JOURNAL 1990

JAMES W. BEE

1990
JOURNAL - J.W.B.

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

Jan. 1, 1990

9:20 A.M at Bee House feeder, 3 mule deer with antlers shed. Deer at feeder include: 2 ♂ mule deer, 6 adult ♀, 5 young of the year.

Jan. 2, 1990

10:30 A.M Swift Lagoon on Port Stanley Road: 19 mallards, 8 northern pintail.

Jan 3, 1990

11:10 A.M Swift Lagoon: 43 american widgeon. at SW beach of Swift Bay: 18 American widgeon. Careful examination has not revealed the Eurasian widgeon although it is not uncommon in the Padella Bay region E of Anacortes. newspaper reports 4 trumpeter swans have been killed by rifle on San Juan Island.

Jan. 4, 1990

10:00 A.M. Waves in front Bee House 29 per minutes, wind from S.

On an average, 2 ad. bald eagles and 2 immatures have been observed daily in the Bee House area, generally flying N & S past house or resting in trees along shoreline. One immature has 60% white in tail.

11:05 A.M. Rain and windy. One young of the year mule deer assumed copulation position on it's mother who did not resist for 20 seconds.

Jan. 5, 1990

mule deer of all ages become nervous when wind reaches 15-25 MPH and above, from the S. wind also brings more gulls, mews, Bonapartes, but especially glaucous-winged gulls that sail in the updraft finds in front of Bee House. I would estimate that the numbers increase at least double of treple when the winds are favorable. Wind also produced more bald eagle in the area above the shoreline at 400'-1000' above water.

1:24 P.M 68 Common mergansers fed and travelled as a group approx 100' E of Flat Point at the same time 2 river otter swam and fished southward and out into the direction

direction of the merganser which were farther out from shore than otter usually travel. As the otters done some 80' from the merganasers, all merganasers instantly left by flight. The otter reappeared where the merganasers had been fishing and swimming.

Jan. 6, 1990

9:20 A.M. 6 adult ♀ mule deer at feeder with 4 young of the year (2♀, 2♂). Some measurements of this group are: ♂ young of the year 26" high at shoulder, smallest young ♀ 23" high; ad. ♀ 29½", ♂ young 25½" high.

Jan. 7, 1990

8:40 A.M. Buster, an adult female mule deer and her young of the year, 25 inches high at shoud at feeder at Bee House. A 2 year old ♂ deer, a member of the local group and a male of this year with antler knobs, sparred. Between sparring they licked each others neck and ears. The younger male initated the sparring 4 different times. At one time the 2 year old pushed the young male 20'-25' in one slow and gentle thrust, head on. The young male finally left on own accord.

Jan. 7, 1990 (cont.)

Trip to S end Lopez Island via car. at Shoal Bay Marina: 1 hooded merganser, 2 bufflehead, 12 double-crested cormorants. Humphrey Lagoon: 1 adult bald eagle with 3 glaucous-winged gulls in pursuit. 2 bufflehead. Swift Lagoon: 25 gadwalls, 28 American widgeons, 9 northern pintails, 11 mallards, 1 belted kingfisher. MacKaye Harbor, NE corner: 9♂ and 8♀ bufflehead, 1 glaucous-winged gull, 10 American Crows, 2 red-necked mergansers, 1 double-crested cormorant. Barlow Bay (fishing moorage) 3 red-necked mergansers, 13 American Crows, common loon, 4 glaucous-winged gulls. Agate Beach: 1 red-throated loon. Knoll of island off Agate Beach a bright green grass. This is the last remnant of soil on this island. Perry Peninsula: 2 bufflehead and no other birds on E side. On dike road to W of causeway: 8 great blue herons (1 group), 23♀ and 3♂ Common Mergansers, 6 bufflehead, 3 horned grebes, 1 glaucous winged gull

At Bee House: ad. ♀ mule deer 30" high at shoulders and ♀ young of the year 23" high, ad ♀ mule deer 29" high and young of year 27" and 26".

3:30 P.M Leo Reef well exposed but no harbor seal. From Bee House observed 15 common mergansers, 8 pelagic cormorant.

Jan. 9, 1990

At Fisherman Bay Causeway on W side rated 8.7 Harlquien duck 2 feet from beach. As they move into deeper water, they dove and on emergence they bounced on the water as if a bag filled with air. On E side of causeway: 18 surf scoters, 11 buffleheads, 8 of which were along shoreline at S end of bay.

At Bee House 3:20 P.M. 6 river otters fishing and resting on bank.

Jan 10, 1990

2 adult bald eagle fly S past Bee House along shoreline at daybreak and later return north past house.

Jan. 11, 1990

Two ♂ mule deer, both two points at Bee House feeder. One of them ( ) with left side smaller fork than right side, was dominant over the other 2 point ♂ and all females. The other non-dominant ♂ accepted females at feeder.

11:45 A.M 6 river otter swam S past Bee House. Fish captured by otter that are too large to handle on water come to land to consume their prey. One otter spent 1½ min. with a fish 8" long. The head of the fish is chewed more than the rest of the fishes body. As the fish is swallowed it progressively chews on the fish. When the tail of the fish disappears the otter immediately returns to water without licking claps or investigating the ground at the eating area. all six left the water at Lichen Point and immediately ran to pool of fresh water from recent rain among rocks. All drank without changing position at the water hole. They remained in area in a compact ball, always adjusting position and preening each other. She search the hair by systematically working the hair from outer end to hair roots with pinching teeth. In three minutes they returned to water.

At the feeder at Bee House watch the chain of command that lasted 35 seconds: 2 point ♂, adult harbless male (antlers shed) ad. ♀, young of the year to smallest young of the year.

900113-4

Jan 13, 1990

1:30 P.m 5 river otter swam to n past Bee House.

3:25 P.m. To Lopez Village: Swift Lagoon; 27 American widgeons. E. side Fishermans Bay. Approx 250 common mergansers, one of which was 120 in one group, others generally distributed. On Fisherman Bay Causeway. on E side causeway; 14 surf scoters, 1 great blue heron, 13 American wdgeon, 2 glaucous gulls, 9 black-bellied plover, 38 western sandpipers, 2 small sandpipers sp.?, 4 American crows. One group of approx. 90 common mergansers flew W across Causeway.

Jan. 14, 1990

2:00 P.m. no harbor seal on Leo Reef. Day rain and cool.

Jan. 15, 1990

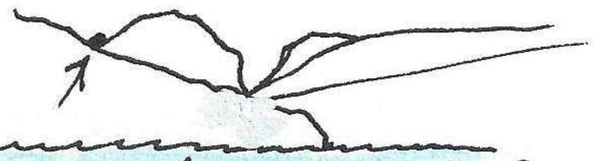
The eastern gray squirrel, cut ears, at Bee House feeder. 13 black turnstones and 5 surfbirds on shore below Bee House. ♂ mule deer, 2 pomt, 33" high at shoulders.

Jan. 17, 1990

At Fisherman Bay Causeway at SW end on E side of Causeway noted (at low tide); 2 green-winged teal, one flock of 365 mew gulls on mud flat. 13 individual glaucous-winged gulls feeding along edge of water, 9 black-bellied plover, 18 western sandpipers, 5 great blue heron, 15 bufflehead, ♂ & ♀ red-breasted merganser, 8 American crows, 4 surf scoters, 1 killdeer, 2 double-crested cormorants. At Hummel Lake, one adult bald eagle top dead cottonwood tree E side lake. Surft Lagoon 9 american wdgeons. Humphrey Lagoon, 1 mew gull, 4 bufflehead.

Jan 18, 1990

Sunrise 8:03 A.m at junction n end Mt. Erie and ridge of Blakely Island. At this same time approx. 220 pelagic cormorants flew S past Bee House some 300 (out from shore) and settled in outer Surft Bay. They arrived in one irregular group of 2 V shaped formations. 46 of them swam N to Lichen Point then returned S to join main group.



Jan 18, 1990

2 ♂ ad. male mule deer, (1 a 2 point and the other shed antlers) groomed head and neck area for 45".

At Swift Bay along beach or near beach, 11 american wedgeon, 13 mallards, 87 american wedgeon, 60 mew gulls, 34 glaucous-winged gulls, 9 American Crow, 1 great blue heron, 6 buffleheads, 8 scrf scoters, 16 northern pintails, no cormorants.

Jan. 19, 1990

Hummel Lake open. Farm pond junction Cross and Port Stanley roads: 14 american widgeons.

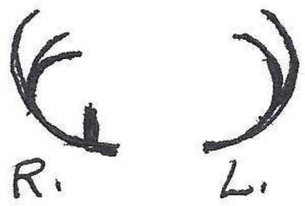
Swift Lagoon frozen except 2 3'x10' openings occupied by 8 mallards and 6 northern pintails. Two pintails ♂ ♀, walked 110 feet on ice.

On Swift Bay Low Beach: 140 mew gulls, 36 glaucous-winged gulls, 21 mallards, 18 pintails, 14 American widgeons, 3 buffleheads, 8 American Crows.

Jan 20, 1990

Below Bee House, 6 surfbirds feeding below barnacle zone on shore.

mule deer ♂, 33" high at shoulders at Bee House feeder.

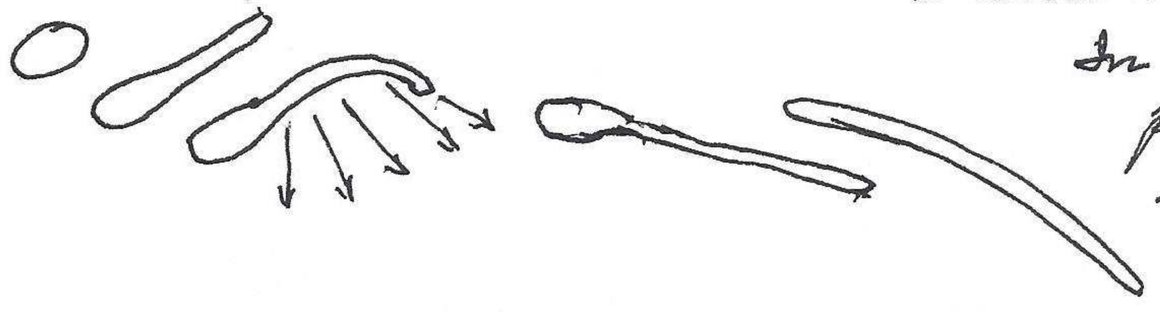


The number of birds between Bee House and Lee Reef at any one time are: 18 pelagic cormorant, 8 mew gulls, 2 glaucous-winged gulls, 2 mallards, 2 common murres. (2/10 mi. corridor)

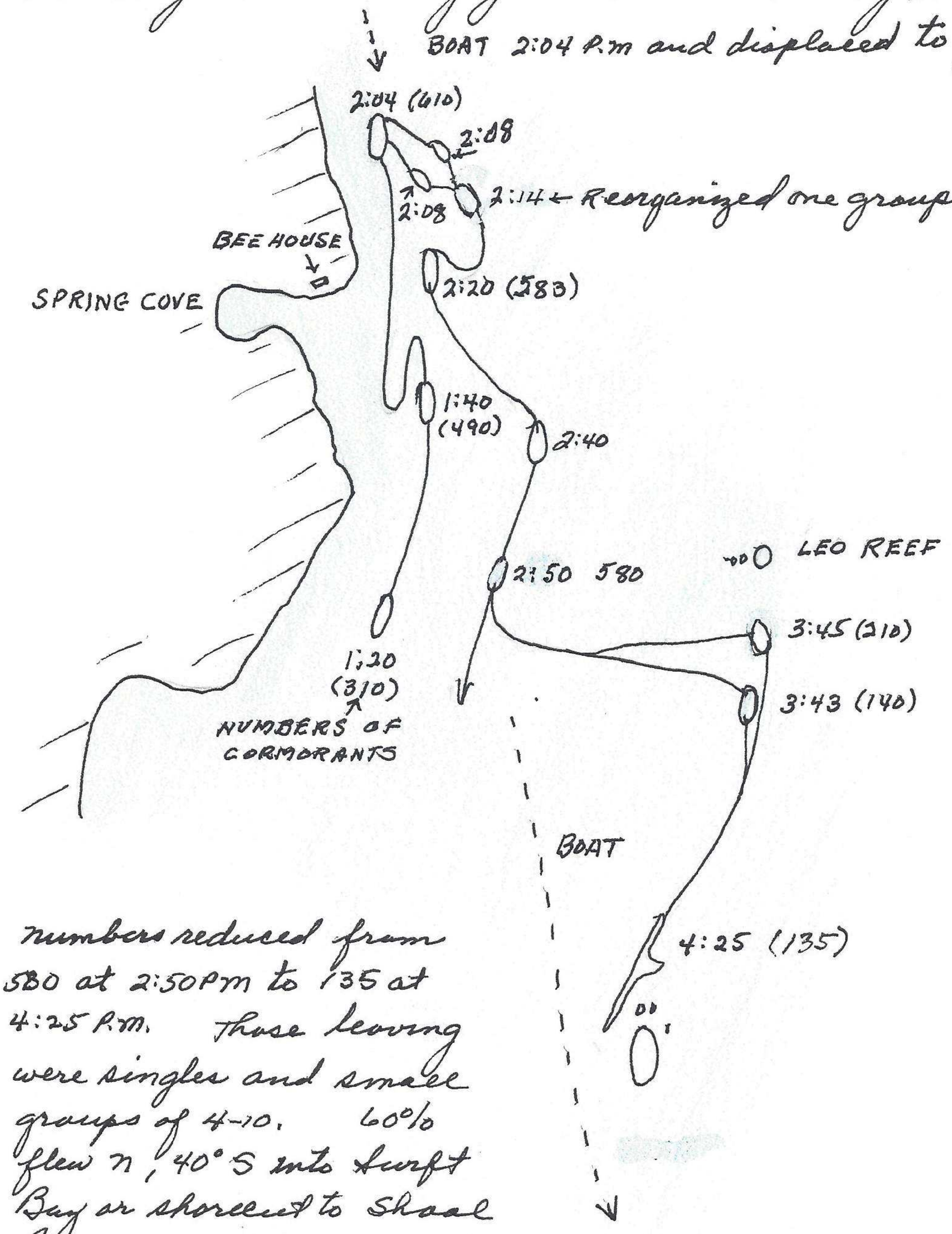
1:00 P.M. 15 harbor seal Lee Reef.

Two groups of approx. 16 each of mew gulls fed on water by swimming in an area 15'x30' for 3/4 hours and no other kinds of water birds joined them. They were picking up organisms or debris from surface of water.

1:26 P.M. 440 pelagic cormorants increased to 610 in 20 minutes and remained as a group until 2:50 P.M. The cormorants followed a general pattern of aggregating into compact formation where they rested, aired wings by flapping and moving steadily from one spot to another. After a 3"-20" period of compact formation, they move out linearly in one direction, alternately diving and reforming. In this instance 2/3 of compact group participated in diving and extending



the linear line, finally the long line participated in diving and fishing and after surfacing some 150 from point of diving reorganized into linear formation. Sometimes segments would reform in another area and the rest would gradually swim to the new formation or fly the short distance. no other kinds of birds are associated with the cormorants except 1 or 2 glaucous-winged gulls that swim along with the raft.



numbers reduced from 580 at 2:50PM to 135 at 4:25 P.M. Those leaving were singles and small groups of 4-10. 60% flew N, 40° S into Surfe Bay or shortcut to Shoal Bay. At 6:10 P.M group 18 flew N out of Surfe Bay area with lights fading to late twilight. Day overcast and waters calm all day. Only others in Sound area above were 8 new gulls, 2 glaucous-winged gulls, 1 Pacific Loon and these were not associated with the cormorants except the 2 glaucous-winged gulls. They swam among the cormorants and occasionally were displaced by the cormorants by pecking.

Jan 23, 1990

8:45 A.M. 5 river otters swimming to S past Bee House and all successful in getting food. Put-out 3 times between here and Lichen Point.

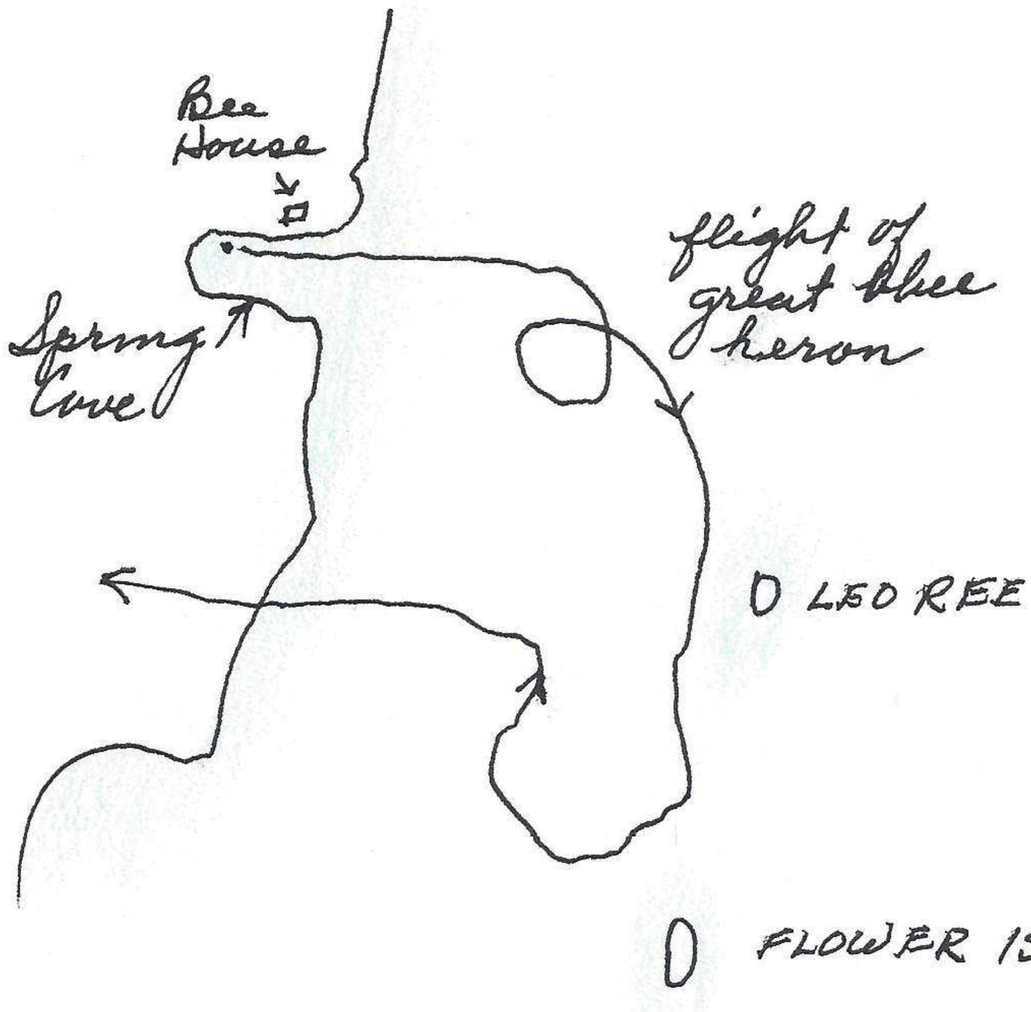
Jan 24, 1990

2:30 P.M. Approx. 350 pelagic cormorant in sound between Bee House and Leo Reef. White-capped waves and cormorant diving off crest

Jan. 25, 1990

10:45 A.M. Flight of great blue heron from Spring Cove, out over sound and thence W over Humphrey Head.

11:45 A.M An adult bald eagle flew S past Bee House some 40' out and 60 high and alighted in Douglas fir tree above Dissected Pt. 20' away from an imm. bald eagle. A mew gull was feeding on a scrap of debris (3"x3") out 150' from shore. The subadult left, displaced the gull and carried the scrap back to the same tree.



High wind today with waves 22 per minute. Also rain. Most wind up to 10:00 A.M.

Two groups pelagic cormorants, one of 198 E of Lichen Point and one of 145 7/10 mi E Boundary Point. The last group at one time moved 1/10 mi. by flight.

4:50 P.M. One group 110 pelagic cormorants 150' N Leo Reef. Others have already left the area.

Jan. 26, 1990

10:07 A.M. 356 pelagic cormorant in one group 1/3 way between Bee House and Leo Reef. 1 red-throated loon not associated with cormorant.

900127-B

Jan. 27, 1990

Fisherman's Bay Causeway. Windy. Birds: 2 black-bellied plover, 8 bufflehead, 12 American wrdgeons, 1 great blue heron, 4 glaucous-winged gull, 8 mew gulls,

Swift Bay Low Bank: 13 surf scoters, 11 bufflehead, 8 American widgeons.

Hummel Lake: red-tailed hawk.

Jan. 28, 1990

9:06 A.M. wind more waves 23 waves per minute, white caps and foam streamers.

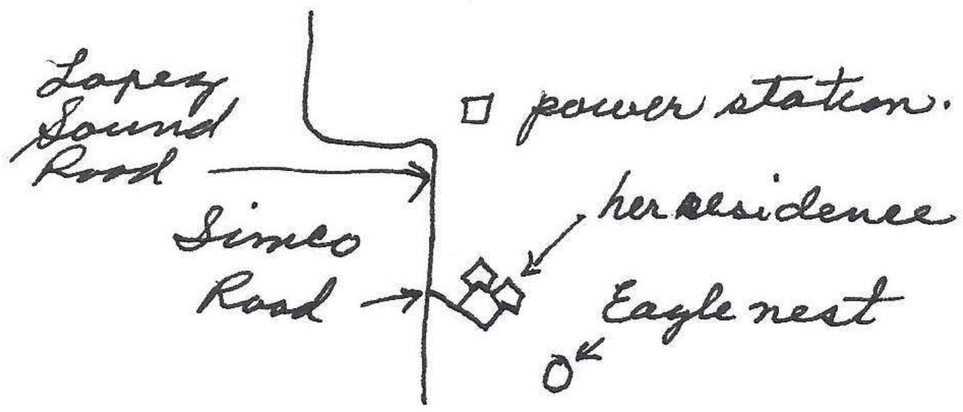
a river otter swam continuously on surface of water with waves 2'-4' high and was tossed about. Swam approx. 18' out from shore.

Rain on and off all morning to at least 9:30 A.M. and then periodically the remainder of the day.

Marcia Simpson of Rt 1, Box 1080, Sound Road, Lopez Island, reports 2 bald eagles building nest in view of her front porch. The birds have been building nest since Oct of last year and have increased the nest to 50% of its former size. In late summer last year they left area and returned in October. Marcia's telephone number is 864-3235.

11:25 A.M waves still 23 per minute and raining.

4:00 P.M 81 pelagic cormorants in area between Bee House and Leo Reef. more activity fishing than on previous days. The average times for various phases of fishing vary according to the size of the group. For this small group:
18 seconds between start of diving and all birds under water.
50 seconds under water and birds starting to surface. now dispersed.
20 seconds for all birds to reappear.
40 seconds to 2 mins. to reorganized if reorganization is scheduled.
Birds dispersed too far will fly back to main group. This group of bird worked off Leeken Point, thence E 2/10 mi, thence S 2/10 mi at 10:05 A.M. Day clear, gusty winds on relatively calm water.



One 100' diameter circle of gusty wind, reduced small wavelets and smoothed water.

10:10 A.M 46 american crows at Bee House feeder, one of 3-4 daily groups. One lone crow arrived 7:27 A.M from S, turned around

in front of Bee House and flew S again.

11:10 surfbirds and black turnstones on rocks at edge of water below Bee House. The black turnstones only birds of this group that has white on shoulders. It has flesh-colored legs that have a transparent quality to it. in contrast to the noticeably larger and yellow legs of the surfbird. The surfbird is larger than the black turnstone. The black turnstone is more active and aggressive but either species will displace the other. Waves SE 1' 81 per minute and no whitecaps.

Jan 30, 1990

820 pelagic cormorants 300' W of light beacon RC "BS" F(2+1) R. 6s at half way between Humphrey Head and N end Blakely Island.

11:30 A.M. ♀ mule deer and her 2 young, ♂ 26½" and ♀ 26" high at shoulders.

2:45 P.M 5 river otter swam N past Bee House

4:10 P.M " " " " S " " " one with a 2" diameter white sea anemone.

2 marbled murrelets 100' out from Bee House.

1 ♀ hooded merganser remained almost stationery in front of Bee House. An hour later another hooded merganser ♀ arrived and they both swam away.

4:40 P.M ad. bald eagle flew S past Bee House to Lichen Point Tree, remained 5 minutes and continued S.

♂ & ♀ hooded merganser in Spring Cove.

Jan 31, 1990

Cool, wind from SE.

9:15 A.M 5 river otter swimming to N

42 American crows at feeder. When disturbed at feeder they fly out over water 100' or so and then return all at same altitude. If they select to gain a position higher on hill, they fly out, circle and in the process gain altitude.

10:46 an adult bald eagle flew S past Bee House at 50' elevation, then around Lichen Point but then turned around and followed same course back to and past Bee House.

2:20 2 ad. bald eagles circled 300' above Bee House for 3 min. while a 3rd circle 800' above.

4:30 P.M. no harbor seal on Leo Reef. Wind approx. 20 knots. Pelagic cormorants diving under cresting white cap waves

2 point mule deer with equal points 23" high at shoulders.
An adult bald eagle and 2 American crows flying parallel and 15' apart. The eagle past them without the Crows deviating course.

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

Feb. 1, 1990

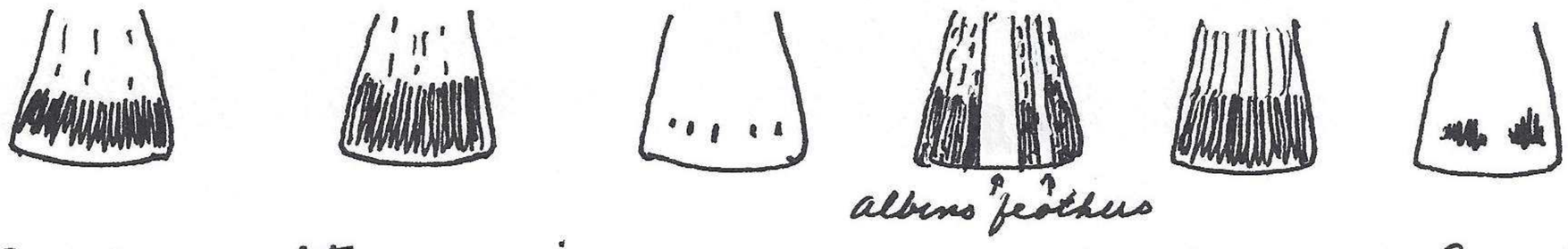
1:45 Swift Lagoon: 18 mallards, 7 gadwalls.
Two bald eagle sightings so far today.

Feb. 2, 1990

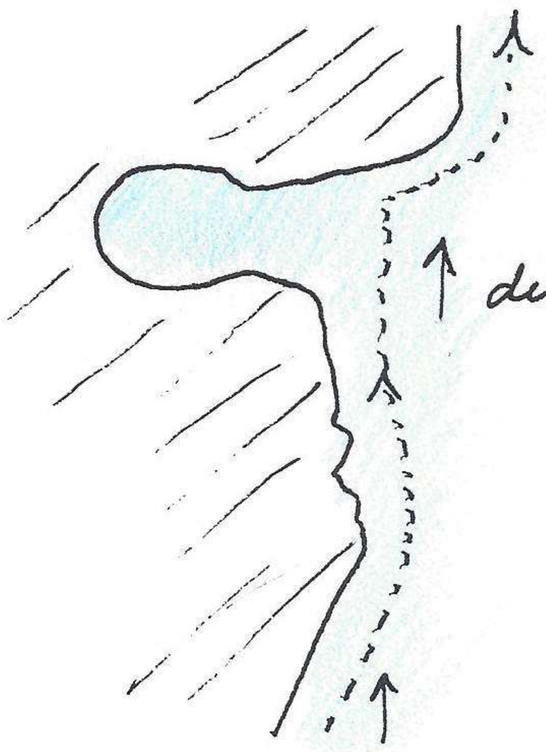
2:35 P.M. 12 harbor seals on Leo Reef.
Swift Bay Low Beach. 215 American crows in loose groups on beach.
No birds on Hummel Lake, Swift Lagoon or Humphrey Lagoon. Misty rain all day.

Feb. 3, 1990

4:00 P.M. 26 harbor seal on Leo Reef.
4:12 P.M 1 river otter swam S past Bee House. Tide low and otter following edge of water at body depth.
4:25 P.M. Ad. bald eagle flew from Bee House directly E to Blakely Island, thence N 1/10 mile, thence S along shoreline at approx. 500', across Thatcher Bay and S. Fisherman Bay Causeway, San Juan Channel side out approx to 200'. 18 bufflehead, 2 group (8;4) surf scoters, 6 scoup ? sp., 5 glaucous-winged gulls, 6 mew gulls, 7 American Crows. On E side Causeway in Bay, a continuation S of Fishermans Bay: 13 scaup, 3 great blue heron, 240 mew gulls, 23 glaucous-winged gulls, 4 bufflehead, 1 double-crested cormorant, 2 red-breasted mergansers, 9 American Crows, 9 black-bellied plover, 4 western sandpipers. The glaucous-winged gulls were generally distributed and searching tidal flats. The mew congregated on area.
No birds Swift Lagoon, or Humphrey Lagoon.
Wind last night approx. 60 M.P.H. Bee driveway with douglas fir branchs 4" to 2" every foot apart. One main road in front Bee Estate road clear. Wind blew 9 shingles off Bee House.
In front Bee House at 2:40 P.M. 53 mew gulls searching waves. The tail feathers of some of the birds are:



3:10 P.M. Strong winds from S, no harbor seal Lea Reef.



Stream of foam 15' or so from shore and moving N.

↑ direction waves.

5:30 P.M. approaching twilight. No harbor seals on any put-out in sound. (N Lopez Sound).

Feb. 5, 1990

Left for Anacortes 10:05 A.M. 2 adult bald eagles flew west at Lopez Island ferry terminal. Wind SE and waves, + white caps. At least 80 mew gulls N end Humphrey Head, 8 pelagic cormorants. Floating logs have mew gulls, one with 25, pelagic cormorant, 2 mew gulls, pelagic Cormorant. On Blakely hillsides in open grassinal areas are bright green. Willow Island, W Thatcher Pass. Glaucous-winged gull, 2 mew gulls, pelagic cormorant. 20 gulls on Pointer Island and all green. 4 pelagic cormorant, mew gull. Arrive Anacortes. Camped at Thousand Trail Camp.

9:15 P.M Thunder. Thunder has also been heared on Lopez Island last 3 nights.

Thousand Trails Preserve, Skagit Co., Washington

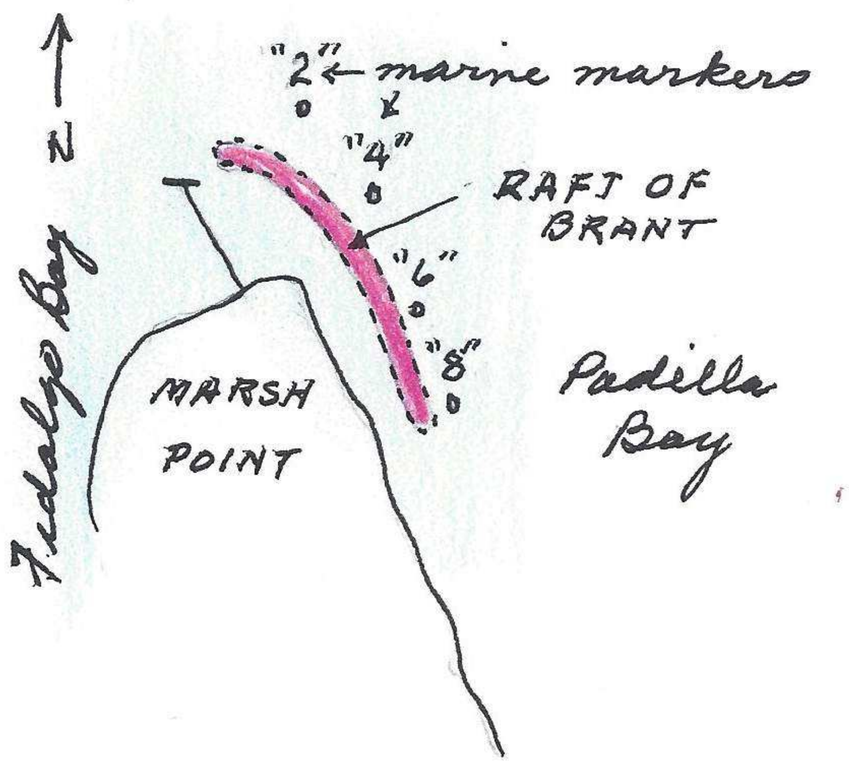
Feb. 6, 1990

8:10 A.M. 3rd year bald eagle circled Lone Tree Peninsula, thence NE up coastline of bay.

6 Glaucous-winged gull, 5 bufflehead in Lone Tree Lagoon.

Birds in area: 11 am; 1 black oystercatchers remained on shore S of Lone Tree Point and bathed in high wind and cold temperture, 8 black turnstones, 6 surfbirds, 8 western sandpipers (all three above species in are group), 52 American crows remained in causeway area and on an

average of every 3 minutes would all leave and return in 12-15 seconds, pairs of crows would attact each other, 11 glaucous-winged gulls, 6 buffleheads, 3 hooded mergansers, 1 song sparrow, 8 surfscoters. Left Thousand Trail Preserve and drove to marsh Point off highway 20. at n end E marsh Road (NE marsh Peninsula) observed 1624 brant in a 1 1/2 mile raft from 100' E of E oil loading terminal to number "8" marine marker of the n extension of Swinomish Channel. They were out 150' from shore to almost to marine markers in a loose group.



To the n w of the nw corner of marsh Point are: 16 buffleheads, 13 scaup.

From above to R.R crossing of Fidalgo Bay are: 1 group 19 brant at shoreline, 7 northern pintails, 23 scaup. Another group 380 brant 100' N of RR crossing (E end) and 30' from shore, 9 gdwalls, 2 buffleheads. From RR causeway to S end of Fidalgo Bay: 125 northern pintail, 2 green-winged teal, 6 glaucous-winged gulls, 35 buffleheads, 8 american crows, 1 great blue heron. The scaup were in large groups totalling 550 birds. From marsh Point also observed a bald eagle circling above Hat Island. Continued to Anacortes ferry terminal.

Left ferry terminal 3:34 P.M. Will keep record by Time: 3:36 P.M. pelagic cormorant, 3:42 PM pegeon guillemot in summer plumage, 3:44 P.M. mew gull, 3:46 P.M Common murre, 3:48 P.M N James Island, 3:50 P.M Pointer Island no gulls, 3:51 Lawson Rock, 3:51 Point Fauntleroy, 3:52 red alder in red buds in Cove w of Armitage Island, 3:52 P.M pelagic cormorant, 3:54 P.M. light beacon SW Blakely, 2 common murre, waves but no whitecaps and waves not as high as in Rosario Straits, 3:57 P.M Willow Island, 3:58 P.M Common murre, 3:59 P.M Common murre, 4:00 P.M no gulls Flower Island, 4:01 P.M Common murre, 4:02 P.M 8 pelagic cormorants, 1 glaucous-winged gull, 4:03 P.M Leo Reef, 4:03 P.M pelagic cormorant, 4:04 P.M, pelagic cormorant, 3 separate pelagic cormorants, glaucous-winged gull, 2 mew gulls, 4:05 P.M glaucous-winged gull,

red-throated loon, pelagic cormorant, 4:06 P.M N end Humphrey Head, double-crested cormorant. Arrived Lopez Island ferry terminal at 4:11 P.M.

Feb. 7, 1990

9:30 A.M Waves 22 per minute. 50 year old

The local lumberman said that trees on Lopez Island are 18" in deameter, whereas on the mainland they are 24-28 inches in diameter. One six inch diameter tree had 98 annual rings [I presume he was talking about Douglas fir.] There are from 2 to 4 truck loads of logs that leave Lopez Island every day.

Feb. 8, 1990

Snow 2/3 way down W slope Blakely Island E of Bee House.

Flocks of 10 to 45 American crows visit and feed at Bee House 4-5 times a day.

3 adult bold eagles in area this A.M.

4 purple finch at feeder at Bee House.

10:05 8 purple finches at feed at Bee House.

1:42 P.M 384 pelagic cormorants in one group fed out 150' SE from Bee House. In 4 minutes they had moved to 200' off Lichen Point.

Fisherman Bay Causeway; W side, 7 ♂ 4 ♀ Harlequin ducks, 2 common loon, 1 red-necked grebe, 3 horned grebes, 11 bufflehead ducks. On E side. 28 bufflehead, 4 scaup, 8 surf scoters, 2 great blue heron, 8 glaucous-winged gulls, 11 American Crows, 1 read-breasted merganser, another group 8 surf scaters.

Swift Lagoon: 6 mallards, 3 buffleheads, 8 gadwall, 5 hooded mergansers

new gulls that spend day in Swift Bay at shoreline start to pass N past Bee House at 5:15 P.M, or later and end at about 5:34 P.M. at late twilight. On some occasions they fish in area of Bee House before continuing N. In the above case approx 1600 new gulls fished in front of Bee House from Boundary Point to Lichen Point. They fed from 8' from shore to out 120' from shore and in a continuous band 1000' long and 100 or so feet wide. They followed a pattern of fishing S along shoreline, then out to 120' then either circling back to re-

peat the pattern or fly N to Boundary Point and then continue fishing S. Sometimes they formed larger compact groups and wheeled in unison. The original 1600 gradually decreased to appox 150 that congregated directly in front of Bee House and then altogether at one instance left to N as had the others. In the later period of the fishing the group at Lichen Point was 25% young whereas in front of Bee House the young constituted only 10%. Those in area were landing on the water at the rate of 1 in 20 and these were picking up material smaller than an inch minnow as if some kind of invertebrate.

Feb. 10, 1990

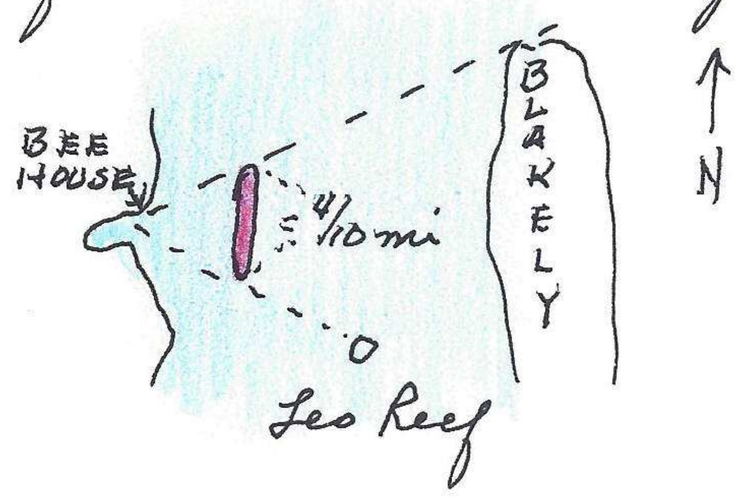
8:40 A.M. 5 river otter swam S and upon surfacing all shook their heads sideways which I had not observed previously.

9:45 A.M 45 American crows feeding at feeder at Bee House.

2:25 P.M. Approx 600 pelagic cormorants in one group 7/10 mi E of Bee House.

Feb. 11, 1990

12:24 P.M. 1024 pelagic cormorants out 1/3 way to Leo Reef from Bee House and in a linear raft in a zone from N end Blakely to Leo Reef. The sequence was fishing in 5-6 dives then compaction for 5 minutes of wing flapping and progressive travel in water. 15 glaucous-winged gulls accompanied the cormorants by swimming along side or among them. Ordinarily only 2 or 3 gulls are associated with the cormorants. no other kind of water accompanied the cormorants. Frequently when fishing the gulls will swim contra to direction of the swimming of the cormorants.



2:20 P.M. 105 new gulls in raft and were resting. Another flock 65 to S 100'.

4:40 P.M. Above flock now 405 and passively setting on water.

Last night 3 mosquitos in Bee House and first obs since last

summer. Mosquetos rare in this area of Bee Estate.

Feb. 12, 1990

Snow last night to 1/2", mainly large non-compact crystals. disappeared as soon as direct sun shone on surfaces. By 10:00 A.M snow had disappeared except in shaded or protected places.

Rufous-backed chickadee at suit feeder.

10:30 A.M snow still on upper slopes of Bald Bluff on Blakely.

11:35 A.M. First Townsend chipmunk this year. It was normal weight and active.

2 double-crested cormorant fed in front Bee House.

Collected 3 ants from inside Bee House. First ab. sq. keeled.

900212-1

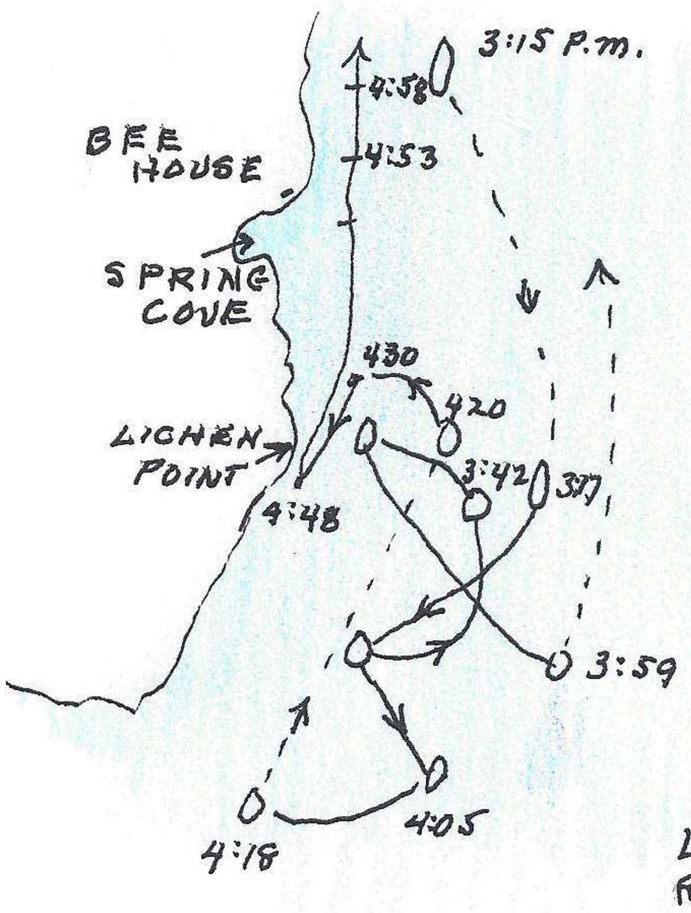
900212-2

900212-3

3:00 P.M. Logs on beach in Spring Cove still covered with snow of last night, elsewhere except on N exposures snow gone.

3:12 P.M 5 river otters swam N 2' out from shore below Bee House.

3:15 P.M.



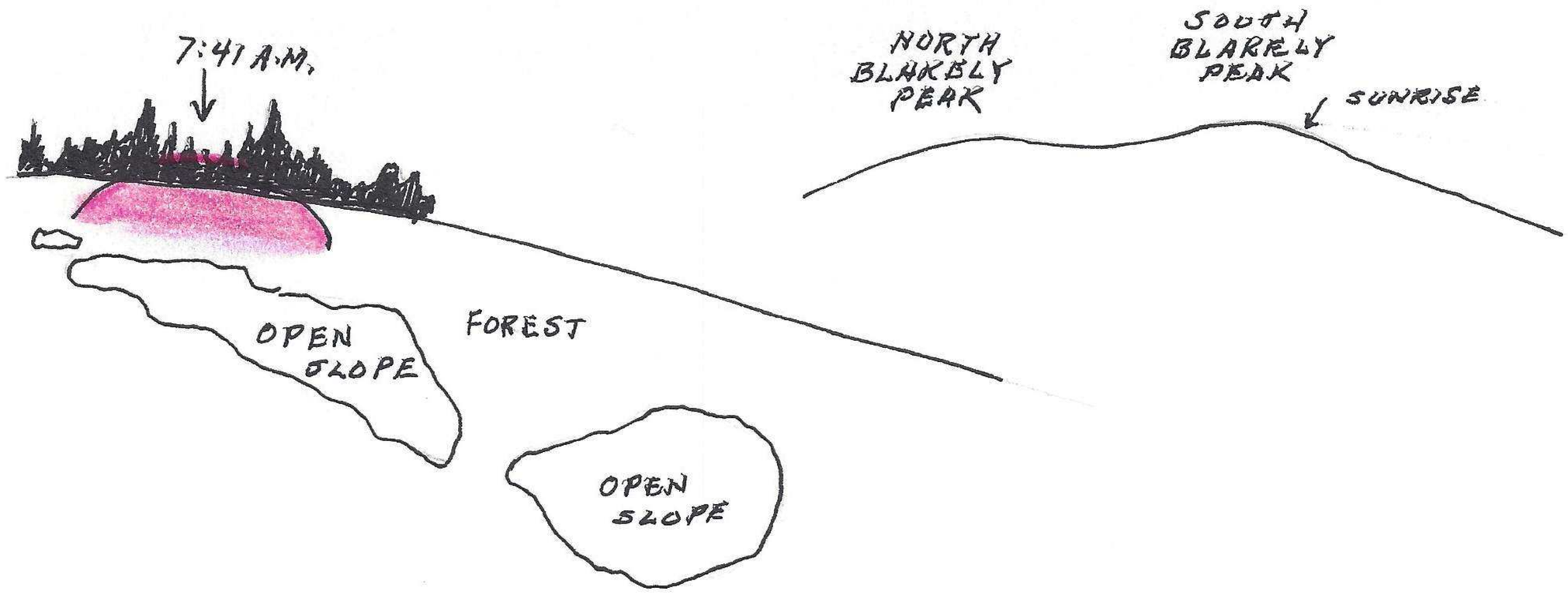
3:15 P.M. Original group left by flight.

From 4:30 P.M to 4:58 P.M the birds swam constantly without diving to N out of sight! Waves 18" high They form compact group when resting or when travelling.

Feb. 13, 1990

Sunrise 7:41 A.M. near Top 5 Thatcher Peak.

900213-16



Wind from NNE at 17 waves per minute. Foam and crest of whitecaps blowing 1/2 way across swell. Wave 3' high and swell 15-25' wide.

10:00 A.M. Several photos wave action from Bee House area:

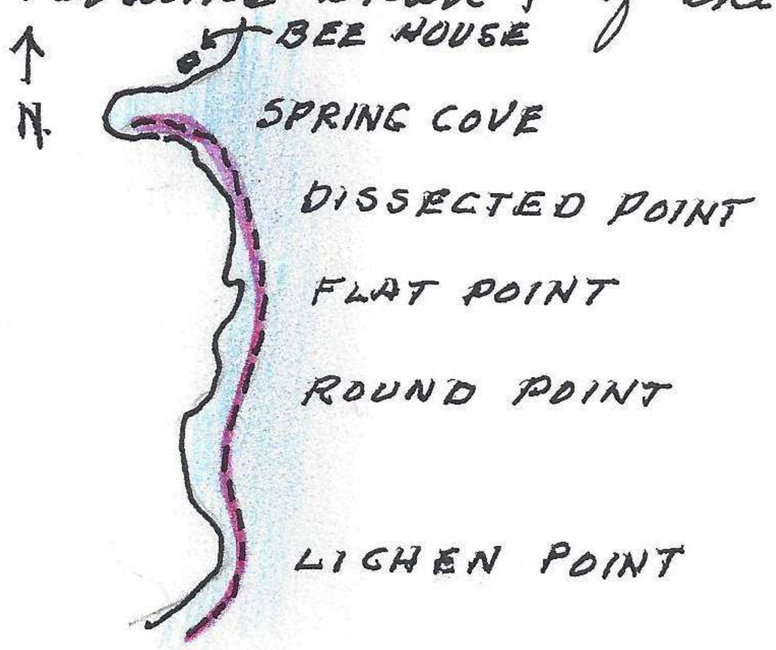
Photo 900213-1 Lichen Point, Humphrey Head, Lopez Island.
" 900213-2 Flat and Round points.
" 900213-3 From Boundary Point to N with Otter Cove in foreground.
" 900213-4 Wave action in Otter Cove,
" 900213-5 Wave action at Boundary Point.
" 900213-6 " " " " "
" 900213-7 General wave action beyond Boundary Point.
" 900213-8 Shoreline S of Spring Cove from Bee House with dead madrona branches framing photo. SW corner Bee House.

Few gulls float up to crest then fly over and alight on opposite side of wave.

No harbor seal on Leo Reef this A.M. High winds to noon then tapered off at 28 waves per minute.

Snow only in protected areas. All gone from Bald Bluff except 5 flat areas on top.

Young male mule deer with knobs as antlers have whiter rostrums than ♀ of the same year (deer of last summer).



To left, streak of foam from beyond Lichen Point to Spring Cove, wind from S. Streak approx. 1 foot wide.

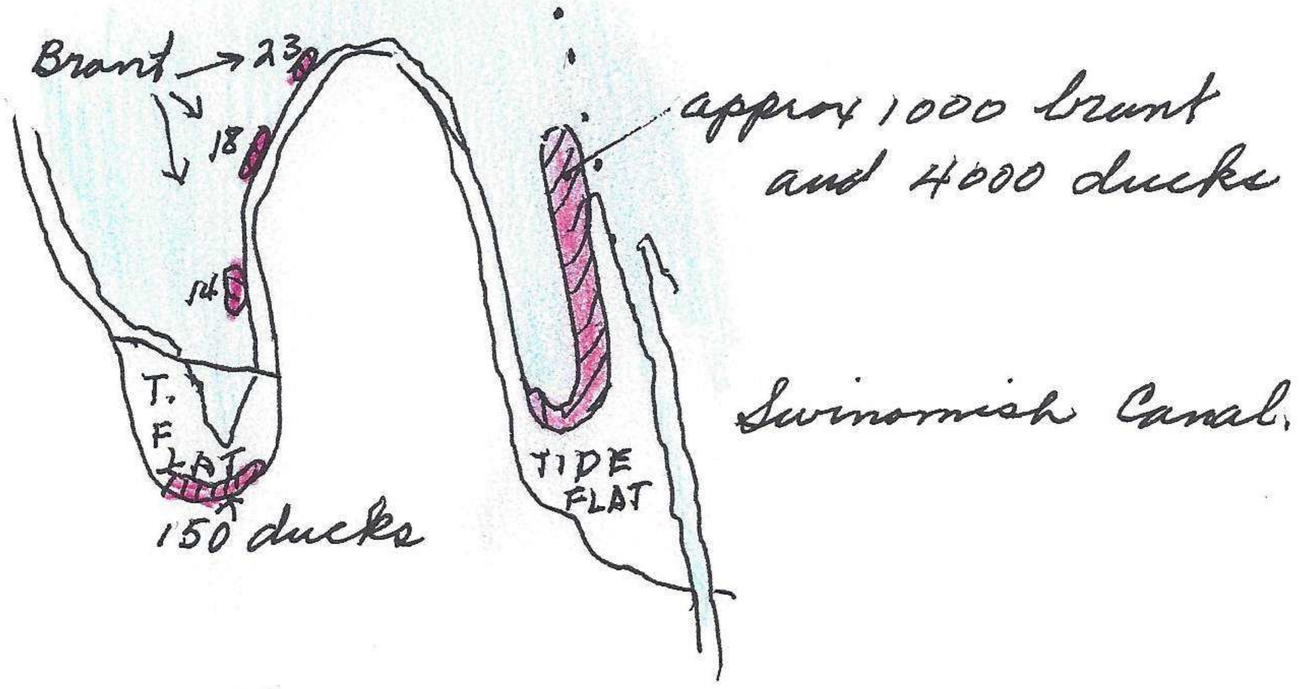
Feb. 15, 1990

adult female with scar on left cannon bone 30" high at shoulders.

Snow last night 1/2 way down slopes of Blakely and in Thatcher Bay the snow line dropped to 3/4 down to shoreline in places slope. Between entrance to Thatcher Bay to Round Peak are 22 open areas among the trees, made visible with new snow on ground.

To Anacortes and return via ferry; First time I have seen waterfall in Thatcher Bay from drainage of Spencer Lake, approx. 50' high. Arrive Anacortes. Red-tailed hawk at Swinomish Channel and highway 20.

checked marsh Point. then returned to Lopez Island.

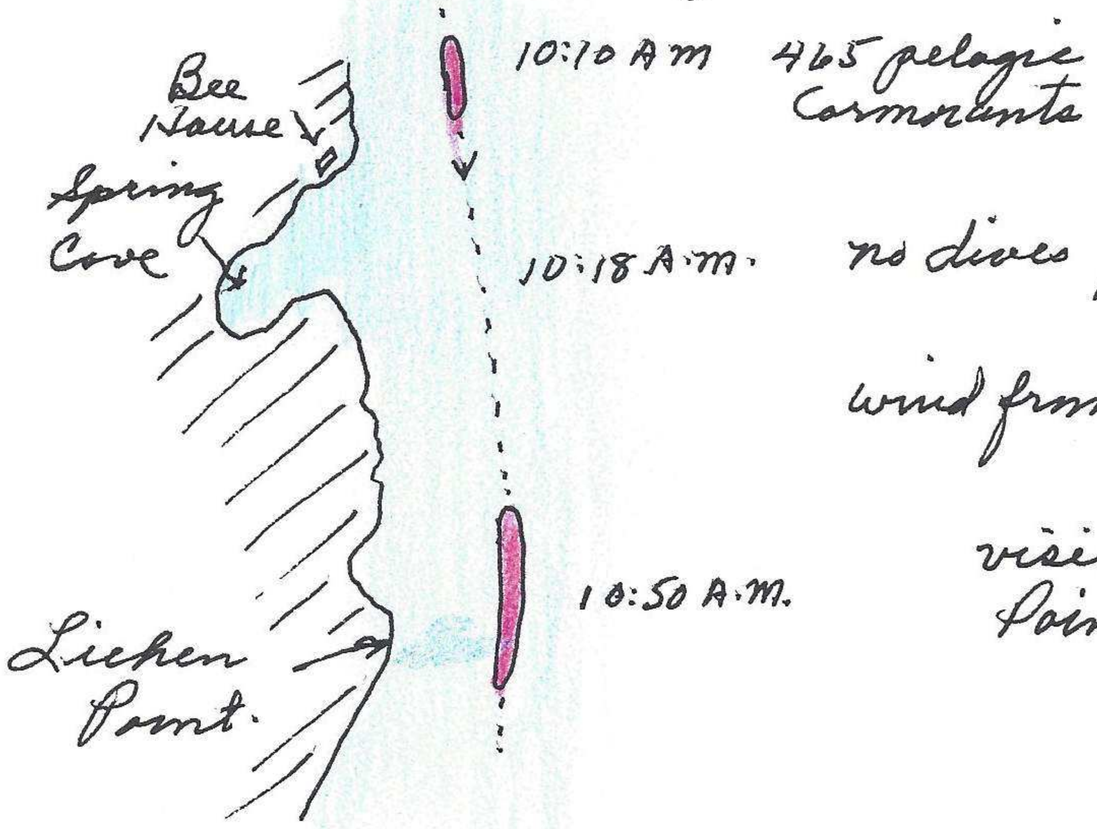


Feb. 16, 1990

Wind from N. 26°F. wet snow fell last night to depth of 1 inch covering all trees and slopes.

10:00 A.M Started to snow. Wet snow still on trees and ground.

10:18 P.M. 465 pelagic cormorants approx. 200' SE Bee House.



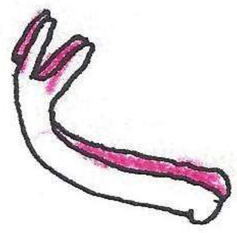
no dives from 10:10 A.M to 10:50 A.M

wind from N and whitecaps.

visibility from Bee House to Licken Point.

900216-18

11:00 A.M. 2 point ♂ mule deer at feeder. It had snow on top of antler from snow of 10:10 A.M and maintained snow for at least 1/2 hour.



No chipmunks since Feb. 12, 1990.

Groups 35-45 american crows feed at feeder at Bee House daily.

Purple finch 1-6 more numerous since snow period.

2:50 P.M waves 23 per minute from N. Snowing and temp. 24°F.

4:00 P.M. Collected yellow jacket from inside Bee House from under rug near windaw. Its number is 900216-1.

Water frozen in bird drinking fountain and the 3rd time this year.

Feb. 17, 1990

Temp. this A.M 21°F. No snow last night.

11:40 A.M. 320 pelagic cormorants 10' to 80' out SE of Bee House. They swam towards Flat Point then E out into north Lopez Sound, then S into Surft Bay beyond Licken Point.

12:30 P.M. Photo 900217-1 of Bald Bluff of remaining snow of night of Feb. 15-16, 1990. Temp 43°F. Sun shining.

2:30 P.M. 108 pelagic cormorants in raft from 150 E Licken Point to E in line of Bee House and Leo Reef in 23 minutes without diving. One glaucous-winged gull was swimming with cormorants to and was twice displaced by cormorants. Then in 5 minutes they made 3 dives that placed them 1/10 mi farther E.

3:45 P.M. Directly below Bee House 13 mew gulls systematically circled from 4' from shore to 50' off shore and covered same area on the outward circle path.

4:05 P.M. 1 double-crested cormorant, 1 hooded merganser, 11 pelagic cormorant, 3 common mergansers and 23 mew gulls fed in a 10'x20' area below Bee House out 30'. Each time they moved out 50' (pelagic cormorants) and then returned for another dive. The mew gulls aggressively met the cormorant as they resurfaced. A belted-kingfisher caught 3 candlefish in 4 mins.

5:32 P.M ♂ 2 point mule deer 34" high at shoulders. The right antler had been shed.

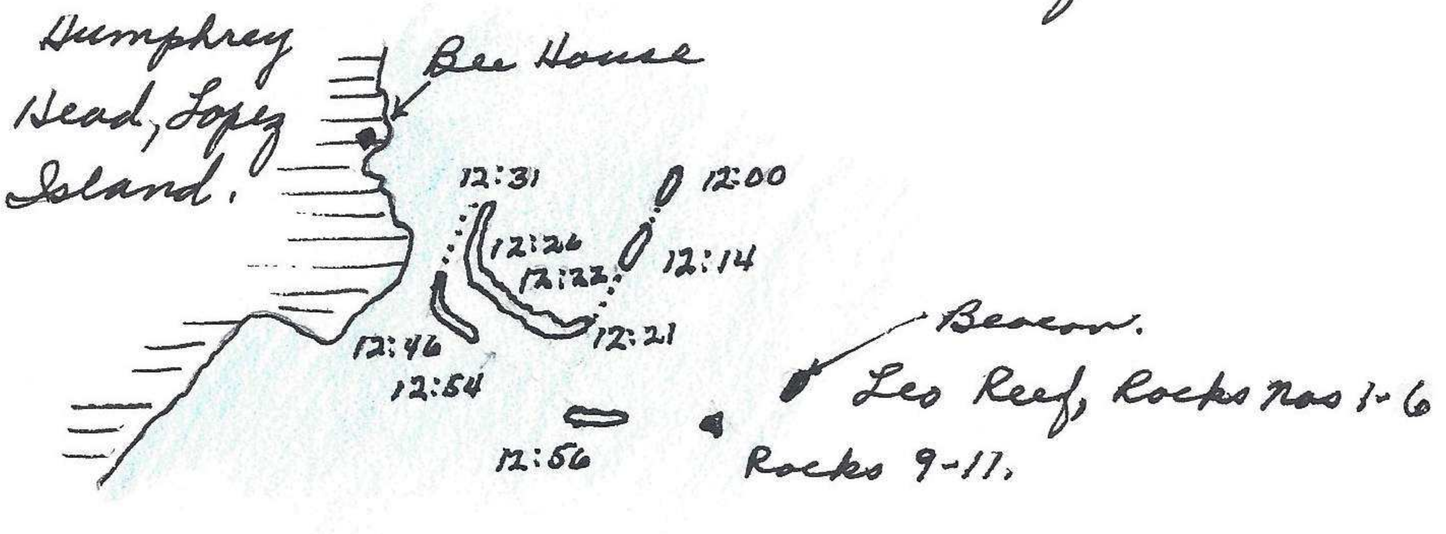
900218-19

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

Feb. 18, 1990

Sunrise 7:35 A.M just off top S Thatcher Peak. Day beautiful, no clouds, breeze. This is the second day of sunshine and no rain of a month that has been consistently rainy and cool.

11:00 A.M 21 harbor seal on Leo Reef and first in last 4 or 5 days.



noted approx. 380 pelagic cormorant in a compact linear raft at 12:00 P.M directly E of Bee House and NW of Leo Reef. They were moving SW but not diving.

12:14 P.M advancing left of raft in line of Bee House and Leo Reef light beacon.

12:17 P.M rear end of raft now in line with Bee House and Leo Reef light beacon. The entire raft is equal to twice the length of Leo Reef, Rocks 1-6.

12:21 P.M now the 1/3 of raft, advancing front, started to wheel to NW.

12:22 P.M. raft now ↻.

12:25 P.M. Length of raft 5x length Leo Reef, Rocks 1-6.

12:26 P.M Leading 1/3 of raft now starting to dive, remaining 2/3 not diving but follow the first 1/3. now developing into a long loosely formed raft.

12:31 PM front group now swinging SW to a point 250' SW Lichen Point.

12:46 PM all cormorants now collected into compact group arriving by swimming or short flight.

12:54 PM all diving now and trending SE. a boat displaced all cormorants and resettled at 12:56

12:56 reformed compact raft and moved SE.

There were 1 to 3 glaucous-winged gulls accompanied raft.

at 1:45 P.M 18 harbor seal on Leo Reef. 3 adult bald eagles circled low beyond Lichen Point.

1:45 P.M 18 harbor seal Leo Reef.

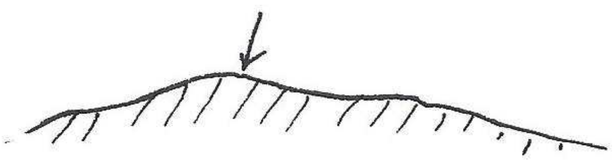
4:00 P.M 17 harbor seal on Leo Reef, all cohitish.

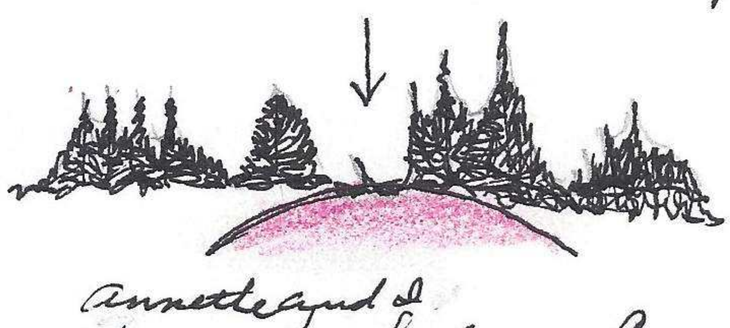
Erosional slopes of Blakely Island, one at fault directly E Bee House and one at N entrance Thatcher Bay are green with some kind of ground cover mosslike.

4:20 P.M mew gulls moving N past Bee House as evening sets in.

Feb. 19, 1990

Sunrise 7:35 A.M top S Thatcher Peak.

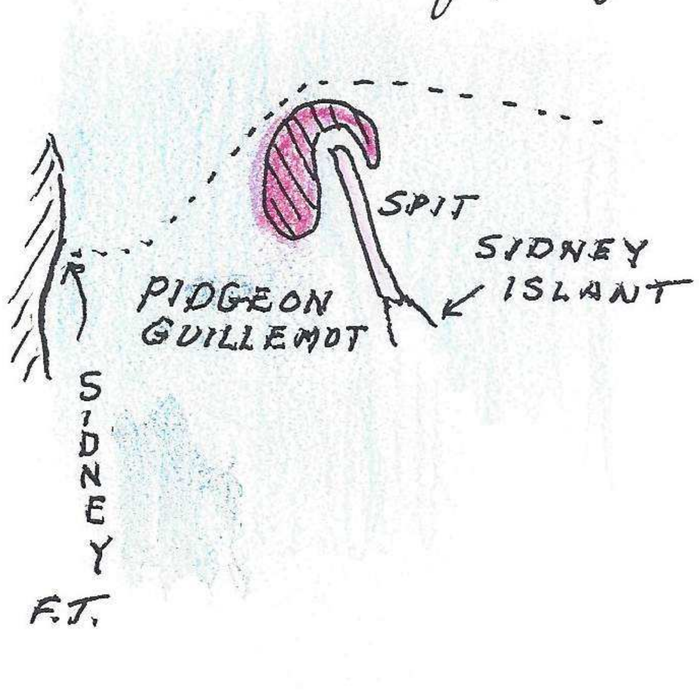




Annette and I ferry to Sidney, Canada. at Lopez Island ferry terminal observed fox sparrow, brown gull, double-crested cormorant. Left 10:02 A.M, will keep complete census by time interval. 10:08 A.M NE Shaw Island. One N side Harney Channel on S exposure of Orcas St. all snow on shoreline gone except in protected areas among trees above. On S side on Shaw Island entire slope in snow. Icicles on 80% of cliffy shoreline on N exposure of Shaw from top of cliffs to beach. 10:15 A.M Shaw Island ferry terminal. 1 red necked grebe, 3 horned grebes, 2 mew gulls, 3 surf scoters. Rock pigeon left Shaw Island and flew across channel to Orcas Island ferry terminal. at Shaw, 12 double-crested cormorant, 4 rhinoceros auklet, 18 glaucous-winged gulls on piling, 14 pelagic cormorant, 1♂ bufflehead duck, 6♀ buffleheads. On shoreline E of ferry terminal 100% shrubs 30% shrubs slope with rock barrier have slope stabilized with 100% shrubs, whereas slope not protected are eroding and support only 30% shrubs. 10:32 left Orcas Island. 10:43 Hankins Point. 10:44 adult bald eagle flew E across channel. 10:45 ad. bald eagle flew N along top ridge to W. 10:48 N end Conae Island. 10:50 pigeon guillemot, 3 pelagic cormorant, 1 double-crested cormorant, 1 glaucous-winged gull. 11:00 A.M. double-crested cormorant. 10:02 A.M. Univ. Wash. tide guage. 13 pelagic cormorant, 3 surf scoters, 1 common mergansers. 11:07 Friday Harbor ferry terminal, 1 american crow, 16 glaucous-winged gulls, 3 mew gulls. 11:14 A.M Leaving Friday Harbor, one group including 24 glaucous-winged gull, 6 mew gulls, 18 pelagic cormorants, 65 common mergansers, 3 buffleheads, 1 red-breasted grebe 11:20 Univ. Wash. tide guage. American crow following ferry. 2 mew gulls, 8 buffleheads, 1 common murre, double-crested Cormdant, 1 common murre. 11:27 common murre. 11:30 A.M W end Warp Passage, 2 common murres

waves 5" high, no whitecaps. 11:33 A.M w end yellow Island, pelagic cormorant. 11:43 E end Spieden Island. Approx 300 exotic deer and antelope, 1/2 of them white on top of high ridge on E end, 2 mew gulls, 1 adult bald eagle above island. Snow in drainage gullies. 3 common murres. 12:09 P.M nw end Mandarte Island. On the most Eastern outlier are 18 harbor seal. On the island proper were 210 glaucous-winged gulls generally distributed on all exposure except 90' on each side of an adult eagle in top of a tree. 12:13 P.M. "U.S" black-yellow beacon. (in Canada) On a reef to N of YB "US" beacon on one of the outer rocks are 28 harbor seal. On outer outlier on E end of Forrest Island are 105 harbor seal. 12:19 NW end Sidney Island spit. Straits smooth. up to 12:23 are 86 pigeon guillemots, 21 common murres, 8 pelagic cormorants, 3 red-necked grebes 18 old squaw ducks. In harbor of Sidney are: 2 Barrow golden-eyes, 12 Common mergansers, 9 horned grebes, 1 great blue heron, 1 hooded merganser, 36 surf scoters, 2 old squaw ducks, 3 glaucous-winged gulls, 1 american crow, 1 common loon, 4 white-winged scoters. Arrive Sidney 12:30 P.M.

Left Sidney ferry terminal 12:53 P.M. In area indicated in diagram to left were 62 pigeon guillemots.



On mandarte Island where gulls nest are two adult bald eagles, one flew N. Island green on slopes and reddish bushes in draws.

Concentration of water birds mouth Roche Harbor and Henry Island entrance.

Adult bald eagle flew N to NE over above area.

There is a scarcity of birds in San Juan Channel being 25 only. Waves under whitecaps. Cold, overcast and wind from S. Slopes bordering Fri. Harbor bright green from mass etc. Arrived Friday Harbor 2:08 P.M. Left 2:28 P.M. Arrived Areas and went ashore to wait for next ferry to Lopez Island. all fields and slope on N exposure show are covered with snow. On Blind Island is good example of elevated shoreline or bench  Left Areas 4:33 P.M. for Lopez Island and home.

5:15 PM and lights fading. 11 harbor seal on Leo Reef.

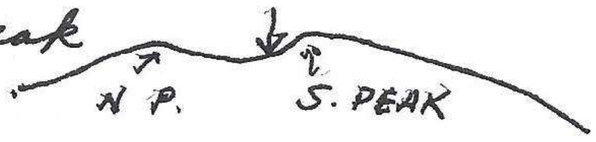
5:30 PM 9 mew gulls from Swift Bay paused at Bee House area for 2 minutes feeding before moving N.

5:47 P.M. 21 new gulls, 4 of which are subadults, fished or fed 20'-80' in front Bee House.

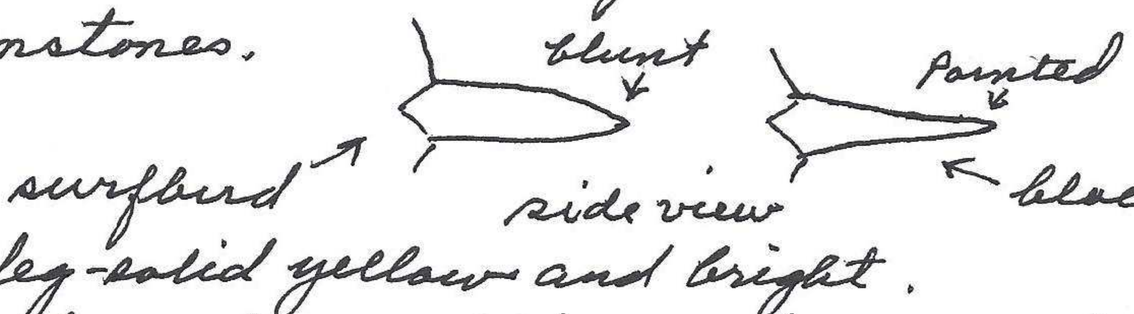
6:05 Ad. bald eagle flew past Bee House in rain and poor visibility. It passed 15' from bedroom window

Feb. 22, 1990

Sunrise 7:27 A.M at base of S Thatcher Peak



9:30 A.M In front Bee House on rock shoreline observed 3 surfbirds and 5 black turnstones.



Surfbirds leg-solid yellow and bright.
black turnstone leg - reddish and transparent.
Both species displace each other but black turnstone moves.
Surf bird larger than black turnstone. They remained in area for 20 minutes in front Bee House.

2:00 P.M. An adult bold eagle on Leo Reef and within 4 feet to the nearest of 25 harbor seal. The eagle hopped to other rocks but did not disturb the seal.

4:45 P.M 2 adult bald eagles fed on a carcass of some kind for 35 minutes among 21 harbor seal. One seal was 8 feet of eagles.

Incoming american crows (21) flew 25' high over surfbirds and black turnstone without disturbing the shorebirds.

American crows when feeding on rocky slopes where cracked corn is broadcasted for other birds, remove or turn over rocks up to 3" in diameter to get at the food lodged under the rocks.

Feb. 23, 1990

In N Lopez Sound in an area between Leo Reef, 7 Iowa Island and Bee House at 2:00 P.M; 1 pelagic cormorant, 1 surf scoter, 1 marbled murrelet, and 1 glaucous-winged gull. Day clear and water calm.

Collected the 2 following insects at Bee House:
900223-1 wood boring beetle
900223-2 Ant.

Feb. 24, 1990

10:30 A.M. Fog lifted from N Lopez Sound. No harbor seal Leo Reef.

11:45 A.M. noted double-crested cormorant with almost white neck and chest.

11:50 A.M 1 river otter swimming S past Bee House.

2:00 P.M 11 harbor seal on Led Rock. 1 river otter swimming N out 20' from shore in front of Bee House.

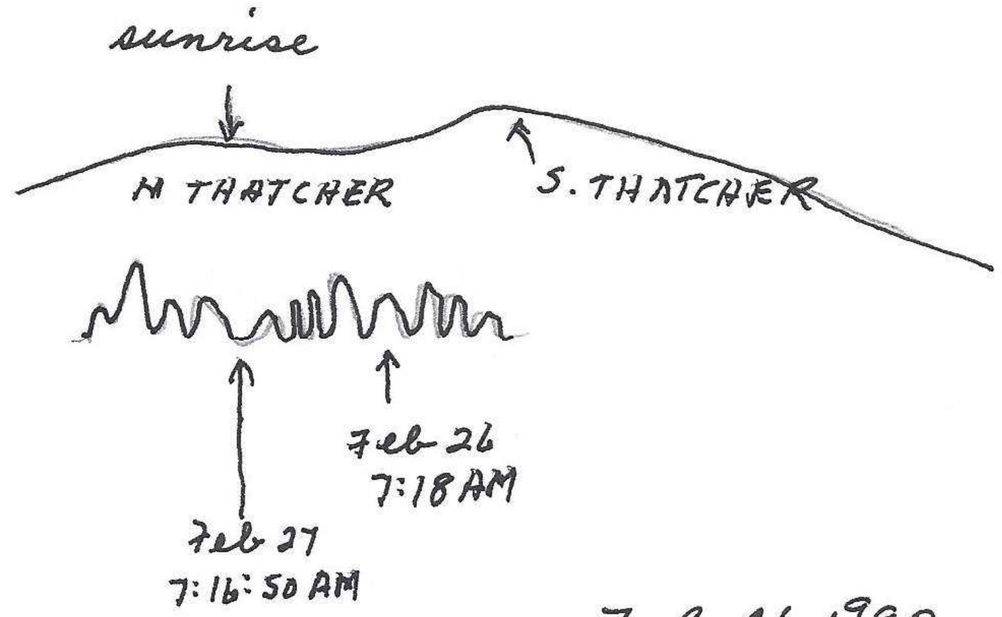
It is common for American crows to fly out 100' from shore over water from porch feeder at Bee House and then return. If they want to gain altitude they circle upward once or twice and then move landward. At one time 11 left feeder and flew S toward Surft Bay Beach. At Lichen Point, 5 returned to feeder. When crows feed at Bee House, glaucous-winged gulls occasionally come to investigate activity.

2:25 A.M Townsend Chipmunk at feeder at Bee House and first sighting since last recorded in journal.

At Causeway SW Fisherman's Bay (henceforth this secondary bay will be edited S. Fisherman's Bay). On W side Causeway of S Fishermans Bay are 53♀ and 4♂ red-breasted mergansers, 20 bufflehead ducks, 18 surf scoters, 1 double-crested cormorant. On E side of causeway in S Fishermans Bay are 11 black-bellied plover, 8 western sandpipers and 6 glaucous-winged gull. also 18 bufflehead ducks, 6 scaup sp.?, and 4 red-breasted mergansers.

Feb. 25, 1990

Townsend chipmunk active in P.M.



Feb. 26, 1990

Collected 2 ants from Bee House.

900226-1 ant

900226-2 ant.

12:30 P.m. 8 harbor seal on Leo Reef. 2 on Little Flower Rock.

900227-24

Feb. 27, 1990

Sunrise 7:16:50 A.M (see Feb. 26 for position on figure)
Surf Bay off beach: 12 ♀, 50↑ bufflehead ducks, 6 scaup sp., 43 mew gulls, 2 glaucous-winged gulls., 4 surf scoters.
4 Brewer blackbirds 1/10 mi. S Lopez High School on Center Road. also 3 american robins.
Richardson: 8 surf scoters, 3 glaucous-winged gulls, 8 bufflehead ducks, 3 scaup.
Agate Beach. 8 buffleheads, 4 american crows, 3 horned grebes, 1 common loon.
Watmough Bay. 6 surf scoters outer part of bay.
S Fisherman's Bay, 2 mallards, 8 buffleheads.
1916 School House in marsh to E: 33 northern pintails, 8 american urdgeon, 4 gadwall, 2 mallards,
Humphrey Lagoon 2 bufflehead,

Feb. 28, 1990

Sunrise 7:14:15 A.M. centered on N slope near top of N thatcher Peak. The sun first appeared 2 1/2 times below the heighth of tree exposed on ridge



8:30 A.M. Townsend chipmunk active.

March 1, 1990

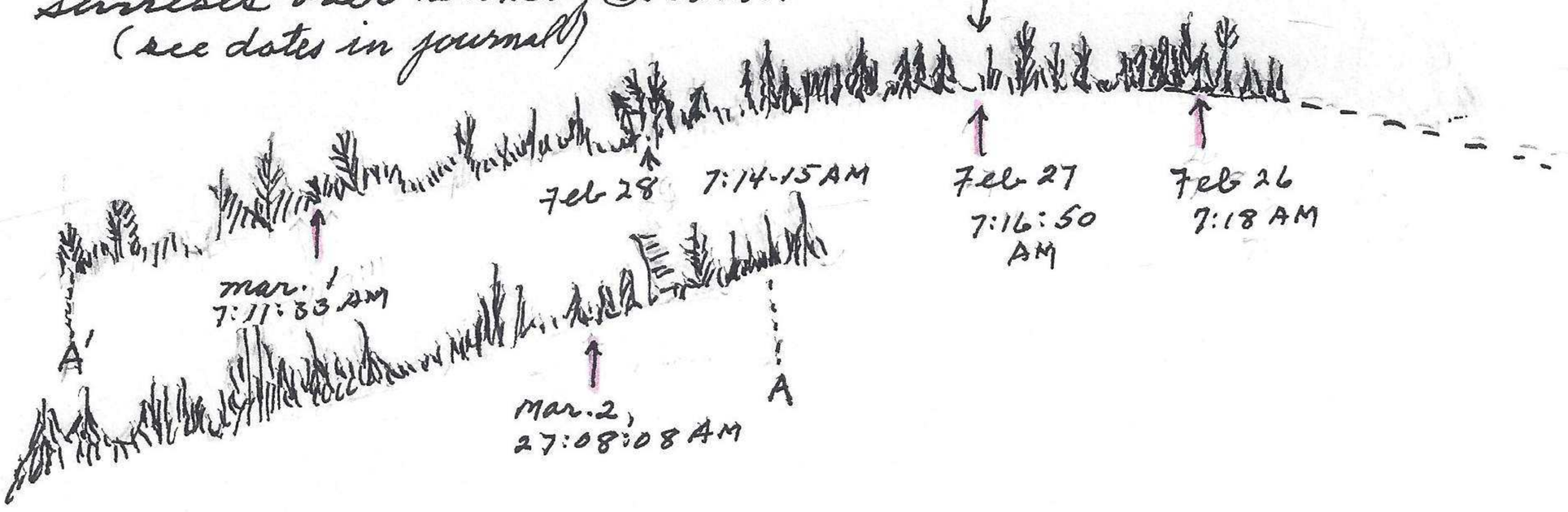
Sunrise 7:11:33 A.M.
An adult ♀ mule deer has 2 young. The adult measured 29" at shoulder.
Swift Lagoon 5 green-winged teal,
Townsend chipmunk, at least one of them, observed every day.
1:05 P.M. 5 harbor seal on Leo Reef (Rock no 10). 5 seal also on Rock no 11 of Leo Reef. no other harbor seal in area.
Young of last year 27" high at shoulder has knobs for antlers

March 2, 1990

Sunrise 7:08:05 A.M.
no pelagic cormorants observed in N Lopez Sound in last 5 days which were fair days
♀ mule deer and her young with 1/3 body showing light hair of pelage change. 7 other deer normal hair color. One adult ♀ 29" high at shoulders. Her young 24".

900302-25

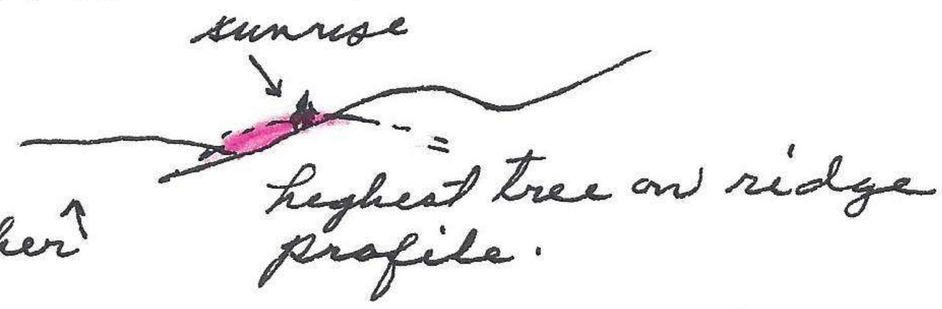
Sunrises over Blakely Island.
(see dates in journal)



4:30 P.M. 3 river otter swam S past Bee House. They fed within a foot of shore and at one time all three climbed on rocks below Bee House.

March 4, 1990

Sunrise 7:02 A.M.



12:10 P.M. a river otter left water for shoreline below Bee House. when it recognized me it put in and swam under water 25' and the surfaced and raised head & neck above water to inspect me and then dove and resurfaced 100' beyond.

Wtlands E 1916 School House. 18 northern pintail, 2 mallards, 6 gadwalls, 24 American widgeon. . These kinds of birds in about same numbers have been in the marsh here for at least the last 3 days.

No individuals or large groups of pelagic cormorant in n Lopez Sound since last recorded in journal.

Ducks or other waterbirds have not been observed in Surfs Lozam in last 5 days, except the 5 green-winged teal of Mar. 1.

1:30 P.M. 34 harbor seal on Leo Reef (Rocks 2-6), one on Rock no 10 of Leo Reef. 8 harbor seal on n Flower Rock,

2 western grebe 300' SE Bee House in n Lopez Sound.

An adult bald eagle perched on upper structure of Leo Reef Beacon flew down to highest rock on the reef and alighted within 8 feet of a harbor seal. Neither this seal or others did not react to the eagles arrival or activity, even to the utent of raising their heads.

Coast Guard barge landed Leo Reef and removed superstructure to floor level and lowered light. They left 4:44 P.M. At 4:47 P.M the first harbor seal swam near the island. At 4:59 P.M 1 seal 15' away, 1 25' and 1 80'. 5:03 P.M. 5 seal in area but none hauled out on reef. 5:15 P.M 3 harbor seal within 5' of shore but did not haul out. Discontinued observation at this time.

March 8, 1990

10:25 A.M Hailed for 5 minutes. More on ground on Blakely than on Lopez. Largest hail 1/4" and lasted 20 minutes on ground before disappearing Mule deer carried hail on their backs.

1:20 P.M. 138 pelagic cormorant in fishing pod 1/2 mi. SSE Bee House.

4:42 P.M. S Fisherman Bay; 18 red-breasted mergansers, 1 hooded merganser, 9 surf scoters, 48 bufflehead ducks, 11 scaup, 6 gadwalls, 11 glaucous-winged gulls, 2 northern pintails. On west side of S Fisherman Bay Causeway 8 glaucous-winged gulls, 13 black bellied plover, 24 western sandpipers, 1 Day Cold and wind from SW.

Hummel Lake: 3 bufflehead ducks, 3 scaups.

Marsh E 1916 School House; 12 northern pintail, 8 American widgeon, 2 mallards.

Swift Lagoon; 6 green-winged teal, 2 northern pintails.

900309-28

March 9, 1990

Family of mule deer at feeder. They measured ♂ ad. 29" high at shoulders, ♀ young of last year 25" and another ♀ of last year 23. The last one is a runt of the group of deer in area.

During a high wind (waves 22-23 per second) at 10:30 A.M. I approached an eastern gray squirrel that was feeding on the perch feeder and stood within 2 feet of the squirrel. Ordinarily these squirrels leave the porch when porch door is opened some 20' away. The confiding behaviorism was associated with the high wind and have never happened before in 4 years of observation

Bee House

Trip to Chris at Last Lake in Snohomish Co.. Left from Lopez Island ferry terminal at 2:46 P.M. Waves 1½' high and and whitecaps and foam streaks. Birds observed: 3 pelagic cormorants, 2 glaucous-winged gulls, pelagic cormorant, pigeon guillemot, 2 separate pelagic cormorants, 2 common mergs, 2 mew gulls, 2 mew gulls, 4 common mergansers, mew gull. W end Pearsine Pass at harbor point at 2:56 P.M. Kingfisher. On S side pass on steep slope above shore a patch of 100'x100' of ocean spray in white blossom. Pelagic cormorant. 2:58 P.M E end Pearsine Pass. Pelagic cormorant, mew gull. 2:59 P.M marine marker. 3:02 P.M Out crop of lichen directly W on Blakely Island. Ad. bald eagle in top tall tree 150 N of lichen cover above. Waves 3' high. whitecaps 8" to 3" widths at breaking point. Wind SE. Light SW Cypress Island at 3:19 P.M. Pigeon guillemot, mew gull. Arrived Anacortes at 3:33 P.M.

Continued to Thousand Trails Preserve Redtail hawk at junction Reservation Road and Highway 20.

March 10, 1990

Thousand Trails Preserve. Birds in area: 4 American black oystercatcher, 12 American crows, 6 American widgeon, 5 bufflehead ducks, 2 glaucous-winged gulls, song sparrow, kingfisher.

8:20 A.M River otter in Lone Tree Lagoon for 45 minutes. It covered entire lagoon and was successful in getting food at least 80% of dives. It approached 5 buffleheads which left the lagoon when otter was within 40' of them. Left for Chris via Skagit river valley - Stillaguamish valley to Selvona, thence E to 9 high. was, thence Monroe, thence Highbridge Rd to Chris at Last Lake

900312-29

Lost Lake, Snohomish Co., Washington

march 10, 11, 1990

Stayed at Chris home for 2 days. noted Steller jay.

march 12, 1990

Left Chris' at 10:29 A.M at mileage 66984.4. Will follow highway 9 to Arlington, thence E on highway 530 to Darrington, thence N on 530 highway to Rockport-Cascade Rd to Corkindale, thence E on highway 20 to marblemount, thence return W on 20 to Cedro-Woolley, thence Burlington, Mt Vernon, La Conner Thousand Trails. Cloudy of cumulus clouds and promise of a beautiful day. Catkins of willow are the earliest and at present most conspicuous blossom. Catkins were out on Bee Estate at least as early as last week. Other kinds of trees show blossoms. Red alder has a definite reddish cast. 3/10 mi. N Lost Lake on Welch Road. Moles are active digging and hummock making in most open grassy fields. At N end Welch Road, northern flicker. Now on Elliot Road. First oxbow with approx. 120 maelards, 12 gadwall, 40 American widgeon and 20 pintail at NW end at drainage inlet. This is the pond at stop sign of Elliot and Faber Road. The second larger oxbow approx 8/10 mi. beyond has about 60 ducks sp.?. 16 American robins Snohomish river valley. At bridge over Snohomish River are approx 150 glaucous-winged gulls at sanitation reservoir on highway 9. no birds between Snohomish and Arlington on highway 9. 3 mi. E Arlington on highway 530 are 4 mule deer in open grassy field, one at least 360' from forest. Skunk Cabbage in blossom. At crossing of Stillaguamish River. 4 robins, no birds otherwise enroute. Dark-eyed juneo. First snow along utility right-of-way, at 37 milepost. At milepost 39, snow now all along highway. Darrington at 12:21 P.M. roven. Skagit Co. line. 2 roven. Bennetto-ville. Now along Sauk River. no snow along Sauk River route. Skagit River greenish but not muddy. 4 robins at milepost 102. Dark-eyed juneo. Now crossing to Corkendale Creek on highway 20. now E to Marblemount 2:20 P.M and turning around to retrack 20 to W. no bald eagles observed on Conservency preserves. Along 20 are individual trees, conifers, alder etc are covered with moss whereas adjoining trees are free of moss. 2 rovens. Concrete It is incredible how

few birds there are of any size along highways. At 3:04 P.M in an inundated field to S are appx 1000 mallards, 30 gadwalls, 50 American widgeons and one Trumpeters swan. There may have been other species of ducks. This area is approx. 4 mi. E Hamelton on highway 20. There are other flooded fields and all have ducks. I would estimate 5000 in all. no Burlington, thence mt. Vernon, to Laconner Thousand Trails Preserve.

March 13, 1990

Left Thousand Trails Preserve at La Conner at 10:26 A.M for Anacortes Ferry Terminal. Left for Lopez Island 10:51 A.M. Clouds 15%, wind 5E. Surf scoter. marine light SW Cypress Island. Rigeon guellemot, double-crested cormorant, mew gull, 5 Pointer Island. Appox 70 glaucous-winged gulls on 5 face island and on territories. Lawson Reef. 28 mew gulls, 1 glaucous-winged gull, 1 double-crested cormorant. W end Thatcher Pass at light. 80% sand slope stabilized with greenish-gray moss. Glaucous-winged gull. Willow Island. Water falls (named here as Thatcher Water Falls) with normal amount of water for this time & season. Logs piled on ramp at N end Bay. 14 harbor seal on Leo Reef. Arrived Lopez Island 11:29 A.M. Home on Humphrey Head. 11:40 A.M.

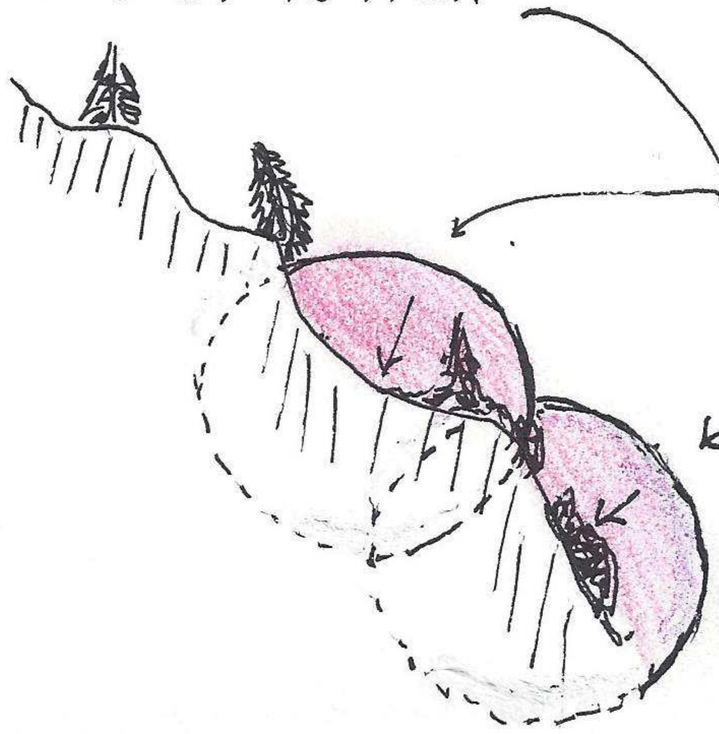
1:30 P.M a belted Kingfisher perched on limb above Spring Cove raised in unison head, body & tail every 10 seconds for 6 consecutive times.

March 14, 1990

Kingfisher on limb above Spring Cove. Raised in unison head, body, & tail up and down every 10 seconds for 6 times.

March 15, 1990

Sunrise 6:39:45 A.M.



March 16, 1990
Sunrise 6:39 A.M
First starling at Bee House. It examined each of two nesting box used by violet green swallows for 4 seconds each then left. Aperature

too small for starling siege.

First of redwing blackbird at marshland beyond N end of Lake one week ago.

An eastern gray squirrel moved along porch rail for 8 feet, with sequence of 5 jumps each jump ending with head low and stiff legs. It remained in the stopped motion for 4 seconds before next jump. To a human eye the jumps were awkward.

From last week To 3 days ago there was 1 Townsend chipmunk at Bee House, in last 2 days 2 and today 3.

March 17, 1990

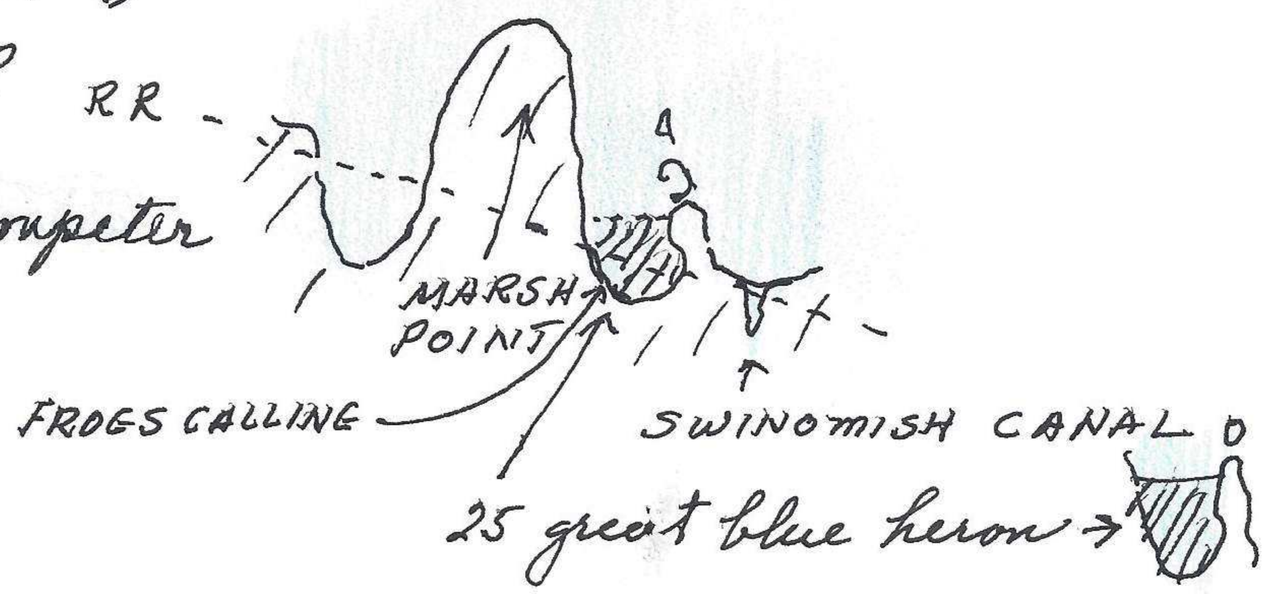
An boat trip noted river otter asleep on water at N end Humphrey Head. 1:04 P.M. 7 bald eagles on Flower Island 3 adults and 4 immatures. One adult flew N. They continuously adjusted their position on the island. Madrona flowering. On S side of Flower Island 2 river otter were 1/2 way up slope. At that time 5 bald eagles remained on the island above the otter.

March 18, 1990

Left Lopez Island 10:00 AM for Anacortes. At Pointer Island are approx. 200 glaucous-winged gulls on territories.

At NE marsh Point; 4 bald eagles, 1400 brant, 8 buffleheads, 600 greater scaup, also mallards, gadwalls and american widgeons: →

2/3 mi. N off Hi. 20 and Bayview-Edison Rd. Observed 5 trumpeter swans.



March 19, 1990

Mr. Hachette (get name and address), a visitor from Seattle knew about the 2 brothers of Mildred Wakefield and supplied the following information: Their boat was 125' AKL. He had not heard about them recently. He also said the Pacific oil stoves was the best diesel stove for cooking and heating and the bigger the better. Takes long time to heat them.

the oil rings in time deform and cause soot. At one time he had a wood burning stove and carried 1 cubic yard of firewood.

March 20, 1990

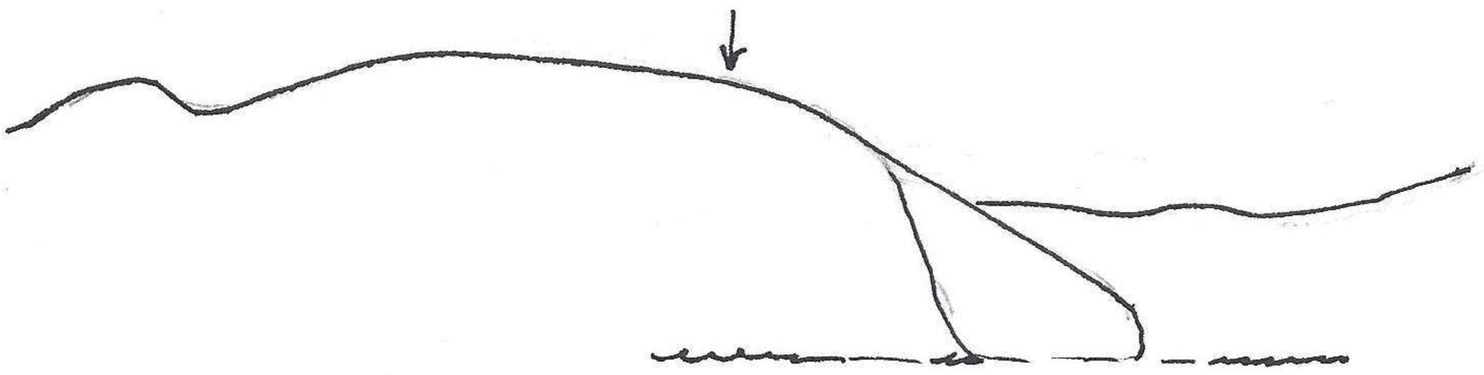
Left Lopez Island for Anacortes at 7:46 AM. 2 glaucous-winged gulls and one mew gull. No harbor seal on Leo Reef. Light SW of Blakely. Common murre, glaucous-winged gull. Pointer Island with approx. 200 glaucous-winged gulls. Gulls also at Black Island and I presume are glaucous-winged. 2 marbled murrelet. 2 double-crested cormorant. Arrived Anacortes. To hospital for mary Pauline mamm. Return Lopez Island. In Rosario Straits 28 grey, 3 rhinoceras auklets and 8 pelagic cormorants in one feeding group. Arrived Lopez Island 5:46 P.M.

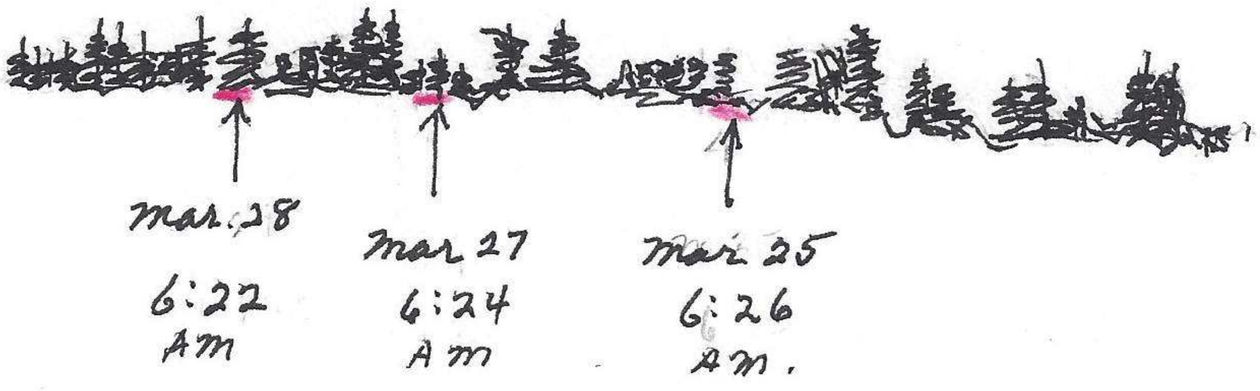
March 23, 1990

To Annette Christines (Chris). At 2 mi. S Arlington approx. 2000 mew gulls in 1/10 mi. x 70' wide in green field with rain pools, lakes and drainage. 2 red-tailed hawks across Skagit delta, also one marsh hawk.

March 25, 1990

Sunrise 6:27 A.M.





at daybreak, a myotis size bat flew past Bee House 5 times in 4 minutes.

8:20 A.M. rufous hummingbird at feeder at Bee House. In recollection of red-winged blackbirds on territories at Hummel Lake 1 month ago. Also violet-green swallows at Hummel Lake 1 week ago.

Adult bald eagle flew S on ridge above Shoal Bay marina.

5:20 P.M. myotis size bat flew by second story room of Bee House.

March 26, 1990

Sunrise 6:26 A.M.

6:15 A.M. bald eagle flew N past Bee House.

6:46 first violet green swallow at nesting box (roof level) and alighted for 3 min. but did not enter box.

9:25 A.M. starling at same box as above but could not enter.

1:07 P.M 1 European widgeon among 48 American widgeon at Spurfts Lagoon. Also 2 mallards, 4 northern pintails and 5 green-winged teal.

At Spurfts Bay on beach were: 22 marbled godwits, 13 greater scaup, 24 mew gulls, 1 American crow, 13 glaucous-winged gulls and 1 adult bald eagle on beach.

N end Shoal Bay 3 western grebes. No fish at 28' depth.

March 27, 1990
from Lopez Island.

To Sidney, Canada. N of Upright channel 3 glaucous-winged gulls, 5 mew gulls, 1 pigeon guillemot, Left Areas. 2 pelagic cormorants, 18 glaucous-winged gulls, 2 American crows. N end Upright Channel 7:35 A.M. 2 mew gulls. 7:36 Ad. bald eagle NE end Shaw Island, on perch top dead tree. 2 mew gulls. 7:40 A.M red-breasted merganser. 7:40 A.M N end Canoe Island. 2 glaucous-winged gulls. 7:43 AM 8 surf scoters, 2 mew gulls, 2 common murres, 4 common murres, 1 harbor seal, 2 pigeon guillemots, 1 red-breasted merganser, 2 pigeon guillemots, 2 glaucous-winged gulls, 2 mew gulls, 7:47 A.M marbled murrelet, common murre. 7:48 mew gull. 7:49 A.M 2 murrelets (common) 7:52 mew gull, glaucous-winged gull. 7:53 beacon to N 7:53 Univ. Wash. Tidal gauge. 7:58 A.M 2 red-necked grebe.

american merganser. 8:01 A.M Friday Harbor. 12:39 A.M Left Friday Harbor. 12:45 Unfv. Washington tidal gauge. 12:54 P.M. Common murre. 12:54 Common murre. 12:55 P.M 5 common murres. 12:57 W yellow Island. 1:06 Common murre. 1:08 6 pelagic cormorant & 2 mew gulls and 1 pigeon guillemot. E end Speiden Island at 1:10 P.M. 1:11 erratic rocks low 1/5 of slope of island. at least 30 white cervids (erratic). 1:13 good tidal currents. 1:15 P.M S of Sentinel Island, 400 mew gulls in raft between reef and Sentinel Island. 1:17 S green marker. 1:20 S of high beacon (red + green), less tidal currents. 1:23 6 common murres. 1:24 now good tidal currents. 1:27 3 harbor dolphins. 130 2 glaucous-winged gulls. 1:33 E end Mandarte Island. where approx. 1600 glaucous-winged gulls are on territories, 1:35 3 double-crested cormorants. 1:37 yellow-black marker, 1:40 Forrest Island, E end at becon (red & white). Island north of the E end has 9 harbor seal. Another Island farther N is austanding in form and would make a good photo. On E side of Sidney Spit are: 200 brant, 64 surf scoters, 18 glaucous-winged gulls, 20 mallards, 40 American widgeons, 18 pintails, 13 bufflehead's, 18 gadwalls and 4 double-crested cormorant. 1:43 P.M N end Sidney Spit. 1:46 P.M 2 common murres. 1:49 P.M 12 white-winged scoters, 2 pigeon guillemot, pigeon guillemot. 1:50 P.M 1 red-necked grebe, 3 pigeon guillemot 1:51 P.M 1 old squaw duck, 4 surf scoters. 1:53 P.M Sidney on Vancouver Island. while ferry in dock observed: 8 Barrow golden eyed ducks, 1 common loon, 8 glaucous-winged gulls, 4 American crows, 1 red-necked grebe, 2 common merganser's. A jet plane flew low over bay and Barrows goldeneye ducks did not dive.



Left Sidney, Vancouver Island, Canada at 2:10 P.M. Red-necked grebe take off and land awkwardly. 2:13 P.M 3 pigeon guillemot, 6 pigeon guillemot, 5 pigeon guillemot. 2:15 P.M E end Forrest Island, 3 pigeon guillemot; 2 pigeon guillemot. 2:17 P.M 5 of black and yellow marker. 2:19 P.M 6 glaucous-winged gulls, 1 pelagic cormorant, 1 pelagic cormorant. 2:24 P.M 2 glaucous-winged gulls. 2:26 P.M red-necked grebe. 2:32 glaucous-winged gull. 2:35 P.M. 2 glaucous-winged gulls, 1 common murre, soil beginning to show three slopes of Speiden Island, green elsewhere. 2:37 P.M green marker. 2:39 P.M 2 common murres.

2:40 P.M. 16 mew gulls. 2:44 P.M E end Spieden Island. 2:47 glaucous-winged gull. 2:52 P.M common murre. 2:56 W of W end Wasp Passage. 3:05 P.M 2 groups gulls, another group of 3 cormorants, 40 rhinoceros auklets, 26 gulls and others. 3:08 P.M. Univ. Wash tide guage. 3:10 P.M. red-necked grebe and common loon. 3:11 P.M Friday Harbor ferry terminal. 3:24 P.M left Friday Harbor. 3:28 P.M Univ. Wash. tidal guage, good currents. 3:30 P.M. 6 glaucous-winged gulls, 2 mew gulls, 2 double-crested cormorant, 1 pelagic cormorant on a floating log. 3:31 P.M. 3 glaucous-winged gulls. 3:34 P.M. raft of 98 glaucous-winged gulls, 31 mew gulls, 1 rhinoceros auklet. Current as polygons. ○○○, ○○○○, ○○○ 3:35 beyond currents. no birds. 3:37 Common loon. 3:39. 3 common murres. 3:40 P.M 1 common murre. 3:40 P.M 8 common murre. 3:40 3 glaucous-winged gulls. 3:41 Flat Point on Lopez Island. (at S end Coral Island). 3 glaucous-winged gulls. 3:43 glaucous-winged gull. 3:45 P.M 37 glaucous-winged gulls, 1 common merginser, 6 double-crested cormorants in one group. The common merganser had a 4" feed. 3:46 P.M 2 groups of 2 and 4 glaucous-winged gulls. 3:47 N end Upright Head, Lopez Island, 2 glaucous-winged gulls. 3:49 P.M 2 glaucous-winged gulls. 3:55 P.M arrive Lopez Island ferry terminal.

March 28, 1990 at Bee House

12:10 P.M 6 Townsend Chipmunks at feeder. Rufous hummingbird at feeder. 3 bald eagle sightings ^ this A.M.

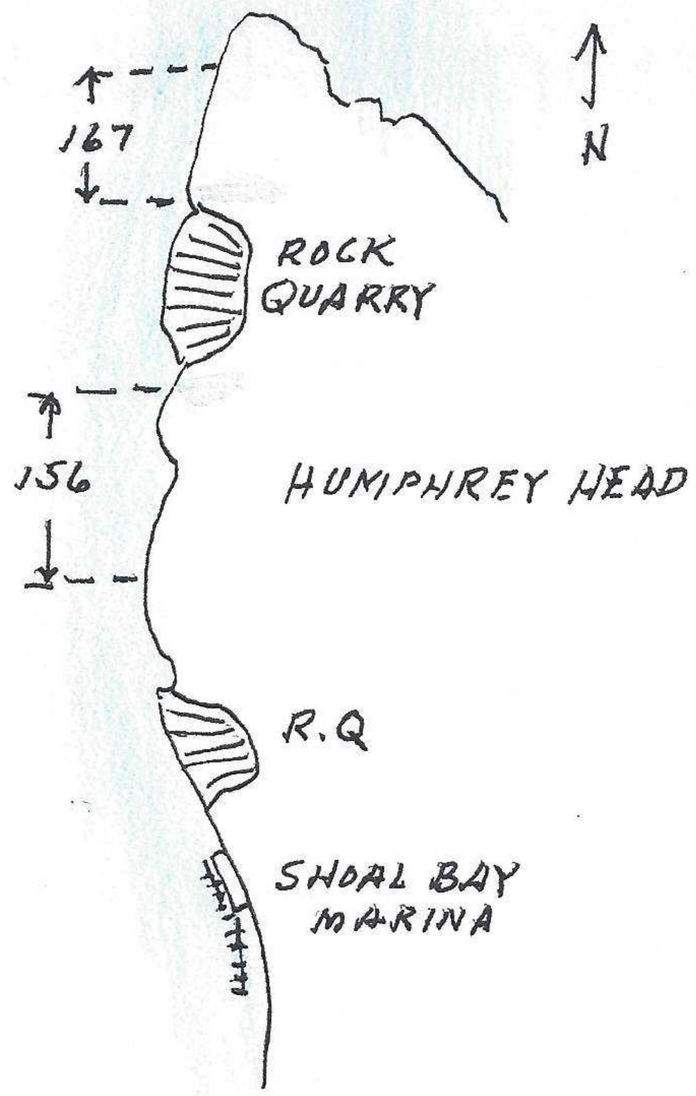
March 29, 1990

2:35. River otter swam N past Bee House. In last 3 days the band-tailed pigeon has been at feeder at various times of the day

April 1, 1990

Checked causeway at Fishermans Bay SW end and observed 34 brant feeding on and along the shoreline.

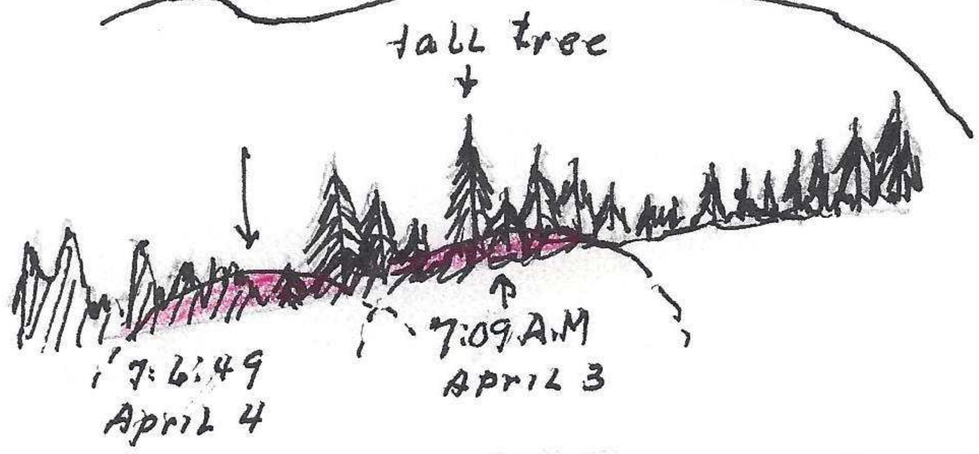
Took Bee Boat along W side Humphrey Head and counted ochre sea stars, Piaster ochreus. Tide low. In the first cliffs N of Shoal Bay Marina, there were 156 individuals and in second set of cliffs from N end Rock Quarry to and including white cliffs used by marine birds for roosting were 167.



One mass of 48 ochre sea stars (orange and purple in equal number) in first set of 156 were compacted in an area of approx. 1 1/2' x 2'. A second large mass of 72 stars (orange & purple mixed) in cliff area of 167 stars occupied an area of 2' x 2'.

April 3, 1990

Sunrise 7:10 A.M. at highest tree on n slope of North Bluff. Peak,



First brownish medium size butterfly this season. Band-tailed pigeon last 4 days but only a single individual.

April 4, 1990

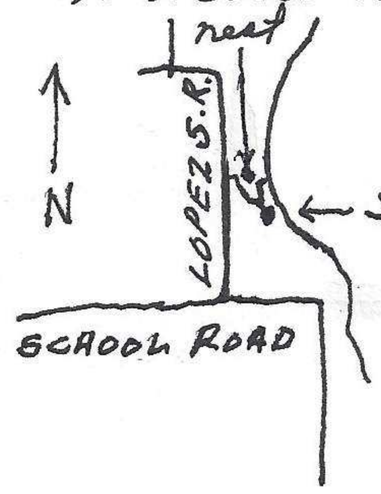
Sunrise 7:06:49 AM, see above.

3 bald eagles flew S past Bee Museum before sunrise, one to Lucken Point and the other 2 to Surf Bay.

April 5, 1990

Mule deer measurements: ♀ young of last year 25" high at shoulders, ♀ adult 30", ♀ adult 29".

Marcia Simpson reports of eagle nest: Eggs hatched march 25, 1990 and young are 2 weeks old. Observation based on activity of adult at nest. The young are now on rim of nest. She has never observed a bald eagle catch a live fish from water. The eagle feeds along shore and in open fields.



A bald eagle landed on a tree 40' from nest and remained for 1/2 hour.

900406-37

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

April 6, 1990

Hummel Lake; 2 common mergansers.

Swift Bay Lagoon: 4 mallards, 6 green-winged teal, 21 northern pintails, 3 godwalls.

Pond at Cross & Port Stanley roads: 38 American widgeons, 1 European widgeon, 2 bufflehead ducks, 1 greater yellowlegs

Swift Bay Low Beach: 38 mew gulls, 9 glaucous-winged gulls, 6 American crows, 9 surf scoters, 6 bufflehead.

5:20 P.M. 207 cormorants including pelagic and double-crested, left roosting cliffs at NW corner Humphrey Head when a bald eagle flew by just overhead.

5 bald eagle sightings today.

April 7, 1990

madrona with yellow inflorescence on W side Blakely Island and has been for last week.

At Lopez ferry terminal at 9:20 A.M 2 ad. bald eagles flew E 2/10 mi. out to a fishing group of 121 pelagic cormorant, 60 double-crested cormorant, 8 rhinoceros auklet, 29 glaucous-winged gulls. The eagle did not contact water but partially displaced the other birds. The eagles then flew back to perching tree on N end Upright Head and in 5 minutes flew back to the fishing groups of birds. While watching the aquatic birds 3 separate boats changed their course to head directly into the fishing groups. Near ferry terminal were 6 western grebes.

to pick up Mary & Don Jensen at Vancouver Airport

Left Lopez ferry terminal at 10:18 A.M via Anacortes, waterfalls active at Thatcher on Blakely Island. 10:30 A.M Willow Island. 10:33 SW Blakely Island at light beacon. 10:36 A.M Usual glaucous-wing gulls on Pointer Island. ON 5 and 80 cormorants. 10:39 3 double-crested cormorants, 10:43 A.M 3 glaucous-winged gulls, 1 pigeon guillemot. 10:46 A.M double-crested cormorant. 10:58 Arrive Anacortes. 3 pigeon guillemots, 1 red-necked grebe at terminal. Left Anacortes ferry terminal at 11:43 A.M. 12:30 Rhododendron Restaurant at Bow City. No N to Chuckanut Drive to Bellingham arriving Blaine on Interstate 5 at mileage 2:06 P.M. (from Anacortes). Thence into Canada, 99 to Vancouver Airport. 82 miles from Anacortes arriving at 2:45 P.M or 3 hours traveling time. With Mary & Don and Annette we continued to Vancouver for the night, after

having visited Granville Island. Lodging in Vancouver proper (Holladay Inn)

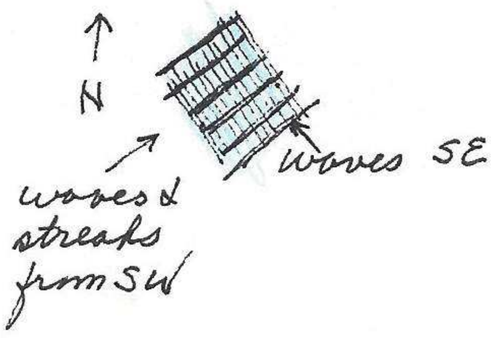
April 8, 1990

Vancouver, Canada. This A.M checked Stanley Park. near restaurant there noted melanistic red squirrel, Tamiasciurus douglasi In lakes noted 18 common goldeneye ducks, 1 great blue heron, 3 glaucous-winged gulls, 6 American crows. Left Vancouver and continued S to U.S, thence to Bellis Fair in N Bellingham. Arrived Anacortes ferry terminal at mileage 819.0 or 82 miles to Vancouver Airport from Lopez Island.

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

April 11, 1990

Piloted the Bee boat with mary and Don to and around Frost Island and back. Between 4:30 P.M and 7:42 P.M winds currently from SE and waves, then wind abruptly changed and came from SW, first streaks then wavelets, both superimposed on current waves.



At same time a rainbow extended (end to end) from NE end Frost Island to beach house on NW end Blakely Island.

April 12, 1990

1:30 PM river otter swam N past Bee House. 2 band-tailed pigeons at feeder.

April 13, 1990

Rain last night to at least 12:30 P.M. Mary and Don left for Utah.

April 14, 1990

Photo 900414-1 of O'Learys renters on shoreline. 10 of the kids had just finished of passing a ball from one group to another without being touched. Rocks and sticks were commonly thrown into the water.

Check rock quarry NW end Humphrey Head from top. 1 pileated woodpecker appr 150' due E on stump. 4 turkey vultures sailed by at top quarry. No other birds on trail to quarry and return by road to Bee House. One madrona cut at top quarry measured 18" diameter.

900415-39

April 15, 1990

16 mule deer at feeder at Bee House, one small one ↑ 25 inches high at shoulders. Antlers starting to grow. mange in 30% of deer. A definite line of dominance established with older ♀ dominant. Thamnophis an open slope E of Bee House.

Made circumnavigation of Lopez Island. Annette and Q left in the Bee boat at 12:00 P.M. from Shoal Bay. Will keep complete census of trip. In Shoal Bay 1 loon, 2 glaucous-winged gulls and 4 mew gulls. Upright Channel 1 common murre, 4 glaucous-winged gulls and 6 mew gulls. Flat Point. 1 double-crested cormorant. 1:26 P.M Shark Reef. 1:30 P.M Deadman Island. Glaucous-winged gulls on both whale Rocks. Whole Rocks 1:40 P.M. western grebe, rhinoceros auklet, glaucous-winged gulls on water. Ling Island. Glaucous-winged gulls on Hall Island at 1:55 P.M. 2:11 P.M Iceberg Point, 2:44 Colville Island, glaucous-winged gulls and pigeon guillemot, 6 western grebes at Channel. 3:00 P.M, Boulder Island. no gulls, one Steller sea lion (sp.?). Bird Island Rocks (W of) red-necked grebe. Just before Lopez Pass surf scoters and pigeon guillemots. 3:34 P.M E end Lopez Pass, 28 western grebes in one group 7/10 mi. S Frost Island. 4:25 Frost Island-Spencer Spit Pass. 4:32 Flower Island, 8 glaucous-winged gulls on island. 4:37 Leo Reef, no harbor seal or gulls. 4:50 P.M N end Humphrey Head. 5:00 P.M Shoal Bay Marina. Summation of time. 5 hr 31 min. at average 11 RPM or 6.2 MPH.

From Bee House between 6:15 PM and 6:45 P.M one group of approx 750 Bonaparte gulls and another group of 420 N of Leo Reef swam into N wind feeding on surface, sometimes all in flight other times mostly swimming. They adjusted their position in the raft by leaving N end of raft and flying S to assume their position at the S end of the raft. Sometimes I have seen the reverse where the rear gulls flew to head of raft. At 6:30 all Bonaparte gulls left to SE to W end of Thatcher Pass, arriving in raft formation, some single lines. They circled in area at random direction for 20 minutes, gaining elevation until at least a 1000 feet high all left to SW. Other Bonaparte gulls joined them from Thatcher Pass forming a group of at least 3000 birds. no birds (Bonaparte gull) in area not associated with the raft either on the water or in the air.

April 17, 1990

At Bee House feeder, ♀ mule deer 30" high at shoulders, ♂ mule

deer of last year 28" high at shoulders and a ♀ young of last year 27".

11:30 Am. 11 band-tailed pigeons at feeder in one group.

Collected a red-flowering currant plant no 900417-1 on Bee Estate.

Photo 900417-2 Two old Douglas firs top of Graben Ridge, Bee Estate (to S)

Photo 900417-3 Top rock quarry above Shoal marina, (to S)

Photo 900417-4 " " " " " " (to S)

April 18, 1990

Observations from Causeway, S end Fishermans Bay. On west side (San Juan Channel) at 5:32 P.M. 52 brant, 1 great blue heron, 8 red-breasted mergansers, 34 buffle-heads, 17 glaucous-winged gulls, 2 northern pintails, 2 american crows, 3 surf scoters, 4 greater scaup. E side of Causeway in Causeway Lake (extension Fishermans Bay) 5 great blue heron, 42 greater scaup, 28 buffleheads, 36 glaucous-winged gulls. In Swift's Lagoon are; 2 mallards, 23 northern pintail, 15 green-winged teal, 7 gadwalls. In Swift's Bay: 8 gadwalls, 18 greater scaup, 14 buffleheads, 11 American crows, 17 glaucous-wing gulls, 5 surf scoters.

At Bee House 8 bald eagles flew past the first at 6:10 P.M to S and the last to N at 8:13 P.M.

Chestnut-sided chickadee entered bedroom on second story Bee House.

Last week 1 great blue heron in first 2 days, 2 next 3 days and 3 the next 2 days.

Collected limpets from Otter Cove (N Boundary Pt.) Spec[illegible] number 900418-1 Plate limpet nearest low tide are same color as water when wave disturb bottom sediments. Limpets in general are larger this year than last year.

April 19, 1990

At tidal flats N end Fishermans Bay observed: 2 ♂, 6 ♀ dunlin, males in breeding plumage, 1 great blue heron, 3 glaucous-winged gulls, 1 mew gull, 12 green-winged teal (6 ♂ 6 ♀), 1 ♀ bufflehead, 1 violet-green swallow. In main Fishermans Bay just beyond to S are; 6 buffleheads, 3 red-necked grebes. A helicoptera passed overhead and all birds left but all returned. Shortly after 8 green-wing teal, 1 greater yellowlegs & 1 mallard arrived.

April 20, 1990

2:35 River otter swam N past Bee House out 10' from shore. Buster, a ♀ mule deer measured 29" high at shoulders. A young ♂ mule deer had left nasal swollen, pelage browner than other deer. ♀ measured 26" high at shoulders

1:30 PM 15 harbor seal, 28 glaucous-winged gulls on territories, Flower Island.

1:35 P.M. 26 greater white-fronted geese in V formation, approx 200' above Bee House flying N called in a high pitched squeal in conversation.

The yellows of deciduous trees on NW side Blakely Island are now yellowish green.

April 21, 1990

Spent 2-5:00 P.M at Apalco meeting on ferry. At Orcas Island landing, 18 American Crow maintained their position above a raven some 400 ft above a ridge. Two of the crows left the group and dropped down to a tree where it harassed a second raven in the tree. Only birds between Upright Head and Friday Harbor were 2 groups of 3 and 7 glaucous-winged gulls and 3 double-crested cormorants. Returned to Lopez I. At Bee House a 2 point ♂ mule deer at feeder. It measured 33 1/2" high at shoulders. Two ♂ mule deer had knobs as antlers and their heights measured 27" and 28 1/2" respectively.

April 24, 1990

Annette, James Robert and I left for Johnston Strait at N E end Vancouver Island, Canada to check on Ore orca Left Lopez Island in Barth at 3:20 P.M. At 1/2 way between James Island and Cypress Island observed approx. 6000 Bonaparte gulls, 20% in linear flight ....., rest in group flight and resting and feeding on water.

Thousand Trail Preserve, La Conner, Island Co., Washington

April 25, 1990

Left 7:35 A.M. Rain all night. Continued highway 5 and 1 to Horseshoe Bay and at 11:30 AM to Langdale and Earl Cove. no orca in sound. Enroute to Langdale photo 900426-1 of sound, mts and clouds with ferry wake trailing. Photo 900426-2 Annette and I as above. At Earls Cove an informant and native of Langdale for 20 years said: In 1965 cougars, black bear, bobcats, mule deer were common at Earl Cove. In 1982 Coho salmon were disappearing. Now one spends all day to catch one. no cougars, black bear or coyotes today. An occasional bobcat and raccoon is reported today. Mule deer rare. no killer whales in sound at Earls Cove.

Left Earl's Cove 4:33 P.M arrived Saltery Bay 5:20 P.M. 1 western grebe observed. Photo 900425-3 enroute to Saltery Bay. Mileage at Saltery Bay 67356.2 (Barth). Left Saltery Bay 8:30 P.M for Comax on W side of Strait of Georgia.

900426-A2

Comax, Vancouver Island, Canada

April 26, 1990

Continued north on highway 19. At 3 mi. S Campbell River photo 900426-1 of Cascade across Straits of Georgia and with dandelion in foreground. Had lunch Kelsey Bay and thence to Port McNeil, made short trip to Telegraph Bay. This Bay is small but unique and picturesque. Checked camp site approx 1/2 mi. E. Returned to McNeil and camped overnight there. Mileage 67566.4. Best nout C.3546

Port McNeil, Vancouver Island, Canada.

April 27, 1990

Left 10:10 A.M on the boat Cupre Prince for Robson Bight on Johnstone Strait. Day windy and cool. Between Port McNeil and Telegraph Bay observed 1 pelagic cormorant, 1 red-throated grebe, 60 sanderlings, 8 dunlins, 6 buffleheads, 2 mew gulls, 8 mew gulls. Photos 900427-1 and 900427-2 of this bay and associated birdlife. 11:05 AM Telegraph Bay. 11:20 AM Blakehorn beacon. Pilot of boat says Paul Spong research orca by recording sound as they pass his research facility on an island E of Alert Bay. Kinds of whales and numbers of orca can be ascertained. The pilot also say that harbor porpoise surface slowly like a larger whale(?) The last of August and first 2 weeks of September are the best times to see orca. At that time the have definite routes among the islands that they follow. On our trip the pilot had four different contacts he made for information on the whereabouts of the killer whales and it impressed me how readily the area can be molested by great number of people so informed. Continued to Robson Bight but Photos 900427-3 approaching bight and rough seas of Johnston Straight. 900427-4 + 900427-5 ibid. no orcas. This bight has been remote but now roads are being made into area and the last stand of white cedar is going to be logged with the attending disturbance and pollution associated with logging. The greatest harm is the opening of the bight to tourism by the new road. It is here where the orcas rub their bodies on the shoreline and is one of only a few such places in the world. As now we do not understand why they so perform nor we will never know when people disturb the whales at this rubbing site. I understand that the last group of Roosevelt on Vancouver Island elk use the cedar forest as a refugia. At the bight observed: 6 band-tailed pigeons, 1 adult bald eagle, 3 white-winged scoter and 4 mew gulls. Left Robson Bight 4:43 P.M. and Returned to Port McNeil via northern photo 900427-6 as we left t&w. islands.

Left Port McNeil on return trip. Between Port McNeil and Kelsey Bay turnoff noted: 1 Stellers jay, 4 Common ravens, 2 mule

deer, 2 American crows, 1 turkey vulture. no road kills. 3 mi. S Sayward turnoff 1 ad bald eagle. 11 mi S Campbell River 1 turkey vulture. Oyster Bay 7:12 P.M An adult bald eagle in tree 40' up and 35' from heavily travelled road.

Oyster Bay, Vancouver Island, Canada
April 28, 1990

At Oyster Bay: 1 ad bald eagle, 9 bufflehead, 1 pelagic cormorant Bald eagle at Bowser. Arrive Sidney at ferry terminal (U.S ferry) at Sidney Spit approx 350 brownish brantlike geese. In same area 18 surf scoters, 1 pigeon guillemot and 81 glaucous-winged gulls. Arrived Lopez Island at Barth mileage 67874.3. or 308 miles from Port McNeil.

From Bee House: 8 harbor seal # 6 rock on Leo Reef and 11 seal on rock # 9 Leo Reef. None elsewhere.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa.
April 30, 1990 from Shoal Bay marina

Sunrise 6:16:14 AM Left for Friday Harbor, 11:25 AM via the Bee boat. 11 RPM all the way. No birds in Shoal Bay. Western grebe at Upright Head. mew gull, mew gull, glaucous-winged gull. no passing island peninsula opposite side channel from Shaw ferry terminal at 12:05 P.M. Red-necked grebe & 2 mew gulls. Orcas at 12:14 P.M. 2 pigeon guillemots, 1 double-crested cormorant, 1 glaucous-winged gull. 12:28 P.M Broken Point. Pigeon guillemot, pigeon guillemot, 2 pigeon guillemot, pigeon guillemot, pigeon guillemot, glaucous-winged gull, 12:58 Neck Point at no. 3 beacon. 1:00 P.M W end Cliff Island. no birds from here to Friday Harbor. 1:29 P.M Tide guage of Univ. Wash. Marine Labs. 1:32 P.M Friday Harbor. Left Friday Harbor 4:48 P.M. no to Lopez Island via San Juan channel and Upright channel. At light beacon E Turn Island 2 rhinoceros auklet, adult bold eagle. E side Shaw Island bold eagle. At opposite Odlin Park a rufous hummingbird past our boat going (the hummer) E. Approaching Upright Head were 8 glaucous-winged gulls, 3 pelagic cormorant, 2 rhinoceros auklet, 1 arctic loon. An entire trip sign of oil on water. 6:05 PM Lopez Island ferry terminal (1 hr 13 min from Friday Harbor). 6:20 P.M Shoal Bay marina or 1½ hrs from Friday Harbor.

may 1, 1990

10:05 A.M 2 canada geese 1/3 up slope of Flower Island feeding on grasses. 25 territories of glaucous-winged gulls on the island. 9 harbor seals on Leo Reef.

1:35 P.M. From the W side of causeway at bay SW extension of Fishermans Bay observed; (low tide). 2 great blue herons, 1 brant, 52 surf scoters in one group, 19 glaucous-winged gulls, 2 american crows, 2 bufflehead, 2 red-necked grebes, 2 double-crested cormorants. On E side of causeway in the secondary bay were: 26 glaucous-winged gulls, 4 mew gulls, 3 american crows, 8 western sandpipers, 6 violet green swallows, 2 tree swallows.

no birds on Hummell Lake.

The following is a comparison of birds observed the first week of April and the last week of april and the observations of today:

To day.	First week April	Last week april.	
2	25	4	Mallards
11	19	16	northern pintail
6	8	11	gadwall
1	0	0	cinnamon teal
5	9	9	green-winged teal
1	4	2	greater yellowlegs
13	6	8	western sandpipers
3	0	0	tree swallows
8	0	8	violet-green swallow
0	24	0	American widgeon
0	6	0	bufflehead
0	2	1	great blue heron
0	0	1	killdeer.
50	103	60	

Bufflehead fewer (today) in small ponds but more in open bays. no bufflehead in Humphrey Lagoon in last 2 weeks. Today fewer bald eagle sightings than earlier.

Early this A.M. no birds in North Lopez Sound (S to Leo Reef) or elsewhere visible from Bee House, not even gulls.

Mule deer pulling long winter hair and creating light patches of underfur. These patches are everywhere the deer can reach. Occurring in 80% of deer in local herd. Antlered young of mule deer have antlers averaging 1/2" high. Adults 1 1/2" high. The older ♂ mule deer (up to 4 years), in groups and pairs of older ♂ deer common.

Deciduous trees on NW end Blakely Island now green with

some with greenish cast.

Leo Reef average 10 harbor seal per day but there are days when there are none.

The glaucous-winged gull call is most frequently heard between 7:00 A.M and 6:00 P.M.

A ♂ chestnut backed chickadee offered food to ♀ in nesting box. NE corner Bee House. Both sexes out of nesting box at one time. a ♀ left box, flew to an approaching perch and fluttered its wings in presence of ♂.

A nesting violet-green swallow not active at nesting box on Bee House for 5 days. During that time 6 other violet green swallows inspected the box.

Specimen 900501-1, a bumble bee collected in yard among conifers and madrona at Bee House on Lopez Island.

May 3, 1990

at 12:30 P.M Left Lopez Island by ferry for Chris' home on Last Lake. 4 Canada geese oxbow lake on Elliott Road nearest Welch Rd. Below Chris on her property elderberry in full blossom, some beyond mot-imum. On road below her place at lowest level and before turn-around water flow under road 1 gallon per 4 seconds. Compare with previous water capacity. This whole hillside is wet to damp. Cotton-wood leaf 7" wide, 10" long and 1 3/4 petiole. Red alder leaf 4" wide, 6" long and petiole 1".

May 5, 1990

Left Chris for Lopez Island. At her home on Last Lake, Snohomish Co., Wa. Collected a bee, insect with red abdomen, no. 900505-1. At N end Humphrey Head observed 6 pigeon guillemots.

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

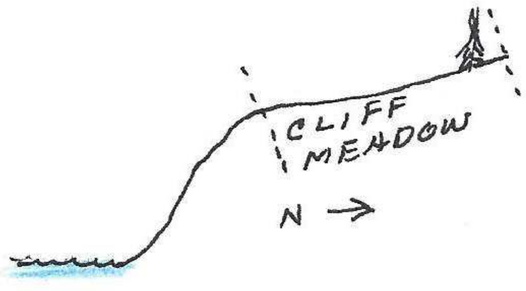
May 7, 1990

Mary Pauline Bee hiked the shoreline from Odlin Park to Lopez Village. I accompanied her to Flat Point: Our combined list of birds and mammals observed (2 1/2 hrs) is: 1 killdeer, 2 great blue heron, 20 common glaucous-winged gulls and 8 mew gulls, 2 red-necked grebe, 1 golden-eye, 1 bald eagle, 2 mallards, 21 surf scoters, 12 rhinoceros aukets, 13 guillemots, 1 Steller sea lion, 1 river otter, 3 American black oyster-catchers, 16 barn swallows, 18 violet-green swallows, 5 pelagic cormorant.

On my return from Flat Point hike checked causeway SW end of

Fishermans Bay. On W side in Son Jean Country observed 1 ♂ bufflehead. On E side were 4 least sandpipers, 3 american crows. No other birds.

At Swift Lagoon: 1 cinnamon teal, 6 green-winged teal, 5 mallards, 8 northern pintails, 6 godwalls, approx. 110 least sandpipers, 3 barn swallows, 7 violet-green swallows.

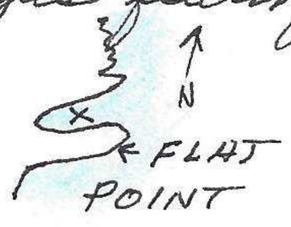


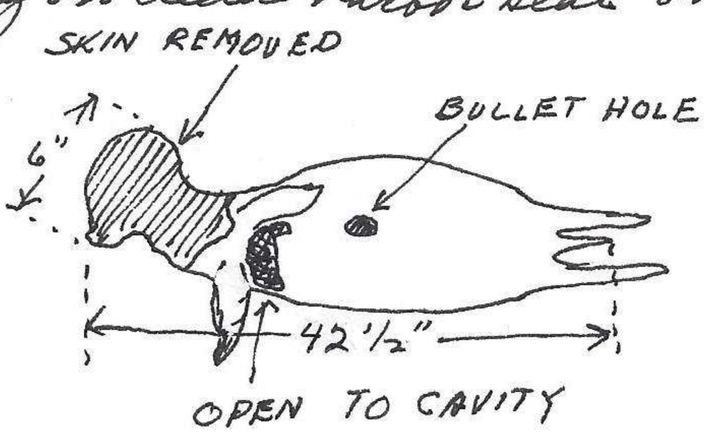
May 8, 1990

From Cliff meadow on Bee Estate, collected and preserved the following plant material:

900508-1 plant.
900508-2 yellow flower and bulb.
900508-3 salal.
900508-4 sedge or grass
900508-5 1/8" white flower.
900508-6 Indian paint
900508-7 purple flower
900508-8 grass
900508-9 yellow flower
900508-10 pink flower and red stems
900508-11 strawberry
900508-12 white flower, long stem.
900508-13 1/8" white flower
900508-14 yellow flower
900508-15 1/8" white flower and seeds.
900508-16 small yellow flower.

10:20 A.M 2 adult bald eagles feeding on dead Harbor seal on Flat Point, N of Spring Cove.





Total length 42 1/2"
length skull 6"

Each bald eagle would feed 5-6 minutes then move out 8-10 feet while other eagle fed for about same period of time. The left after 15 minutes, flew toward Leo Reef, circled and one flew N and the other returned to harbor seal. 1 common roven fed within 1 foot of eagles but alway rejected eagles. 4:10 P.M 2 turkey vultures and one raven arrived at seal and all fed on the seal, raven dominated.

9:00 P.M river otter swam N past Bee House

900509-47

May 9, 1990

mule deer at feeder at Bee House: ♂ 29" high at shoulders

3" ⌐¬ 2" in velvet, ♀ with 3 fawns but one adapted.

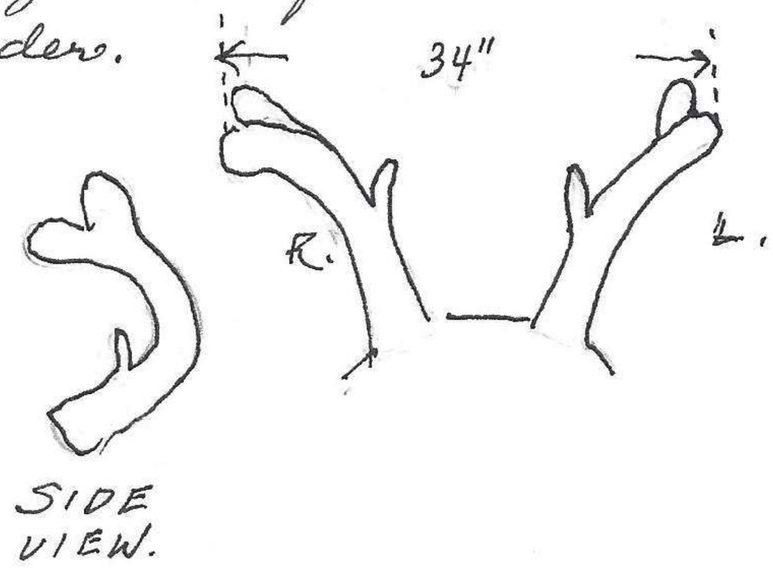
adult dark-eyed junco feed young at feeder.

May 10, 1990

8:30 AM River otter swam N past Bee House 10' out from shore. Placed the Bee boat, Grand Banks, at moorage in Shoal Bay, Wintered at Shoal Bay marina. River on S end of Shoal Bay dock (at marina) and left to S. Osprey flew full length N in Shoal Bay, then returned to S end where it caught a 4" fish.

A Bee House a ♂ mule deer at feeders.

all deer in summer pelage.



SIDE VIEW.

May 11, 1990

2:05 PM bald eagle, black terminal on white tail. Head:



The dead harbor seal (May 8, 1990) on Flat Point. S of Spring Cove visited by 2 ad. bald eagles this P.M. One of the eagles took 24 bites per minute after settling in on feeding. The other averaged 4 bites then stood upright to survey area, then back to feeding for 4 or so more bites. 2 common ravens averaged 40 bites per minute per individual with less upright stance. Seals head, neck and ribs now exposed. One of the 2 eagles fed for 1/2 hour then moved 6' away to a log and after 10 minutes left.

5:10 P.M 2 Turkey vultures feeding on above dead seal.

May 12, 1990

A ♂ mule deer with 1" antlers 29" high at shoulders.

8:00 A.M common raven at harbor seal corps of above.

mule deer refuse asparagus.

1:40 P.M. Harbor seal (34) on Les Reef.

Steven Carl Kaufman of Homer Alaska reports; Grizzly bears are non-selective of salmon when salmon are at heigth of spawning.

In late stages of spawning the grizzly bears are selective in the condition of the salmon as to weakness or deterioration of the fish. The bears leave the rivers when all fish are dead or decomposing. and search for berries as an alternative food source. The bears fish by random plunge or direct contact and by searching with heads under water. He reports an instance of olfactory sense in the common raven when the bird selected one of several boxes at ~60F on top of a moving trailer that contained potatoe chips. On the Arctic Wildlife Range in northern Alaska, bald eagles nest over salmon streams. No bald eagle nest at Homer, Alaska but 5 mi E across sound many bald eagles nest along streams that support salmon.

On a visit to Shark Reef, Lopez Island, with Steve & Mary, he located a Calypso orchid (Calypso bulbosa (L), Oakes) among the stable second growth coniferous forest. It was growing on the forest floor on the flat sections of the upland slope.



3:40 P.M. 6 harbor seal on Leo Reef. (rocks # 3, 4, 5) and 46 harbor seal of n Flower Rock.

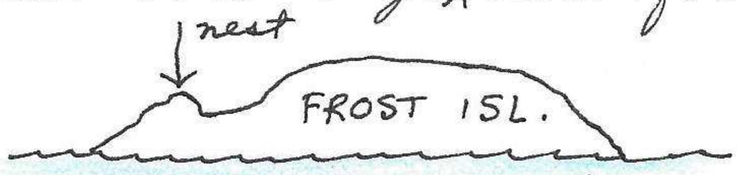
Dead harbor seal on Flat Point S of Spring Cove consumed or carried out by slack tide except hind quarters and hind legs.

May 13, 1990

River otter swam S past Bee House at 6:45 A.M.

Between 6:30 - 7:00 A.M. adult bald eagle at dead harbor seal corps S Spring Cove. (at Flat Point). After feeding it rested on log 8' above carps on rocky shoreline. At left 7:08 A.M.

Located bald eagle and nest for first time on NE end Frost Island



at 7:30 A.M. The bird left to E at 7:45 A.M.

8:30 A.M. 2 young and 1 adult River otter swimming N past Bee House, out 12' from shore.

11:20 A.M. 34 harbor seal on n Flower Rock; 3 on Leo Reefs on Rocks # 4, 5, 2 on rock # 10.

11:50 A.M. Caught kelp crab, Pugettia producta on fishing line. length carapace, 83 mm; width carapace, 77 mm. From Boundary Point on Bee Estate. Steven C Kaufman made photo of this specimen.

7:25 A.M. One bald eagle on nest (3' to right of nest on perching limb.)

May 14, 1990

8:45 A.M. 1 Turkey vulture at harbor seal corps on Flat Point S of Spring Cove.

900514-49

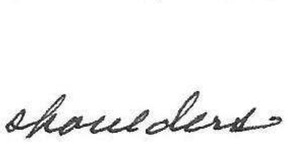
Observed 6 gold finches along Baker View Road and at Port Stanley. These birds are fregiently observed (1½ trips to Lopez Village) on the more open areas of the island.

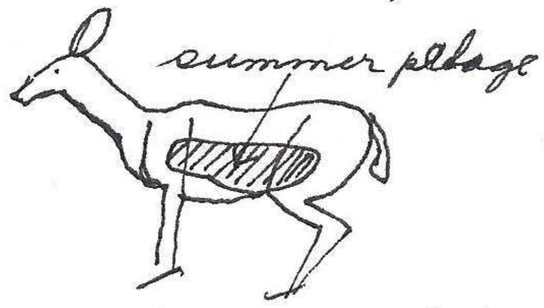
May 15, 1990

This A.M via ferry to Friday Harbor via Crane Passage and return by Upright Head. Birds observed: rhinaceros auklets, glaucous-winged gulls, turkey vultures, kingfisher, double-crested cormorants, pigeon guillemots, pelagic cormorants.

May 16, 1990

At feed at Bee House at 7:30 A.M. a fawn mule deer ♂; 33½" high at shoulders; ♂ 



34" high at shoulders; ♀ last year 

; last year ♂ 29" high at shoulders 2 ♀ and 34" high shoulders ♂ eating new needles of Douglas fir.

Trip by ferry to Orcas Island. At E side airport there, a bald eagle circled 5 times, gaining altitude then soared straight N. Returned to Lopez. Redtail hawk junction Hummel and Center roads.

May 17, 1990

7:30 A.M 2 fawn mule deer at feeder. no adults present. Bald eagle facing E on nest NE Frost Island. 16 harbor seal on Leo Reef.

Photo 900517-1 of Mary and Steve at Bee House just before departure for Homer Alaska. At Lopez Island airport a bald eagle flew W across runway at terminal. Mary & Steve departed.

4:02 P.M A bald eagle circled above ridge between Bald Bluff and Bald Bluff Peak for 20 minutes,

young mule deer of last year now with pelage of grayish-white with patches of new colorful golden brown of summer pelage. Adults show frosting of white but not as white of young deer.

2 bald eagles feeding (young?) at nest NE Frost Island, in evening.

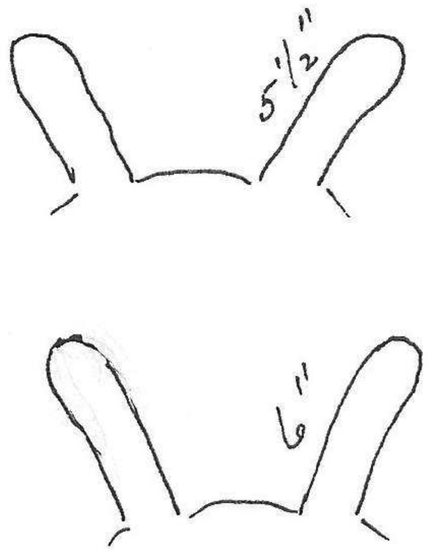
May 18, 1990

This A.M 42 band-tailed pigeons in one close group on feeder at Bee House. They have been at feeder 3 times today in about same numbers. Of single individuals of American crow and

a band-tailed pigeon, the crow is dommnate but a single crow in flock of pigeons, the crow is subdommnate.

At 7:05 A.M An adult bald eagle left Swift Bay at Licken Point, flew continuously to base of Bald Bluff on Blakely, thence along the shoreline N for 1/10 mi, thence back W to N end Humphrey Head, all at approx 200'.

May 19, 1990



♂ mule deer 34" high at shoulders. This male mule deer was curious and shyed away from a new born fawn.

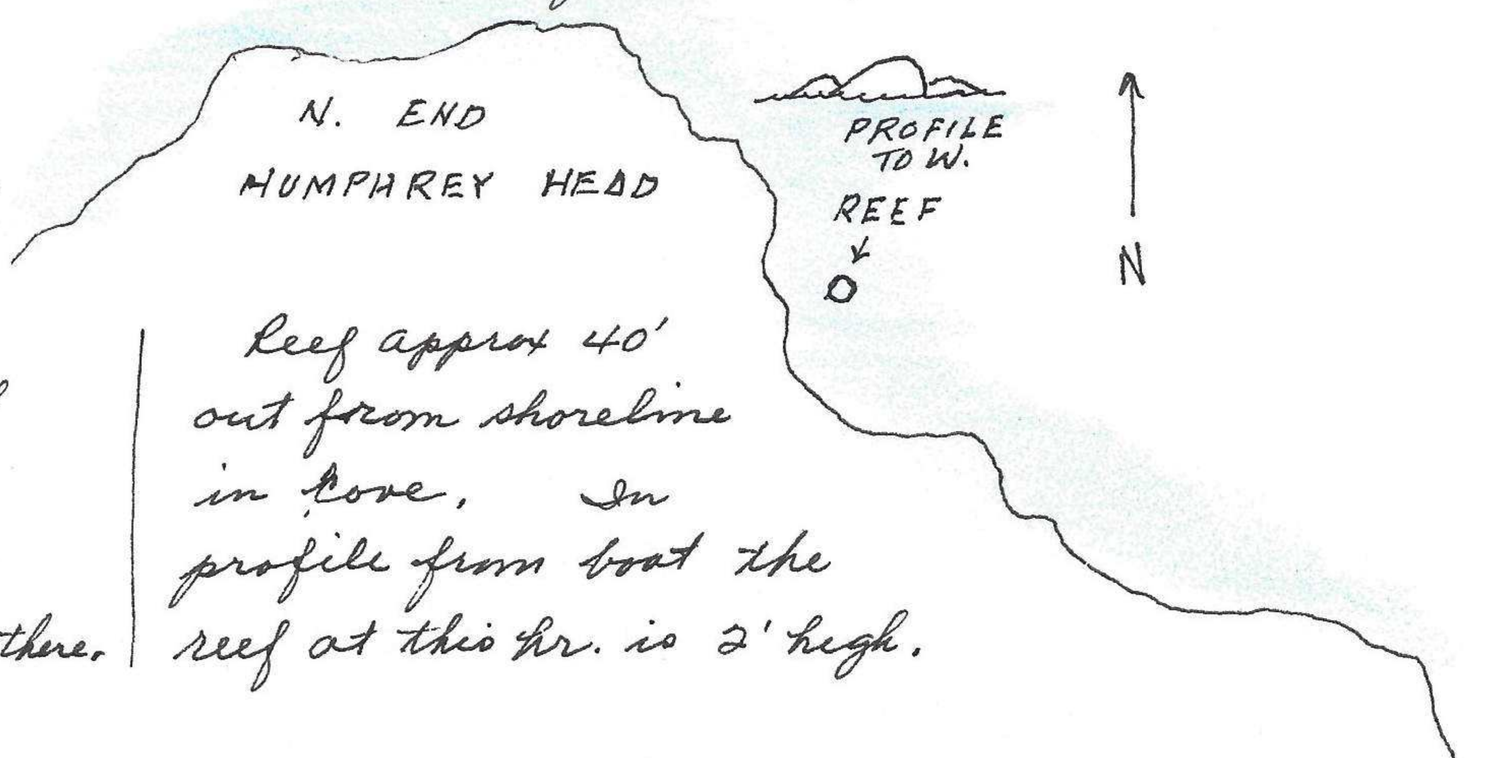
This ♂ mule deer measuring 33" high at shoulder kicked with its front feet, a new born fawn. I have never observed a mule deer using its rear legs for this or any other defensive purpose. At feeder were also ♀ mule deer 30" heigh at shoulders and another ♀ new to area 31" high at shoulders. Fawns are curious about gray Jay and chipmunks (Townsend). Last year ♀ timid of fawn.

7:05 - 7:30 PM. Ad. bold eagle on cup of nest facing N. (NE Frost Island). 7:30 P.M second adult bold eagle arrived from N and fed young for 5 minutes. The first eagle left nest 2 minutes after 2nd eagle arrived with food. After above 5 minute feeding it moved to SE edge of nest and remained for 20 minutes, then returned to cup and fed young for 6 minutes, then to edge of nest again where it remained to at least 8:10 P.M at which time the evening lights were fading and I discontinued observation.

May 23, 1990

Overcast and no wind. Left Lopez Island for Anacortes via ferry at 9:50 A.M.

The reef is conspicuous at low tide but covered at higher tides. I have passed by this reef several times in the Bee boat but never realized it was there.



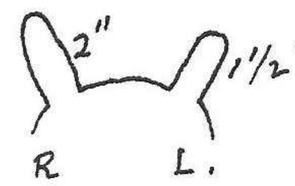
Reef approx 40' out from shoreline in cove. In profile from boat the reef at this hr. is 2' high.

no birds at least to Point Fauntleroy. First birds, beacon, SW Cypress Island 2 western grebes, 2 surf scoters, 1 harbor seal. 1 pelagic cormorant. Arrived Anacortes: thence Burlington + return. Left Anacortes for Lopez Island at 4:20 P.M via ferry.

May 24, 1990

At Swifts Lagoon this A.M: 68 mallards, 11 gadwalls, 4 ♂ common teal. These ducks were in one close group in contrast to the usual general distribution.

At Bee House ♂ mule deer 29" high at shoulders another ♂ 26" high at shoulders with antlers just budding



May 27, 1990

At causeway SW end Fishermans Bay on Lopez Island observed the following on W side (San Juan Channel) 18 glaucous-winged gulls, 2 buffleheads, 16 great blue herons, 9 American crows. At approximately 200' W of shoreline a raft of debris of indeterminate 4-5 length. On E side causeway. 8 glaucous-winged gulls and 7 great blue herons.

May 28, 1990

Last 3 days bald eagles absent from nest on N E end Frost Island in late evening but present after sundown.

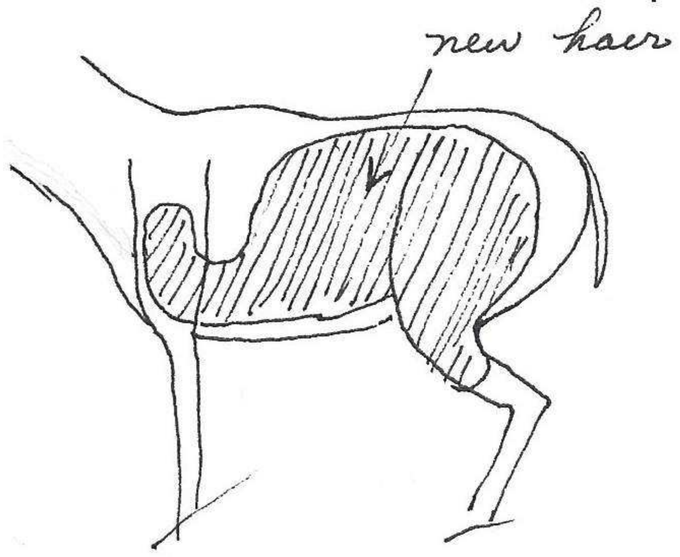
Last 4 days ♀, adult mule deer eating new growth of Douglas fir on Bee Estate.

May 29, 1990

To Anacortes. No, bold eagle nest in tree N end Humphrey Head. Open slopes above rocky shoreline on E side are grayish brown. 16 harbor seal on N side Leo Reef and 1 cormorant. 2 glaucous-winged gulls SW end Blakely Island. Usual gulls on Pointer Island. In Rosario Strait, glaucous-winged gull, Anacortes and return to Lopez Island. A ♂ mule deer at Bee House:



mule deer



A ♀ 29" high at shoulders at Bee House had noticeable abdominal twitches: recorded seconds between these twiches or contraction:

15, 12, 18, 10, 12, 14, 12, 17, 13, 23, 13, 8, 77, 44, 26, 22, 03, 27, 99, 14, 10, 15, 94, 46, 65.

Noted ♀ mule deer with blood stained hair on posterior (recent parturition.).

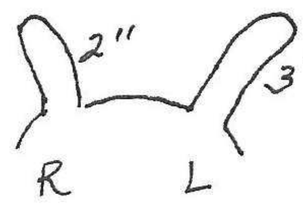
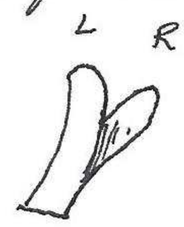
May 30, 1990

♂ mule deer 28 1/2" high at shoulder.  1 1/2" high the reddish summer pelage appearing / thru winter pelage.

♂ mule deer 26 1/2" high at shoulder on 1/2 summer pelage of rich golden-brown.

♀ mule deer of last year 27 1/2" high at shoulder.

♂ of last year (fawn) 1" high antlers. This is first time for antler development

♂ mule deer  , side view 

♂ 27" high at shoulder, knobs, no reddish pelage.

2 ♂ 26 1/2 inches high at shoulders with antlers just budding.

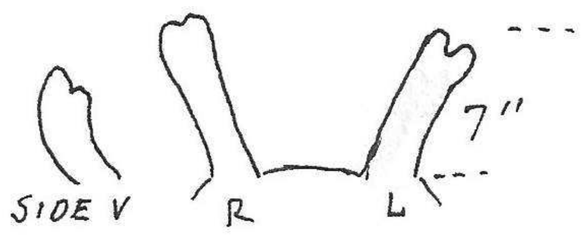
Left Lopez Island this A.M for Anacortes. 16 harbor seal Leo Reef on N side, 1 double-crested cormorant and 2 glaucous-winged gulls. SW end Blakely. Usual glaucous-winged gulls on Panter Island. Arrived Anacortes. Left Anacortes 5:20 P.M) pelagic cormorant, 4 rhinoceras auklet in Rosario Straits, one glaucous-winged gull W end Thatcher Pass. Arrived Lopez Islands. Birds rare between Lopez Island and Anacortes.

May 31, 1990

Piloted the Bee (Grand Banks boat) to Fishermans Bay marina. Flat Point 35", Fisherman Bay 55 min (from moorage Shoal Bay,

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

June 2, 1990



15 mule deer at Bee feeder including 2 fawns. There are more deer at feeder on weekends than during the week.

900603-53

Lopez Island, San Juan Co., Washington.

June 3, 1990

Completed itinerary and localities of our boat trip to British Columbia and SE Alaska: in retrospect of the trip completed, Annette and I made first leg of trip from Lopez Island to Princess Louisa Inlet in British Columbia June 11 - June 20, 1990 and from Ketchikan Alaska to Skagway (June 1 - July 25, 1990). Trip in the 'Bee' boat. First number of localities are recorded on map 4 pages beyond (camps)

1 June 11, 1990 Lopez Island, San Juan Co., Washington
2 June 12, 1990 Deer Harbor, Orcas Island. Wa.
3 June 13, 1990 Ganges, Gulf Islands, Vancouver Island, B.C., Canada
4 June 14, 1990 Nanaimo, Vancouver Island, B.C., Canada
5 June 15, 1990 Fishermans Resort, Garden Bay, Malaspina Strait, B.C., Canada.
6 June 16, 17, 1990 Princess Louisa, B.C., Canada (Jervis Inlet).
7 June 18-20, 1990 Fishermans Resort, Garden Bay, B.C. Canada. At this point James Robert Bee and party, assumed command and continued N. Annette and I returned to Lopez Island by car.

June 21, 1990 Bellingham, Wa.
June 22, 1990 Annette Bee Kenagy, Last Lake, Snohomish Co., Wa.
June 23, 1990 Lopez Island, San Juan Co., Wa.
June 24, 1990 Lopez Island, Wa. Left for Prince Rupert, Canada in 'Barth', thence by ferry to Ketchikan where we will continue N to Skagway. James R and party will return to states by air travel.

June 25, 1990 Cultus Lake, Thousand Trail Preserve, B.C., Canada
June 26, 1990 Lazy R, Lac La Hache, B.C., Canada.
June 27, 1990 Burns Lake, 1 mi. E town, B.C. Canada
8 June 28-30, 1990 Prince Rupert, Alaska, 30th to Ketchikan via ferry
8a July 1-3, 1990 Ketchikan, Alaska. James R. & party arrived with boat from Garden Bay B.C. and Annette and I continued N with the Bee.
9 July 4, 1990 Knudsen Cove, Clover Pass, Behm Canal, Alaska
10 July 5, 1990 Meyer's Chuck, Clarence Strait, Alaska.
11 July 6, 1990 Santa Anna, Ernest Sound, Alaska
12 July 7-13, 1990 Wrangell, Alaska.
13 July 14, 1990 Petersburg
14 July 15, 16, 1990 Entrance Cove, Hobart Bay, Alaska
15 July 17, 1990 Taku Harbor, Stephens Passage, Alaska

16 July 18, 19, 1990 Juneau, Alaska
July 20, 1990 Glacier Bay and Mendenhall ice fields via, Alaska, via small plane.
July 21, 1990 Juneau, Alaska.
17 July 22, 1990 Echo Cove, Lynn Canal, Berners Bay, Alaska
18 July 22, 23, 1990 Skagway, Alaska.
July 24, 1990 White Summit via van.
July 25, 26, 1990 Skagway, Alaska. Left boat at Skagway and thence S to Prince Rupert via State ferry arriving July 28, 1900, thence E on highway 16 to Kitwanga via the Barth (motor home).
July 29, 1990 Kitwanga. (junction 16 and Cassiar highway)
July 30, 1990 Frazer Lake, Pipers Glenn, B.C., Canada
July 31, 1990 Lazy R, Lac La Hoche, B.C., Canada.
Aug. 1, 1990 Cultus Lake, T.T. Preserve, B.C. Canada.
Aug. 2, 1990 Home of Annette C Kenagy, Last Lake, Snohomish Co., Wa.
Aug 3, 1990 Lopez Island, San Juan Co., Wa.

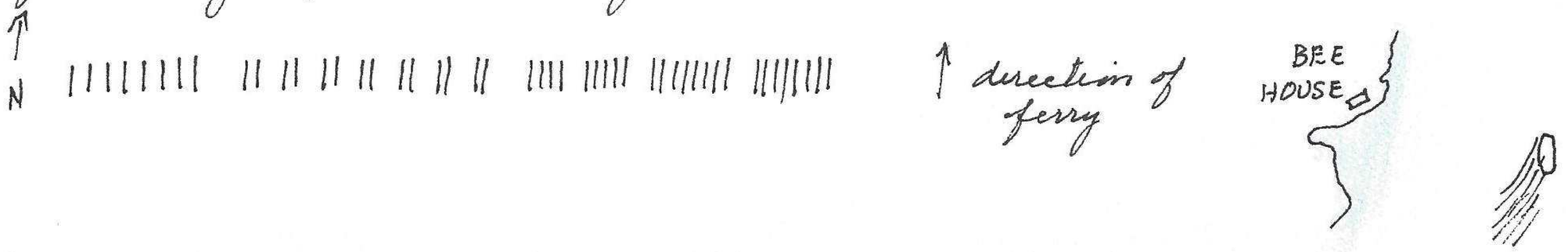
Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa.

June 4, 1990

5:30 P.M. a third year bald eagle alighted on rock weed on shoreline below Bee House where it watched a spotted rat-fish, Hydrologus colliei swim on surface of water 10' from shoreline. The eagle picked it up and hopped 4 feet up shoreline where it pulled 3 fragments of fish and then stopped and watched another bald eagle approach. The third year eagle left when the adult eagle was approx. 150' away. The adult alighted on the fish, flew 10' above on the shoreline and without eating the fish left after 1 minute and without the fish.

After sundown, 2 harbor seals fed on candlefish from below Bee House to Lichen Point from approx. 50' to 10' from shore. Aggregations of fish up to 200 individuals instantaneously broke water surface in areas as large as 20'x20'. The seal raced thru these areas of surfacing.

6:30 P.M. The wake of a ferry boat (Kate[illegible]) produced the following sequence as they approached the shore below Bee House.



6:40 P.M. Buster, a ♀ mule deer, and her 2 fawns, each 18" high at shoulders at feeder. An adult ♂ mule deer investigated the posterior body of the fawns and was curious about them. Another ♂ mule in area measured 29" high at shoulders



June 7, 1990

Buster, a ♀ mule deer and her 2 fawns, each 19" high at shoulders. They have grown 1" since June 3, 1990.

a ♂ mule deer with right antler 3" and left 4½. Right antler angles posteriorly.

12:20 P.M. 62 Canada geese flew N at apprx 200' high above Bee House.

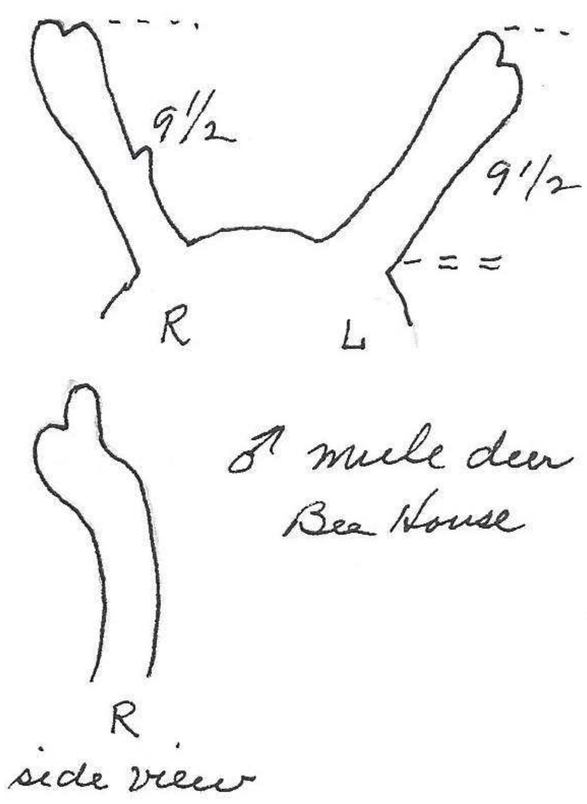
♀ mule deer 31" high at shoulders. Her fawns 16" high at shoulders.

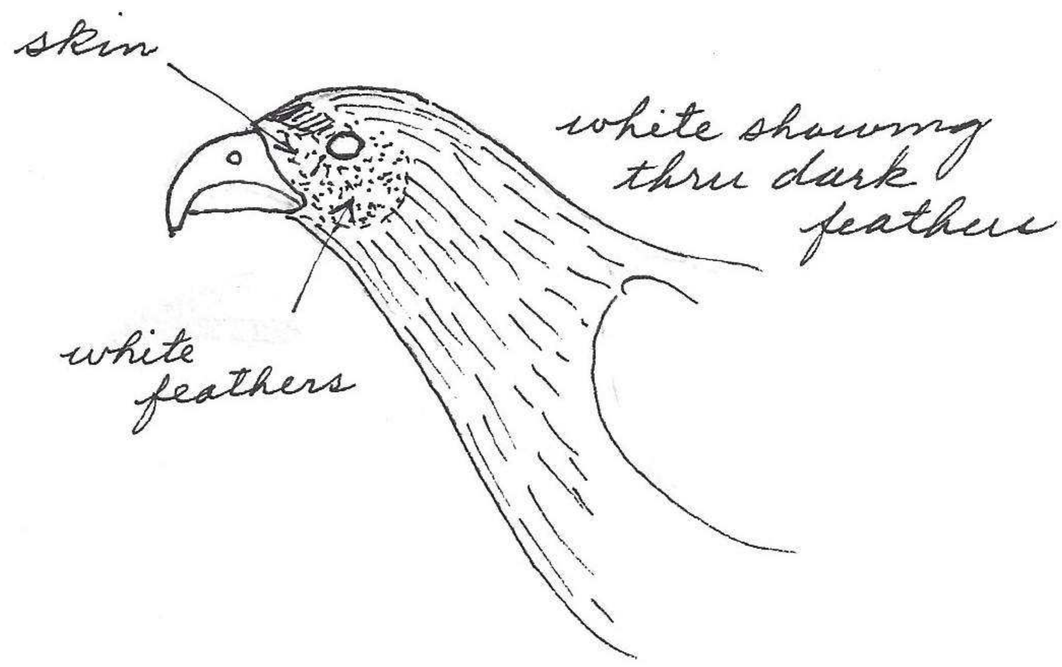
Observed 2 savanna sparrows N end Fishermans Bay along side tidal bay.

2:28 P.M. At causeway SW Fishermans Bay on W side causeway; apprx. 60 glaucous-winged gulls (1 per cent immatures), 3 double crested cormorant, 56 rhinoceros auklet all in one group. On E side (secondary bay) were 11 great blue heron and 26 glaucous-winged gulls.

June 9, 1990

At Bee House an immature bold eagle alighted on a madrona in front of dining room on second floor. It remained 19 minutes during which time it picked at branches and broke 6 of them.





♂ mule deer 29" high at shoulders.

Trip to Anacortes by ferry.



12:52 P.M W. Thatcher Pass. 2 rhinoceros auklets arrive Anacortes.

June 10, 1990

Left Anacortes 9:00 A.M by ferry for Lopez Island, raining at E side Rosario Strait 8 rhinoceros auklet in one group and 7 in another groups. These were only birds observed on trip. Arrived Lopez Island 9:35 A.M. 58 glaucous-winged gulls on ferry pilings at Lopez Island terminal

From Bee House can see 21 harbor seal on Leo Reef and bald eagle on nest on NE corner Frost Island.

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

June 11, 1990 (see June 3 for itinerary)

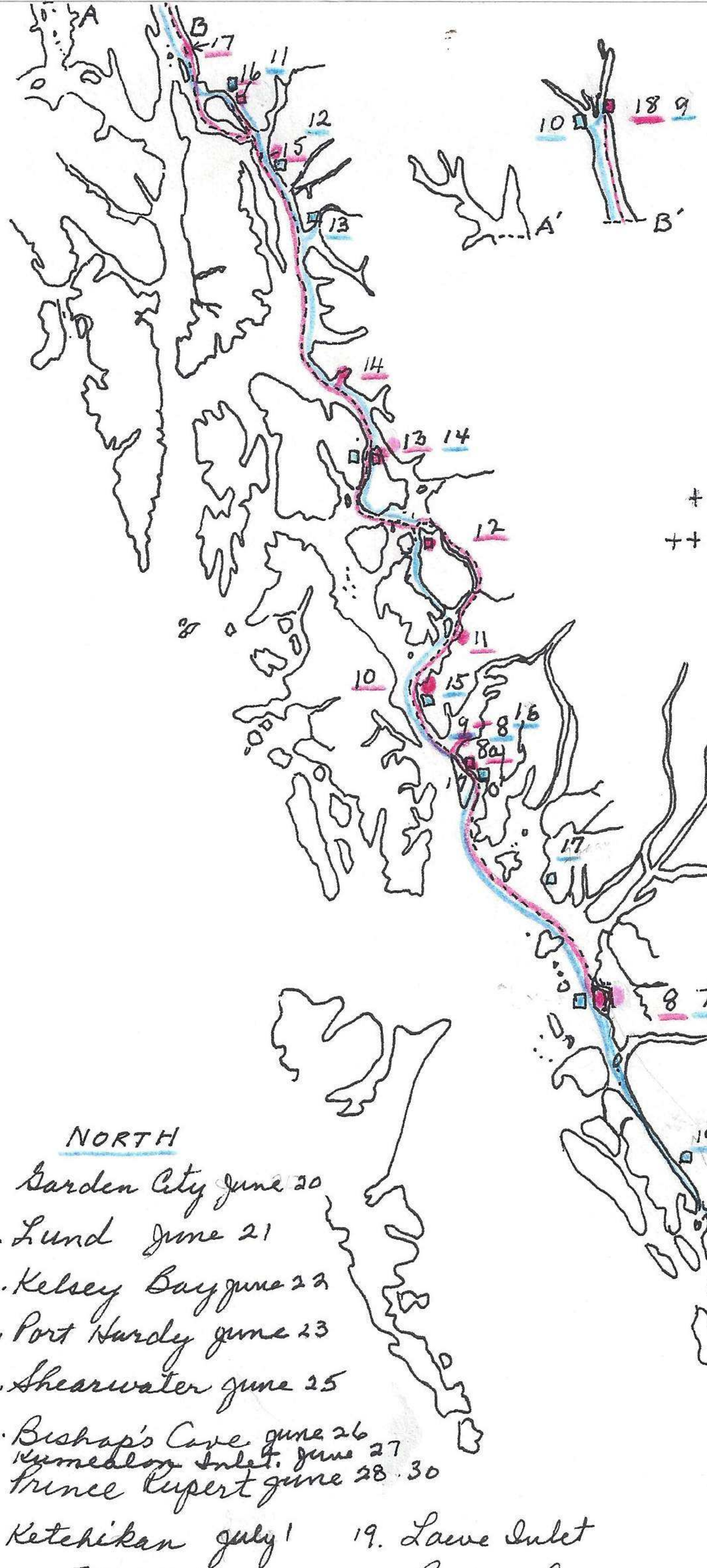
annette and I Departed Shoal Bay on Lopez Islanded at 5:14 P.M for trip to S.E Alaska via the 'Bee' (3x Grand Banks). mileage meter 2718.0 Passing Lopez Island ferry terminal counted 73 glaucous-winged gulls on piling of terminal. Continued past Hankin Point, Point Hudson, Bell Island, through Pole Pass, Deer Harbor to the Deer Harbor marina where we moored for the night. Only one rhinoceros auklet observed.

Deer Harbor Marina, Deer Harbor, San Juan Co., Washington.

June 12, 1990

Left 9:00 A.M. Route to San Juan Channel via north Pass, thence by Jones Island to San Juan Channel, At 10:07 A.M at Sentinel Island observed first harbor seal and 1 pigeon guillemot. Traversed N side of Sentinel Island for first time. On reef to SW were 21 harbor seal. 11:00 AM. Mandarte Island with full territorial compliment of glaucous-winged gulls. 2 double-crested cormorant and approx. 200 glaucous-winged gulls in compact group resting on NW end of island. Only 4 glaucous-winged gulls in air beyond the island and none on reef (beacon). On approach to Sidney Spit (E side of spit) observed 2 and 3 pelagic cormorants, 3 rhinoceros auklets, 1 rhinoceros auklet, 1 pelagic cormorant. Along shoreline on E side were 57 glaucous-winged gulls, 5 pigeon guillemots, 4 rhinoceros auklets and approx 15 other bird that were not identifiable. Arrived NW end Spencer Spit 11:45 A.M.

900612-57



VOYAGE OF THE BEE. 1990

RED. ANNETTE AND JAMES W.

BLUE JAMES R AND PARTY.

(see June 20, 1990 for names in party)

1. Lopez Island June 11. NORTH
2. Deer Harbor
3. Ganges
4. Nanaimo
5. Garden Bay
6. Princess Louisa
\+ 7. Garden Bay June 17-21
++ 8. Prince Rupert. June 27-30
8a. Ketchikan June 30 – July 3
9 Knudsen Cove
10 meyer's Chuck
11 Santa Anna
12 Wrangell
13 Petersburg
14 Entrance Cove
15 Taku Harbor
16 Juneau
17 Echo Cove
18 Skagway. July 22-26
(July 28 Prince Rupert by ferry, aug 2 Lopez Island by Barth.

NORTH

1 Garden City June 20
2. Lund June 21
3. Kelsey Bay June 22
4. Port Hardy June 23
5. Shearwater June 25
6. Bishop's Cove June 26
Kynemeden Inlet. June 27
7 Prince Rupert June 28. 30
8 Ketchikan July 1

RETURN

9. Skagway Aug 3.
10. Haines
11. Juneau
12. Taku Harbor
13. NW Tracy Arm
14. Petersburg
15 meyer's Chuck
16 Ketchikan
17 Foggy Bay
18 Prince Rupert
19. Laeve Inlet
20. Bishop Cove
21. Safety Cove
22. Malcolm Island
23. Thurston Bay
24. Nanoose Bay
25. Jones Island
26 Lopez Island, Aug 20

\+ (Left June 21 for Lopez Island by Jay's Van. Left Lopez June 24-27 for Prince Rupert by Barth.)

++ (Left June 30 by ferry to Ketchikan)

Half way between nw end Spencer Spit and Sidney on the Sidney Channel are approx. 650 rhinoceros and 18 glaucous-winged gull stretching for 2/10 of a mile n to s. Another group of 300 rhinoceros auklets 2/10 mi. E of Sidney ferry terminal. Arrived Sidney 12:25 P.M. Entered Canada at Sidney Customs. Continued n E to Charmer Pt arriving at 2:26 P.M. first common murre and marbled murrelet at above Point. Continued n around Beaver Point on Swanson Channel and thence nw to Ganges in Ganges Harbor arriving 5:00 P.M.

Ganges, Ganges Harbor, Gulf Islands, British Columbia

June 13, 1990

Left Ganges 9:47 A.m at meter (hr.) 2727.0. Sky 40% clear. 10:47 A.M Rose Point. 11:17 A.M 3 glaucous-winged gulls so far this A.M. in Trincomali Passage, no other birds. 11:31 harbor seal. 11:53 glaucous-winged gull, 2:21 double-crested cormorant. 12:29 P.M gull sp., double crested cormorant; 1:32 PM n end of Wallace Island at Chivers Point, to w. In last half hour have passed good cleff exposures along shoreline and on top of ridge of Galiano Island. One recent rock slip. 1:47 middle of Secretary Channel E Island, 2:00 P.M Beginning of Hall Island. 2:21 P.M n end Reid Island (main island and not reefs beyond). Glaucous-winged gulls nesting on last reef of Reed Island (Rose Islets). White sands extend into reefs. No seal in area so far. 2:43 Pilkey Point. Good exposure cleffs to n E across sound. 2:46 P.M E Frazer Point on Thetis Island. 3:01 P.M 200' E of U40 day marker. 45 glaucous-winged gulls on island to n E. 3:14 good raptar nesting cavities in perpendicular cliffs. Now W of Ruxton Island. 3:32 4 common murre and first observed on todays trip. 3:36 P.M first marbled murrelet, 4:02 P.M Round Island, one pelagic cormorant. 4:20 P.M Todd narrows. Currents running n into wherlpools and irregular water direction. Boat turned to 90° uncontrollable. not recommended at this stage of currents. On walls of cliffs on n E side Northumberland Channel, no evidence of former sea levels. major displacement of cliffs E across Channel from Jack Point. On north exposures of cliff surfaces are yellow. Another noticeable displacement beyond and at least 22 separate areas of white ekrement. 3 major lumber mills on S W side of Channel. 5:06 P.M first pigeon guillemot. 5:08 PM Entrance light to Nanaimo harbors, 5:15 P.M marina at Nanaimo. at submerged rock marker. Averged 4.8 m P/R

900614-59

Nanaimo, Vancouver Island, British Columbia.

June 14, 1990

Left 7:05 AM. Passed Snake Island on W side, E of 5 Fingers and thence NE across Strait of Georgia. Although we passed across part of the Canadian-American torpedo range and that there were 2 military vessels in the area, we were not rebuffed. Water calm and air warm. Crossing the straits we observed 2 gulls sp., 1 cormorant sp.?, 2 rhinoceras auklets and 2 glaucous-winged gulls. The safest way to cross this strait is to follow coast of Vancouver Island and then directly N to Young Point on S end Lasqueti Island, then S end Texada Island and then SE across Malaspina Strait to mainland of Sechelt Peninsula. Ballenas Islands, at 10:19 A.M we were N of Mary Island or 3 hrs. and 20 min. from Nanaimo. 10:55 Epsom Point. At this point a NS line of greenish-yellow debris and logs. Two other such rafts in crossing Georgia Straits. Also there were 2 pigeon guillemots and a marbled murrelet and one glaucous-winged gull. 12:00 PM Francis Point. 12:21 P.M Entrance to Pender Harbor or 5 hrs. and 20 minutes from Nanaimo. An adult bald eagle flew across mouth of Pender Harbor. moored at Fishermens Resort.

Fisherman's Resort, Garden Bay, British Columbia.

June 15, 1990

Annette and I took Grand Banks 'Bee' to Princesses Louisa via Jervis Inlet. Left 9:06 A.M. Sky clear to W. High cirrus clouds to E. Ripples. As we left the bay observed a turkey vulture and a pigeon guillemot. Daniel Point, 9:29 Agamemnon Passage. 9:34 A.M Entrance Sakinaw Lake. now Starboard at point beyond utility line crossing. 10:00 first view of snow covered mountains beyond. No bird in passage so far. 10:28 AM. Caldwell Island. 10:32 utility line just beyond Caldwell Island. 10:34 A.M first harbor seal, blackish. 10:39 AM Earl Cove. considerable disturbance of shoreline for accommodation of ferry terminal 10:51 A.M. Nile Point 11:20 A.M NW of Miller Rock. no birds so far, not even a gull. Deciduous trees replacing clear cuts. most recent clear cut highest on mt and just under ridgetop.

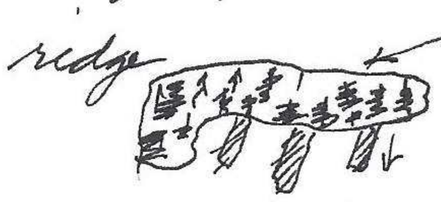
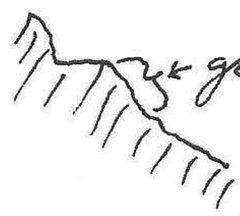


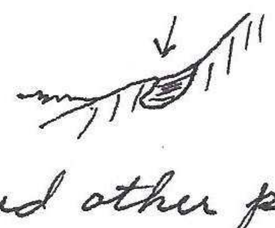
Photo 900615-1 at 11:28 AM of Glacier front left Point, and passage to N mt. Churchill is prominent knob peak to right and chucklike peaks to left. The extreme left peak with the slash of snow

ledge is prominent mark from several different points of view. Lower limits of snow slides or avalanches in drainage, as is true elsewhere, are approx. 1/2 way down mt. These mountains are called Marlborough Heights. The upper peaks meet requirements for mountain goat habitat: good food source, open and steep and ready escape routes.

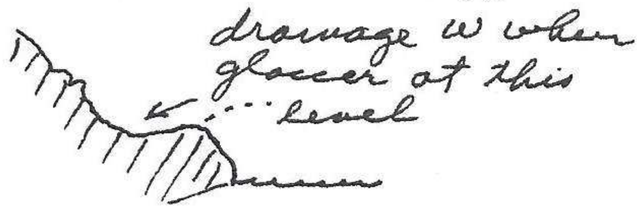
Logging roads that traverse clear cuts show greener growth of outside fill than on clear cut sand and gravel pit or stripping on glacial deposits at mouth of drainage to right.



11:45 AM.



12:00 P.M. Saimaez Point. Photo 900615-2 NNE into Vancouver Bay. Round mts and other peaks associated. The bay could be used for refuge in case of high wind or bad weather. 12:26 P.M water into Prince of Wales Reach fall to right or E. As passage turns from N to NW the waves decrease although wind still follows channel. The above water falls is approx 2/10 mi SE of Morson Bluff. 1:25 P.M steep cliffs from water level and fractures perpendicular. 1:30 P.M shoreline of rocks at high tide level and spray zone above whitish. 1:35 P.M. Photo 900615-3 to right of rounded mountain peak covered with snow. Old Conifer trees in left foreground stand out in comparison to new young trees. Photo taken from approx 1/2 mi. into Princess Royal Reach which now trends NE. 1:50 P.M Good example of whitish rocks at high tide level up to 3-4 feet. Promentory on left side 1/2 way NE up Princess Royal Reach at 2:21 P.M. Waves 1'1/2' and whitecaps. Photo 900615-4 of massive granite exposures with smooth surfaces and devoid of vegetation (smooth surfaces). This condition is from displacement of granite along fracture systems rather than from glacial erosion. Some remnants of avalanches in drainages. Upper slopes show stratification. This massif is approx. 1/2 way between Patrick Pt and next canyon down reach. It is on the NW side of the reach. 2:47 P.M. Patrick Point On left side Queens Reach at point S across reach from Malibu Rapids is a profile thus:



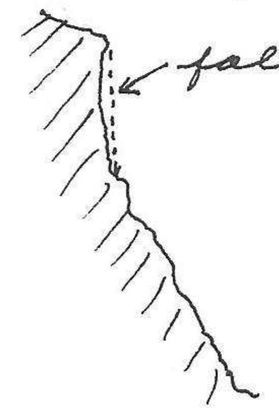
Queens Reach has waves but no whitecaps. Low hanging valley at mouth, next Canyon SE of Malibu Rapids. 3:06 P.M first bird, a mew gull. 3:22 P.M 36 mew gulls on floating log 1 mi SE Malebu Rapids. 3:30 Malebu Rapids and waited until 4:15 P.M before negotiating the run. Only a little current activity at E end but had no problem getting thru rapid area. 4:23 P.M 2 glaucous-winged gulls flying down (W)

inlet at approx. 400' above water. 4:27 P.M ♀ common merganser and 11 2" long chicks. Walls of intertidal zone green. 4:31 P.M single ♀ common merganser 1' out from shore under overhead protection of Conifer bows. Shore (intertidal) russet-green. The creeks that enter the inlet along the sides can be told by deltas of gravel, some deltas with water flowing over gravels, 4:47 P.M white covered rocks eroded by water into granite. Harbor seal 4:48 P.M. 4:57 P.M. Perpendicular cliffs free of vegetation to left. Chatterbox Falls now in full view to NE. 1 glaucous-winged gull. 5:05 P.M snow moss to base of cliffs to left of falls. (on NW wall of inlet). 5:15 P.M arrive Chatterbox Falls. Observed a ♀ and young mt. goat on granite walls NE of falls approx 1/3 way to top. They were in area of new growth in slide areas. They had all the necessities for survival: protection of steep mt side, food, and escape routes. In area of, alone, 2 ♀ common mergansers one with 2 and one with 11 chicks. Pileated woodpecker in area. Moored boat for the night.

Chatterbox Falls, Princess Louisa Inlet, Jervis Inlet, B.C.

June 16, 1990

This high and steep walled inlet is characterized by the numerous waterfalls on the fiord walls. Estimated 20-30 falls in view at one time. One falls issued from ice field above almost perpendicular cliffs and fell approx 545'. These falls were approx 1/11 of the heighth of the canyon or fiord wall.



This morning temp 65°F at 8:55 A.M. Earlier sky clear and sunshine on tops of mts. Now clouds 1/2 way down inlet walls but at different levels.

A ♂ common merganser on delta of Chatterbox Falls. No gulls.

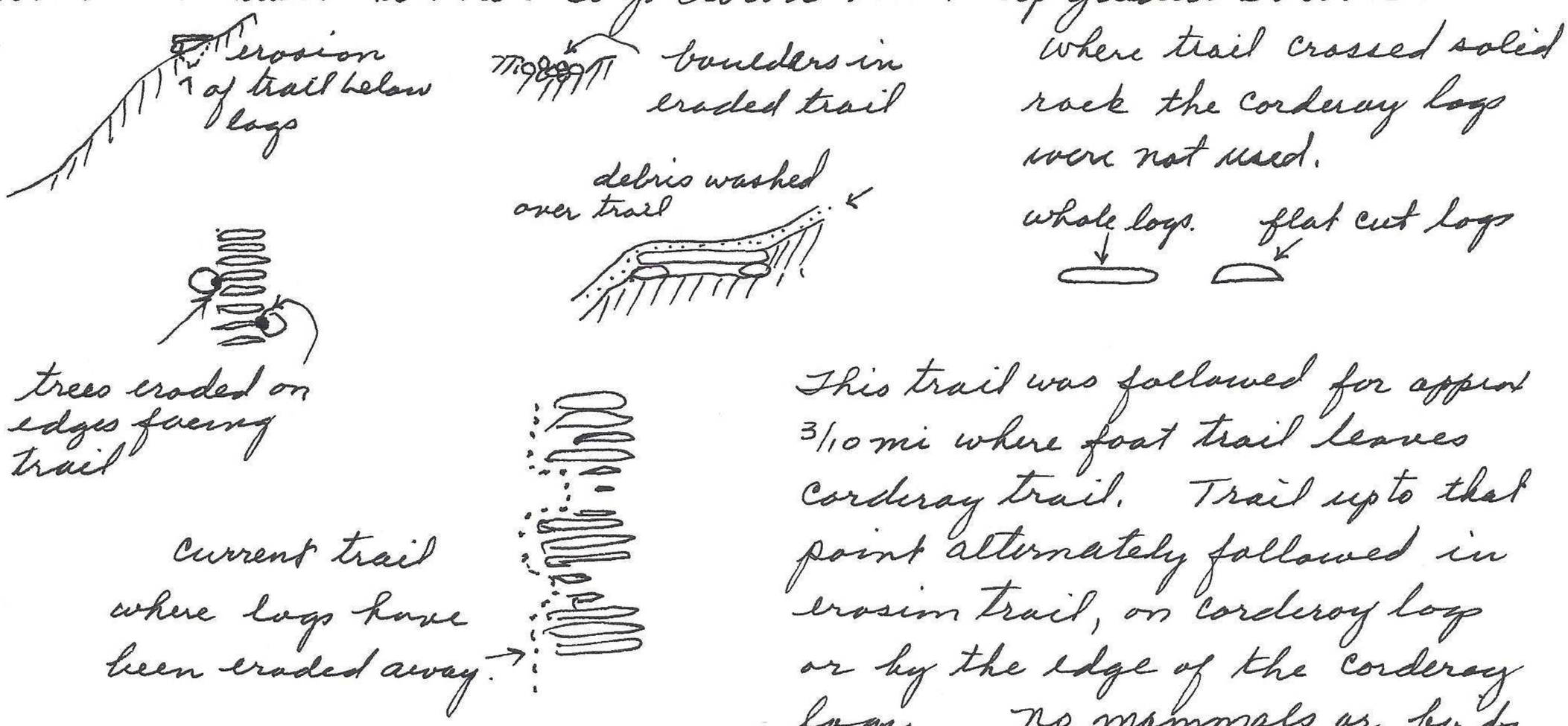
A red-breasted woodpecker was reported nesting approx. 200' W of Chatterbox Falls. 3 weeks ago. I checked the nesting tree of this woodpecker for 1 hr. but observed no activity. The hole was in a dead alder among cedar, maple and other alder. Surrounding partially open. Could hear thrush but did not see to identify. American robin carried food in its mouth. Common loon in lake.



Some problems observed: At least 5 garbage bags of trash off trail 100' N of incinerator. Need to be carried.

out. Planes displace gulls, mergansers, etc by loud echoing noises. may keep goats high on slopes. Delta below falls and marshland should be made inviolate to trespass because of trampling effect. Exclude harvesting oysters.

10:43 temp 58°F. This morning followed old logging trail up slope from right of Chatterbox Falls. This corderoy trail was used to slide logs down the steep graded course.



This trail was followed for appox 3/10 mi where foot trail leaves corderoy trail. Trail up to that point alternately followed in erosion trail, on corderoy logs or by the edge of the corderoy logs. No mammals or birds observed on trail.

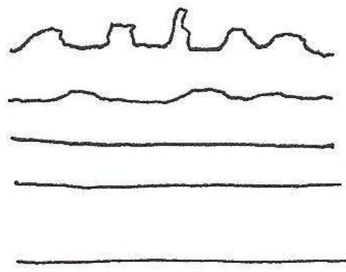
7:00 P.M. Photo 900616-1 Chatterbox Falls. which is Loquilis Creek at point where it enters Princess Louisa Inlet. This same creek has falls along its course above. The grass and sedge wetlands below are being trampled by man. During the warmer part of the day the water covers the left hand side of the brink of the falls. Photo 900616-2 ibid. but some falls showing on granite walls beyond. Oysters grow on the rocks in the middle forground. Steller's jay flew across the delta in the foreground.

June 17, 1990

At 7:20 A.M temp. 54°F. An immature bald eagle flew across valley from E to W. Left 7:25 A.M. Oysters on rocks and cliffs of intertidal zone on NW side of Princess Louisa Inlet in upper end are approx 100 per 20' of shareline. ♀ common merganser. Photo 900617-1 of Chatterbox Falls, the 'Bee' Grand Banks and waterfalls on Canyon wall. The one from top ridge in center of photo is the 545' falls. It is difficult to decern in the photo. 2 marbled murrelet, 4 mew gulls flying 150' high. Adult bald eagle to water but no success, then NW to tree 150' above shareline. A nest of the

bald eagle was reported from Hamilton Island. A harbor seal at last point before Malibu Rapids. Photo 900617-1a toward entrance Princess Louisa Inlet. clouds keeping above water. Photo 900617-2 reflective shoreline. NW side. Photo 900617-3 approaching Malabu Rapids. mountains in background are on SW side of Queens Reach. 8:17 A.M three Malebu Rapids. 4 mew gulls, marbled murrelet. Continued down Queens Reach.

First gravel-rock delta, SW side this side Patrick Point. Snow in drainage at base of falls 1/2 mi up gully from inlet water clear cut produces deltas at base below, 9:01 Patrick Point, now SW down Princess Royal Reach. On NW shore the shoreline is thus:



roven flew across reach
3 marbled murrelets

9:22 A.M 2 marbled murrelels. 9:25 AM 1 marbled murrlet at first point beyond Patrick Point. Also American robin. The NW shoreline of Princess Louisa Reach is characterized by thick, bath depth or thickness and heighth of water covering of rock. Most of it is above the 'black zone', but in many cases it estends down into the cliffs or rocks of the intertidal zone.

The are 2 colors of inflorescence of foxgloves above shoreline. 10:06 A.M harbor seal splashing. 10:11 P.M. Approx 1/2 mi up Princess Louisa Reach walls on SE side range from plate coverage to icicle coverage above shoreline. Photo 900617-4 of unnamed water falls half way between Moorsom Point and Glacial Creek. On W side Prince of Wales Reach a recent rock slide up 1/3 heighth of ridge. 11:40 Saumarez Bluff. 12:04 P.M gravel pit & side. at mouth Treat Creek. 12:17 P.M Point of Foley Hd. 12:27 P.M utelity line crassing. 1:30 ad. bald eagle in tree on shoreline. Pender Bay Channel 2:48 P.M. Base camp at Fishermans Resort 2:53 P.M. Hour meter 2757.6. Photo here of Canada Geese Photo no. 900617-5

June 18, 1990

Waiting for James Robert Bee and party to arrive.

June 19, 1990

Cloudy skies, blue to W, slight wind from S. 2 turkey vultures circling ridge S of Garden Bay. Adult bald eagle soared to N ridge about 200' above ridge. One glaucous-winged gull followed

900619-64

approx. 100' above the eagle.

Fisherman's Resort, Garden Bay, B.C.

June 20, 1990

James Robert Bee and his group arrived by car and will take over the shuttle of the boat to Ketchican where we will return to continue on to Skagway. James R party includes:

Anne Wallace (contact) 1939 Belle, Topeka, Ks. 66604, (913) 272-1207.
Dick Dunkaupt (Contact) Betty Dunkaupt, Topeka, Ks. (913) 354-4125
Patti Hackney (contact) Plamanns, 1705, Ill. (913) 843-7195

June 21, 1990

Annette and I stayed at cabin at Fishermans Resort, Jay a party slept on boat. They left for first leg of trip and Annette and I left at 3:15 P.m for Lopez Island via James R. van. will rendevous at Ketchican on June 28, 1990. Continued 5 to Vancouver thence to a Inn in Bellingham, Wa.

June 22, 1990

Left Bellingham, thence to Annette Christine Kenagy at Lost Lake, Snohomish Co., Wa.

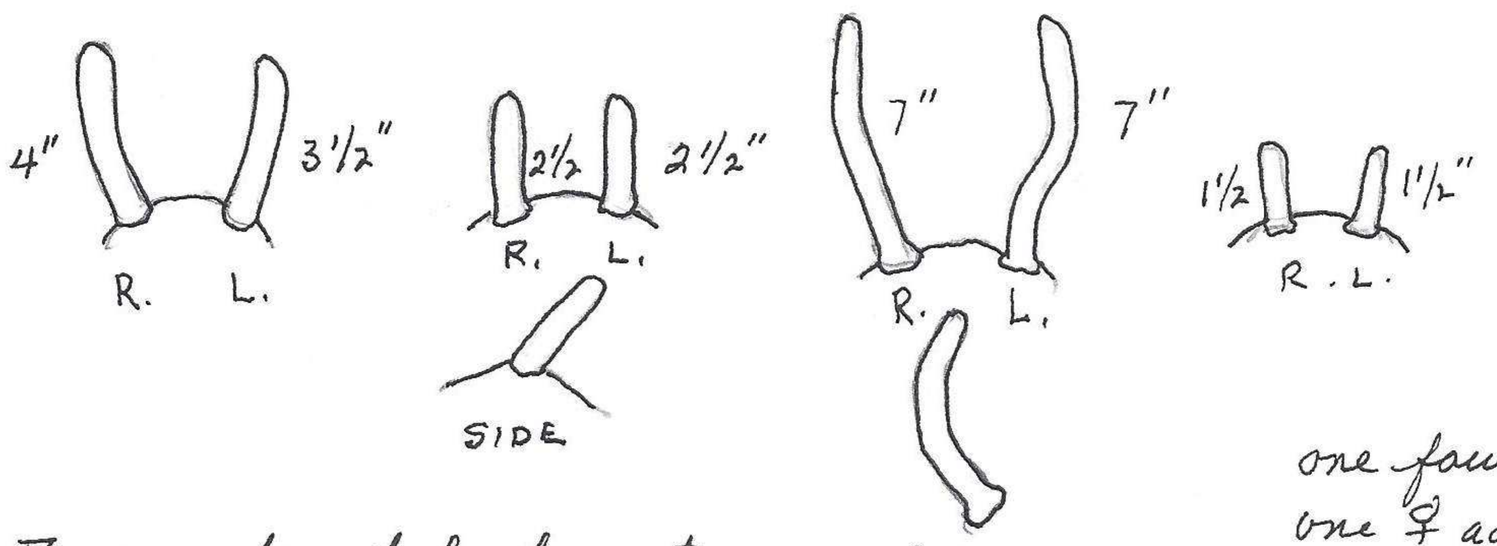
Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa

June 23, 1990

Violet-green swallows active in and out of nesting box on Bee House (both boxes).

On Leo Reef rocks nos 1-6 are 49 harbor seal. and rock no. 10 9 or 58 total seal.

2 pairs glaucous-winged gulls on territories on Flower Island. no evidence of bald eagles at nest on NE end Frost Island.



Four males at feeder at Bee House among 4 ♀ and 5 fawns.

one fawn 19"
one ♀ ad. 27"

900623-65

11:05 A.m no bald eagles at nest on n E Frost Island.
Harbor seal on the following reefs and rocks:

Leo Reef, rocks no 1-6 = 9 — none on rock associated
" " " no 11 = 2 — with Flower Island.
total. 11

Ad. bald eagle 3/4 up slope Decatur Island n Silvan Cove.

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

June 24, 1990

Left Lopez Island at 2:50 p.m for Prince Rupert, B.C., Canada mileage at Lopez Island 67878.2. Only 3 glaucous-winged gulls on ferry trip to Anacortes. From Anacortes to highway 9 via highway 20 to Sedro-woolley thence n to Canada via highway 9, thence E to Cultus Lake Thousand Trails Preserve.

Cultus Lake Thousand Trails Preserve, British Columbia, Canada

June 25, 1990

Yesterday enroute to Cultus Lake from Sedro-Woolley observed 18 violet-green swallows, 8 barn swallows, 7 American robins, 22 American crows, 30 Brewer blackbirds, 2 great blue heron.

Left Cultus Lake 9:09 A.m at 67978.2 or 100 miles from Lopez Island. Cottonwoods in full cotton inflorescence. Followed highway 1. First sagelike plant at Luytton on river terraces. Country bare beyand. Enroute to Cache Valley observed Brewers blackbird, american crow, common raven, violet-green swallow and american robin and then only 1 or 2 birds of each species. Arrived Cache Creek at 68149.0 First aspen at 68177.2. Chasm at 68180.0 Arrived at Lazy R camp ground at S end of Lac La Hache at 68236 or 258 miles today.

Lazy R Camp, Lac La Hache, B.C. Canada

June 26, 1990

1 Western flycatcher, 2 american mergansers, 2 common loon, barn swallows nesting, osprey, American robin, tree swallow in area. There is a large yellow flower here and a similar small yellow flower south of here to Cultus Lake.

Left 8:15 A.m. at 68236.0. at 262 mileage sparrow hawk. Prince George 12:45 P.m at 68428. Vanderhoof 68490.5. Arrive Burns Lake approx 2 mi. n of city.

Burns Lake, 1 mi. E, B.C.

June 27, 1990

Temp. 44°F. Fog. Birds in area, pine siskin and American robin. Left 9:40 A.M at 69490.5.

At moricetown took 3 photos of falls which is just off road. These falls have been photographed on previous trips. The number are of the 3 photos: 900627-1 moricetown Falls downstream from falls, showing castlelike house to left and forested slope on right side of gorge. an interesting erosional break-thru of this ridge. Photo 900627-2 moricetown Falls shooting upstream. natural eroded logs in lower part of picture. Photo 900627-3 same as 900627-1 but from slightly different angle. Continued W on highway 16 to Cassiar Highway turnoff at 749 miles. 2 mi. W of this junction on highway 16 photo 900627-4 of mountain range on S side road with cloud plume off left hand peak. Snow steel on upper slopes. Foreground a fence separating white flowers and grasses. Deer track here measured 82 mm. Arrived Terrace 68 804.0 Birds from Burn's Lake to Cassair Highway are: 6 american robins, 12 American crows, 8 common ravens, 6 pine siskins, 1 northern shrike, 1 American kestrel, 1 redwing blackbird, 2 turkey vultures. Arrive Prince Rupert 6:40 P.M at mileage 68899.4.

Prince Rupert, British Columbia, Canada

June 28, 1990

Camped city park on hill. Temp 52°F this A.M. Clouds down to 150'. Checked museum where we were to rendevous. with James Robert Bee and party who had sailed from Pender Bay where we had turned the boat over to them. We were to meet here at P.R. and then they were to continue to Ketchikan and we to some place via ferry.

June 29, 1990

Camped city R.V. park S of town. Temp. 61°F.

10:10 A.M. 18 bald eagles circled above ridge E of Prince Rupert. In Prince Rupert at marina n town, 3 bald eagles (2 ad., 1 imm.) caught fish out 150' from marina. At any one time approx. 7 bald eagles at marina, either fishing or resting in conefers on adjoining ridge to E. Met James Robert Bee & party at marina. Spent day with them. they left in afternoon after boat check and taking on other supplies. We will take ferry tomarrow and meet them in Ketchikan. Found place to store the Barth motor home. A lumber-hardware controls entire basement of city mall and the Barth was placed there which

provide enclosed cover and complete security. This evening and night we parked and slept at the lumber-hardware parking lot. in Barth 68951.0

June 30, 1990

Left Prince Rupert via state ferry at 9:56 A.M. 10:07 adult bald eagle green beacon starboard. 10:10 A.M. green marker no. 047 starboard. 10:11 A.M green beacon starboard and naw N. 8 glaucous-winged gulls, 2 glaucous-winged gulls. 11:09 A.M. East of S end Melville Island. 11:45AM 5 glaucous-winged gulls on floating log. 11:57 A.M. Light house starboard, rocks to N with approx 150 resting gulls. no gull on islands E of light house. Whitly Point 12:05 P.M.



glaucous-winged gull.

12:06 P.M. double-crested cormorant, glaucous-winged gull, 12:20 P.M. International Line. 12:30 P.M. 3 dall porpoises. 2:05 P.M E of Mary Light House. 2:25 P.M 4 dall porpoise. Approx 150' from ferry. 3:05 mountain Point. 3:18 Narrow Point entrance to Ketchikan. 21 adult bald eagles and 4 imms between narrow entrance and Ketchikan, most by them resting in trees or crossing channel, also 4 glaucous-winged gulls. Arrive ferry terminal 3:25 P.M. From Harris marina area, 1 bald eagle observed flying overhead or fishing beyond breakwater every half hour.

July 1, 1990

Contacted James Robert Bea & party (see names & addresses listed earlier in journal, June 20, 1990) and made final arrangement for James' party to fly out and Annette & I to depart to north (Skagway). Stayed tonight at bed and breakfast top hill E of Harris marina.

July 2, 1990

James R Bea crew left via plane today at 2:00 P.M. for Kansas.

July 3, 1990

Annette and I left Ketchikan at 1:00 P.M at hour meter 2846.5. or 128.5 hrs. from Lopez (Shoal Bay).

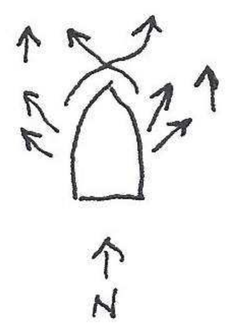
arrived Clover Cove, then just beyond to Knudsen Cove. At Clover Cove an imm. bald eagle sat on top piling and a violet-green swallow darted 3 times at the eagle which flinched each time and then left. At Knudsen Cove 2 imm. bald eagles fed within 30' of boat. 8:03 P.M adult bald eagle flew across channel. mary and don are scheduled to join us at Ketchikan Sunday via alaska airlines. We will notify airlines as to where we are staying.

900704-68

Knudsen Cove, Clover Pass, Behm Canal, British Columbia, Canada

July 4, 1990

Left Knudsen Cove 8:00 A.M., at 2849.1 hrs on meter. Three to five bold eagles attracted to boat by fish cleaning. wind mild. Local overcast. 8:25 A.M. At least 18 dall porpoises swam along with boat for 7 minutes The most characteristic behavior is the speed. Our boat was moving approx 8 Knots whereas the porpoise at times moved at least twice that speed. The surfaced at most any place, especially on bow waves where considerable plumes of water trailed their surfacing.



9:05 A.M Caamano Point on S end Cleveland Peninsula. no birds observed across the Behm Canal. 8 surf scoters flew north over boat. 9:34 A.M first glaucous-winged gull. 9:41 A.M second glaucous-winged gull. Old bold eagle nest first point S of Neblacker RW marker. A cove at north end. 9:55 A.M at R and W marker at neblacker Point. Mountain to NE is 3095 elev.. all forest except irregular outlined green of alpine on top. Avalanch tracks in forest below alpine. 9:59 A.M 2 bald eagles, ad, in tree. Another one in air above. 10:00 A.M. Can now see ship Rock Island. 10:07 A.M Prominent Point. 10:17 A.M. 13 dall porpoises swimming along side and in front of boat. Boat travelling 16000 R.P.M. They remained in area for 3 minutes. 11:00 opposite a rock island. 11:16 AM. 8 porpoises (dall) came toward boat when first observed approx. 150' away. They were approx 50 starboard and instead of coming to boat they passed to stern and continued in that direction. These porpoise were opposite a mountain to E at 2485 elevation. 11:28 new boat speed 11000 RPM. 11:45 W of Lee Rocks. Arrived Meyer's Chuck 12:30 P.M. 3 hrs and 25 min this morning. This evening took several photos of area. Photo 900704-1 of cove and boats. The 'Bee' last one on right of docks and by larger fishing boat. Photo to W. These docks are supplied by state and serve more as refugia during heavy weather. State docks near larger cities or center of fishing are generally 100% preoccupied by fishing vessels. except when seasons permit fishing. In most marinas whether operated by local Communities or otherwise, lease at least 90% of available space to local and provide only 10% as transient use. Most boats passing thru use stalls of people who are at the moment not using them. They pay regular fees plus $3.00 per ~~month~~ night for electricity which is passed on to the leasing

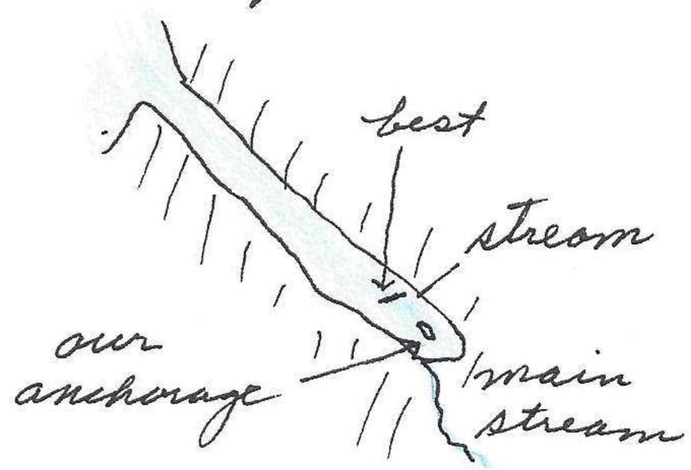
the stall. Photo 900704-2 of one of the original buildings used as grocery store and general merchandise. At present there are 31 residences that line here the year around. At a potluck dinner that we were invited to included most of the regulars and about 20 outside friends or summer vacationers. Blanch, an Eskimo or Indian and 86 years old was the honored guest at the party. Photo 900704-3 another photo of cove as photo no 900704-2. Photo 900704-4 of the school house built by alaska oil money and used by 7 students. The village had no roads and only single trail paths thru forests for transportation. No major or leader appointed but the village is governed by mutual respect for each other. 2 mew gulls in area.

Meyer's Chuck, Clarence Strait, Alaska

July 5, 1990

Left Meyer's Chuck at 8:31 AM at hr. meter 2854.4 3 bald eagles in area and 2 mew gulls and 3 pigeon guillemots.

9:09 AM. and heading into Ernest Sound. 14 dall porpoise followed our boat for 5 minutes at 11,000 R.P.M. The porpoise are found most frequently at entrance of minor channels into the larger straits where water is more active than elsewhere. 11:26 N of Easterly Island. 12.29 Eaton Point? 1:13 Point Santa Anna. Upper end Santa Anna Bay at 1:30 P.M. Anchored in 30' at high tide. This inlet is on the E side Seward Passage about 3 mi. E of Point Peters. From the approach from SW it is deffiecult to see entrance into inlet until almost there, however, the high mt ridge demarks the NE side of inlet. The inlet is about a mile long and is deep but at the upper SE end the depths decrease to about 4 fathoms, although abruptly where anchor can be fixed on slaping floor. Wind was from the NW when we anchored but changed to SE and and although the anchor pull was counterindicated, it held. Upon arrival at head of bay, a family of raven called continuously for about 45' then left. At 3:37 a group of candlefish? covering 8'X8' surface, ran 30' continuous feet toward mouth of creek entering to SW. Most reaction from candlefish is a splash but these continuously surfaced in their escape.



Santa Anna Inlet is a very peaceful place and is beautiful on all sides.

Santa Anna Inlet, Ernest Sound, Alaska

July 6, 1990

Left 9:15 A.M. for Wrangell, mouth or entrance 9:32 A.M. Turned right and now in Seward Passage, deer Island to port, mainland to starboard. 10:15 Frosty Bay, E side Seward Passage near N end. The head of the bay narrows, then opens to shallow water. Large stream enters at head. 10:20 2 marbled murrelets. Found Island, entrance Zimovia Straits 10:45 Fools Inlet and photo 900706-1 of N end Seward Passage. Cumulus and cirrus clouds. Water calm. 11:15 Point Warde. This point is the entrance to Bradfield Canal. The point consists of 2 timbered knolls. The shore is rocky and cliffs on the W are approx 100' high. A small cove is just S of the point on the starboard side, 11:29 marbled murrelet. 11:36 3 mew gulls. Anan Bay is about 2½ miles beyond Point Warde. on the south side of Bradfield Canal, a large stream enters here. It is reported that black bear feed on salmon along this stream and especially at waterfalls inland from beach. Blake Island 11:44 AM. 16 mew gulls and 2 marbled murrelets at entrance. The Blake Channel starts here and connects Ernest Sound with Eastern Passage. There is a narrow channel on each side of Blake Island, we chose the port side channel, but avoided the rocks off the west side at point. Several reefs and islets extend N from Blake Island. Some currents in this channel. 12:01 adult bold eagle on first rock N of Blake Island, 6 mew gulls flew N, 2 marbled murrelets in channel. 12:14 P.M. 14 mew gulls, 7 glaucous-winged gulls together on water. 12:24 P.M. for a full mi. a raft of rockweeds floating in Channel. Photo 900706-2 at 12:33 P.M in Blake Channel to N. Some snow on top of ridges. Annette on pulpit. Mostly cumulus clouds and water calm. 12:46 E Cape Point ?, Snow on ridges. Water-snow avalanche tracts on slopes all along Channel in this area. 12:48 2 mew gulls flew N. 12:50 64 surf scoters in one group on water. 12:54 Beacon light on Neptune Island and point on W side. 1:02 P.M. photo 900706-3 to N and E with high snow covered peaks and cloud cover. Two American Crows in area. 1:11 P.M photo 900706-4 to E + N of peaks but mainly spear of cumulus clouds from W. Blake Channel ↑ 1:32 bend in Blake Channel leading to narrows. whitewash cliffs and shoreline to starboard. 1:35 P.M adult bald eagle. The Narrows 1:45 P.M. This narrow is about 1½ mi. long and 750' wide at narrowish part. no

problem navigating these narrow except reef n entrance on E side and rocks on S side of channel on west side of narrowest part of channel. 1:52 P.m 5 marbled murrelets. most marbled murrelets are in pairs. 2:14 hooked end madan Point, w side  now on open water. alpine bright green of closely arranged shrubs rather than tundralike. First island peninsula port turn at 2:53P.m. 3:36 P.m 48 mew gulls on water. Steep slopes and approx. 20 avalanche scars. 3:44 P.m Kodin Island to n. 3 marbled murrelets. 3:55 P.m 3 prs marbled murrelets, 2 mew gulls. 4:00 P.m Wrangell. Called Mary P. Bee at Kantishna and she reported that the wedding was set at 8th & 9th Sept. there. On Blake and Eastern sound did not see boat or person.

Wrangell, Alaska

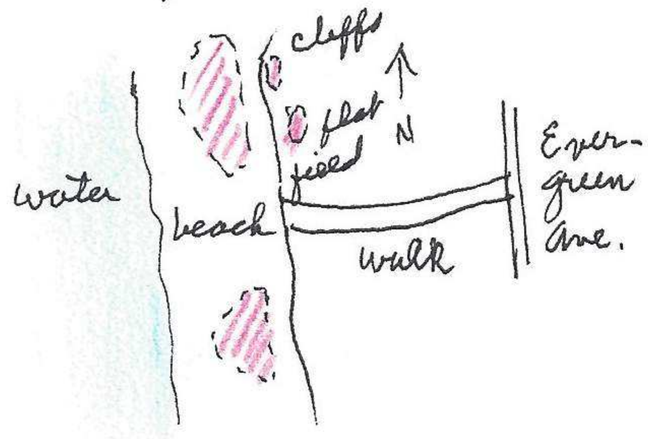
July 7, 1990

One pigeon guillemot. It flew under overhead walk and was unafraid of marina and its boats. Called Mary & Don. Observed 7 river otter at docks at one time. They remain under docks and are continuously active. They arrive in evening. Common raven are in equal numbers to American crows. 3 pigeon guillemots in harbor at one time. 9:30 P.m bald eagles still active in area. Rangell is a city of more people and cars than the city will tolerate and the people (a few) are coarse and degraded.

July 8, 1990

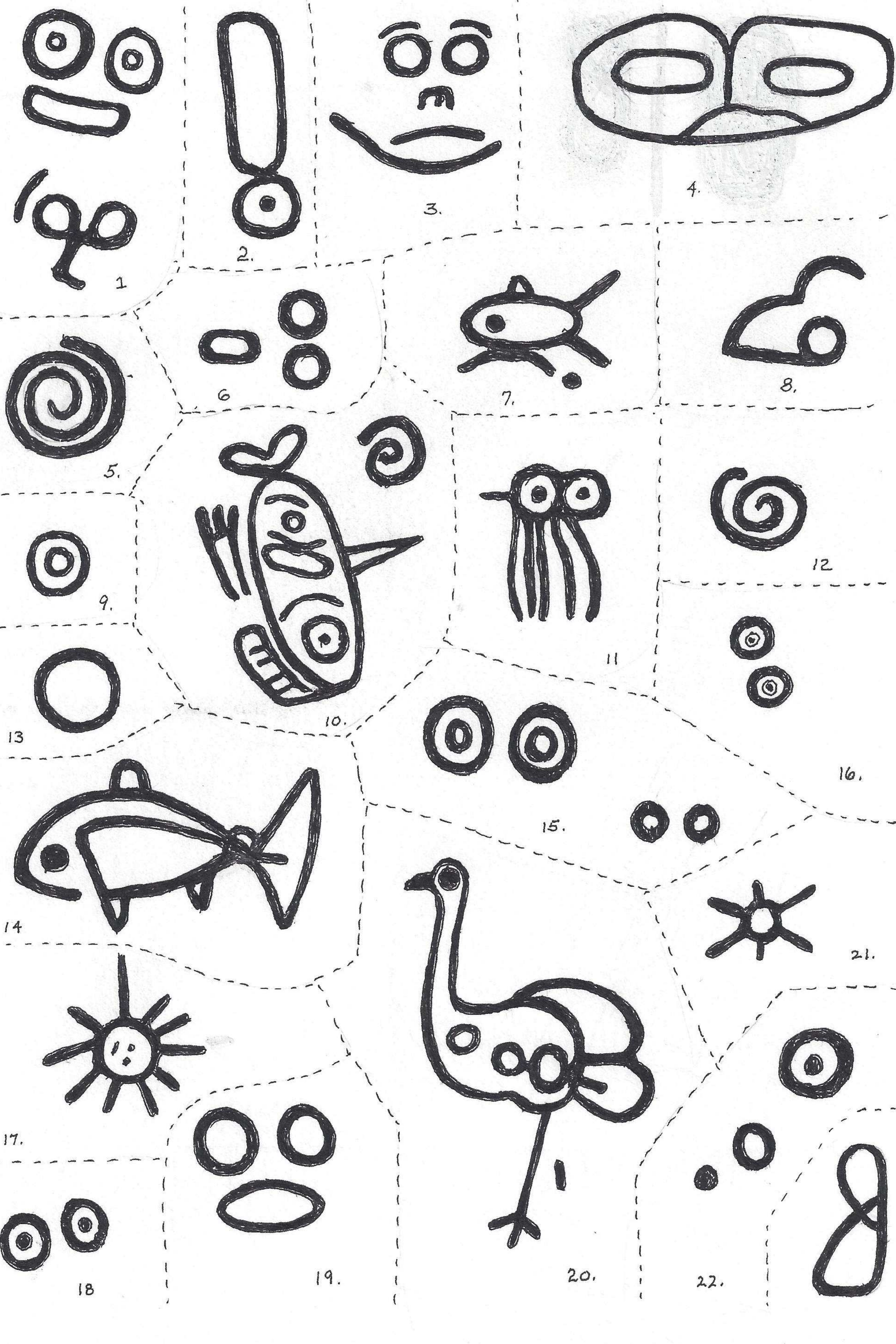
58° F outside, 67° F inside boat. 8 bald eagles in area (4 imm and 4 adults. Other birds: 2 kingfishers, 1 pigeon guillemot, 4 barn swallows, 3 mew gulls, 2 American crows, 5 Common raven, 5 mallards, 1 great blue heron, 2 shorebirds (dowitchers?).

Left for petroglyph site 15 min. walk from town. Carbon dating is not feasible because the rocks are located on an active beach where most of the glyphs are cover by high tide. Several, however, are located above high tide. These petroglyphs may be older than 8,000 years. Some of the rocks have been moved to the museum and library and elsewhere. The glyphs are off Evergreen avenue on beach, 3/4 mi n ferry terminal. Most people believe they are of early Stikine Tlingit origen. There is a striking similarity, especially the head or face characters that remind me of the petroglyphs of St. John Island in the virgin islands!

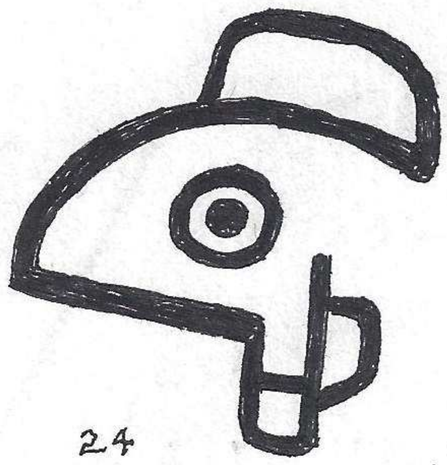


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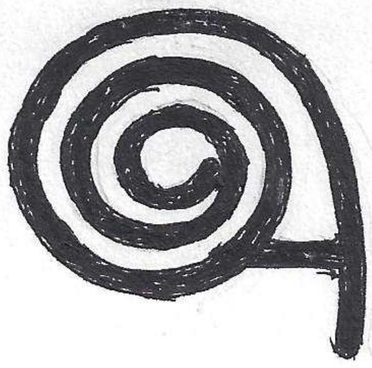
Petroglyphs on black slate and most of the figure are oriented with top to N: Size variable but approx 1/1 nat. size. Hand drawn.



900708—73



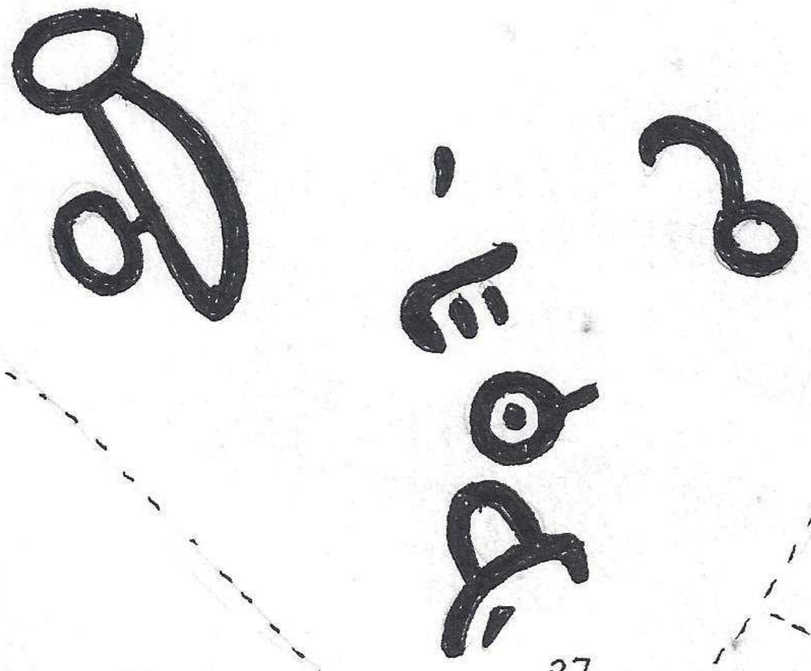
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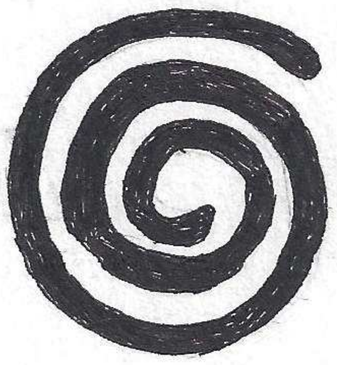
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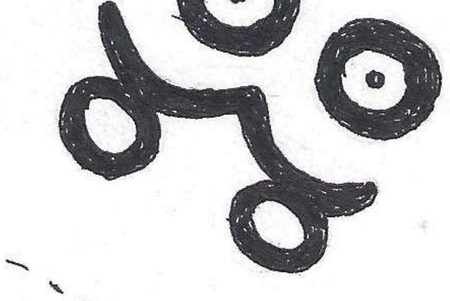
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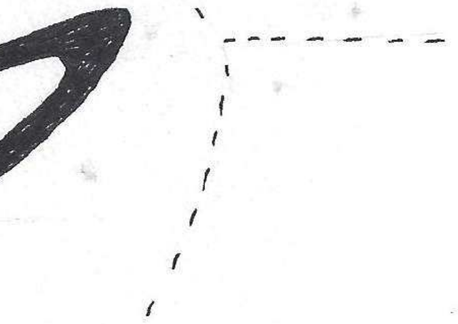
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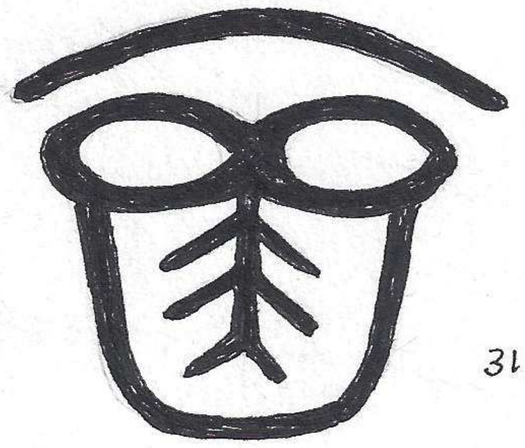
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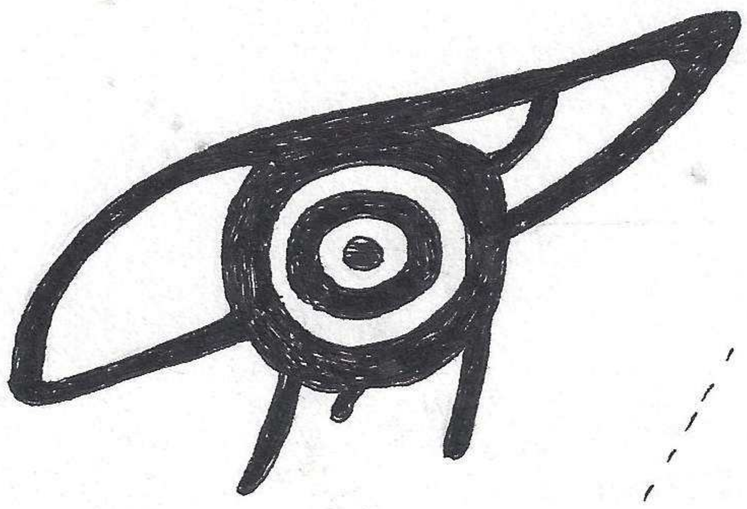
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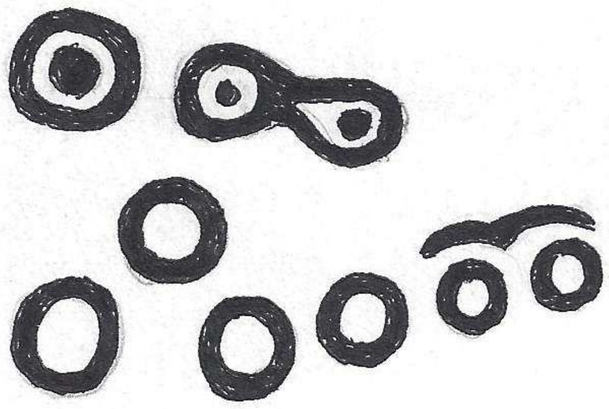
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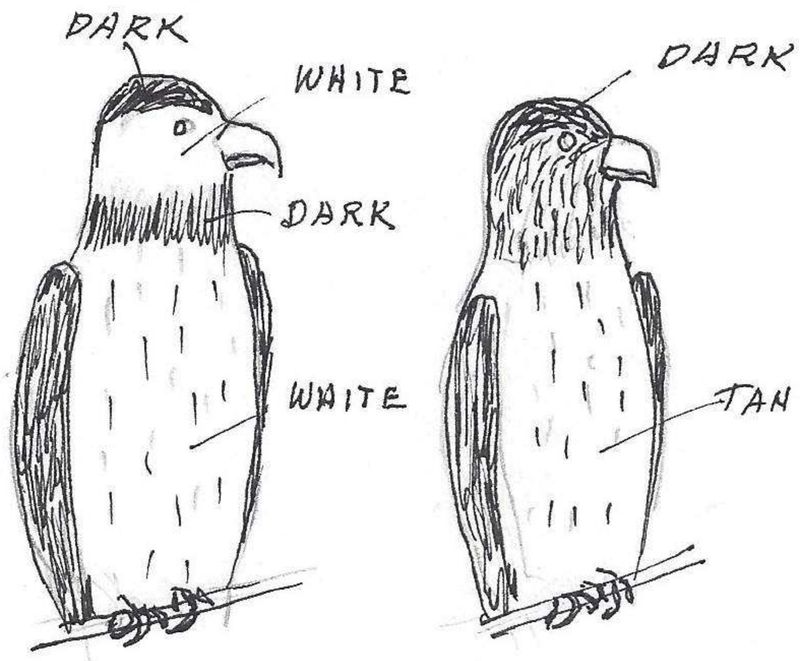


35

Rufous hummingbird at petroglyphs. Also and adult common roven and its young called continuously. These birds are mainly along coast but also inland in the Wrangell area. Continued to airport and thence back to Wrangell proper. At feat divide on road is a dwarf pine or conifer forest and savanna which looks out of place than the solid forests elsewhere. The Stikine river delta and mountains to E are impressive. The river is the fastest navigable river in N. Am. and cuts across thru the coastal range and into British Columbia beyond. This should be investigated by small boat at a later date.

July 10, 1990

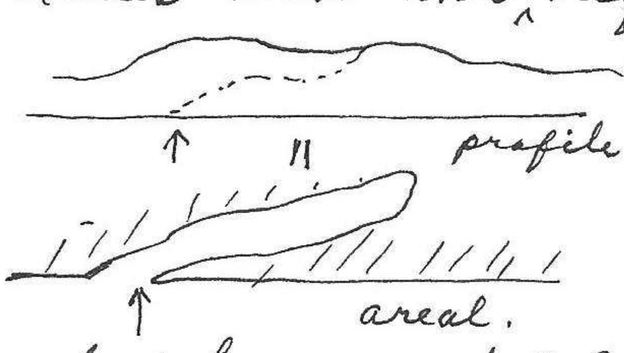
Rain last night and storm approaching from the west.
20 American crows and 18 mew gull in marina area.
Two imm. together in tree at marina. Four American crows harassing an adult, all in flight.



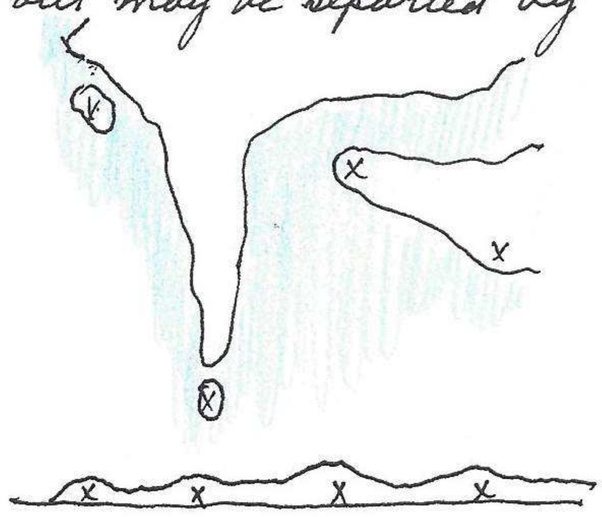
Recorded observations on correlation of visual interpretation of navigation and corresponding information from charts:
1. Visual distances are farther away than recorded on maps or charts. 2. Small islands on charts appear larger when view in nature. Small islands that one assumes are reefs or rocks turn out to be large islands covered with mature trees, ex. ▭ = . 3. Relatively flat straight shorelines on maps are deeply indented and irregular. 4. Islands that are widely separated on maps are in same plane visually thus:



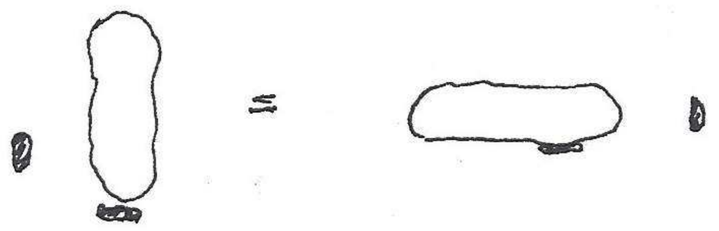
5. Inlets blend into neft. or ridge beyond.



6. Islands near shore become part of mainland but may be separted by miles apart.



6. Islands when veewed 90° are:



7. Island in channels thus:



3:30 P.m 5 american crows chased adult bald eagle.

July 11, 1990.

In Port Wrangell. check waters for Wrangell narrows for tomorrow.
H slack 69.29 AM max current 12:32
L " 3:46 P.m " " 6:35 PM.

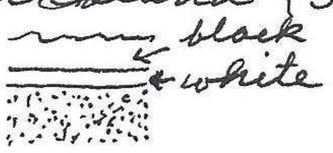
July 12, 1990

at marina (inside protected) noted a pigeon guillemot with a 1/2" x 4" marine worm in bill. worm sp.? but like Nereis vexillosa (sandworm) or amphiporus bimaculatus (thick Amphiporus). It held in mouth for 4 minutes, then flew 120' and consumed it.

July 13, 1990

Left Wrangell at hr. meter 2868 at 8:34 A.m, Clear. 2 mew gulls at exit of harbor. 8:40 A.m raft of debris, mainly rockweed. 2 mew gulls feeding at raft. 9:09 A.m 5 mi. Island to port. Adult bald eagle at north end. 9:25 A.m Another raft of debris, length indeterminate and with approx. 120 ft. 9:34 A.m pigeon guillemot, American crow. 9:39 A.m. Adult bald eagle fling across Channel, American crow (2), 9:42 A.m 2 pigeon guillemot, American crow, 9:47 A.m Two Tree Island. From here the various islands appear in profile. Low Point.

Level Island  Station Island 

10:19 mew gull. 10:21 Station Island (S of)
On Station shoreline is = 

10:59 at unnamed point

approx 1/2 way between Point Hawe and Pt. Alexander. 11:15 A.m Pt. Alexander, now n. 11:21 A.m. old mud slides now grown to deciduous trees and contrasting in greens. 11:26 midway Rock. 11:34 A.m. December Point. 11:38 A.m Pt. Lockwood and beacon no. 1. 11:42 A.m. marbled murrelet and Bonapart gull. 11:48 marker no. 4. 12:25 A.m green marker 29. 3 marbled murrelets. 12:34 marker 42. Private dock beyond. 3 bald eagles on rocks on beach and 2 in trees. 12:41 P.m bald eagle on rock at marker 48. 12:44 2 bald eagles on flats. 12:47 P.M. Adult bald eagle. 12:49 P.m marker no. 50. 1:07 P.m mountain Point. at marker 51. 6 mew gulls as we approached Snow. Bay. 1:33 marine marker 52. adult bald eagle marker 53. 1:56 P.M. at marker 54, 42 Bonapart gulls, 11 glaucous-winged gulls. 2:10 P.m Petersburg. Petersburg is a "Little Norway" only as one looks east across Frederick Sound toward the snow covered mts of the Stikine River and glaciers. LeConte Glacier although we did not visit it, is accessible and of exceptional scenic value. The streets of Petersburg are wide, clean & the city is organized.

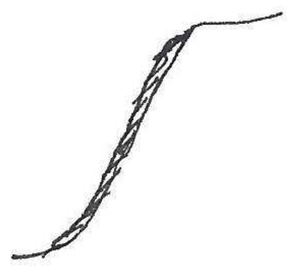
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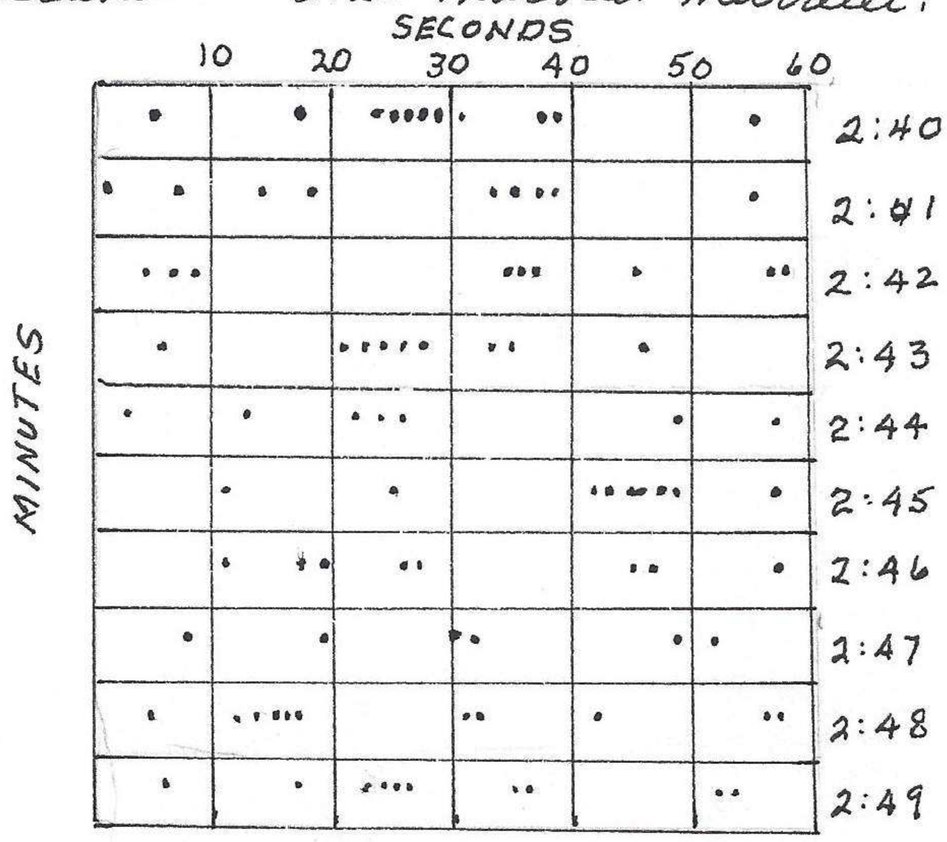
St. Petersburg, Alaska

July 14, 1990

Approx. 2000 gulls in middle of Petersburg harbor, 90% mew gulls, 8% glaucous-winged and 2% Bonaparte gulls. 8 bald eagles, 6 american crows and 4 common ravens in area at one moment. The gulls move around according to source of debris from fishermens boats.

Left Petersburg at 8:27 A.M. 8:54 A.M. photo 900714-1 to E across Frederick Sound of snow and glacier covered mountains, many knoblike peaks, some may have been monadnocks or at least goodhorns. 8:59 A.M photo 900714-2 ibid but closer. Glaciers have broad terminals. (recessional); cruise ship entering right side Photo 900714-3 ibid as no. 1. Photo 900714-4 close-up of above 3 photos 9:18 A.M. ibid but telelegie showing more detail of glaciers, right side photo light struck, from S end Sukoi Island to E. 9:22 A.M. N end Sukoi Island at marker. 9:27 to E alpine with rock talus below cliffs instead of vegetation up to base of cliffs, mew gull. 9:35 to E snow avalanche in gravel tract carried by water from benchland at top of ridge 9:43 A.M. adult bald eagle flying approx. 150' E across Frederick Sound. 9:46 A.M mew gull. 10:05 A.M. In drainge on E mts on north slopes old mature trees solid green. 90% forests have dead trees (bare trunks to top) every 20-30' apart. 10:23 Cape Strait. 11:00 A.M. marbled murrelet, at long raft of rockweed, Glaucous-winged gull. 11:09 A.M. 1 foot long salmon? jumped forward 6 feet. 11:22 A.M. 2 marbled murrelets. 11:51 A.M glaucous-winged gull. 12:09 P.M. 3 mew gulls. 12:39 mew gull. 12:47 P.M. wind and whitecaps from E all along route as far and then abruptly smooth. 1:01 P.M Cape Fanshaw at light beacon 1:15 P.M starboard. Bird Island, adult bald eagle here. Extensive reefs associated with Storm Island. 2:20 marbled murrelet.





Frequency of surfacing of whales in 10 minutes. 86 sightings in groups of:

0.	14
1.	26
2.	11
3.	3
4.	2
5.	3
6.	1

closest surfacing to boat was 180', another 210 feet.

Two surfacings were of above 1 breaches

900714—76

57°40" ↑

POINT LOOKOUT →

POINT LEAGUE

133°20" →

CLASS PENINSULA

WINDHAM BAY

SUNSET ISL.

7:30

7:09

THE TWINS

7:01 AM

MACDONALD RK.

6:47

LEFT 6:24AM

HOBART BAY

ENTRANCE ISLAND 3:50PM

POINT HOBART 3:24 P.M.

ADMIRALTY ISL.

SNAIL ISL.

ARRIVED 2:26PM

DEPARTED. 3:00PM

TOTAL 38 WHALES JULY 14 1990

PORT HOUGHTON

W. BROTHERS

EAST BROTHERS

THE FIVEFINGERS

BEACON

FOOT I.

PT. WALPOLE

WHITNEY I.

STORM ISL.

BIRD ISL.

1:15 PM

1:01 P.M.

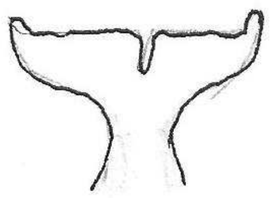
CAPE FRANSHAW

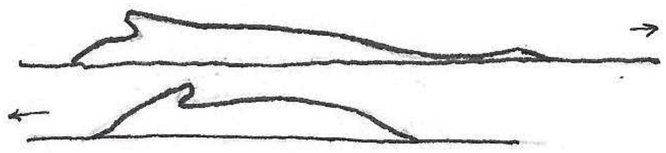
DISTRIBUTION
HUMPBACK WHALE

JULY 14, 15, 1990

900714-77

2:26 P.M. stopped boat and observed the humpback whales until 3:00 P.M. If we had recognized the distribution of whales we would have bi-passed them by circling west out around them so as not to disturb them. (See map of the distribution of these whales in in area at the mouth of Houghton Bay.) The characters of these whale as observed are:  spout 12-18 feet and wide at top, tail



dorsal fin 

Two photos of these whales are: 900714-5 to SW showing back and dorsal fin of humpback whale on downward plunge. Five Fingers islands in left background. The Brothers Islands and Admiralty Island in right background. Photo 900714-6 of humpback whale at top of surfacing. Dorsal tip of forward head, nares and dorsal fin and back are exposed. Photo to W. at approx. 150' from boat. At this time boat was not moving & engine was off. also aug 8, 1990

James R. Lee reported whales (humpbacked) and photographed them July 14, 1990 in same area ↑

Left whale area at 3:01 P.M. with whales still active. 2 marbled murrelets. 3:06 P.M 4 marbled murrelets. 3:15 P.M salmon jumped 3 feet. 3:24 P.M Hobart Point to E. 3:34 P.M marbled murrelet. 3:38 2 marbled murrelet. 3:50 P.M entered Entrance Island Cove on S side Entrance Island. The entrance is narrow but expands into a larger cove. Between 6:15 PM and 8:15 P.M 16 common ravens flew in groups of 5-3-3-2-1-1-1 to W approx 100' above cove. The belted Kingfisher only other bird observed. 9:00 P.M 2 ravens flew W at approx. 400' high.

Entrance Cove, Entrance Island, Hobart Bay, Alaska

July 15, 1990

Temp. 52°F AM, rain all night & this morning. Cold front passing over. 8:00 A.M 2 ravens flying W at approx. 200'. 8 American crows, 1 glaucous-winged gull, 3 belted Kingfishers at Entrance ↑ Cove. Small fish 1"-2", stubby and jumping once in every 1/2 hrs. no other activity in water. 1:30 P.M first aquatic bird in cove since 8:00 A.M, a marbled murrelet 200' away. Caretaker or actually owner of a cabin here has 6 dogs that have the free run of Entrance Island. They spend 50% of their time interacting with at least 3 river ↑ otter that remain under the floating sheds or docks. It seems like a game of hide and seek with otter exposing themselves first on one side of the dock and then the other side with the dogs running back and forth.

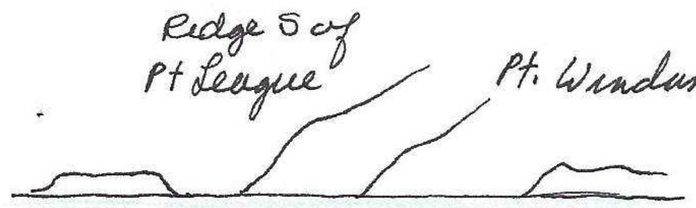
900715-78

July 15, 1990

Stayed in port today because of weather and wind. Did take boat to circumnavigate the island.

July 16, 1990

Left Entrance Cove. at 6:24 A.M for Taku Harbor. Temp 52°F. Rain and overcast. First humpback whale at 6:47 P.M at 3/10 mi W of our position. Continued toward the Twins and at 7:01 A.M with The Twins to SW observed a humpback whale 1/2 mi. to N. It breeched. Also 1 mew gull, 17 surf scoters, 2 marbled murrelet. 7:03 marbled murrelet. 7:09 A.M. humpback whale 1 mi. N Now can see

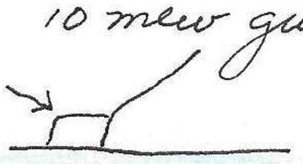


Sunset Is

7:17 AM Iceberg between Sunset Is & mainland,

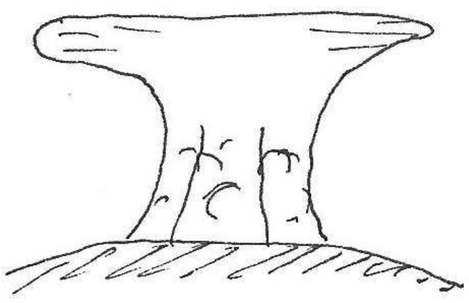
7:30 A.M Sunset Island starboard.

7:43 10 mew gulls. 7:58 mew gull. 8:00 A.M. Pt League now in view

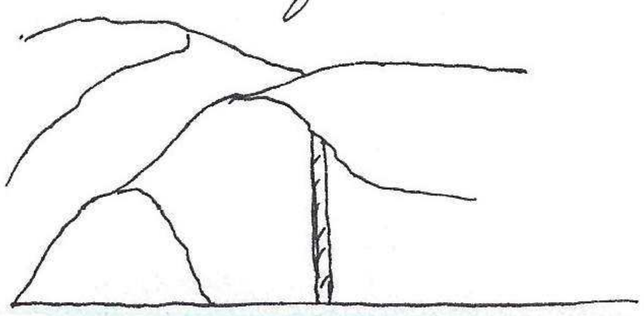


8:16 A.M. One of 7-8 icebergs mainly center of Stephens Passage, landward. One had a mew gull perched on top. 8:30 A.M a light colored streak of cleft produced by smooth surface rather than new surface exposed by rock despacement to E. First sign of blue sky ahead, 8:51 A.M. mew gull. 8:54 A.M Pt. League. 8:56 A.M. photo 900716-1 mountains and clouds to E between Pt. League and Pt. Lookout. photo 900716-2 to NE of Point Lookout 9:07 A.M 5 icebergs in view some 4-5 miles to N. Outside temp. 54°F. 9:18 A.M 2 marbled murrelets, a harbor seal resting on iceberg 150' from boat. 9:24 A.M photo 900716-3 to SE looking back at Pt. Lookout, plumelike cloud up from point. Appears like a cumulus in forming but is associated with fog layer below. In far distant middle of photo is a similar plume with base at near sealevel. Also photo 900716-4 to W showing Glass Peninsula with fog clouds at base, cumulus just above and almost part of fog zone and higher stratified clouds above. Photo 900716-5 to NW and continuation of 900716-4. 9:42 A.M. Photo 900716-6 E to Holkam Bay with Sundum Glacier barely 2 icebergs visible. Phot 900716-7 SW to Glass Peninsula and clouds. 10:10 A.M. To SE of Point Astley with rising clouds, cumulus photo 900716-8 6 marbled murrelets in one group. To E can see 12 icebergs in Holkham Bay. 10:35 AM 2 marbled murrelets. 10:40 A.M 40 mew gulls. The breaking up of rainy overcast this AM to cumulus and stratified clouds on slopes & above is associated with calm seas. 10:56 midway Island to port. when reference

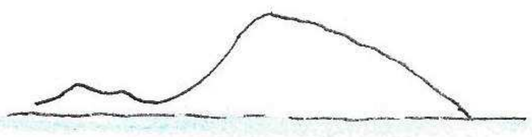
is made to an island or point of interest it is made in reference. to cardinal points or variation of cardinal points, NW, SSE etc. So in reference to last observation, the lighthouse is directly W of our position going N. 11:03 Grove Pt. at 303°. 11:10 photo 900716-9 to NNW of cumulus clouds forming off or from low stratified clouds on lower slopes of Glass Peninsula and developing in a northerly direction. In distance are intermediate stratified clouds and above cirrus. 11:26 AM. Photo 900716-10 of cumulus and cirrus clouds over Glass Peninsula to W. There is a U shaped nick in ridge to right. Photo 900716-11 ibid but larger area and a little N of above. 1:45 PM opposite a dissected shoreline and 2 waterfalls over cliffs, 2 mew gulls. Blue sky to SW and N, 30% of sky. Earlier clear sky 80%. 11:41 AM alpine zone extensive on mts. to E. 11:44 AM 7 marbled murrelets in one group. Left at 75' rather than dive. Occasionally one will contact part of bad at takeoff and bird fumbles until regaining speed. 11:47 now opposite Anmer Point to E. Grove Point beyond is a round mountain in profile and is a prominent landmark as far back as Medway Island. 11:51 AM mew gull. 12:00 P.M Opposite Port Snettisham (Port is another name for bay. Blue sky now 10% or less to SW and N, Greenish water from Port Snettisham 12:15 P.M mew gull.



Cumulus clouds develop from and over mountain tops and ridges 12.33 approx 300 mew gulls in groups 1-7 flying S along W shore of mainland. 12:34 boulder and outwash on beach bedow a deep and steep trench on mountainside,



12:37 All blue sky gone except small patches N and E. A large fish jumped out of water in a linear direction 3 times. mew gulls still flying S. 12:41 extensive talus slopes high on mts. A hillside slip extends to beach and is now grown to deciduous tree bordered by usual coniferous forests.



a mountain to W is a good landmark coming N in Stephens Passage. mew gulls still flying S at 1 per minute. 12:56 N of Limestone Inlet are cliffs of low angle dip to N and are segmented into house size blocks . I have also observed this same erosional form in same general area. 5 marbled murrelet. 1:14 P.M Stockade Point now E into Taku Harbor. Just (2/10 mi) S of Stockade Point observed a black bear feeding out

900716-80

approx 50' out from tree shoreline. It moved slowly to N. 1:30 P.M arrived Taku Harbor. 7 hrs travel today. 2 adult bald eagles were perched on a plateform structure elevated on piling. they left and flew E to trees beyond the bay. Taku is a large bay, approx 1 mile long with steep to wide slaping meadows. At the E end is the ruins of an early cannery and wharf. This area is also the home of Father Hubbard the great glaceologist and friend of the natives. Tiger Olson also lived here. We docked about 100 W of old Cannery. 5:54 5 river otter remained active under the dock and gave a high nate call and a low grumbling sound. They left an hour later to E. At 25' away one raised its body about 1/2 way out of water and looked at us and continued on its way. A small grizzly bear is reported visiting the area. It is weak and fur is disarranged. A rufous hummingbird came to windows of boat 3 times. 1 great blue heron and 6 mew gulls are in the bay. 6:20 P.M a 2 foot salmonlike fish completely jumped out of water. 2 belted kingfishers used the old elevated plateform. 6:50 P.M another salmonlike fish jumped out of water.

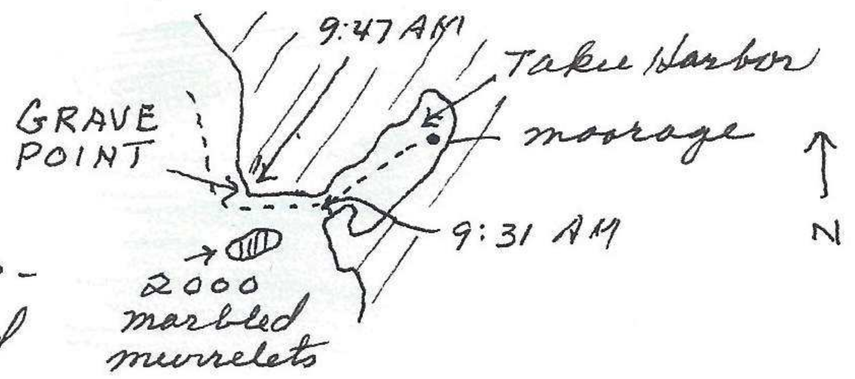
Taku Harbor, Stephens Passage, Alaska.

July 17, 1990

Temp 52°F. This morning photographed the ruins of the old cannery and wharf just N of our boat. Photo 700717-1 to NE. of piling. Grasses down to high tide level. Top of piling support vegetation, many of them grassies. Photo 700717-2 ibid. Piling to NE show distinct line, brownish or tanish white above and light brownish below. Barnacles start about a foot below distinct line. above distinct line the white is graded into natural, above water stressed wood. Barnacles and rockweed on some boulders below. Photo 700717-3 to NW of 2 levels of pile one, the higher, with remnant floor of the wharf. In mid-distance the elevated plateform on piling that supported the machinery for operating the cannery. Part of a belt wheel visible. hillside beyond show dead conifers mixed in with normal growth. Photo 700717-4 to SW of elevated plateform, more of the machinery can be seen. Firewked grows from part of the plateform. At least 8 different named bricks were found on ground below plateform and were probably used as firebrick for boiler or canning processes. The two poles may have been used for utility line from generator. The grasses on this rocky point are not as prolific as S of the plateform. Taku Harbor is not advised as a place to moor a boat in winter time when northern winds move into the harbor from the NE.

900717-81

Left 9:20 A.M. and moved out to entrance of harbor. at 9:31 A.M. thence W to Graves Point. 9:37 to SW approx. 2000 marbled murrelets in groups up to 20 and overall generally distributed. One group of 48 glaucous-winged gulls and 32 mew gull associated in fishing formation (diving into water and fishing in close formation) with 20 marbled murrelets. This is the first large aggregation of marbled murrelets we have seen, most of our observations have been of 1 or 2 birds and widely spaced. From here can see to S in what appears as an endless passage with cumulus clouds emerging from water The horizon. 9:43 A.M salmon 1½' long jumped foreward 9 times. 9:46 A.M, red stained cliffs starboard. 9:47 Grave Point. 9:48 2 mew gulls. 9:49 2 mew gulls



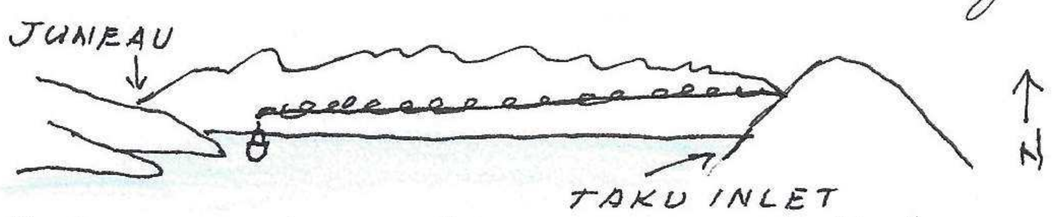


Photo 900717-5 of this source of pollution taken E from Point Arden (see 11:12 AM below)

Smoke from a large tour boat headed for Juneau exhausted a black smoke. The smoke moved straight upward then turned abruptly starboard in a horizontal plain gradually gaining altitude as it moved up Taku Inlet to the NNE. 10:15 8 sandpipers and first observed on trip over water. 10:28 Grand Island port side. adult eagle from W to E to Circle Point. now travelling 16 RPM (since Grove Point). 10:32 2 marbled murrelets 10:46 mew gull flying S. 11:53 Can now see Taku Glacier in fjord to NNE 10:57 Can see Taku Glacier now all the way to water level. 11:12 AM Photo 900717-5 from E of (see above) Point Arden on NE end Glass Peninsula (4 destinct layers). at least 8 fishing boats with nets stretching E from Point, some at least ½ mi. These nets required us to detour E out around them. no gulls associated with these fishing operations. Water out beyond entrance Taku Glacier. 11:23 marbled murrelet. 11:31 mew gull. 11:44 Marmion Island. 12:05 P.M 2' salmon jumped foreward 5 times. no evidence seal. 12:07 P.M harbor seal., 12:10 mew gull. most gulls in Taku Harbor area. 12:23 Sheep Creek Common raven flew E across Gastineau Channel. 12:32 12 Bonaparte gulls in one close formed flying group. 12:29 P.M Juneau Isle 12:44 salmon jumped foreward 4 times. 12:57 Juneau-Douglas Bridge. 12:59 Harris Harbor (stall 113). While at moorage noted barn swallows flying out from under the Juneau-Douglas bridge. One of the adjoining boaters informed me that lightning has struck as far N as Kenai Peninsula. Purchased 65' of 3/8 inch rope for boom hoist on boat.

900718-82

Juneau, Alaska.

June 18, 1990

This morning made trip via bus to mendenhall Glacier. As one travels N the valley became narrow with wetlands developed along side of the channel. These wetlands should all be preserved but Juneau Commissioners have decided to share the wetland and extend commercial interests in that direction. multiple use philosophy! Continued N to base of mendenhall Glacier. Observation house should have been enough but trails, trampling, sunning beaches & swimming has depreciated the value of the observation point. Several photographs were taken from the area of the observation point. Photo 900718-1 to N showing Mendenhall Glacier, lake below and river entering from valley to the E. The glacier is smoothing out with reduced front, and sides pulling away from side of valley. The sand ridges in foreground are covered with deciduous trees in early succession. Photo 900718-2 to NW of mendenhall Glacier with flattened front and front pulling back on left side exposing bare rock. 900718-3 Mendenhall Glacier to N, showing river emerging from valley to E. Water action has produced bald face of glacier terminal. Note amount of shrinking of glacier from side wall of valley. At one time the river must have flowed onto glacier when the glacier was active and moving progressively forward. Left glacier and drove to Lake Auke where 3 photos were taken to N with mendenhall Glacier in the far distance. Note flat nature of glacier in crossection. (90° to flow). Photo 900718-4 of mendenhall Glacier and Mts in background, Lake Auke in middle ground and conifers and deciduous in foreground. red elderberry in right side of photo {goat beard hair, devils club and skunk cabbage in area.} Photos 900718-5 and 900718-6 ibid. At the Juneau airport photo 900718-7 of cultivated flowers on airport grounds. Ph. 900718-8 ibid. Ph. 900718-9 ibid.

At Harris marina the owner of Alpine Toilet Pumping Co. informed me that all boats, pleasure and commercial dump holding tanks, or toilets, in channel There is no way to enforce O overboard discharge of sewage. Until enforced it is not cost effective to supply pumping service to boats. 40' piling originally coated with creosote and tar are now, lower 1/3 of tidal level free of surface preservative and the coating has been discharged into the water of the marina. At our moorage noted 100' of soap suds from people who clean bilge with soap. This condition is true of a white suds from packing plants. There should be a fine of $500. imposed on dog owners who wilfully allow their dogs to defecate on docks and then not clean up.

900720-83

Juneau, Alaska

July 20, 1990

Annette and I arranged with Wing airlines, pilot Russell Shaub to fly us in a cessna single prop. plane over the Glacier Bay and Juneau ice field, especially the upper alpine zone. We were in the air 1 hr, 30 min. (11:26 AM to 12:56 P.M.) The most satisfactory way to record photographic records is to follow a preset route and then, at a constant speed, record photos taken by time. There are techniques of converting information onto a map of journal paper but it takes time and patience. The following photos (Kodochrome 64) were taken:

900720-1 11:30 AM. N.NE. Over Lynn Canal showing Herbert Glacier to right and Eagle Glacier to left. Pearl Harbor in foreground. Snowline 1/3-1/4 way down from crest of mountain.

900720-2 11:32 A.M. NE. Ibid but farther N along Lynn Canal. Herbert and Eagle river flood plains. Gull Island in right foreground.

900720-3 11:35 A.M. TOWSW. Chilkat Range from Lynn Canal. Lynn Sisters in foreground at spit. River drains from glaciers.

900720-4 11:41 A.M. WSW. Glacier valley and glacier beyond. all above in Chilkat Range.

900720-5 11:42 SW Glacier in Chilkat Range - Recent mud and soil flow out on to head of glacier on N side away from direct sunshine.

900720-6 11:43 SW. Long open glacial valley leading to glaciers in Chilkat Range.

900720-7 11:44 SW Former glaciers now receded. Chinese hat lower left with spotty snow covering on brim. Chilkat Range, all east side.

900720-8 11:47 AM. SW. Endicott River and headwaters draining E. In Chilkat Range.

900720-9 11:51 AM W. Head of Adams Inlet showing major island and lake on top thereof. Klotz Hills beyond island, Muir Inlet N S in distance, drainage now W side of Chilkat Range, mt Crillon ? in far distance center. (in Fairweather Range).

900720-10 11:55 A.M. SSW. Muir Inlet upper right. Adams Inlet right and Klotz Hills center. Mt. Crillon? right distance.

900720-11. 11:56 A.M. NE. Casement Glacier heading into crests of Takhinsha Mountains and Chilkat Range. Haines Borough beyond. 4 major glaciers contribute to this glacier.

900720-12 11:59 A.M. SW. upper reaches Muir Inlet with McBride Glacier entrance of a recent lake. Only a few years ago the glacier fronted the Muir Inlet. note double spit at entrance and the barren rocks recently uncovered.

(continued after maps)

900720-13. 12:01 P.M. SW. Elevated blue lake of same general color as marine water below. The lake is at the N end of White Thunder Ridge and only recently has been exposed by receding Muir Glacier note unvegetated surface of rocks. These lakes have potential for research.
900720-14 12:02 P.M N. Lower end Riggs Glacier. Takhinsha mts, in background. The Tsirku River is on other side of these mts,
900720-15 12:04 P.M. a lateral branch of the Muir Glacier. (right side, Muir Glacier). Takhinsha mts, in background,
900720-16 12:05 P.M. SW a glacier associated with Muir Glacier.
900720-17 12:06 P.M. NE. Glaciers on Takhinsha mts. Two pairs of double pointed peaks.
900720-18 12:07 P.M. NW. Glaciers on Takhinsha mts.
900720-19 12:07 P.M. S Muir Inlet and Glacier Bay beyond. Mt. Wright prominent on left distance.
900720-20 12:08 P.M. S From base of Takhinsha mts.
900720-21 12:09 P.M. SW. Lone mt with glaciers at base. Glacier Bay mts. in distance.
900720-22 12:10 P.M. NE. Head McBride Glacier and Takhinsha mts beyond. Streaks soil on glacier lower right.
900720-23 12:13 P.M. S From base of Takhinsha mts and viewing S
900720-24 12:13 P.M. S. Ibid
900720-25 12:15 P.M. SW. Crevassed glacier slope Chilkat Range.
900720-26 12:16 P.M, SW ibid,
900720-27 12:17 P.M, SW. Mt. Rice ? and glaciers on E side Chilkat Range. Extremely steep slope.
900720-28. 12:20 P.M, SW. Glaciers and ice field showing thickness of ice.
900720-29 12:23 P.M. SW A river trending SE at base of mts in the Chilkat Range. Rocks dip to N. The area borders the W side of Lynn Canal.
900720-30 12:31 P.M. N. Elevated Lake N of convergence of Antler and Gilkey rivers, Juneau Borough. W slope Coast mountains, Ldee River beyond in distance: This lake is blue instead of greenish lake at head of Muir Inlet
900720-31 12:34 P.M. S. Mountain with massive areas of crevasses. Wind blown perpendicular cliff to right. This photo and following 3 photos are recorded by time interval only and are not precisely identifiable.
900720-32 12:36. to S. General vicinity head of Bucher Glacier

9007 20-85

BRITISH COLUMBIA
ALASKA

Mount Quincy Adams
Mount Salisbury
Lituya Mtn
Mount Wilbur
Mount Orville
Mount Bertha
Mount Crillon
Mount Dagelet
Mount La Perouse
North Dome
Middle Dome
South Dome
Mount Marchainville
De Langle Mtn
Mount Abbe
Mount Abdallah
Sentinel Peak
Triangle I
Mount Parker
Ibach Pt
Composite Island
Gilbert Island
Gulised Peak
Contact Nunatak
Heather Nunatak
Mount Friable
Fossil Peak
July Fourth Mountain
Mount Divide
Blackthorn Peak
Threesome Mountain
Abyss Lake
North Deception Lake
Icon
Glacier
Crevasses

Margerie Glacier
Topeka Gl
Toyatte Glacier
Kodachan Gl
Tyeen Gl
Kashoto Gl
Hoonah Gl
Gilman Gl
Clark Gl
Johns Hopkins Gl
Johns Hopkins Inlet
Tarr Inlet
Russell Island
Lamplugh Glacier
Reid Inlet
Scidmore Glacier
Rendu Inlet
Queen Inlet
Hugh Miller Inlet
Charpentier Inlet
Maynard Glacier
Aurora Glacier
Crillon Glacier
North Crillon Glacier
South Crillon Glacier
La Perouse Glacier
Finger Glacier
Dagelet River
Lake Crillon
Kahtau Creek
Icy Point
Palma Bay
Boussole Bay
Boussole Head
Alder Bay
Dixon Entrance

FAIRWEATHER RANGE
GLACIER BAY NATIONAL MONUMENT
BRADY GLACIER

900720-86

Mount Cleveland
Mount Carmack
Mount Yeatman 5670
Mount Clifford
A B Mtn
Hump
Clifton 5416 Elbow
Glacier
Pass
BM 2475
White Pass and Yukon Route
Warm Pass Valley
Goat Lake
Laughton Gl
Irene Gl
Omega
Shelter
Knee 6229
Rail 6132
Ferebee Glacier
West Creek
Gaging Sta
Nelson Cr
Dyea
Parsons Peak
Oskar 4830
Burro Creek
Nahku Bay
Dyea Pt
Landing Area
Gaging Sta
Yakutania Pt
Skagway
Lower Dewey Lake
Upper Dewey Lake
Devils Punch Bowl
Seaplane Anchorage
Twin Dewey Peaks
Bain
Denver Gl
Mount Hefty
Boundary Peak 109
Garb
Kasidaya Creek
Chilkoot
Ferebee
Glacier
Skagway River
White Pass East Fork
South Gl
Taiya Inlet
Taiya River
Chilkoot River
ALASKA
BRITISH COLUMBIA
T 26 S
T 27 S
T 28 S
T 29 S
R 60 E
R 61 E
R 62 E
R 63 E
INDIAN RES
Mount Kashagnak
Chilkoot Lake
Chilkoot
Cem
Cath 4822
MOUNTAINS
RIVER
Tukgahgo Mountain
Chilly 4520
Shakuseyi Cr
Lutak Inlet
Lt
Hal
Halutu Ridge
Taiyasanka Harbor
Taiya Pt
Feast
Dayebas Creek
Tanani
Tanani Pt
Tanani Bay
Mt Ripinski
Zimovia Pt
Takhin 2726
Mount Villard 4990
HAINES BOROUGH
Mount Bagot
INDIAN RES
Landing Area
BM 48
BM 22
Haines
Nukdik Pt
Portage Cove
Port Chilkoot
Kaskulu Pt
McClellan Flats
Chilkat
Towers
Battery Pt
Lt
Katz
Haska 3368
Haska Cr
Back 13
Pyramid
Green Pt
Pyramid Harbor
Anchorage Pt
Hor
Letnikof Cove
Lighto
BATTERY PT STATE REC AREA
Koot
Koch
Kochu Island
Flat Bay
Peninsula
Rain
Rainbow Glacier
Kal 1450
Glacier Pt
Davidson Glacier
Glacier River
Dalasuga I
Seduction Point
Pat 2
Yeldagalga Cr
Sinclair Mountain
Talsani Island
Chilkat
Anyaka Island
Islands
Shikosi Island
Kataguni Island
Sed
Selby 6330
Sullivan Mountain
Deep 8
Landing Area
Sullivan Island
Mount Emmerich
Mount Rice
Bertha Glacier
Garrison Glacier
HAINES BOROUGH
CHILKAT RANGE
CHILKOOT INLET
LYNN CANAL
KATZEHIN
GASSNATIONAU FOREST
Meade Gl
25
26
27
1

900720-87

Three Guardsmen Pass
BM 3038
Tina Cr
Ames Cr
Schultz Cr
Inspector Creek
Michael Cr
Mineral Mountain
5912
5124
Copper Butte
Glave Peak
BP 140
6525
Mt Seltat
Three Guardsmen Mountain
6717
Saltat Creek
BM 1689
Rainy Hollow
MP 50
Nataga River
Hiteshitak Mountain
5533
Tohnitkah Mountain
Rosaunt Creek
5749
Boundary Peak 142
Mount Prinsep
T 26 S
T 27 S
Big Boulder Creek
3316
KLEHINI
Chilkat Peak
Four Winds Mountain
Little Boulder Creek
Mount Cheetdeekahyu
4348
Boundary Peak 144
Surgeon Mountain
4897 Winds
4598 Klut
Klutshah Mountain
CHILKAT
Goat Hollow
TAKS
Mosquito Lake
Campground
Mount McDonell
Boundary Peak 150
Jarvis Glacier
BM 812
Pleasant Camp
Jarvis Cr
BOROUGH
Moose Valley
BM 254
BM 456
Porcupine Creek
RIVER
Herman Cr
Wells
Mount
Mount Bigger
8920
Buckwell Glacier
Jarvis Gl
1720 Knob
Walker Lake
River
Klukwan
Spring
BM 121
Mount Henry Clay
Boundary Peak 151
Herbert Gl
Boundary Gl
Sakaria Gl
Flower Mountain
Porcupine
Cahoon Creek
McKinley Creek
Porcupine Peak
5207 Porcupine
Little Salmon
Landing Area
Summit Cr
RIVER
Chilkat Lake
3231 Anman
Anman Cr
Chunekukleik Mountain
Takhin Ridge
Takhin
TSIRKU
Cottonwood Creek
Nugget Cr
Tsirku Glacier
HAINES
BP 154
BP 155
Mount Harris
Boundary Peak 156
5575
Crevasses
T 30 S
T 31 S
Le Blondeau Glacier
Takhin Glacier
RIGGS
TAKHINSHA
MOUNTAINS
Mount Kraus
BRITISH COLUMBIA
ALASKA
Boundary Peak 157
R 52 E
R 53 E
GLACIER BAY NATIONAL MONUMENT
GLACIER
Cushing Glacier
MUIR
Crevasses
Mt Brock
4590
Black Mountain
Sitth-gha-ee Peak
5870
23-24
Gable Mountain
4780
McBride Glacier
Coleman Peak
McConnell Ridge
White Thunder Ridge
Muir Inlet
Glacier Pass
Minnesota Ridge
Van Horn Ridge
Nunatak
Rendu Inlet
Bruce
Burroughs Gl
Casement
Dickinson Gl
1820
5710
5585
5280
5130
15
16
17
18
19
20
21
22
11
12
13
14
D

90720-88

Glacier
Burroughs Glacier
Minnesota Ridge
Westdahl Pt
The Nunatak
Red Mtn
Nunatak Cove
Goose Cove
Plateau
Bruce Hills
Sealers I
Muir
Curtis Hills
Glacier
Wachusett Inlet
Rowlee Pt
Forest Cr
Casement Glacier
Casement Glacier
Snow Dome
Mt Elder
Howling Valley
Canyon
Granite
Berg Mtn
Girdled Gl
Berg
Pt Mc Leod
Hunter Cove
Idaho Ridge
Mount Merriam
Twin Gl
Mount Kloh Kutz
Morse Glacier
Cush
Klotz Hills
Adams Inlet
Tree Mtn
Black Cap Mountain
Vavid Lake
Gloomy
Pyramid Peak
Oberlin Ridge
Point George
Adams Inlet
Tidal Inlet
Ice Valley
Bull
MUIR INLET
GLACIER
Dirt Gl
Mt Case
Endicott Gap
Mount Wright
Garforth I
Caroline Pt
Caroline Shoal
Sebree Island
Sebree Cove
Tlingit Pt
Blue Mouse Cove
Island
Miller Inlet
Point
Puffin Island
Sturgess Island
Stud
Lone I
BAY
Hugh Miller Mountain
Mt Favorite
Canadian No 190
Geikie Rock
Sandy Cove
Dance
Miller Peak
Spokane Cove
Wolf Gl
York Gl
Beartrack River
NATIONAL MONUMENT
Bed Peak
Mount Bulky
Geikie Inlet
Pirate
Drake Island
N Marble Island
Leland Islands
Lite
Slag Cove
Marble Mtn
Whidbey Passage
S Marble Island
Francis Island
Goat
Tlingit Peak
Tyndall Cove
Johnson Cove
Willoughby Island
Beartrack I
Track
Beartrack Cove
Flapjack Island
Black
Mount Skarn
Fingers Bay
Reef
Swim
Link Island
Wood Lake
Mount Wood
Lake Seclusion
Netland I
Lars I
Jill
Berg Bay
Strawberry Island
George Pt
SITAKADAY NARROWS
Kidney Island
Beardslee Islands
Strawberry I
Spider Island
Anchor
Hutchins Bay
Bartlett Lake
Bartlett
Salmon
Beardslee Entrance
Maze
Secret Bay
Young Island
Island
Best
Lester
Bartlett Cove
Lagoon
Radio Tower
Seaplane Anchorage
Tell
Gustavus Airfield
Gustavus
R Tr
Berry
Pt Gustavus E Base
Tidal Flat
Pier
Lights
Stave
Pt Gustavus
Ancon Rk
Serrated Peak
Dundas River
White Cap Mtn
Mike
Rush Pt
Ripple Cove
Pt Carolus

900720-89

Landing Area
Sullivan Island
Eldred Rock Lighthouse
Island
Cabin
Met
Kakuhan Range
Berners River
Trace
Sul Sullivan Rock
Brown
Lions Head Mountain
Comet
Mt Young
Pt Sherman
Sherman Rk
Surveyor Cr
Johnson Mines
Chan
Cabin
Endicott Lake
Cant
Endicott River
Cot
Lance Pt
William Henry Bay
Danger Pt
Will
Boat Hbr
Point St Mary
Cove Pt
Bernard
Berners Bay
Point Bridget
Bridget
Echo Cove
Sawmill Creek
Davies Creek
Gaging Sta
Cabins
Mab Island
Bridget Cove
Dew
Coweé Creek
Vanderbilt Reef Lt
Foam 2
Pt Whidbey
St James Point
St James Bay
Brothers
Benjamin Island
North I
Sentinel Island
Lighthouse
Little I
Ralston Island
Punk 2
Lincoln Island
Lincoln Anchorage
North Pt
Halibut Cove
Hump Island
Drive 2
Hand Troller Cove
Shelter Island
Faust Rk Lt
Nick
Pt Retreat Lighthouse
Con 2
Barlow Islands
Gull Islan
Saginaw Channel
Favorite Channel
William Henry
Volcanic Peak
Nun Mtn
Lynn Sisters
Oil 2
Excursion Inlet
Seaplane Anchorage
Dock
Cem
Neva Lake
Radio Towers
Sawmill Bay
Cabin
Gene
High
USLM 43AA
Lt
Cabin
Reef
Passage
Ice
Shelt
Excursion Inlet
Lynn Canal
Haines Borough
Juneau Borough
Chilkoot River
Chilkoot Lake
Kakuhan Range
Berners Bay
Lynn Canal
Haines Borough
Juneau Borough
Favorite Channel
Saginaw Channel
Excursion Inlet
Endicott River
Chilkoot Lake
Chilkoot River
Kakuhan Range
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Sullivan Island
Lions Head Mountain
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Volcanic Peak
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William Henry Bay
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Mab Island
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St James Point
Danger Pt
Lance Pt
Boat Hbr
Comet
Mt Young
Endicott Lake
Sullivan Island
Eldred Rock Lighthouse
Landing Area
Cabin
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Brown
Sul Sullivan Rock
Cant
Cot
Will
Pt Sherman
Sherman Rk
Surveyor Cr
Johnson Mines
Chan
Bernard
Cove Pt
Point Bridget
Bridget
Echo Cove
Sawmill Creek
Davies Creek
Gaging Sta
Cabins
Mab Island
Bridget Cove
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USLM 43AA
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Cabin
Reef
Passage
Ice
Shelt
Excursion Inlet
Lynn Canal
Haines Borough
Juneau Borough
Chilkoot River
Chilkoot Lake
Kakuhan Range
Berners River
Berners Bay
Lincoln Island
Ralston Island
Sentinel Island
Benjamin Island
Mab Island
Hump Island
Point Bridget
Point St Mary
St James Point
Danger Pt
Lance Pt
Boat Hbr
Comet
Mt Young
Endicott Lake
Sullivan Island
Eldred Rock Lighthouse
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Sul Sullivan Rock
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Will
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Sherman Rk
Surveyor Cr
Johnson Mines
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Cove Pt
Point Bridget
Bridget
Echo Cove
Sawmill Creek
Davies Creek
Gaging Sta
Cabins
Mab Island
Bridget Cove
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Coweé Creek
Vanderbilt Reef Lt
Foam 2
Pt Whidbey
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Benjamin Island
North I
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Lincoln Island
Lincoln Anchorage
North Pt
Halibut Cove
Hump Island
Drive 2
Hand Troller Cove
Shelter Island
Faust Rk Lt
Nick
Pt Retreat Lighthouse
Con 2
Barlow Islands
Gull Islan
Saginaw Channel
Favorite Channel

900720-90

0 5 10 Mi.

SCALE 1:250 000

HAINES BOROUGH

CITY AND BOROUGH OF JUNEAU

T 33 S

T 34 S

Boundary Peak 99

Mount Nesselrode

Boundary Peak 98

Mount Bressler

UNITED STATES

CANADA

LEMELLYN GLACIER

FLIGHT OVER GLACIER BAY AND JUNEAU ICE FIELDS

JULY 20, 1990

Mt Ogilvie

Boundary Peak 95

Gale Pk

Typhoon Peak

Blizzard Peak

Vaughan Lewis Glacier

BRITISH COLUMBIA

ALASKA

Mount Moore

Picket Gate Crags

Bucher Glacier

COAST

Glacier

Antler River

Antler Gl

Crevasses

Gilkey Glacier

Avalanche Canyon

The Wall

Spirit Range

Stronghold Peak

The Citadel

Dipyramid

Matthes Glacier

Centurian Peak

Echo Glacier

Berners Peaks

The Tusk

Horn Spire

Glacier King

Echo Mtn

Thiel Glacier

Battle Glacier

Antler Lake

RIVER

NATIONAL FOREST

Icefall Spires

Camp 15 Peak

Exploration Peak

Floprock Peak

The Scatter Peaks

Ivy Ridge

Demorest Glacier

Hades Highway

BRANCH

WEST

Tricouni Peak

Knowl

Carpet Pk

Snowpatch Crag

Flower Tower

Dike Mtn

Mustang Peak

Nunatak Chalet

Icy Basin

Vantage Peak

The Snow Towers

Little Matterhorn

Cathedral Peak

Shoehorn

Taku Mtn

Juncture Peak

Organ Pipes

Hodgkins Peak

Eagle Glacier

Canyon Cr

BOUNDARY

(INDEFINITE)

Snowdrift Peak

Taku Towers

Emperor Peak

The Dukes

Rhino Peak

Princess Peak

Taku Range

SOUTHWEST BRANCH

Goat Ridge

Slanting Peak

MOUNTAINS

GLACIER

Yankee Basin

Mount Adolph Knopf

Herbert Glacier

Eagle River

Herbert R

Windfall

Windfall Lake

Mendenhall Towers

Mendenhall Glacier

Amherst Peak

Pete 5479

Echo Pass

Guardian Mtn

North Branch

Crevasses

Wrather Mtn

Spencer Peak

Death Valley

Norris

Norris Mtn

Hole-in-the-Wall Gl

Brassiere Hills

Dotsons Landing

Pearl Hbr

Islet

Quarry

St Terese

Eagle Reef

Stroller White Mountain

Slate Cr

Montana Cr

McGinnis Mtn

Aaron Island

Cohen Island

Peterson Lake

Lake Cr

Tee Hbr

Tee Harbor

Lena Cove

Pt Lena

Radio Towers

Auke Mtn

Auke Bay

Mendenhall Lake

Bullard Mtn

Nugget Creek Glacier

Nugget Mtn

Ridge

Split Thumb

Dead Branch

Throughfare Mountain

Oona Lake

Glory Lake

Grizzly Bar

Taku Pt

CHANNEL

Steep Cr

Heintzleman Ridge

Lemon Creek Glacier

Thunder Mtn

Ptarmigan Ridge

Lemon Cr

DOWN 5 MILES

Auke Cape

Sunny Point

Pearl Island

Bird Island

900720-33 12:39 P.M. Rugged mt. country in vicinity of Hubley Glacier.
900720-34 12:44 P.M. NNE. Juneau Ice Fields showing mainly Taku Glacier.
900720-35 12:52 P.M. E. End of Mendenhall Glacier and river entering from the E. The glacier has recently pulled away from ridge in foreground.
900720-36. Juneau airport with mr. Russell Shaub the pilot and manager of Wing airlines Wearrived at airport on our return trip (set down) at 12:56 just exactly 1½ hrs of flight. We circled W and S and made our approach from SE. The topo maps (USGS) show airport with extension attached to bottom of page A. It belongs at bottom thus:  . The best position for photography is in back 2 seats so that one can shift from left to right and right to left as occasion demands. The strut is also out of the way. The windows were plastic and not optically favorable. They should be optically perfect.

Juneau, Alaska

July 21, 1990

Left 10:40 A.M by Bee Boat. Plan to go south in Gastineau Channel and then out around Douglas Island into Stephens Passage because of the shallow and narrow passage at N end of Douglas Island. It requires at least a 16' tide to safely negotiated the passage in a boat the size of ours. 10:51AM salmon jumped. 10:57 AM, 2 marbled murrelet. 11:10 AM. pigeon guillemot. 11:20 AM. Salmon jumped 1½ feet. 11:22AM and 11:25 A.M salmon jumped out of water. 11:29 pigeon guillemot. 11:39 2 mew gulls. 11:43 2 salmon each jumped completely out of water 2 times, one straight up and the other a foreward leap. 11:48 AM. salmon jumped 1½'., 8 mew gulls. 12:01 P.M 109 mew gulls in one compact group and feeding. 12:06 P.M Marmion Island, now W., 1 hr, 25 min. from Juneau. 12:14 P.M 3 mew gulls and 12 glaucous-winged gulls on log. 12:17 P.M 2 marbled murrelet. 12:24 mew gull, 12:45 P.M mew gull, 1:20 P.M. Point Hilda, 121 PM glaucous-winged gull. 1:26 P.M. 2 mew gulls. Adult bald eagle flew out over water and returned. 158 northern sea lion with fish approx. 15" long, 42 mew gulls associated. 2:02 Middle Point, 18 mew gulls on sand bar. 2:32 outer Point. 2:54 Portland Island. 3:56 S end Aaron Island. 4:06 P.M 2 marbled murrelet. 4:20 P.M Common loon.

900721-92

4:25 PM S end Bird Island between our boat and Herbert Glacier, 4:28 first small clouds to E over range. 4:32 P.M. marbled murrelet, S end Bird Island. 4:34 P.M. marbled murrelet, 4:57 opposite tree line at S end Sentinel Island. 5:08 P.M Knife and black ridges eroded on shoreline to E. Temp 76°F. 5:26 Vander-belt Reef to W. 5:37 P.M 2 dall porpoise approx. 200' to W. surfaced 3 times then remained under water. 5:40 P.M 2 glaucous-winged gulls, 17 mew gulls on a floating log. 6:22 Point Bridget. Reduced speed to 11 RPM as we approached Echo Cove. Continued to cascade on E shore thence S to narrow channel into Echo Cove. were our motor stopped in the middle of the channel. Rocks on port and shallow water to starboard. Set anchor among rocks to keep boat from moving port. In 30 minutes motor turned over and we continued S into Echo Cove. This channel had salmon that were jumping at a rate of 1 per every 10 seconds. They had collected on the ocean side of the channel. An adult bold eagle flew across the channel. at S end of Echo Cove were 8 marbled murrelets. A road had been built from Juneau to here and the Cove had suffered from overpopulation of tourists and fishermen. There were at least 40 cars and trucks. Cars used the beach for car traffic. 3 or 4 well established car tracks made race courses. Off road balloon tired vehicles sped over most of the beach area and shallow waters etc. The auto-mobile had been the downfall of natural places.

Echo Cove, Berners Bay, Lynn Canal, Alaska.

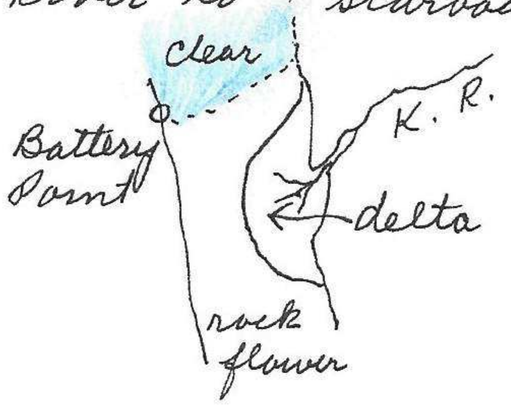
July 22, 1990

Left 5:07 A.M. for Skagway. 3 adult bold eagles in area. at entrance of channel entering Echo Cove, salmon jumping 3 or 4 at a time. 5:38 2 marbled murrelets, 5:40 A.M adult bald eagles, 5:50 AM 2 marbled murrelets and 27 surf scoters. 5:57 2 marbled murrelets. 5:59 A.M. 45 marbled murrelets generally distributed at mouth of Berners Bay, 6:02 AM Point St. mary. 2 mew gulls flying N, 4 mew gulls flying N. 6:30 AM mew gull. 6:35 mew gull. 7:07 AM mew gull. 7:25 AM Sherman Point. 8:35 Eldred Rock to port and light house (8 mi in 1 hr. 7 min or 8.3 mi. per hour), marbled murrelet. Magnificent range arising abruptly from water edge to snow and cirque heights. A adult bold eagle perched top light house. Practically all light houses are now automatical operated. Why not remodel these light house and ancillary buildings and rent to the public as a source of income for operating marine navigation? 8:57 A.M. marbled murrelet. 9:11 A.M Can now see Davidson Glacier W side Lynn Canal. From this angle it appears

as if the area between the glacier and water is forested in conifers



9:22 AM. marbled murrelet. 9:45 AM Talsoni Island, temp. 56°F 9:56 AM. Snowfields and area of mt. Sinclair. outstanding pointed peaks. 9:58 now in Chilkoot Inlet 10:11 AM marbled murrelet 10:15 A.M good waterfall. 10:25 new gull, 6 Boneparte gulls 10:35 AM double arque to port ((. 10:48 5 marbled murrelets, 10:57 first raven today, 3 marbled murrelets. 11:06 Battery Point beacon to port or 15 miles in one hour and 20 min. marine water up to this point has been muddy or rock flour colored from outflow from Katzehin River to starboard but beyond to N the water is clear and blue.



11:23 Glacier to N. 11:28 Haines to W. 11:28 AM Round disc boulder on bench and highly incised canyon above. Now in Taiya Inlet a continuation of Chilkoat Inlet. Temp. 76F all along Taiya Inlet trees are stunted and sides of inlet are dry. 1:04 P.M first bird in inlet, a mew gull. 1:14 P.M Skagway at marina, last pier to W. Hour meter 2914.1 or 196 hours from Sapez or 68 hours from Ketchicen. met Bill Cuebber of Bellingham 647-1123. He has a Grand Banks 36 with all accessaries and is trading up to a 42'. For electric power at dock call service department, Skagit Power and Light Co. 907-983-2202, Skagway is a typical tourist attraction, national Park reconstituted town and has Central.

July 23, 1990

Checked Skagway and Environs.

Skagway, Alaska

July 24, 1990

Temp. 60°F First low clouds in 5 days of high clouds. 28 American crows in harbor area, no bald eagles because of lack of fisheries plants. A shrew crossed road S of marina and ran into bushes at 10:35 AM.

This A.M made trip by van to white Summit and return. Checked the pioneer cemetery and saw the stone of Soapy Smith the bad guy and Frank Reid the good guy. Skagway is starting point for both the Chilkoat Trail and White Pass to the Klondike. Continued to white Summit. At Pitchfork Falls noted old wagon road below the falls. Granites fractured and diked. Red squirrel ran across road, as did a red fox. Bridal Veil Falls To SW a broad glaciated base. At point near summit observed stream fork, one to Pacific and the other to E. Returned to Skagway. At mouth Skagway River observed 9 American merganser and 8 young (3") working upstream at edge.

900724-94

At tour boat docks on S side took 5 phata's of graffetti painted on cliffs. These paintings are associated with tour ships and their captains and ather personnel. I suggested to the National Park at Skagway that each graffito should be photographed and put on display in display cases at the tour boat terminal. Their reaction was—history before natural features. I wauld rather bring back the natural appedring rocks than see the defacement. Phatas are:

900724-1 Tour boat graffetti, S entrance Skagway harbor, Skagway, Alaska
900724-2 ibid
900724-3 "
900724-4 "
900724-5 "

marked anchor chain and rope with colored paint. Level when marker leave winch.

1 foot yellow = level of anchor at depth transducer, so that the rope depth can be synchronized with the depth sounder.

1 yellow band = 5'
2 " " = 10'
3 " " = 15'
4 " " = 20'
5 " " = 25' (Chain ~~starts~~ ends 26'

1 orange-red = 35'
2 " 45'
3 " 55'
4 " 65'
5 " 75'
1 red band 95'
2 " 110'
3 " 130'
4 " 150'
5 " 170'

The ideal system is to see anchor on depth screen or a light buzzer when anchor first contacts bottom. This is the critical point.

Skagway, Alaska

July 25, 1990
Prepared boat for James Robert Bee

July 26, 1990
Photo 900726-1 of dock stairway at low tide. Marina at Skagway.
Left Skagway at 2:40 p.m on Malaspina Ferry. Temp 58°F, wind 20-25 knots. James R. and his guests Dick Dunhaupt and his wife Patti Hackney. will arrive later (Aug 3, 1990) and will pilot boat back to Lopez Island.

900726-95

Boat needs:

Binoculars for night vision and high power.
new depth sounder.
Underfloor cabin heater (diesel)
Tighten flybridge helm.
Replace fuel filter with spin on type.
Fix transmission, either leak or rebuild) now 3000 hrs.
Check engine oil leak.
Higher capacity alternator, tighten or replace improvised mount.
Completely check anchor winch or replace with electric winch, make cover.

Replace flybridge windshield (right side) and strengthen outside edge to accept cover pressure. If replaced entirely with stronger plastic, provide non-reflective plastic.

Rearrange hooks on flybridge cover and install better center tent support.

Check vibration of running motor.
Put porthole on port side fore-cabin.
make sliding windows openable, attach handles.
Fix intercom to flybridge.
Check loran and radio antennae.
Starboard running light replace.
new light in flybridge compass
Repair crack in skeg.
Check both indicator panels (amps, oil, RPM)
Place friction plates on step shelf, sides and rear.
Repair plywood left edge forcabin exterior.
Waterproof aft hatch door.
Install venetian blinds.
Repair or fix knock in water lines
Replace part window wiper and new one in center section.
Intael adjustable spot light.
Clean seat covers
Waterproof flybridge seat covers
Complete socket set closed end wrenches, 1/16.
Buy extra air filters.
Can deisel for priming, 2 gal.
Extra belt threaded on hose for convenience of replacing next belt.
Check exhaust manifold where opposite alternater.
Tighten fuel connection under injector
Install radar.

Install auto-pilot.

Change primary fuel filters every 200 hrs.

" secondary " " " " 400 "

2700 no load RPM, 2450-2500 under load, 85% top RRM is cruising speed.

Install sail.

Dependable life raft 12-13' and small outboard motor.

Direct exhaust under water.

Install below water level viewing windows.

Paint boat and varnish.

Teak floor

Bimini

4 plastic chairs

modify starboard side main cabin to full size bed and raise seats to full outside viewing level.

Remove port side seats and replace with 2 comfortable seats and provide wall table.

Two individual adjustable helm seats.

Fill in V berth in fore-cabin.

Install Sat-Nav.

Cellular phones

Install wind & speed indicator

Second anchor

Diesel generator.

Paint bottom of boat and clean cockpits, replace needed zinc plates

Install holding tanks

Clean bilge & paint belge floor boards & above

Secure batteries

Connect proper wire for Cabin heater. Insert gate valve.

Place solar panel & provide several outlets.

Install shallow waterproof cabinet on aft (Cabin wall) for drying ropes. etc.

Duplicate fiber packing rings

Tighten limber chain

Remove pan under motor and install section pans

Spring on stop lever.

Replace anchor chain from 3/8" to 1/2"

2 rear view mirors

Odometer for speed & mileage

Shade tent over boom

Hand compass

900726-97

Draught

Hole plugs, various sizes

Bell for outside cabin, at least adapter to hold bell.

Range finder.

need chart 17314

check and make operative the automatic bilge pump, now controlled only by manual.

varnish sink door where repaired

Space for stove: front top view 21 3/8" width, 21 5/8" depth; from front view 21 3/8 width, 24" heighth, depth 21 5/8".

AT+T call card no. 206-468-2454-3077

900726-98

Recorded information from James Robert Bee's Trip at this point from Garden City June 20, 1990 to Ketchekan July 1 and from Skagway Aug. 3, 1990 to Lopez Island Aug 20, 1990. This information is not in chronological order and was taken (in part) from Log Book of the "Bee". Only natural history info selected. Dalphins Rodson Point, outside Port Hardy. Bald eagles Seymour Narrows and Port Hardy. Orcas, 10 of them past Edinbrook Island (June 25). 2 bald eagles resting in trees in Lama Passage. Dall porpoise, Johnston Straits (June 23.) The Edinbrook observation was several bulls swimming separately from smaller Orca. Left Shearwater 5:00 A.M 2 bald eagles just outside harbor (June 26). 4 Dall porpoise after crossing sound, then 3 guided boat before Cone Island. Frozer Passage 6-7 bald eagles midway in Malcolm Passage, 4 Dall porpoise. Brestal Bay overnight, 2 sea otter, 2 bald eagles, caught 2 Chinook salmon. June 27, left Bishop, 4 Orcas blowing 1/2 way thru Grenville Channel, several dolphin. Prince Rupert June 27, at Kumealon Inlet. June 30, left Prince Rupert at 10:30 A.M. Ketchikan June 30. James R. Bee and party flew out of Ketchikan to Lawrence, Kansas.

On return trip James Robert Bee, Dick Dunhaupt, Patti Hackney (see June 20, 1990 for addresses. 196 hrs of travel from Lopez to Skagway, 191 hours from Skagway to Lopez. Left Skagway Aug 2, 1990 for Lopez Island, Wa. no wildlife observations listed on return trip.

900726-98a

Pronounciation of names encountered on trip. SE Alaska, Canada,

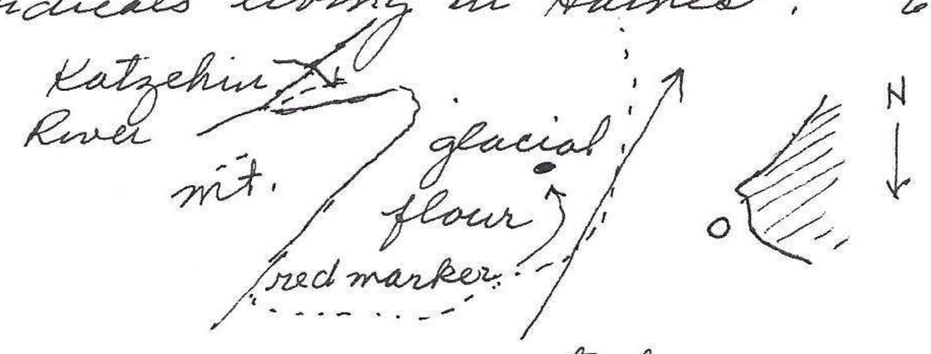
Haida	Hī'da
Baranof	Băr'ă.nŏf, bŭ.rä'nŭf
chichagof	chĭch'à.gŏf, chĭ.chà'gŭf
chilkat	chĭL'kăt
Kupreanof	kōō'prē.ä'nŏf
Revillagigedo	rĕ.vĭl'a.gŭ.gē'dō
metlakatla	mĕt'la.kăt'la
Kosciusko	kŏs'ĭ.ŭs'kō
Kasaan	ka săn'
Klawak	klă'wŏk
Chatham	chăt'ăm
Kruzof	krōō'zôf
Gustavus	güs.tă'vŭs
La Perouse	la.pā'rōōz'
chilkoot	chĭl'kōōt
Hoonah	hōō'na
Shelikof	shĕl'ĭ.kŏf
Taku	tă kōō'
Windham	wĭn'dăm
Sumdum	sŭm.dŭm'
Tlingit	tling'gĭt or kĭt
Stikine	stĭ.kēn'
yakutat	yä'kōō.tät'
Gambier	găm'bēr
Fanshaw	făn'shô
maury	mô'rĭ
Saginaw	săg'ĭ.nô
Behm	?h bām or bēm
Noyes	noiz
Klawak	klă'wŏk
Dundas	dŭn.dăs' or dŭn'dăs
Geikie	gē'kĭ
Hecate	hĕk'a.tē
Tinneh	tĭn'ĕ
Tsimshian	tsĭm'.shĭ.ăn
Bella Coola	bĕl'a.kōō'la
Kwakiutl	Kwä'kĕ.oo't'l
nootka	nŏŏt'ka
Salish	sā'lĭsh
Salishan	sā'lĭsh.ăn

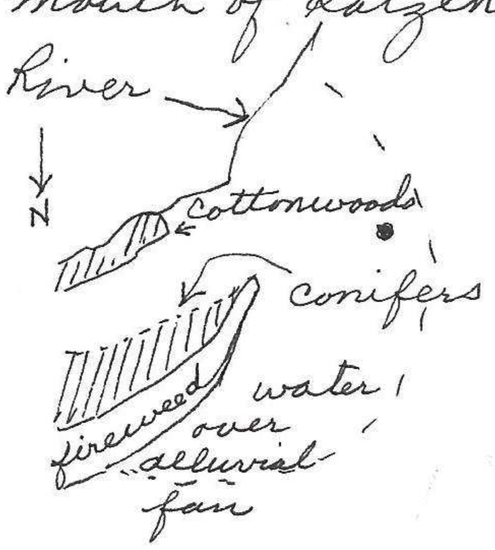
900726-99

July 26, 1990

On return trip via ferry will keep record by time. Before departure examined a marbled murrelet found dead in harbor at Skagway. It was in winter plumage. Birds observed from marina while on boat were: 16 crows one group, 3 raven, 6 mew gulls, 2 glaucous-winged gulls and 1 kingfisher.

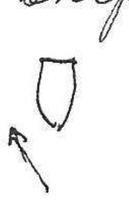
As we left Skagway 16 mew gulls outside harbor. 50% slopes deciduous and light green, conifers dark. ↑ 2:55 Cruising S 2:50 P.M. Photo Harding & Witch mountains 900726-2 photo 900726-3: Taiya Inlet. ↑ 2:55 P.M. good talus at near water level. Some slopes (SE) have erosional gullies from heighth of old glaciers (buses) and others higher, marbled murrelet, 4 marbled murrelets. 3:08 P.M. waterfall. 3:10 P.M. large river waterfall, a deeply eroded gully 1/10 mi to N. 3:15 P.M. 3-4 foot thick fracture seam filled with white quartz. 3:18 P.M major drainage. 3:21 P.M mew gull. 3:27 major drainage and riverlike falls to beach, alpine high on mt and new talus and land scars. 3:39 P.M. ferry docked N of Haines. 3:44 P.M From boat ↑ photo 900726-4 white at Haines terminal to SE at mouth Katzehin River and streak of sandbar at mouth. Anvil cloud overhead. Photo 900726-5 as above but to north. The delta extends N of mouth of Katzehin River and out 2/3 way across Chilkoot Inlet. Reverse apostrophe ties in photo above, 1 mew gull. 6:05 P.M left Haines. 6:10 P.M. Photo 900726-6 to SW of mountain SW of Haines. These mountains and glaciers make Haines a favorite for visitors as well as individuals living in Haines. 6:30 P.M passing Battery Point. At 6:32 P.M opposite mouth of Katzehin River

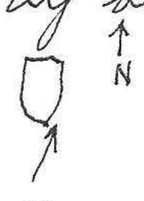




2 prs. marbled murrelets and mew gull at mouth river.

7:48 P.M whitecaps 20% less than earlier today but high winds all day. 8:30 P.M 12 Dall porpoises at edge of glacial flour and clear water out of Berners Bay. 8:43 mew gull. 8:51 P.M 15 Dall porpoises NE of light (beacon) island. They could not keep up at 23 miles per hour of ships speed. 9:05 Light house to port. 9:14 P.M 7 Dall porpoise passed by but did not approach ship. 9:24 8 Dall porpoise 10:28 P.M. arrived Auke Bay ferry terminal N of Juneau. Night travel from Auke Bay to Petersburg via Gastineau Channel, Stephens Passage,





900726-100

Fredericka Sound.

Petersburg, Alaska.

July 27, 1990

At 7:38 A.M, approx. 5,000 mew and 300 glaucous-winged gulls. on shoreline to N. Also 600 concentrated at a fish receiving plant. and 450 in flight in channel. Approx 500 Bonaparte gulls flying east from Petersburg. Left Petersburg at 9:56 A.M. 9:01 2 adult bald eagles. 9:03 A.M 2 adult bald eagles. 9:05 A.M village to port. 9:06 A.M 1 American merganser and 1 young 3" long. 9:08 A.M. 19 mew gulls. 9:10 A.M 2 marble murrelets, 1 Bonaparte gull. 9:11 A.M 2 marbled murrelets. 9:21 A.M. adult bald eagle, 2 marbled murrelets. 9:23 A.M 3 marbled murrelet. 9:26 A.M number 50 red marine marker. 9:28 A.M 9 mew gulls. 9:33 A.M, immature bold eagle. 9:37 A.M. marine marker no. 37 with lone tree on the island, Bonaparte gull. 9:40 A.M. marine channel marker no. 31, 8 Bonaparte and 6 mew gulls. 9:44 A.M imm. bald eagle, glaucous-winged gulls and 6 mew gulls. 9:48 A.M at marker no. 18. a 1 mule deer with 2 fawns at edge between beach and trees; 2 mew and 1 Bonaparte gulls, 3 mew gulls. 9:54 A.M. 8 mew gulls, 5 Bonaparte gulls at no. 11 channel marker. At this point the ferry hits the channel and first the water rushes on-to the beach of the Channel and then recedes below its original level. 9:59 A.M marker no. 9. 10:02 A.M. 2 mule deer lying down in grass beyond beach in open exposure, 3 Bonaparte gulls and 4 mew gulls. 10:04 A.M. marker no. 4, 2 Bonaparte gulls. 10:06 marker no. 1, 1 mew gull, 4 Bonaparte, one harbor seal. 10:12 A.M 2 Bonaparte gulls. 10:15 A.M. MR Island (midway Rock) and nearing S entrance to Wrangel Narrows. At low tide there is little space in the narrows for a ferry or tour boat to share the Channel with a small boat. 10:24 2 marbled murrelets. 10:46 Northern sea lions active. 10:50 A.M salmon jumped out of water. 10:58 A.M 2 marbled murrelets. 11:21 end Complete census as we approach harbor of Wrangell. 11:45 A.M ferry terminal at Wrangell. From Wrangell captain chose Zimovia Strait to Ernest Sound rather than use the larger Stikine Strait. 2:53 photo 900727-1 to N in Zimovia Strait showing characteristics of wake (aft) of ferry, 6 major 5 minor, aireated zone then churning zone. 2:54 small island and 130 mew gulls and 2 marbled murrelets recorded by photo 900727-2 The mountain in background is climax and dead trees fewer than most places. 3:06 P.M Photo 900727-3 entering major channel NE. 3:10 A.M. snow avalanche to E near top of ridge. 3:15 P.M N of Channel and clouds in photo 900727-4. 3:18 P.M white frosting

3:29 P.M. Photo 900727-5 to S island side and snow covered mts. in background. 3:49 P.M Photo 900727-6 boat (rubber) rescue by ferry. 4:02 Point before SW end Ernest Sound. 4:34 vicinity of Meyer's Chuck and now in Clarence Strait. 5:28 P.M Annette on steps to deck. Clarence Strait and wake to N. in Photo 900727-7. Photo 900727-8 to S down Clarence Straits to infenity. Sound calm. 6:28 P.M. Ship Island. 7:05 P.M. Caamano Point. 11 dall porpoise past N, one of which reversed direction and swam along side of ferry. 7:58 P.M 2 imm. bald eagles. 8:10 Ketchican



Ketchican, Alaska

July 28, 1990

Arrived Prince Rupert 5:15 A.M. Settled charges for storage of Barth ($90.00) and at 8:56 A.M left Prince Rupert at mileage 68951.3. for Lopez Island in Washington. Will travel highway 16 to at least Prince George. Photo 900728-20 of Skeena River to S at mileage 974.7. Steller's jay here also immature bald eagle. 10:37 A.M (now Pacific Time) photo 900728-22 of Skeena River to E with meandering creek entrance. Sitka spruce and hemlock at mileage 979.1 Marigonsh Creek mileage 979.9. Agate Creek 4 imm. bald eagles. 999.1 imm. bald eagle and 2 harbor seal. Slopes palished to top. Arrived Cassiar junction. Camped at Kitwanga on Cassiar Rd.

Kitwanga, Junction 16-37 highways, British Columbia, Canada.

July 29, 1990

Temp 66°F AM, sky clear. Left 10:24 AM at mileage 69106.8. Retracted W on highway 16 1 mi from Cassiar — highway 16 junction and photo 900029-23 and 900029-24 to S of snow and peaks. 140.0 mileage, New Hazeltan. At mileage 173.9 at 12:12 PM, photo 900729-25 of glacier on mountain. Photo 900729-27 at mileage 176.0 of same mt as above but with cultivated harvested field & fence in foreground, both 6.1 mile N of Smithers, Left 1:30 P.M. Sparrow hawk at Frozer Lake and a common loon at Piper Glenn also on Frozer Lake. Camped at Piper's Glenn. Birds observed today from Kitwanga to Piper Glenn on Frozer Lake are: 2 sparrow hawks, 11 robins, 8 common ravens, 11 american crows, 1 Steller's jay. It is remarkable how few road kills one finds on established highways. There is some relationship between road kills between little travelled roads and heavily travelled roads being more on least travelled roads.

900730-102

Piper Glenn, Frazer Lake, British Columbia, Canada

July 30, 1990

Common loons called from lake before daybreak. Common raven, american crows and American robins in area. Continued E to Prince George, thence S to Lac La Hache on highway 97, where we camped.

Camp Lazy R., Lac La Hache, British Columbia, Canada

July 31, 1990

Photo 900731-1 annette in Barth at camp. Small flycatcher at camp. Left 9:05 AM. at mileage 69618.2. Selective observations. 69704.5 Sparrow hawk. and meadowlark. 11:22 AM. 69708.5 Cache Creek. now E on highway 1. 739.2 photo 900731-2 & 3. Kamloops Lake. 801.0 merrett, 848.1 at 3:37 photo 900731-3 of Zopkios Ridge to N at Coquihalla Summit. Photo 900731-4 2 miles S Hope on highway 5 about 1 mi. N Silver Hope Creek. Highway 5 is a highland ridgetop road of 4 lanes and has been recently completed. It is a much faster road than highway 1 from Cache Creek. Continued to Cultus Lake T.P Preserve, arriving at mileage 922.4.

Cultus Lake, Thousand Trails Preserve, British Columbia, Canada.

August 1, 1990

Winter wren in area. Camped last undeveloped site up Creek. Left 10:42 a.m. Mileage at U.S - Canadian border at Sumas 949.0 Arrived Chris at Last Lake 70055.6 or 106.6 miles

Last Lake, Snohomish Co., Washington

Aug. 2, 1990

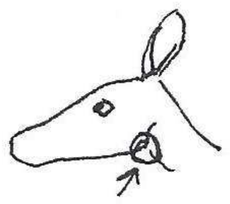
Photo 900802-1 of Mathews sign MATHIHOEO UT NO GIRLS. Left Chris' for Lopez via 9, O'Brien manor, valley road to Cannway, thence La Conner & Anacortes, 5:06 Anacortes ferry terminal (standby). Counted gulls on piling in head bay to SW.: 209 glaucous-winged gulls, 50 mew gulls, 12 Bonaparte gulls and 11 pelagic cormorants. Enroute to Lopez Island (left 5:33 P.M) observed mew gull, 4 separate Bonaparte gulls, mew gull, marbled murrelet. Willow Island, 2 marbled murrelets, marbled murrelet. Lopez Island 6:32 P.M. at Bee House mileage 70135.6.

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

Aug. 3, 1990

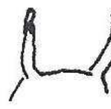
At Bee House, a 3" spike mule deer 29" high. A spotted fawn 19" high

another spotted fawn has an abscess on medial jaw-throat area.

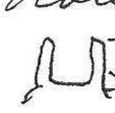


An adult female chased a 3" spike at full speed for 100 or so feet. Townsend chipmunk active. 3 dark-eyed juncos and 1 rufous-sided towhee in area. 4 adult ♀ mule deer and 4 spotted fawns, 13" spike mule deer in area. One fawn with 8" injury on right side of neck. ♀ mule deer 29" high at shoulders dominant. One adult ♀ 30" high fawn 22" high at shoulders. Fawns when hand fed move in and out with hesitation. 2 pine siskin. One northern flicker feeding on ground. This species appears about once every 10-12 days.

11:00 A.M. photo 900803-1 of Joyce Fralic's new house being built on her property to the N of her present home. Considerable blasting (~~$19,600~~) of rocks for foundation. Photo 900803-2 of madrona shedding red bark for new green bark. ♂ mule deer 29" high



♀ mule deer 28" high at shoulders with rich rufous-brown pelage. no hummingbirds (rufous). Violet-green swallows with young at the hole in nesting box.



♂



♂ antlers symmetrical. ♀ mule deer 27" high at shoulders.
♀ mule deer 31" high at shoulders.

Aug. 5, 1990

Photo 900805-1 of O'Leary and boat in Spring Cove.
dark-eyed junco fed young cowbird at feeder.
mule deer at feeder at Bee House:



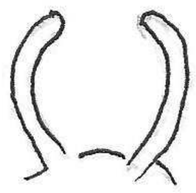
plus 5 adult ♀ and 5 spotted fawns.

Aug. 7, 1990

9:00 A.M 28 harbor seal on Leo Reef on rocks 2-6; 11 seal on rocks no. 11. North Flower Rock are 16. total 55.

4:00 P.M no bald eagles at nest NE Frost Island. ♂ dark-eyed junco fed young brown-headed cowbird. no rufous hummingbirds since at least Aug 3, 1990. One young eastern gray squirrel at feeder daily. Townsend chipmunks 1-7 daily.

31" high at shoulders.



Last night after twilight medeum size bat (5" wing spread) at Bee House on water facing side. (SE). Also accured 2 nights ago.

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

Aug. 9, 1990

Left Lopez Island 9:42 A.M for Anacortes. Harbor seal 150' from terminal. 2 glaucous-winged gulls. 9:50 A.M. mew gull. 9:52 AM 3 mew gulls. Shorelines and slopes of islands are light brown of dry grasses. 9:54 A.M S end Willow Island, glaucous-winged gull. 9:57 A.M. W end Thatcher Pass at red light beacon. 2 Bonaparte gulls. 10:00 A.M. 62 Bonaparte gulls on bull kelp at Lawson Rock. No gulls on Pointer Island, dry grass on top. 10:01 4 mew gulls, 10:02 AM 1 Bonaparte gull. 10:26 mew gull. 10:09 now SW Cypress Island, (beacon). 10:10 A.M marbled murrelet, 10:22 AM Arrive Anacortes, 65 gulls on piling in SW bay, including glaucous-winged, mew and Bonaparte. One glaucous-winged gull on piling (resting) 3/4 size adult.

To Mt. Vernon, La Conner thence river road to Sylvana, at 3/10 mi jct junction Pine Island Road and road turning N. observed approx. 1/2,500 mew gulls generally distributed in field. Red-tailed hawk 2 mi. S Stanwood. Continued to Chris' on Last Lake Rd.

Aug 12, 1990

Left Chris' and returned to Anacortes ferry terminal. Enroute on highway 9 and Stevens Lake opossum road kill, Left on ferry 5:27 P.M. 5:39 mew gull, 5:40 mew, 5:43 glaucous-wingld gull. 5:44 Lawson Rock. 5:49 mew gull. 5:50 S end Willow Island. 5:53 glaucous-winged gull. Arrived Lopez Island, Approx 6:06 P.M.

Aug. 14, 1990

Swift's Bay. 43 western sandpipers, 2 killdeer.

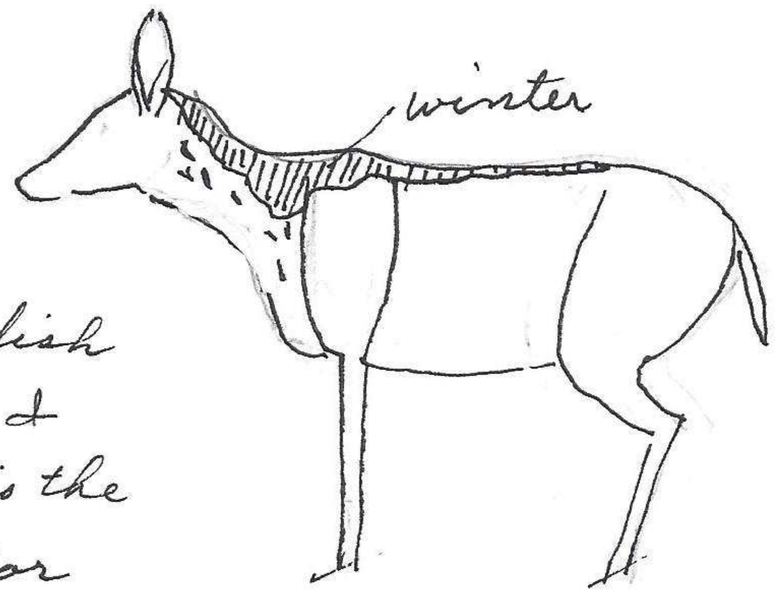
Aug. 15, 1990

Left Lopez Island on ferry for Anacortes, Survey starboard for census out 200'. Left 6:53 A.M. 6:56 2 mew gulls. 6:59 marbled murrelet, 6:59 N. side Leo Reef. Rocks 2-6 3 harbor seal. also 1 glaucous-winged gull rock 1-6, 2 on rock no 9, and 2 on rock no. 10. 15 glaucous-winged gulls on Flower Island, 2 immature unable to fly. On N Flower Rock, 13 harbor seal, Little Flower Rock 2 harbor seal 7:05 A.M S end Willow Island, 2 marbled murrelet. 7:07 A.M red light beacon SW end Blakely Island. 7:08 adult bald eagle in tree on decatur. 7:10 A.M Lawson Rock. 7:11 Fauntleroy Point. 7:13 A.M. 2 glaucous-winged gulls. 7:18 mew gull. 7:19 common

murre, 8 common murre, 7:25 A.M 2 marbled murrelet, 2 mew gulls. 7:30 A.M arrive Anacortes ferry terminal. Continued S. at W side Interstate 5 W of water treatment lakes in NE Everett 106 Canada geese. At Univ of Washington medical Center 6 Canada geese flew 20' over parking lot.

Aug. 16, 1990

mule deer with right antler more curved than left (12) has winter pelage pattern thees:



Aug 17, 1990

Last 3 weeks ocean spray reddish brown and more brilliant than I have seen on Lopez Island. It is the dominant reddish or any other color in the forests. Raccoon at feeder last night. Left Lopez Island for Anacortes at 6:49 A.M. 6 marbled murrelet. This, dark small bird flys close to water, almost wing beat distance with fast wing beat. 1 pigeon guillemot, 19 rhinoceros auklets, dark like marbled murrelet but larger and wing beat not as fast as murrelet, body shape up from water and flys higher above water. Whirlpools of currents wind up kelp. 8 Bonaparte gulls and 4 mew gulls. Arrive Anacortes ferry terminal,

Aug 18, 1990

Left Anacortes 3:33 P.M! Obsaved from starboard side out 300', 160 mew gulls, 1 pelagic cormorant in bay to SW from terminal. Harbor seal, mew gull. SW Cypress Island, tide currents moving N. 2 tight groups of 16 common murres, mew gull, glaucous-winged gull. S Pointer Island, Lawson Rock. 2 Bonaparte gulls, 2 Bonaparte gulls. Red light beacon SW Blakely Island. 2 Bonaparte gulls, Bonaparte gull, glaucous-winged gull. 8 Bonaparte gulls. SE end Willow Island, 2 Bonaparte gulls. SW beacon off W shore N end Blakely Island.

Aug. 20, 1990

On Humphrey Head from Grace's church to Port Stanley Road 13 domestic rabbits, ade but 2 were paired, 2 point mule deer ♂ (without eye tines) dominant over

dominate ♀. Fawns still trying to nurse but unsuccessfully. Dominant ♀ repelled spiked mule deer by chasing 20'. 2 eastern gray squirrels today. Female mule deer with brilliant golden-brown pelage and hair 2"-4" long on flanks. Color of fawns fading.

4:00-4:30 P.M Distinct purple red zone following current lines between Lea Reef and Bee House moving N-S axis. (but moving N)

James R Bee arrived in the "Bee" boat from Shaguay. meter (hr) 3105 or 191 hrs on return trip.

Aug 21, 1990

To Anacortes. Left by ferry at 6:55 A.M. 18 glaucous-winged gulls on shoreline rocks NW of ferry terminal at Lopez Island. These gulls usually rest on terminal piling & structures.

7:01 A.M 8 harbor seal on Lea Reef. Glaucous-winged gulls on Flower Island and on territories 7:09 SW Blakely Island, 2 pigeon guillemots. 7:13 Point Fauntleroy. Fog in Rosario Straits, wind calm, no currents, 100' visibility. 7:19 2 glaucous-wing gully flying in fog. Arrive. Anacortes.

Returned Lopez Island, left 3:45 P.M, Bonaparte gull, 2 single mew gulls, 2 separate mew gulls, Bonaparte gull, mew gull, 2 single mew gulls, mew gull, Bonaparte gull, 2 Bonaparte gulls, 12 Bonaparte gulls, 2 single Bonaparte gulls. Lawson Lark. Willow Island, mew gull, 8 Bonaparte gulls, mew gull, 2 Bonaparte gulls, Arrive Lopez Island

At Bee House ♀ mule deer 30" high at shoulder with injured ear (right)  Buster, a ♀ mule deer with nick out right ear and rear on left cannon bone front, outer. A fawn 21" high at shoulder with right eye ♂ injured ~~red~~ red. and keeps eye partially closed. Black new hair stripe down back of fawn of Buster, however Buster shows no sign of pelage change.

Aug. 23, 1990

Cooper hawk flew past Bee House.

Aug. 24, 1990

River otter swam N past Bee House. It was 8' out from shore.

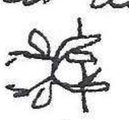
Aug, 25, 1990

River otter swam N past Bee House and did not fish along way.

900805-107

21 mule deer at feeder this A.M. 8:10 A.M 3 photos of Annette feeding some of these deer. 900825-1, 900825-2, 900825-3
Included in the herd are;

1 2 point single eye tine ♂
1 2 " no eye tine ♂ } 60% velvet off spikes
2 1 point ♀♀
6 spotted fawns
4 ♀ last year young
6 ♀ adult.

One of the adult ♀ with spotty indications of pelage change. Two of the fawns showed no pelage change, 3 of them with dark stripe down back and some dark hair behind ears, one of the fawns neck and dorsal back stripe and upper hind quarters.
Injury to fawns by front feet fighting by adults at feeder. In comparison with early summer, aggressiveness up 70%. Fawns are repelled by adults by the adults bunting gently with head, generally with a sideway turn of the bunt or aggressively repelling with strike - of front feet. Two point ♂ struck but at fawn 6 times but did not contact. aiming of front feet strikes are mainly misdirectly and poorly co-ordinated. One fawn walked over to a 2 point ♂ but male accepted the fawn. For 20 minutes an adult 2 point deer continuously manipulated a vine to remove velvet from the antlers. The vine was 3/4" in diameter and stretched from its ground anchor to the lower branches of a tree. The deer would run head and antlers up and down against the vine or better twist head and align the vine, one part on top or side of antler and the other on reverse side  and then elevate & lower antlers against the increased pressure of the vine against the antler. In the process the bark was removed from the vine and 60% of the velvet from the antler. Blood covered the vine and periodically the deer would stop and smell and lick the blood.

Aug. 26, 1990

At Bee House feeder, 24 band-tailed pigeon fed on a 6 sq. feet feeding plateform.
At Causeway, SW Fisherman's Bay observed 6 surfscoters, 9 great blue herons, 2 Heermann gulls, 18 glaucous-winged gulls, 248 mew gulls, approx 150 western sandpipers, 3 American crows,

Aug. 27, 1990

28 band-tailed pigeons at feeder at Bee House. At Swifts lagoon: 8 ♀ northern pintails, 3 greater yellow , 43 western sandpipers,

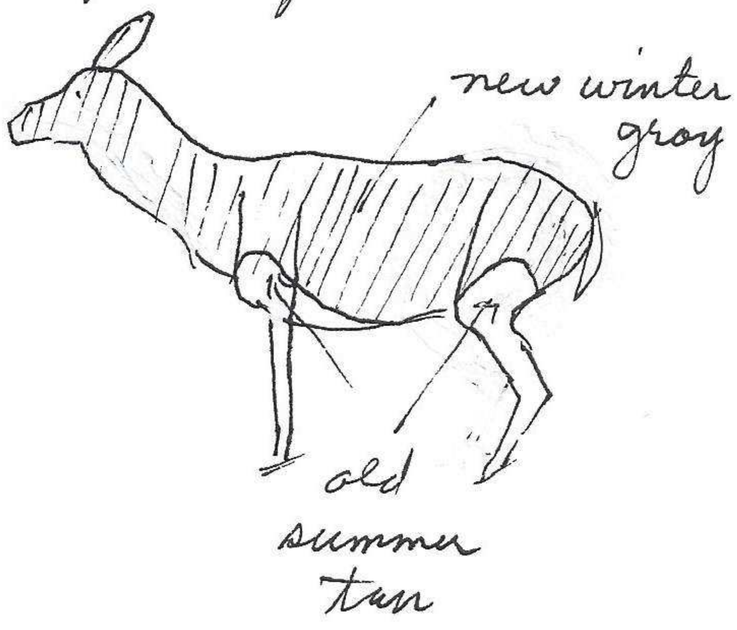
18 mallards. This is the day of the western sandpipers. Two spiked mule deer ♀♀ and ♂♂ scraping off velvet using non-resistent branches. There appears to be at least 80% increase in aggressiveness in the herd including specially ♀♀'s. ♂ spike deer displaced by females but now with most of the velvet gone have become dominant over females.

now 2 young and 1 adult eastern gray squirrels.

no bald eagle sighting since recorded in journal.

5:30 P.M red algae streak 40' wide and indeterminate length same as observed 3-4 days ago. Between Bee House & Leo Reef.

30" high at shoulder, a female shows new dark hair over upper part of neck. Another fawn with black stripe down length of back did not show any evidence of winter pelage.



Aug. 28, 1990

At 4:17 A.M stars reflected perfectly in water of sound (N. Lopez Sound) Orion complete configuration in water and same intensity but less twinkle than sky stars.

Band-tailed pigeons eat madrona berries.

12:05 P.M 35 band-tailed pigeons at feeder (Bee House).

Aug. 29, 1990

Left Lopez Island for Anacortes at 9:24 A.M. Leo Reef 7 harbor seal. Glaucous-winged gull, Bonaparte gull. W end Thatcher pass 4 Bonaparte gulls, 1 glaucous-winged gulls, 2 mew gulls. Salmon jumped out of water, pigeon guillemot. Arrived Anacortes 10:02 A.M. or 38 mins from Lopez Island.

At 8/10 mi. 5 on Best Road in Skagit Valley noted a northern harrier.

Aug. 30, 1990

Left Anacortes for Lopez Island at 5:24 P.M. Harbor seal at terminal 2 glaucous-winged gulls, 2 double crested cormorant, 3 mallards flying east, 8 glaucous-winged gulls, 15 Bonaparte gulls, 3 glaucous-

winged gulls; 4 mew gulls; 2 pigeon guillemots. N James Island, glaucous-winged gull. SW Blakely. Leo Reef, double-crested cormorants. Lopez Island 6:01 P.M. now the glaucous-winged gulls leave piling when ferry moves into terminal and fly over to the shoreline to W.

Sept 1, 1990

A river otter dove 4 times within 10 feet of dead head log, anchored at entrance Spring Cove. After the 4th resurfacing it climb onto dead head log, left and then returned a second time

continued next page (Sept. 2, 1990)

900902-110

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

Sept. 2, 1990

10:35 2 imm. bald eagles flew S past Bee House at approx 60' high and 50' from shore. Have not seen bald eagles, 1, since return from SE Alaska.

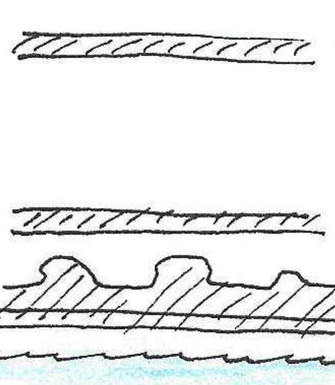
Left Lopez Island for Kantishna, Denali Nat'l Park, Alaska. no color change in deciduous trees (alder & big-leaf maple) on nw side Blakely Island S of airport. Between Leo Reef and SW Blakely Island were approx. 150 glaucous-winged gulls, 26 mew gulls and 18 Bonaparte gulls, At Lawson Rock, approx 500 Bonaparte gulls on bull kelp, all left as one group. and flew W. marbled murrelet. Arrived Anacortes. Continued to Chris' at Last Lake. SE of Conway were approx 2000 glaucous-winged gulls in field. Picked up Mary Lee Jensen at Sea Tac & thence to Chris'.

Lost Lake, Snohomish Co., Washington.

Sept 4, 1990

Chris drove us to airport (SEATAC). Mary scheduled to leave for Fairbanks on flight 93 American West and Annette and I by Delta Airlines at 12:00 PM just a few minutes later than Mary. Our plane actually left 12:17 P.M, B 727, flight 1717.

12:30 P.M N of Mt. Olympus on W side Straits Juan de Fuca. Clouds Thus:



2:37 P.M out over ocean, 32,000 ft, sky slightly lighter blue than ocean Isolated cumulus just forming

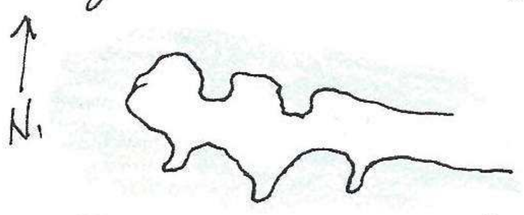
To port or W mainly ocean but occasionally land masses from E. E side good view of inland passage all the way up. Trip to Fairbanks is better viewed from right side of plane.

2:55 P.M. Kayak Island



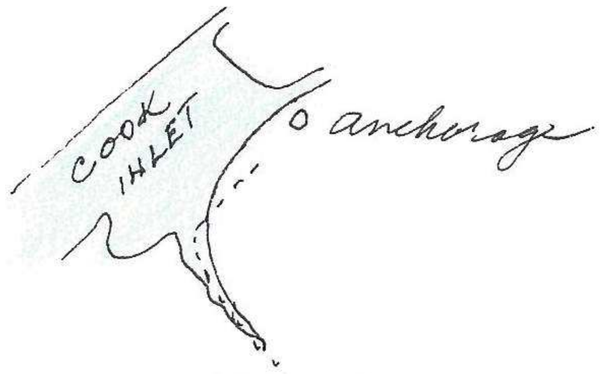
3:01 first land to left.

3:09 P.M.



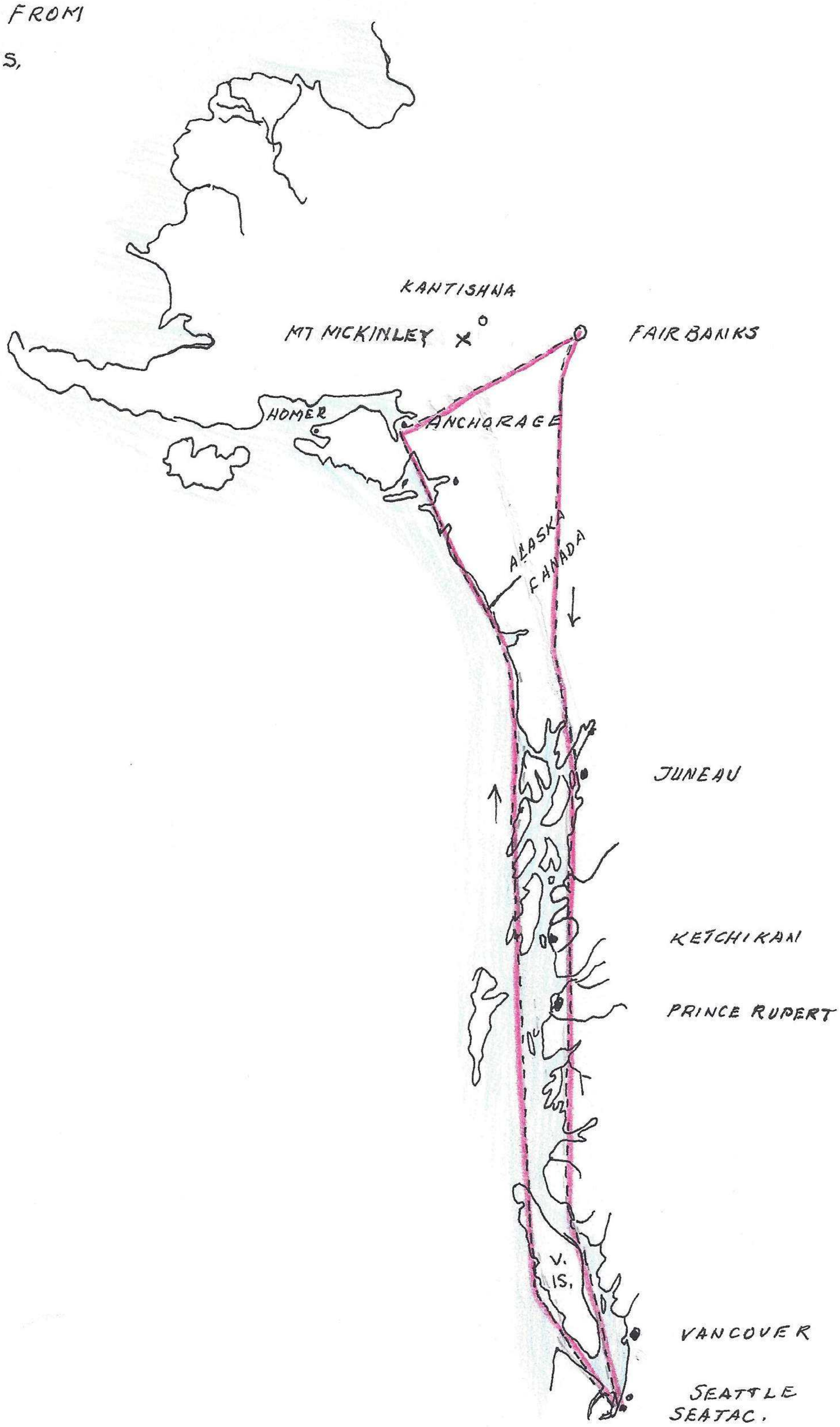


Turnagain Bay was to our right and approach by this bay. Air speed 550 MPH. Time in air 3 hrs. 12 mins.



900904-111

ROUTE OF PLANE FROM
SEATAC TO FAIRBANKS,
SEPT 4, 1990 AND
RETURN
SEPT 11, 1990

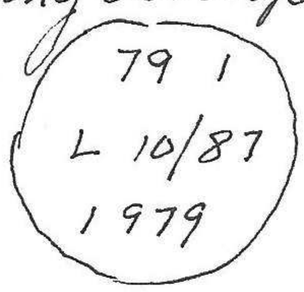


Left Anchorage by same flight at 4:06 P.M and arrived Fairbanks International airport at 4:49 P.M. Mary Pauline Bee and James R. Bee met us at the airport and we stayed at Butlers home NE of Fairbanks. Mickey Maher was to be our pilot to Kantishna tomarrow. Mary B Jensen was delayed in her flight from Anchorage but arrived about midnight at which time JamesR met her and brought her to Butlers home.

Fairbanks, Alaska

Sept 5, 1990

Mary P. Bee drove us in Kantishna vehicle to Kantishna. Left at 4:50 P.M at Chena Bridge in Fairbanks at mileage 544.3. at 1/10 mi W Gier and highway 3, 220 Canada geese. 5:48 P.M Steller's jay along Tanana River. 6:34 P.M. Nenana bridge, common raven. 6:49 red squirrel, 7:04 P.M sparrow hawk. Arrived Healy and visited Mary P. Bee property in the private wedge in Mc.Kinley National Park. This area is being developed for private homes. Marys property marker SE? is





if she could by the adjoinning property it would eleanor her holding There is an advantage point that would be an excellent view point for a house

Arrived McKinley National Park. 3 hrs later from Fairbanks.

McKinley Chalet, Healy, Alaska

Sept. 6, 1990

Fireweed inflorescence replaced by whitish acenes, some basal leaves bright red.

Headquarters Mc. Kinley Natl Park. Met Kennan Ward and his wife and 2 other parties of marys. Canada jay at headquarters. 10:40 AM 10 Barren ground caribou, one in velvet, one red antlers and the rest in clear antlers of autumn. Then approached down ridge, ran across drainage near road and then on hillside again continued grazing and moving forward, all males, near mountain to right with curved profile 11:02 Sanctuary River, Canada jay. Telanika River, 11:36 A.M Canada jay. Eagle Cr. Bridge, 2 Dall sheep 12:09 P.M Grizzly bear at creek. It progressively fed on blueberries as it moved along a horizontal level. 12:10 P.M. 2 grizzly bears moving up ridge to A. 12:17 Dall sheep trail well formed up ridge and following straight up slope, Trail bare

of vegetation and dark compared to adjacent vegetation. 12:18 19 Dall Sheep 400' up slope to W. 1 arctic ground squirrel along side of road. 12:28 P.M. 13 willow ptarmigan at edge of road 4' from car. They remained for about a minute then moved up road. The car kept up with the bird and then they flew 10' ahead to alight again. This procedure was repeated 4 times and fenally they all left Lawn slope to E. 12:31 P.M Arctic ground squirrel. 12:41 E Fort Taklat. 12:44 cross fox (red fox) tail 1/2 white distally. 12:59 2 Dall sheep. 1:01 P.M Marmot Rocks. 1:21 Grizzly bear edge flood plain eating berries from a green patch (soap berries?). 1:24 12 willow ptarmigan 50' off road. 1:33 7 Barren ground caribou 4♂, 3♀, one young. 1:32 Northern harrier, ♀. 1:41 land slide and golden eagle nest on SW side cliff to right. 1:43 Stoney Point. Dall sheep trail to S. 1:54 arrive Eielson visitor center. Left 2:40P.M. 2:48 P.M. golden eagle in cirque. 2:55 first beaver house in pond. Will keep record of small lakes and beaver house along road. 3:05 (R) lake #1 beaver house. 3:08 (R) lake #2, 2 beaver houses 30' apart. 3:16 (R) lake #3, 3 common golden eyed ducks, 1. 3:18 (R) lake no. 4, beaver dam. 3:19 PM (R) lake no. 5. 7 greater scaup ducks, (R) lake #6a 1 greater scaup duck. (R) lake #7, beaver house. 3:20 P.M (L) lake #8, beaver house. (L) lake #9. 3:22 (R) lake #10, beaver active. (R) lake #11. 3:22 (L) lake #12. 3:23 P.M (R) lake #13. 3:25 P.M (L) lake #14, beaver house. 3:27 (R) lakes # 15, 16, 17. 3:28 PM. (R) lake #18, (L) lake #19, 3:28 PM (R) lake #20. 3:29 (R) lake #21. 3:30 P.M (R) lake # 22. 3:30 P.M (R) lake # 23, beaver dam. 3:31 P.M. (R) lake #27. The previous ended at 3:31 PM, and there were others beyond. The method by time is not convenient and there are errors. It should be made by mileage and recorder. 3:36 Big Timber area. 3:38 P.M E end Wonder Lake in view. 3:40 P.M Reflection Lake. 4:00 P.M Kantishna Housed in SW cabin nearest Moose River.

Kantishna, Denali National Park, Alaska.

Sept 7, 1990

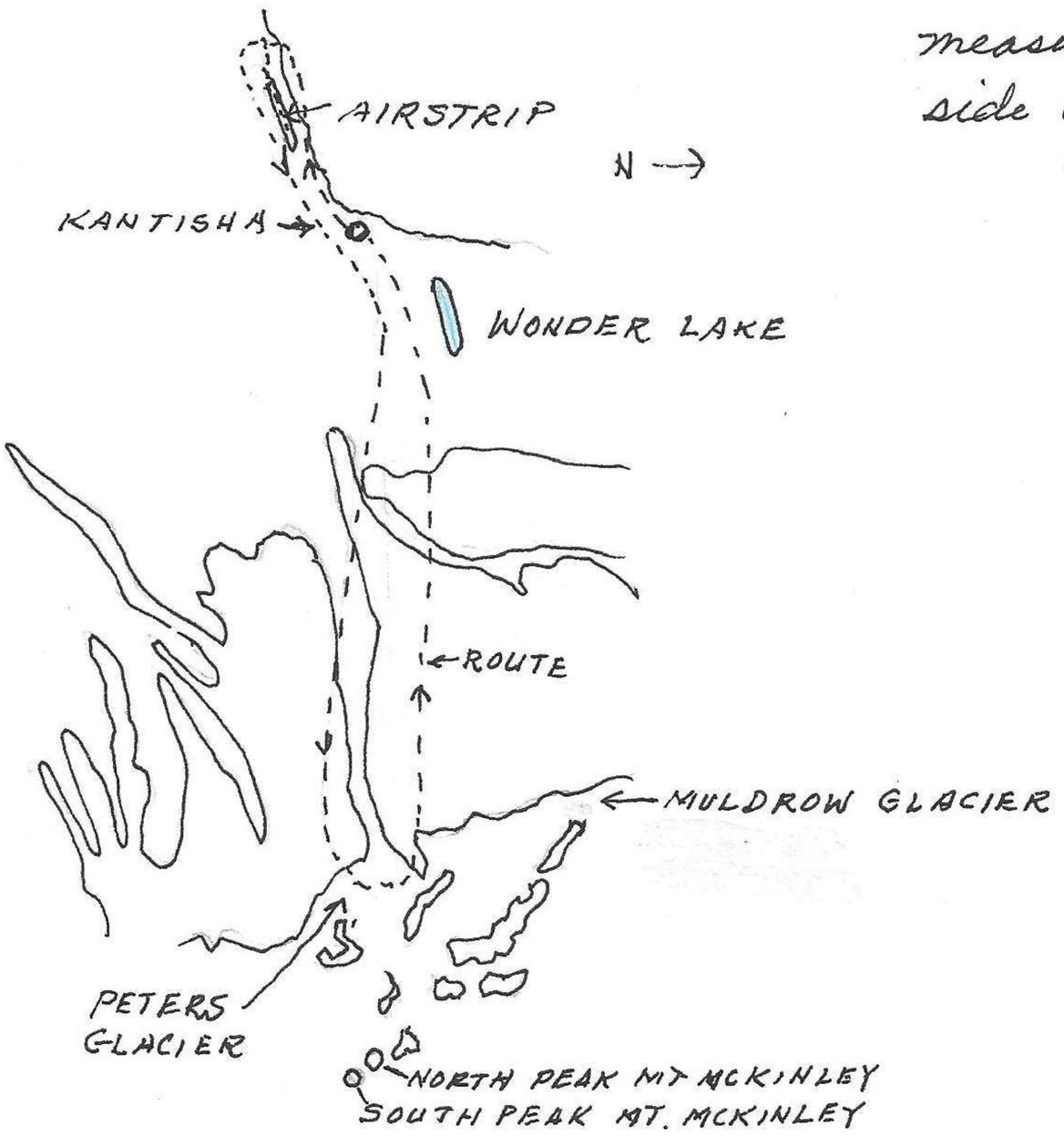
Noted northern spoonbill, a moose ad. and young in Wonder Lake. In the Kantishna area the Steller's jay, Canada jay, white-crowned sparrow coopers hawk, pine siskin and American robin. 2:45 P.M at approx. 800' above Kantishna and flying E in circles were 109 sandhill cranes in formation. They called continuously. 5:05 P.M 2 groups of 8-10 American robins flew W approx. 200' above valley floor. at Kantishna.

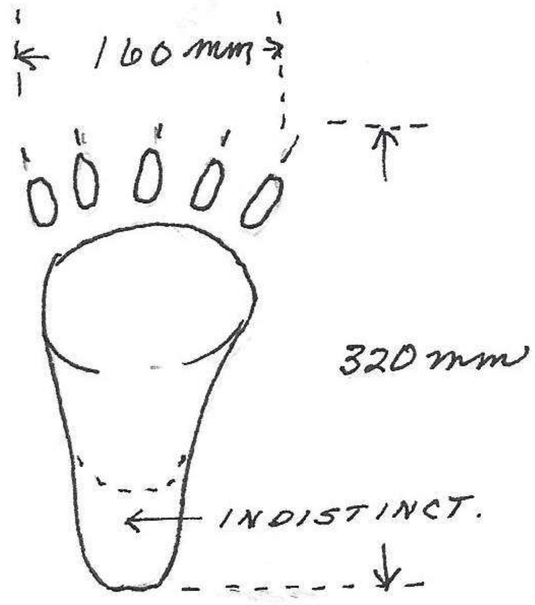
At 9:00 P.M drove to Wonder Lake for viewing Mt. McKinley at sundown. James R and Annette took several photographs of last pink colors on the mountain. At small lake before entering into Wonderlake were 3 northern

and 2 cinnamon teal. In foreground of most of the photos taken were 9 greater scaup, 2 shovellers and 6 cinnamon teal. One Canada jay in spruce at edge of lake. Clouds to far west looking W down moose creek were firey red.

Sept 8, 1990

made plane trip with mickey maher from 12:00 P.M to 12:30 PM to Peters Glacier and return. At airstrip measured black bear imprint along side of runway, S side, 1/2 way down.





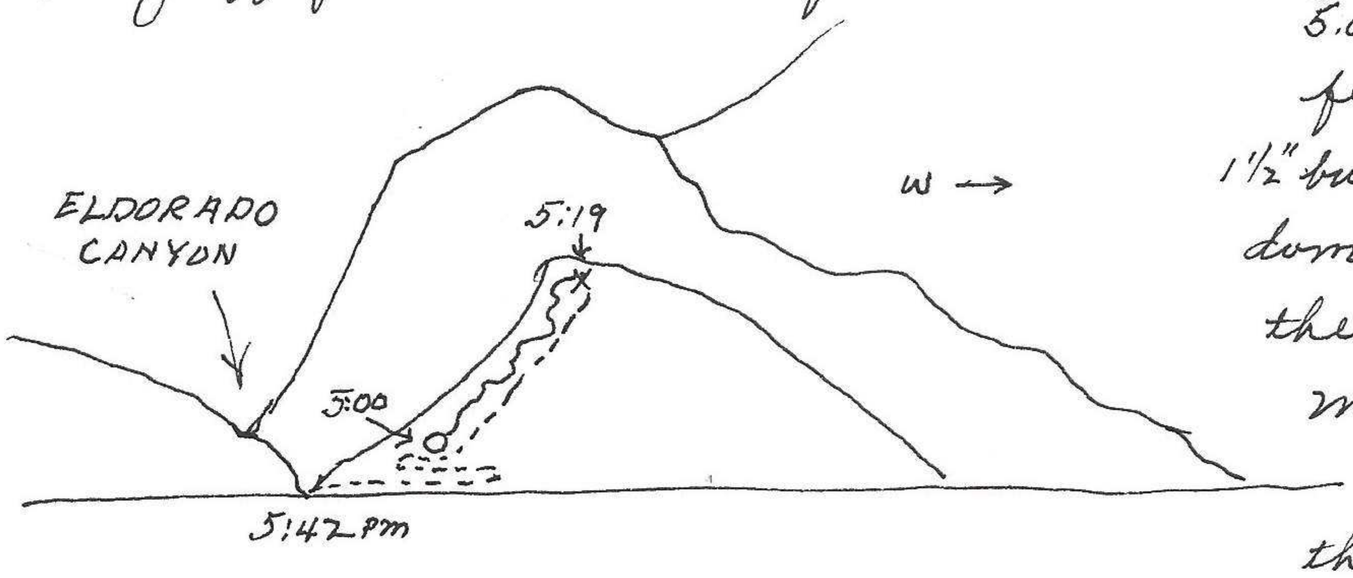
5 sets of moose tracks were also observed in same area.

Mary B Jensen & James R also had same trip later. On our flight at about half way down the runway the lodge pet dog of many years ran out to intercept the departing plane and was struck by the right tire. Mickey attempted to pull away and although the speed was pre-air and the dial registered stall, the pilot decrease the dog plane contact. The rear wheel thumped on the runway as the plane was forced to make an abrupt upward movement.

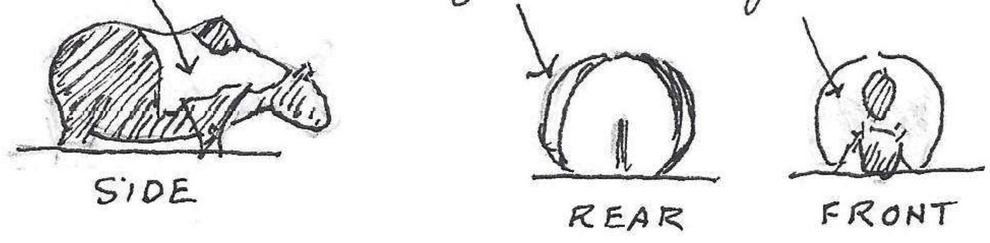
From the air strip walk down moose Creek some half mile from the cabin at E end of strip. In river bottoms were thick shrubs and small trees and trails of moose. Appx 1/10 mi gained an elevated river valley floor of mainly knee deer tundra growth. 4 or 5 unused caribou main trails paralleled the brink of the benchland. Some parts of the trails were hip deep, most knee deep and vegetated on the floor of the trail as if they had not been used for many years. At S end benchland descendes to river floor. Lake enhabited by beaver, (dams and houses, for the nept 1/10 mile. Intercept road and continued

down Moose River, now a high level with many places un flood covered with either overflow from beaver dams or from moose Creek, one stretch 200' knee deep. On the sand and mud overflows measured series of moose track in mm: arranged largest to smallest they are: 180, 180, 175, 163, 160, 155, 158, 155, 152, 145, 144, 135, 142, 130, 108, 95. These represent 9 different ages. There is a greater concentration of moose here than at the airstrip. Returned to Kantishna Road House.

From our cabin (carban) at 5:00 P.m made the folloowng observation of a grizzly bear on W side of Eldorado Canyon at mouth.

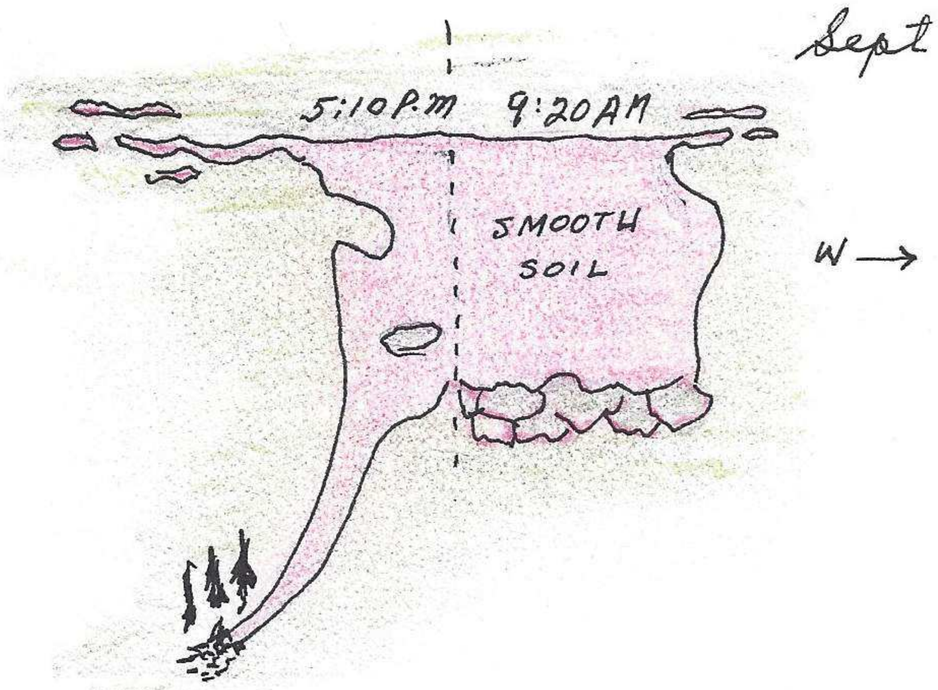


5.00 P.m. first observed grizzly feeding among the red-leaved 1½" bushes of the blueberry, which dominated the E lee side of the ridge. It gradually moved up slope, stopping only to actually feed on the berries. 19 minutes later it had reached the top of the open ridge (5:19 P.m) and then returned to where first observed by straight downhill lope not forced but deliberate reaching bottom of ridge at 5:22 P.m. Loping down hill may look like a charge to anyone, unknowing to the bear, that may be in its way. In an area of 30'x30' it systematically grazed for berries for 20 minutes. at 5:42 P.m. a plane arrived at Kantishna from the east and the bear left the sidehill and moved into the mouth of Eldorado Canyon.



This grizzly had a pattern of dark a light pelage and depending on the angle of light reflection on the hair, produced either a dull or bright grizzled white. Fore and aft produced the most conspicious pelage and in turn the animal.

Sept 9, 1990



at Kantishna rain all night and today. at 9:20 A.m the hellside S of moose Creek and apprx. 1/10 mi E of mouth of Eldorado Canyon broke loose along a previously weakend line and slide down slope at 5:10 P.m another section of the same

complex. It slide fast and continued in an extended linear trough beyond the base of the first slide. Gravel extended 100' beyond the lower end of the last slide.. an estimate of the width of both slides is 150'. A photo of this slide would be useful for appraising regeneration of the tundra growth on this exposed slope.

Mary and Steve were married this P.M by marvin newman, a friend of mary and Steve. Marvin came out to denali to conduct the services. Some 80 guests signed the register and were all guests of Kantishna Roadhouse sponsered by Roberta Wilson, mary and Steves friend and mary's employer. Family members on Steves side were Vice-admiral Robert "yogi" Kaufman, and ours Annette, Jay, Mary Bee Jensen and myself. Many of their photographic friend were present including Kennan Ward and another individual who just recently published on the wildlife of Yucatan. Mr Bailey, one of the older miners of the area was present. Wilson represented the Botany Dept. of Univ. of Alaska.

Annette records the following: " James and I arrived at Fairbanks airport (Delta) in low clouds and rain. An Sept. 4 and Jay who had arrived on the 3rd, Polly met us there with her friends Ed. Butler, a geologist and presently running a construction company in Fairbanks, and mickey maker, a Delta airlines pilot an entrepreneur whose home base is Grass Valley, Calif., and from whom Steve C. bot his Cessna 120. We were waiting for mary Bee Jensen, James sister, to come in on Alaska Air, but she was bumped 4 times in Seattle before catching her Fairbanks flight. while were were waiting, Polly took us to a fabulous resteraunt the "Pump House" on the Chena River bank. It had been used to pump water to higher elevations for gold mining. Ed. put all of us up at his house for the night. His house was interesting as he is still building it. Three stories with 12" thick insulated walls and lots of windows and a deck overlooking the Tanana Valley. Mickey had intended to fly us to Kantishna, but weather continued to close in, so Polly drove us down to Denali national Park, after Jay took us shopping for rubber boats! (and for the next 6 days we wore them constantly). We drove thru fog and rain to just north of the park and then the weather cleared. Polly first drove us out to the 5 acres she bot at the edge of the park, beautiful spot with a lovely view across a small canyon. Jay wants her to see if she can get the 5 acres next to hers. Then we drove to a motel outside the park for the night. The next morning we started into the park. The eastern entrance is lowland with

black spruce forests, trees no more than 30' high. We stopped at headquarters and there met a number of Stevi's and Polly's photographer friends among whom were Kennan and Karen Ward whose names frequently appear on wild-life photos. Everyone was delightful and interesting. Our isolation here on Lopez Island has left me with a new appreciation of people who pursue such unusual life styles.

Kantishna Roadhouse, Denali Natl. Park, Alaska

Sept. 10, 1990

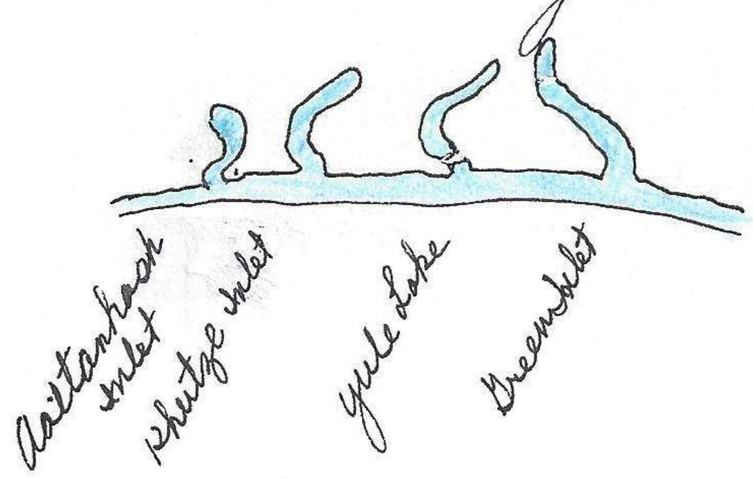
Left 9:20 A.M. for Fairbanks and thence Lopez Island, Washington 9:40 A.M 3 barren-ground caribou. 9:58 ptarmigan (willow), 10:05 willow ptarmigan. 10:30 A.M Eielson visitor Center. 10:45 A.M northern harrier over low tundra. 10:50 A.M Grizzly bear. 11:02 bridge (two spanning river) 12 Dall sheep east side on hill. 11:21 Polychrome Pass, 2 Dall sheep. 11:12 6 Dall sheep, near conspicuous sheep trail up slope, 1:15 Igloo Creek. 11:57 Teklanika River. 5 caribou on hillside, raw tundra and sparse black spruce. 12:26 P.M 2 caribou on flats below bridge. 12:38 2 barren-ground caribou. 12:50 P.M Lack Creek and Natl Park Headquarters. Continued N on highway. 2:33 P.M Nenana River beyond Healy. Arrived Fairbanks. Mary Jensen left on flight 396 at 6:55 P.M for Anchorage thence Seattle at 11:41 P.M thence Las Vegas at 11:25 A.M where Dan met mary.

Fairbanks, Alaska

Sept. 11, 1990

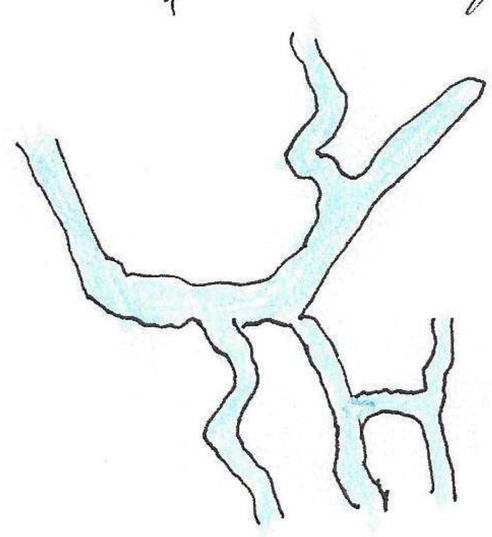
Annette and Dan scheduled to leave on 727 plane, flight 1708 at 6:45 P.M Jay to drive yellow car to Homer. Actually left 6:58 P.M. Clouds full sky. From right side of plane the full Alaska Range and specifically Denali Natl Park, and McKinley mountain can be clearly viewed above the clouds. The sunrised lights produced a very colorful sight. The route 35,000 ft. followed the east limb of the Alaska Range, but not exactly knowing the route along the range. From the plane the east was comparatively low and covered with clouds, the right or south side was alway mountainous and covered with glaciers. a direct flight to Juneau would have taken us E of Wrangell Mts and St. Elias Mts whereas a more southern Route would be more in the center of the range and approach NW of Glacier Bay extension. In any event the route is all alpine and one of the greatest mountain areas in N. America. The extensiveness is impressive. Observed several impressive fault valley trending NW-SE. One should check these mts by small plane or helicopter. Right side of plane this trip is best. Left side for Mt McKinley. Sharp pointed peaks on approach to Juneau. Arrived 8:30 A.M. Left Juneau 8:53 A.M. Green algae in compacted in streaks against narrow channel at head of Gastineau channel 5 of airport. at 32,000' the clouds previously were smooth, now taken on a rough surface ~~~~ versus ~~~~. Vail clouds directly above stratified clouds ≈≈≈ Clouds now smooth again but more finely fractured. 9:37 A.M clouds until now,

mountains becoming visible. 9:49 channels below thus:



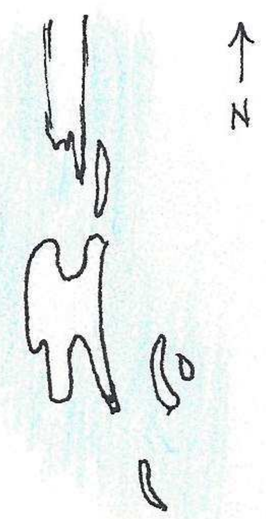
These proved to be on Graham Reach S of Prince Rupert in Canada and are;

8 min later
at 9:57 A.M recorded a pattern of channels thus.



but unable to match the pattern with map. maybe channels surrounding King Island. Partially fogged in.

10:03 P.m very rugged and extensive mountainous area with recent high snow 1/3 from top. All glacier are receding 10:07 Good and extensive ice fields. Many elevated new lakes and would be good problem for limnological research. 10:12 Major drainage NE. Another one to E. 10:14 A.m mt ranges increasing to E 10:17 nearing Straits of Georgia. 10:26 A.m Selchet



10:31 A.m on more of the islands in Gulf Islands
10:45 A.m arrive Sea-Tac. International airport. Suburban airporter to Wyndham Hotel in valley at junction 450 - 522. Chris picked us up there.

Last Lake, Snohomish Co., Washington

mileage 91707.0 Sept 12, 1990

Left, Chris' 11:11 AM for Lopez Island via Whitney, Elliott and hy 9 roads to mt Vernon, thence 20 to Anacortes & ferry. At junction 99th Ave SE and Elliot road 800 mew gulls in long flight formation flying E at about 150' high. (mileage 21 mi from East Lake). at mileage 91744.0 on highway 9, Townsend hipmunk. At beginning of Marsh Point Road at RR tracks, noted that out of 40 nesting boxes, 7 (experimental) had starling on top of the box. Appro 1/2 mile beyond on a raft of logs tied to pilling 500 x 500 ft, noted appro 540 gulls (85% glaucous-winged and 15% mew. Belted kingfisher and 2 surf scoters in area. Left Anacortes 8:50 P.m. for Lopez Island.

900913-120

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

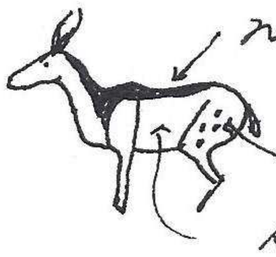
Sept. 13, 1990

An orange-crowned wabler flew into to a window of Bee House. It measured: 120 mm T.L.; 58 mm. wing; 45, tail; 185, wing spread; 10 mm, bill (exposed culmen; 10 gms wt.

Only young eastern gray squirrel this summer at Bee House.

Takes 1/2 hr. to walk from Bee House to Shoal Bay marina via woods trail.

Smallest mule deer, a fawn of this year 21 1/2" high at shoulder.



new dark gray winter pelage.

summer pelage and faint spots.

summer pelage, spots absent because of wear & sunlight.

and pelage shaggy.

5:45 P.M. American crow and band tailed pigeon feed 3" apart on feeder.

Sept. 16, 1990

28 harbor seal on Leo Reef. (Rocks 2-6), 5 on Little Flower Ruck and 36 on north Flower Rocks, total 69. 10:30 A.M.

The symmetrical spiked mule deer ⋃ is dominant over the non-symmetrical ⋃

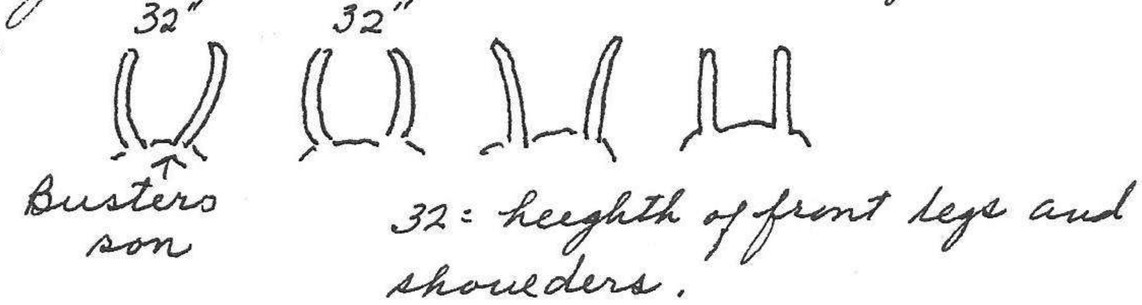
Sept. 17, 1990

2:10 P.M. a sharp-shinned hawk past Bee House 1 1/2' above feeder. Last night perfect star reflection from water.

Sept. 18, 1990

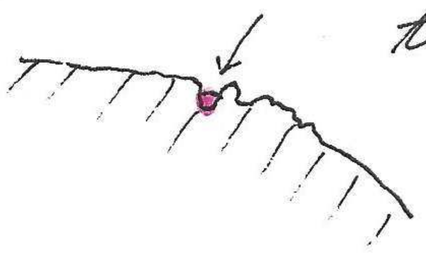
2:25 P.M. a sharp-shinned hawk flew into window of Bee House and was dazzled below window for 3 minutes then flew into madrona. The sound was greater than small bird impacts.

Four young mule deer bucks at feeder:



Sept. 20, 1990

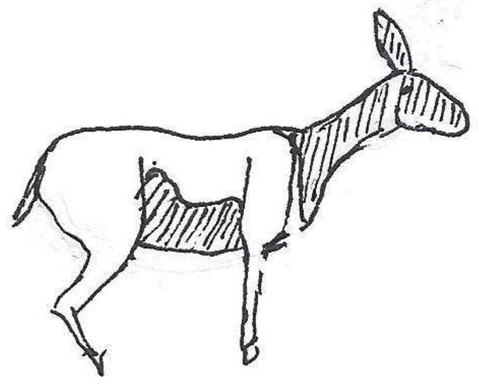
Sunrise 7:17:10



tree notch on Bald Bluff.

Lept Lopez Island at 9:25 A.m for Anacortes. Selective observation. First Bonaparte gull at W end Thatcher Pass. 24 glaucous-winged gulls on Pointer Island. They were in small groups near shoreline. at Lawson Rock 45 Bonaparte gulls on bull kelp. 2 new gulls also in area. No alcids. Arrived Anacortes ferry terminal. 23 immature and 3 adult glaucous-winged gulls flew into bay to SW and alighted on piling.

Peloge change in mule deer "Buster" ♀ sides gray, neck grey, head gray rest of body summer tan. Her young still try to nurse but are always refused.



Buster, ♀ mule deer.

When adult glaucous-winged gulls alight on roof of Bee House, they expand webbing of toes to act as ailerons.



Sept 25, 1990

The new parking lot for the pending Teenager Center in Lopez Village now has a layer of sand as base of the 275 foot length clearing. 30 trails of the mule deer crossed the axis of the lot, in an E W or W E direction. The number could be repeats of deer investigating the new disturbed soil. Largest imprint 81 mm, smallest 48 mm. A rufous-sided towhee fed out from edge of brush zone onto parking area.

Sept 28, 1990

2:00 P.M. Common raven flew S on ridge of Upright Head approx. 10' above tops of trees. It called as it continued S.

Left Lopez Island 2:16 P.M for Anacortes. Will keep complete census of birds: 2 Bonaparte gulls, 10 Bonaparte gulls, 7 glaucous-winged gulls, 1 Bonaparte gull, new gull, reddish needles below conifers on Blakely Island E of Willow Island, all slopes on Blakely Island dry, Bonapart gull, Bonaparte gull. 2:32 P.M S W end Blakely Island. In Thatcher Pass 28 Bonaparte gulls, 350 Bonaparte gulls on bull kelp beds surrounding Lawson Rock, 19 cormorants on N end Pointer Island. 6 Bonaparte gulls, new gull, 6 new gulls. Sand exposures on Cypress and Guemes stands dry and light colored. Arrived Anacortes 2:56 P.M. 6 pelagic cormorant on piling of ferry terminal as were 5 double-crested cormorants. One glaucous-winged cormorant displaced a pelagic cormorant on piling. 42 glaucous-winged gulls on piling SW at head of bay.

Oct. 1, 1990

[redacted] at Chris' on Lost Lake. Mot and Phillys, Chris, Steve, Mat, Annette and I celebrated my 77 year birthday (Sept 25, 1913).

Oct. 2, 1990

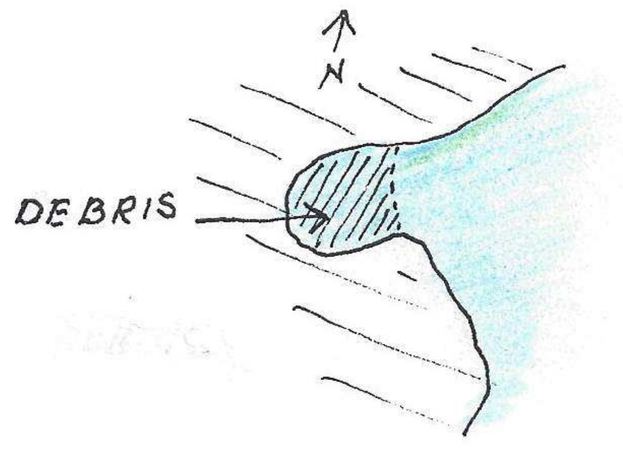
Returned to Lopez Island via monroe, Woods Creek, Russell Rd, W shore road Roesiger Lake. menzel Rd, Granite Falls, thence Jordan Road to Arlington thence 9 to Mt. Vernon, Burlington, Lopez Island. From Anacortes ferry (lake to SW) 1 cinnamn teal, 2 mallards. Enroute to Lopez Island via ferry: marbled murrelet, approx 1,500 Bonaparte gulls, 3 mew gulls, 1 double-crested cormorant.

At Swift Bay on Lopez Island 11 northern pintails, 6 green-winged teal, 4 greater yellowlegs. At Fishermans Lagoon causeway (W side) 13 glaucous-winged gulls singularly resting on shore and 6 great blue herons on east side. Crows (American) in flocks of 15-35 between Lopez Village and Humphrey Head via Port Stanley Road.

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

Oct. 3, 1990

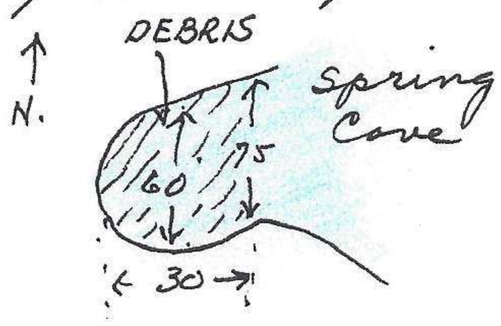
Two days ago debris of sea lettuce, bull kelp and man-made artifacts entered Spring Cove and remained. This A.M took phato 90103-1 from vantage point above Cove to N. The man-made debris consisted of 32 pieces of white styroform (largest 3' x 2'), 3 plastic bottles (pint & quart size), 8 scraps of plastic (wrappers and sheets), and 4 plastic bobes (small). Phato 90103-2 ibid. Photo 90103-3 branches of Madrona in change of bark period red to green. Photo 90103-4 Glaciated knoll & lechen & mosses. Photo 90103-5 Sealing of madrona bark. Photo 90103-6 Forests of Douglas fer & madrona in Groben Swail, not shown with Spring Cove lower left. Photo 90103-7 Douglas fer and madrona laced against shoreline S Spring Cove. Photo 90103-8 Bee House stairway looking down Photo 90103-9 " " " " up. Photo 90103-10 SW Bee House and stairs with madrone foreground. Photo 90103-11 " " " " looking down upper angles.



Oct 4, 1990

Debris still in Spring Cove. Settles on beach at low tide. Man-made debris remains in relatively same area of Cove. An on site inspection of this debris included: 8" plastic bowl, 2" plastic cups, aluminum foil 3 pieces, 6 pack plastic holders 888, 8 pieces plastic, plastic bottle

dog shampoo, paper 6 pieces, soft drink carton 1, aluminum can, beer, 2, cottage cheese bot, quart oil bottle, plastic, 2, plastic shovel (children size) 1, plastic box 4, silicon II tube 1, small plastic wrappers 8, ice cream carton 1/2 gal 2, rope (to 1") 4, paper plate 2, plastic strap 1. Of the debris 50% bull kelp, 40% sea lettuce, 10% other.



1:35 P.M. a harbor seal fed from 5' to 25' out from shore below Bee House. It floated on back with head to eye level above water and upper part of body (ventral) The whiskers and jaw and nostrils were above water. In this position the seal can see below and in front and when a fish is spotted, the seal dives venter up then changes position in a 1/2 turn for the chase. The on surface stance is generally 6-12 seconds. This seal has be observed on other occasion as told by the character of its spotting. I would judge it to be 50" in length.

A belted Kingfisher perched on deadhead, out from Spring Cove, for 15 minutes.

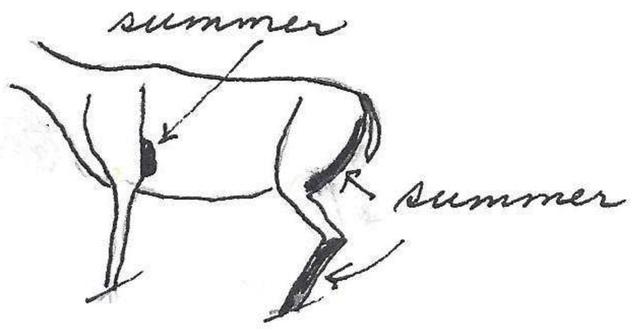
A northern flicker flew N past Bee House at apprx 40' high and out along the shoreline.

A band-tailed pigeon flew into window and dropped to ground below where it remained motionless for 18 seconds. 6 other pigeons were concerned and moved above among the branches of the tree. It left and had full powers of navigation.

2:26 P.M 2 Forester terns fed in front of Bee House.
Photo 901004-1 From bathroom window Bee House of madrone red berrees and Douglas fir, to N.

Oct. 5, 1990

A ♂ mule deer 28 1/2" high at shoulders had buds for antlers. No bone showing and completely covered with yellowish hair. 90% mule deer in winter pelage. One adult ♀ with yellowish-brown summer pelage thus:



Left Lopez Island for Chris' at Lost Lake. At 0327, Samuel John Kenagy was born. He was 8 lbs 6 oz weight, 20 inches length (crown-foat), head 13 1/4 inches circumference, chest 14 3/8". delivered, Group Health Hospital, Redmond, Wa. Annette Christine Bee Kenagy and baby are doing fine.

Oct 6, 1990

Stayed in Barth at Chris' place. John & Mary Kenagy were there

from California.

Oct 7, 1990

Left Chris' for Lopez Island. at junction of Elliot and Welch rood an opossum roadkill. At junction (1/10 SE) of Fales and Elliot rds in oxbow lake, 74 Canada geese. also at S end Best Road in Skagit Co., opossum roadkill. Arrived T.T. Preserve beyond La Conner.

Oct 8, 1990

Birds observed at Thousand Trail Preserve near La Conner. 8 western grebes, 3 surf scoters, belted Kingfisher, 2 double-crested cormorants, 5 glaucous-winged gulls, 6 ring-billed gulls, 13 American crows, 1 great blue heron, 5 black turnstones, 1 common loon.

Left T.T. Preserve for Anacortes. at N end Best Road and highway 20, red-tailed hawk.

Left Anacortes at 5:10 P.M with the Barth at prime position at head of ferry. 3 double-crested cormorant on Anacortes ferry piling. Approx 60 gulls on piling SW in head of bay. As we left, 9 double crested cormorant flew by from the W and also 1 mew gull, 1 glaucous-winged gull. 5:15 P.M glaucous-winged gull, 5:16 mew gull. 5:18 red-necked grebe and 19 double-crested cormorant. 5:21 S of Cypress Island beacon. 24 double-crested cormorants, 26 rhinoceros auklets, 29 double-crested cormorants. 5:30 N end James Island, mew gull on floating bull kelp. 5:31 Point Fauntleroy and S of Lawson Rock. The question is asked why are there no porpoises in area? In Texas where State ferry crass inlets there are many porpoise in front of boats and there are many boats. 3:35 W end Thatcher Pass S of beacon. 12 Bonaparte a 2 double-crested cormorants in beacon area. N Lopez Sound has noticeably quieter water than Rosario Straits. mew gull, 5:38 Willow Island (S end), mew gull, mew gull, double-crested cormorant, 4 double-crested cormorant on roosting SW wall of Willow Island. 5:40 mew gull. 5:41 Bonaparte gull. 3 floats of bull kelp since Thatcher Pass, no other debris. 5:44 E of Leo Reef, 32 mew gulls. 5:45 pelagic cormorant. 5:47 3 pelagic cormorant, mew gull. 5:48 2 common loon. 5:50 3 pelagic cormorants. 5:51 pelagic cormorant. 5:54 Lopez Island ferry terminal 4 glaucous-winged gulls on piling.

Oct. 9, 1990

A male mule deer of last year attempted copulation with mother but was refused. Townsend Chipmunks still active. All mule deer now

in winter pelage.

On west side causeway of Fisherman Bay Lagoon (will use this name for lagoon at SW end Fisherman Bay with causeway on W side). On west side of causeway in San Juan channel observed: 5♂ 5♀ Harlequin ducks in one close group, 1 common loon. On east side causeway: 6 glaucous-winged gulls and 1 great blue heron.



In Swifts Lagoon: 21 mallards, 9♀ 2♂ northern pintails, 11 green-winged teal.

At Bee House 2nd year ♂ with antler buds

Oct. 10, 1990

To Chris' at Lost Lake, thence Uni. Wa. Med. center for eye angiogram. Oxbow Lake at junction Elliott and Fales rds: 26 Canada geese, 43 mallards, 6 pintail, 4 green-winged teal.

On return from med. center observed approx. 2,000 Bonaparte gulls in sanitation settling basins NE Everett. The Bonaparte gulls have a general distribution in fields and on bodies of inland waters. At junction Best Road and highway 20 in Skagit Valley, redtail.

At Anacortes ferry terminal at 6:30 P.M. 3 flocks of mallards 9, 18, 11 flew E at appror 300' high. Left ferry terminal 6:47 P.M for Lopez Island. Sun already set. no census.

Oct 11, 1990

Fished from the Bee boat in Shoal Bay (S end at moorage) and caught 3 sand sharks (spiny dogfish, Squalus acanthias, measuring 18♀, 24♂, 26♂.

Oct. 12, 1990

3 river otter swam S past Bee House. First observed since last recorded in journal.

Oct 13, 1990

8:50 A.M. 2 coopers hawks at Bee House. They hunted singlely or in unison at feeder and out as far as 50' on either side. The first approach was high speed 3' above feeder. At one time 2 American crows chased the hawks, then the hawks reversed the act and chased the crows. The crows evaded by irregular flight out over the water.

8:55 A.M. river otter swam S past Bee House and beyond Lichen Point. Travelled approx. 10' from shore except bypassed Spring Cove.

It takes approx. 30 min. to record 1 page notes. Charts, drawing take longer.

Male mule deer keep ♀ deer nervous. The ♂ approaches from rear and at 1 or 2 feet away the ♀ moves forward.

At Fisherman Bay Lagoon at high tide and W side of causeway, 1 hooded merganser, 1 common loon, 5 glaucous-winged gulls. On E side in lagoon, 8 mallards.

At Swift Lagoon: 28 mallards, 13 northern pintails, 3 shovellers, 8 green-winged teal.

In evening 2 glaucous-winged gulls called continuously at Spring Cove where an adult bald eagle was perched on a Douglas fir. This eagle is the first observed since they are returning from salmon runs.

Townsend chipmunk active.

On forest trail from Shoal Bay marina to home in late evening observed 4 rufous-sided towhee. Ordinarily in daytime they are rarely observed, or any other bird for that matter.

Oct 14, 1990

To La Conner for dinner and celebration Annettes birthday and our 45 anniversary. Chris, Steve, Mat, Sara, John & mary were there.

Big-leaf maple have yellow leaves and leaves are falling both on the mainland and San Juan Islands.

On return to Lopez Island, via ferry, noted 18 Herrmann's gulls, 92 glaucous-winged gulls (80% young) in fishing formation, S of Anacortes ferry terminal. While waiting for ferry at 5:23 P.M for last hour. 206 american crows arrived at different times and congregated in tree top (Douglas fir) N of terminal. As we boarded the ferry the crows left in one group and flew N to Cypress Island. Another group of 23 crows arrived from S and instead of stopping at the collection area, past directly N overhead and followed the first flight to Cypress Island. Rain all day and when we left the skies were clearing to the W.

Oct. 16, 1990

Made trip to Univ. Wa. Med. Center, leaving Lopez Island 7:47 A.M. by ferry. Will keep complete census to Anacortes. mew gull, 2 pelagic cormorant, 1 glaucous-winged gulls. 7:50 A.M N end Humphrey Head. 6 rhinoceros auklets. 7:53 A.M Leo Reef, 13 harbor seal, 11 glaucous-winged gulls. 7:56 E Frost Island, 1 marbled murrelet. 7:58 Willow Island 8:00 beacon SW Blakely Island, 9 Bonaparte gulls, 12 Bonaparte gulls, 2

new gulls, 130 Bonaparte gulls, 2 new gulls, 100 new gulls, 46 Bonaparte gulls. 8:04 Fauntleroy Point. Gulls are all flying N and are generally distrubed within their individual flocks. All confined to Thatcher Pass on S side. 18 Bonaparte gulls. 8:06 A.M N of James Island. 8:08 130 glaucous-winged gulls, 8 new gulls, 14 cormorant, 4 Herrmann's gulls, 34 Bonaparte, 8 western grebes. 8:12 guillemot at beacon SW Cypress Island, 2 common loon, 2 marbled murrelets, pelagic cormorant, new gull, 6 Bonaparte gulls. 8:24 A.M Arrive Anacortes. Continued to Anac. Wa. med. Center. On return noted an estimated 20,000 new gulls in a field 300'x600' at 3/10 mi. N of highway 5 and Conway turnoff. The gulls were generally distributed at about 1 per every 4 feet. I have never seen such even distrution of gulls in such large areas.

Oct. 18, 1990

Townsend Chipmunk active (will keep record until they go into winter retreat). High winds from S moved 1/2 of debris out from Spring Cove.

Oct 19, 1990

Fished from the Bee boat on S end Shoal Bay and caught the following spiny dogfish;

12:10 P.M ♀ 26 inches total length.
12:20 " ♀ 28 " "
12:30 " ♂ 30 " "
12:48 " ♂ 28 " "
1:26 " ♂ 29 " "
1:32 " ♂ 27 " "
1:41 " ♂ 21 " "
2:20 " ♀ 27 " "
3:08 " ♂ 24 " "
3:18 " ♀ 27 " "
3:45 " ♂ 24 " "
3:50 " ♂ 29 " "

Average ♀ = 27" long
" ♂ = 27" "

All sharks 27 (21-30)

Birds and mammals in area of above fishing area: 6 western grebes, 21 surf scoters, 14 glaucous-winged gulls, 2 new gulls, 4 Bonaparte gulls, 1 double-crested Cormorant, 1 harbor seal, 1 great blue heron.

Marker number of stake SW corner Bee Estate 0 19452.

5:50 P.M. 3 river otter swam N 10' out from shore in front Bee House.

5:51 P.M 3 glaucous-winged gulls flew back and forth calling continuously in front of an adult bald eagle perched in top of a Douglas fir at Boundary Point on Bee Estate. The gulls called from 5:57-6:10 P.M.

I have heard glaucous-winged gulls call in evening 3 times in last week (exclusive of last 2 observations). Townsend chipmunks active.

The numbers of mule deer at feeder (2) are the fewest we have observed.

Debris back in Spring Cove (original amount).

Oct. 20, 1990

Sunrise 8:03 A.M. 1/2 way between N+S Thatcher Peaks

10:50 Photo 901020-1 of red-berries of madrona and douglas fir trees. shooting E from Bee House. During high wind, 4 bunches of berries fell to ground and were consumed by deer. The madrona to right was in full berry production last year and not this year. Several other trees on Bee Estate have this cyclic pattern of inflorescence.

9 mule deer 29" high at feeder. Townsend chipmunk active.

From the Trumpeter news letter of local Audubon Society Vol 10, issue 5 recorded mark Lewis' observations: great white egret, NE side Decatur; 10 snow geese, Fisherman's Bay, June 10, 1990; bald eagle, osprey, sharp-shinned hawk, Northern harrier, merlin, peregrine, False Bay, Aug 15; 3000 x northern phalarope, Pt. Disney, Aug 15, 1990; 5000 N phalarope between Henry & Waldron islands; screech owl W John Island, 12 Sept, 1990; N saw-wet owl, Stuart Island; 30 Vaux Swift, Henry Island Aug 29, 1990; Lewis woodpecker, Sept 14, 1990, Agers Pond; mockingbird, Sept 16, 1990, McGinnitie Rd, San Juan Island.

Oct. 21, 1990

male mule deer, 4 pointer, 35" high at shoulders at feeder at 9:00 A.M.

9:50 A.M. approx 4000 Bonaparte gulls 95% in flight between E of Bee House to Thatcher Pass in N. Lopez Sound. Some areas looked like a snow storm. 10:00 A.M all Bonaparte gulls have left area except approx. 30 which remain in the area most of the time. 6-8 habitually use area between Boundary Point and Lieken Point and mainly 5-30' from shore.

Deciduous trees on NW Blakely mostly yellowish, the big-leafed maple the brightest yellow.

T. Chipmunk active.

Oct 22, 1990

Townsend Chipmunk active.

901023-129

Oct 23, 1990

Photo 901023-1 of sunrise skies E Bee House.
Photo 901023-2 NG " " " " " "

10:26 A.M. Trip to Friday Harbor by ferry. Left Lopez ferry terminal. 2 pelagic cormorants, Bonaparte gull, Bonaparte gull, Shaw ferry terminal 10:41, 10 pelagic cormorant, 4 double-crested cormorant, 3 glaucous-winged gulls, 3 pigeon guillemots, double-crested cormorant, glaucous-winged gull, 4 double-crested cormorants. Arrived Orcas Island 10:57 4 glaucous-winged cormorant, 1 american crow, mew gull, belted kingfisher. 11:06 left Orcas. In one group, 5 double-crested cormorant, 1 harbor seal, 11 Bonaparte gulls, 6 glaucous-winged gulls. Bell Island, double-crested cormorant, 2 glaucous-winged gulls, 14 Bonaparte gulls at beacon #4. 5 double-crested cormorants on beacon, 1 adult bald eagle on Bell Island w end. Thru passage 8 pigeon guillemots, pigeon guillemot, great blue heron, double-crested cormorant, glaucous-winged gull, Bonaparte gull 17(7♀ 10♂) surf scoters one group, Bonaparte gull, 2 Bonaparte gulls, 3 pigeon guillemots at beacon #3 at Cliff Island at 11:25. 2 pigeon guillemots, 2 double crested cormorant at beacon #1. Across San Juan Channel to Friday Harbor: 1 double-crested cormorant, 2 individual Bonaparte gulls, 2 individual mew gulls, bull kelp, floating detached masses every 200'-300' double-crested cormorant, glaucous-winged gull, Bonaparte gull, Bonaparte gull. 11:43 Tide gauge of Univ. Wa. marine Station. 2 Bonaparte gulls, Bonaparte gull, pigeon guillemot, 2 Bonaparte gulls, mew gull. 11:49 Friday Harbor. Calm seas all way and sunshine. Returned to Lopez Island 3:30 P.M. no census.

Oct. 24, 1990

Townsend Chipmunk active.

In evening a ♂ mule deer, 4 pointer and 35" high at shoulders, pursued a ♀ in area of lower and upper parking lots of Bee Estate. The ♂ persistently trailed the ♀. The ♂ held neck & head low. The ♀ never let ♂ closer than 3 feet. On 3 occasions she entered thickets of salal which the ♂ could not enter because of antlers. He would back out or turn around and check other accesses to the thicket. The ♀ on 2 occasions came to within 10' of me but the ♂ stood 25' away and waited for the female to leave. Another ♂ (7" antlers spikes) in area but kept from 50'-80' away by the large buck. Both the ♂ & ♀ commonly feed at the feeder at other times.

Oct 25, 1990

Photos 901025-1, 901025-2, 901025-3, 901025-4 of sun rise skies E of Bee House.

4:05 P.M. On west side causeway at Fishermans Bay Lagoon noted: 5♂, 5♀ Harlequin duck in close group, 5 glaucous-winged gulls and 1 surf scoter. High wind a heavy wave action on beach. On E side of causeway, 3 groups mallards 2-9-21, 4 great blue heron and 1 bufflehead.

Swifts Lagoon: 6 mallards.

Thamnophis ordinoides northwestern garter snake active on Bee Estate. 480 mm total length.

Oct. 26, 1990

9:00 A.M Humphrey Lagoon: 3 glaucous-winged gulls, 47 60↑ hooded mergansers, 11 common mergansers.

Lopez Village (in front Gail Restaurant) pileated woodpecker on utility pole, half way up, and inspected for 1½ minutes but did not use bill.

Hummel Lake: 1500 ring-billed gulls.

Swift Bay: 24 mallards, 6 green-winged teal,

Humphrys Lagoon 51 common mergansers, 6 hooded mergansers, 2 greater yellowlegs, 2 American crow; 1 great blue heron.

Oct. 27, 1990

11:58 Left Lopez Island for Anacortes via ferry, observed: 1 glaucous-winged gull, 1 Bonaparte gull, 1 commm loon, 2 double-crested cormorants, 1 new gull, 1 Bonaparte gull, 1 Bonaparte gull, 1 new gulls, 1 pelagic cormorant, 3 Bonaparte gulls, new gulls, 2 double-crested cormorant, 1 glaucous-winged gull, 1 new gull, 1 Bonaparte gull, Willow Island, glaucous-winged gull, 2 Bonaparte gulls, 1 pelagic cormorant, 5 Bonaparte gulls, 2 double-crested cormorants, SW Blakely Island at beacon, new gull, Bonaparte gull, 2 double-crested cormorant, 2 double-crested cormorant, glaucous-winged gulls, Lawson Rocks, 4 double-crested cormorant, 1 common murre, 2 glaucouse-winged gulls, 1 Bonaparte gull, 1 glaucous-winged gull, 1 Bonaparte gull, 1 double-crested cormorant, 1 Bonaparte gull, 1 Bonaparte gull (all gulls flying N), S of Cypress Island at beacon, 2 Herrmann gulls, glaucous-winged gulls, two Herrmann gull flew for ½10 mi. on lee side of ferry in same position, glaucous-winged gull, 2 marbled murrelets. Arrived Anacortes and thence Widbey Island route to Mukeltes. On Mukeltes Crossing observed 2 Bonaparte gulls, 4 glaucous-winged gulls, 2 new gulls. High wind 25' x 3' high swells. Continued S to Chris' on Lost Lake, Snohomish Co.

901030-131

Oct 30, 1990

At Chris' home on Lost Lake in Snohomish Co., noted a Douglas squirrel, Tamiasciurus douglasi. It fed in a big-leaf maple by running out to outer limb of tree, picking off a bud and then running back to center of tree to consume it. It repeated the feeding activity approx. every 8-10 seconds.

Collected big-leaf maple leaf that measured 21" total length petiole 9", and width (greatest) 18". A leaf of black cottonwood measured 14" total length, petiole 3" and width 8". One exceptionally long petiole of the leaf of big-leaf maple measured: 26" total length, greatest width 16" and petiole 16".

Nov. 1, 1990

At Chris' took the following photos:

901101NG-1 from her living room to E.

901101NG-2 of red-leafed tree in her back yard.

901101-3 red leafed tree against cedar tree foliage (last of roll).

Took 2 rolls of Samuel J Kenagy mainly closeup of face also including one of yellow pumpkin.

Left Chris' and drove to Anacortes. On ferry to Lopez Island observed the following. Left 4:03 P.M. (in recording census or other observations a name like Bonaparte gull = 1 gull, 1 Bonaparte gull means 1 gull. Bonaparte gulls = more than 1 gull. Sometimes numbers are associated with singular names as 82 Bonaparte gull) The following, as in all cases, are recorded in chronological order of observation. For use of computer purpose the name is fully written. Double-crested cormorant, 4 glaucous-winged gulls, mew gull, 2 Bonaparte gulls, common loon, 2 double-crested cormorant, glaucous-winged gull, 4:13 P.M beacon SW Cypress island. Bonaparte gull, 3 pelagic gulls, 2 double-crested cormorant, pelagic cormorant, 2 double-crested cormorant, pigeon guillemot, double-crested cormorant, 4:23 P.M, 200' S of Armitage Island and first time in 5 years that the ferry has cruised so close to the Cypress beacon, Armitage Island & S end Blakely Island. Mew gull. 4:25 P.M beacon SW Blakely Island at 150' from shore. 4:47 P.M S6 double-crested cormorant, 5 glaucous-winged gulls and 8 common mergansers in one close group. 4:48 P.M. S end Willow Island, glaucous-winged gull, pelagic cormorant, glaucous-winged gull, pelagic cormorant, pelagic cormorant, 2 separate glaucous-winged gulls, 3 pelagic cormorant. Arrived Lopez Island ferry terminal.

At Bee House, observed 1 spike and 3 point ♂ mule deer

independently close ♀ mule deer. The 3 point ♂ is non-aggressive and follows ♀ with patence and delineation whereas the spike keeps the ♀ running most of the time.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa.
Nov. 3, 1990

10:33 A.M 13 harbor seal and 33 double-crested cormorants on Leo Reef. They occupied all of the available reef surface.

At N end Fishermans Bay in tidal lagoon were: 36 mew gulls, 3 glaucous-winged gulls, 117, 5♂ bufflehead, 13 green-winged teal, 3 American crows.

At Swifts Lagoon: 21 northern pintails, 7 green-winged teal.

On Humphrey Lagoon: 29, 2♂ bufflehead.

In Spring Cove on Humphrey Head, 8 common mergansers, 14 northern pintails, Nov. 4, 1990

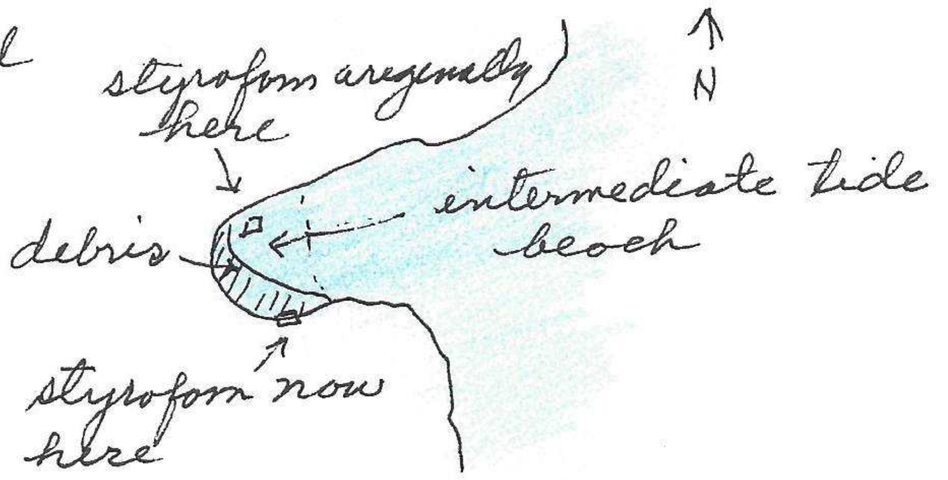
Nov. 4, 1990

At daybreak at Bee House 1 adult bald eagle flew S. at 7:51 A.M a bold eagle flew S.

10:20 A.M On Leo Reef with tide level 7 logs (ends protruding ⇐) from plateform, and exposing just the tops of Rocks #3, 4, 5. were 4 harbor seal and 84 double-crested cormorants, occupying all available space. Some cormorants 1 foot from seal. At 11:05 AM Rock 3 was 1½ high, Rock 4, 6" high, Rock 5, 8" high. At 11:25 A.M Rock 3 had 8 cormorant, Rock 4, 3 and Rock 5, 2. The rest of the 84 were swimming around reef but could not find a place to gain position on rocks. It was at least 20" later that the started to disperse. 3 Herrmann gulls swam around the rocks supporting seal. Did not notice competetion between cormorants on rocks. Rocks 4, 5 awash but cormorant steil remain with waves splashing lower body. At 1:00 P.M Rocks 4 ~~and 5~~ covered and 5 with 2" exposed and 4 cormorants still there (on 4). Big Flower Rock off Flower Island same heeight as Rock no 3. 1:20 P.M Seal rocked with waves and 1 left (2 remain). 1:50 P.M all seals left 2:10 P.M Rock # 3 2" above water, Herrmann gulls left when seals left. 2:20 P.M Rock 3 awash. During this period an adult bald eagle rested top Flower Island. The eagle nest NE Frost Island has not been seen to have eagle activity, however the nest remains in same condition as when occupied the summer.

Nov. 5, 1990

Spring Cove on Humphrey Head Lopez Island fluctuate from day to day in amount of debris. This Am the distrebution is as follows: →



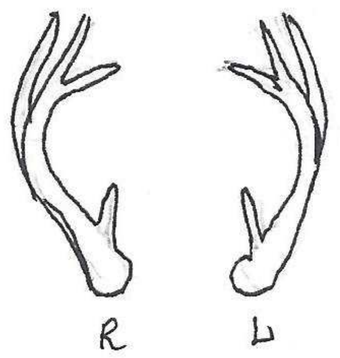
10:45 A.M. Two adult bald eagle separated bey 2 feet, on perch (highest point) of Flower Island.

4 Townsend Chipmunk still active. they vary from 1-5 at feeder and observed most of the day.

Wind today now from N. instead of usual S.

Nov. 5, 1990

♂ mule deer at feeder today with antlers thus:



It was not one of the regular deer that belong to the local herd but one that had been obsrved before at Bee House.

Observed red-breasted nuthatch, These birds are seen about once a mouth at Bee House.

In Fishermans Bay 48 double-crested cormorant 1/2 way down E side of bay.

Belted Kingfishers feed on candlefish, They are obsurved once or twice a day in Oct. and first part Nov.

Chipmunks (Townsend), active today. 4 together at one time.

Sharp-shinned hawk past Bee House to S out 50' from shore and 40' above water.

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

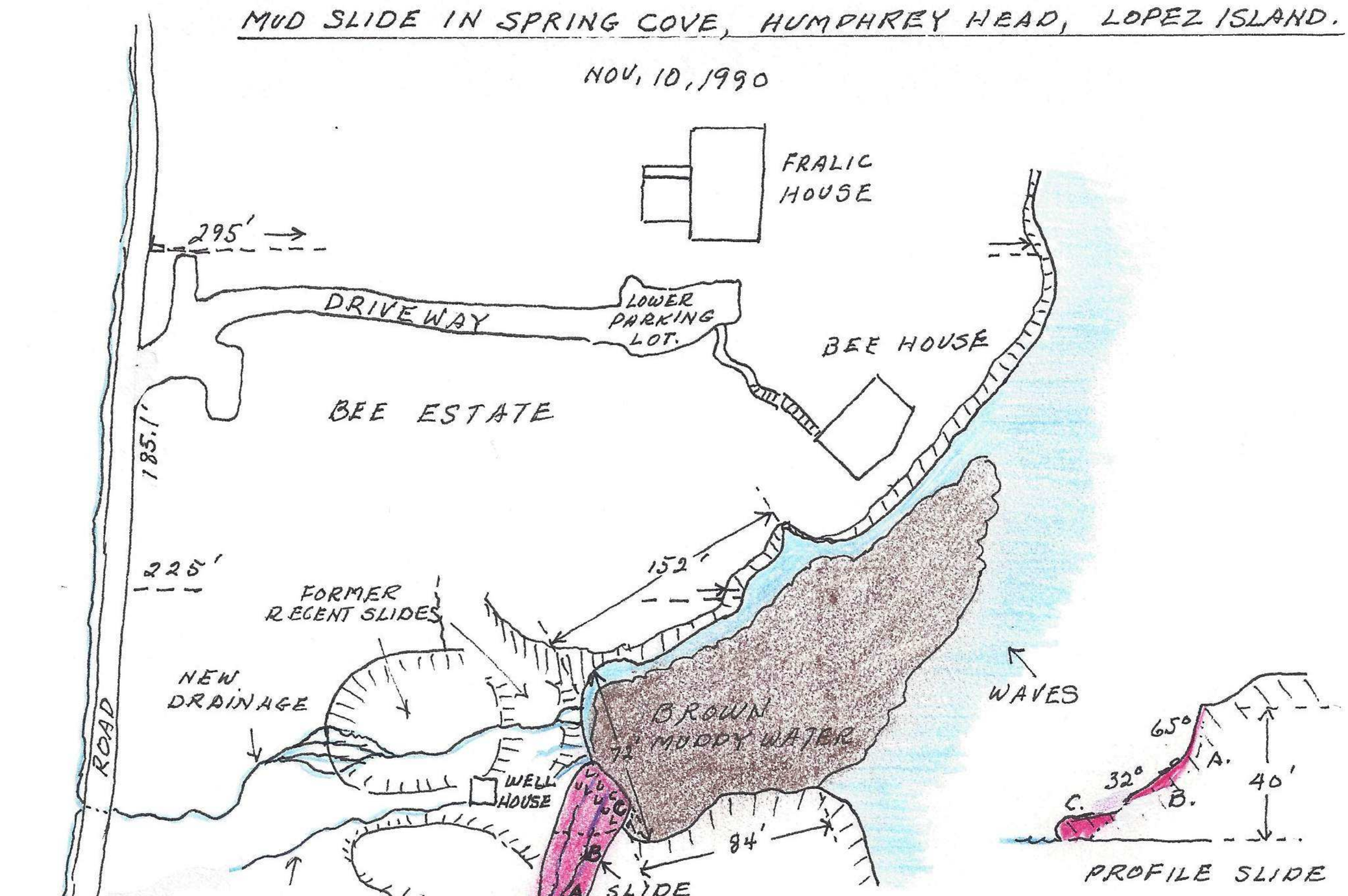
Nov. 10, 1990

as a result of continuous rain for several days; a section of Spring Cove gave way and created a slide 81 feet long x 26 feet average on a 33° degree middle slope, 65° top. Seddwall perpendicular. Approx 15 sq. yards of mud and gravel form at the upper edge of the beach. The time was 10:15 A.M and the noise could be heard at Bee House across the cove. One red alder 6" in diamter has been uprooted and broken from the slide action. At that time the bay of Spring Cove was a solid muddy color except on the NW side where there was clear water out 10-20' all along the shoreline from a point where the spring water entered the bay to below Bee House. The rain water enters

901110-134

MUD SLIDE IN SPRING COVE, HUMPHREY HEAD, LOPEZ ISLAND.

NOV. 10, 1990



the bay in two cascades of rain water from the main drainage in the cove. Estimated flow at 3 gals. per second. Three other lesser flows to S. For these 1 pint per second. White foam edged the water channels and especially below cascades at edge of bay water covering 3 square yards there. Water from cove slightly brownish. The slide was smooth except a few segments of rocks below crest and hummocky at the terminal At 11:40 A.M. water volume same and muddy zone temporarily extended 50' NE The waves in N Lopez Sound in whitecaps. 12:00 P.M. water volume same and muddy water as diagrammed above. There was a distinct line of separation between muddy and clear water, espically along shore. 1:00 P.M water volume constant and muddy water incredibly same since slide occurred. 4:00 P.M. Clear drainage water from cove is now reduced 40%, muddy water reduced 50% and concentrated SW end cove. Beach now exposed has 6 rivulettes from cove.

Nov 11, 1990

Water in Spring Cove clear as is the bay, and entering at approx 1 gal. per second. (cascade drainage) at 12:30 A.M.

Nov. 12, 1990

6:30AM. Observed sequence morning color over Blakely Island from Bee House. Clouds beginning to redden, espeically clear area of horizon.

7:00 AM red replaced with yellow, first on horizon.

7:10 AM loosing yellow. 3 min, before yellow left clouds faintly red.

7:15 A.M. red tint and yellow gone. 3 photos with Annettes camera.

Chipmunks, (Taunsend) active.

12:05 adult bald eagle circled 3 times above Bee House.

10:00 AM Nov. 13, 1990

Water from Spring Cove 2 qts per second. Townsend chipmunks active.

Nov. 14, 1990

From causeway at S. Fishermans Bay Lagoon observed (on W side in sound): 6 Harlequin ducks, 3 glaucous-winged gulls, 14 bufflehead. On E side causeway in lagoon, 23 bufflehead along S shore, 11 white-winged scoters, 16 greater scaup, 1 river otter on grassy shoreline, it left and fished N into Fisherman Bay. 8 bufflehead in most northern part of lagoon, 2 great blue heron and 1 common loon.

At Swift Bay: 5 mallards, 6 gadwalls.

at Humphrey Lagoon: 3♀, 3♂ bufflehead, 4 glaucous-winged gulls.

At Bee House to S. 18 double-crested cormorants, 2 marbled murrelet, 2 Bonaparte gulls, 1 new gull, 3 glaucous-conriged gulls

Nov. 15, 1990

Townsend chipmunks active. 2 bald eagle sightings today. ♀ mule deer at feeder 30½" high at shoulders; one of her young, a ♀ 26" high at shoulder; Another ♀ adult 32" high at shoulders.

1:45 P.M. Fishing group of in front Bee House. 15 Arctic loon, 18 double-crested cormorant, 2 western grebes, 3 Bonaparte gulls, 5 common mergansers.

When Arctic loon bends head foreward, lighter feathers show three. All had 1 ventral throat bands and distinct contrast between black of hind neck and white throat and neck.

Nov. 16, 1990

Chipmunks active. House finches at feeder last 3 days along with approx 12 dark-eyed juncos. The juncos have been the common bird all fall in groups of 2-15.

Nov. 17, 1990

a large ♂ 2 point (no eye tines) mule deer pursued a ♀ passing another ♀ by 2 feet but not interested.

Townsend Chipmunks active.

Nov. 18, 1990

Changed moorage of 'Bee' boat from Shoal Bay anchorage to Shoal Bay marina for winter protection.

At marina were 7 American oystercatchers along beach south of marina some 150'. Also 1 river otter feeding under docks at marina.

Single ♂ hooded merganser in Spring Cove by Bee House.

At Bee House one male mule deer with 2" antlers and 31½" high at shoulders.

Nov. 19, 1990

First cold windy day in several weeks.

This A.M in Surfe Bay: 23 western grebes, 46 bufflehead, 22 common mergansers, 15 common goldeneye in one group.

In Surfe Lagoon: 6 bufflehead, 1 Canada goose, 1 greater scaup, another group 6 bufflehead.

At Shoal Bay marina, in bay to SW & W: 23 western grebes, 21 common mergansers. The mergansers were feeding in unusual behaviorism. They would dash forward 5-6 feet with head, neck and half of body underwater and moving at faster speed than normal, both by flapping wings and propelling with feet. This gliding on water ended with submergence. Other common mergansers arriving by air alighted on water at a high speed and glided over water like a boat, ending again by submergence. Their head was held under water during the gliding or plaining.

At Bee House a 2 point ♂ mule deer (antlers symmetrical, no eye tines) pursued a ♂ up to 20' of feeder and waited for ♀ to feed, during which time it stamped the ground with alternating front feet  by flexing one leg at ankle and then forcefully thrusting the leg down. At the feeder the same ♀ and a ♂ ( single point) smelled posterior ♀ but was not concerned & continued feeding with ♀. After ♀ finished

she left and the 2 point ♂ again pursued the ♀ which run or walk ahead with low crouch and head down.

A young of the year mule deer measured 24 1/2" high at shoulder.

Nov. 21, 1990

Townsend chipmunk active.

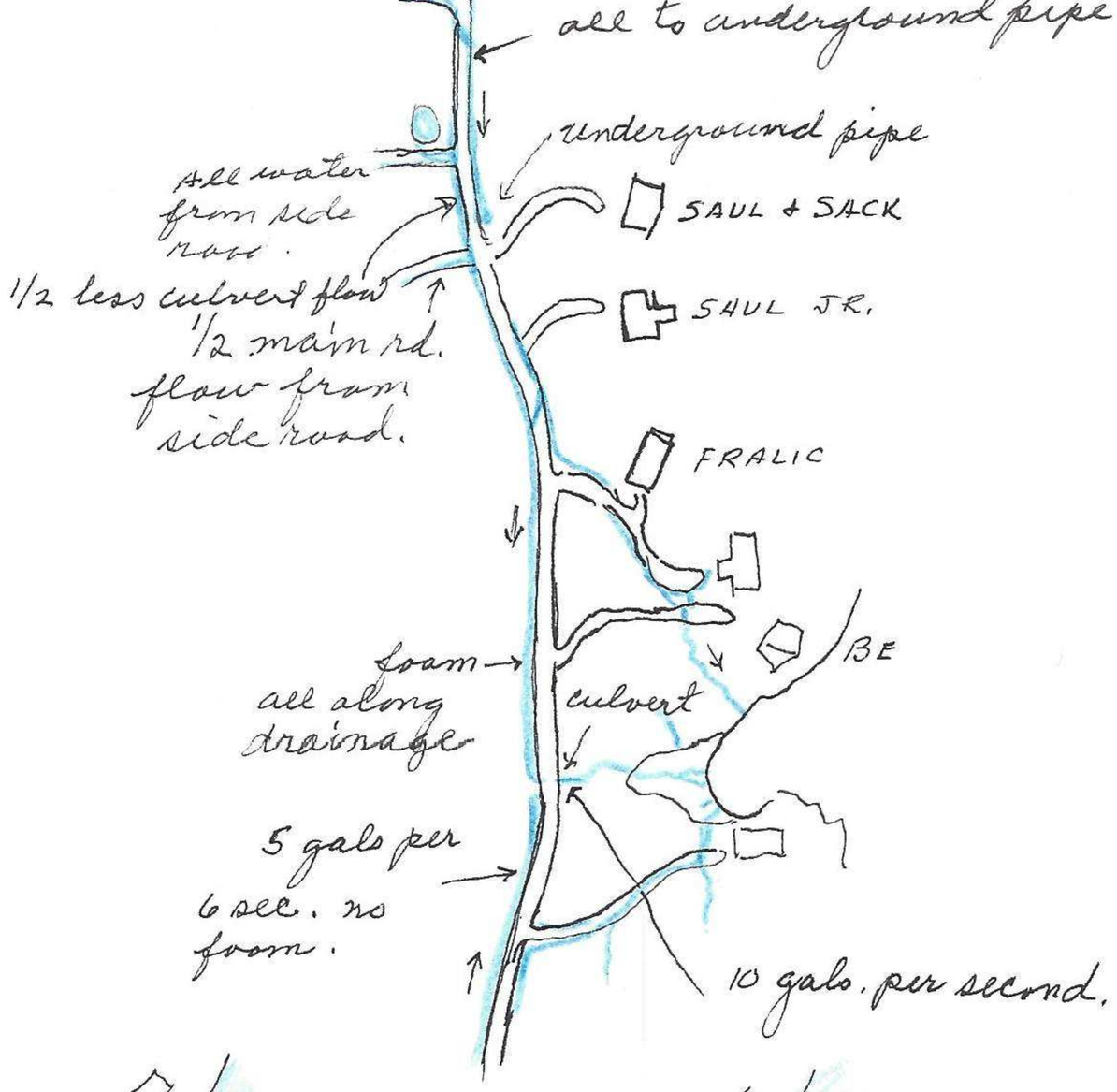
Nov. 22, 1990

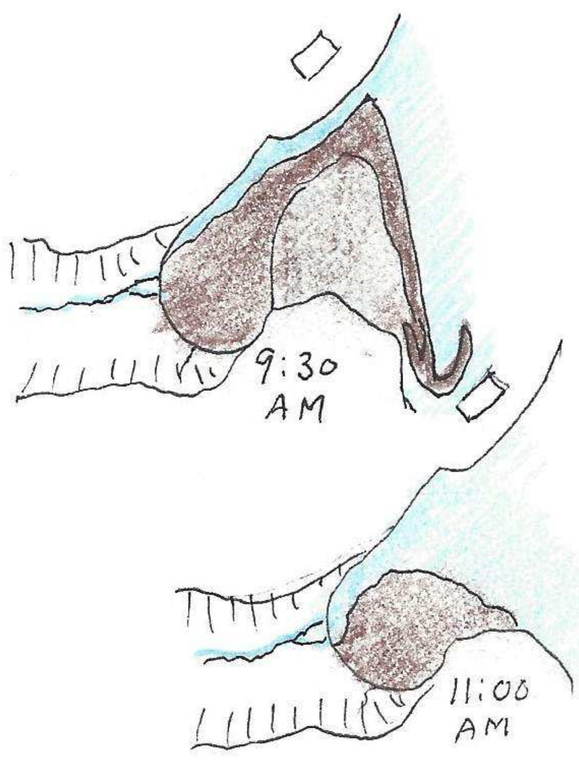
Rain all day. no Townsend chipmunks active.

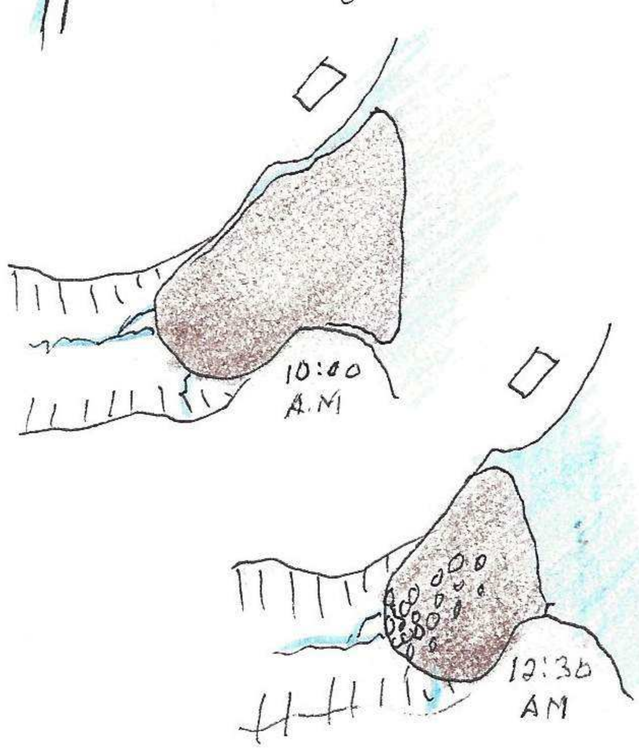
Nov. 23, 1990

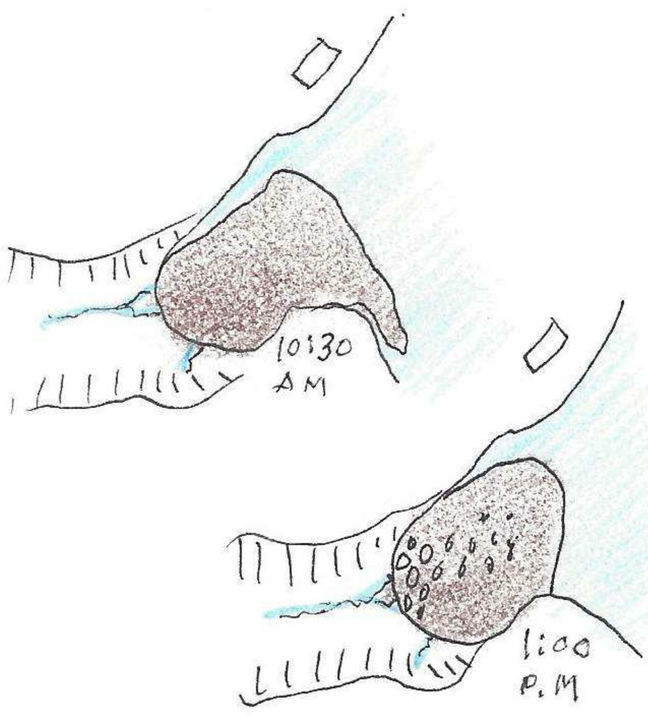
Rain all day and windy. Cascades of water in Spring Cove and Spring Cove muddy.

Traced water sources entering Spring Cove. 85% water from W side of main road. most water E side moves E.







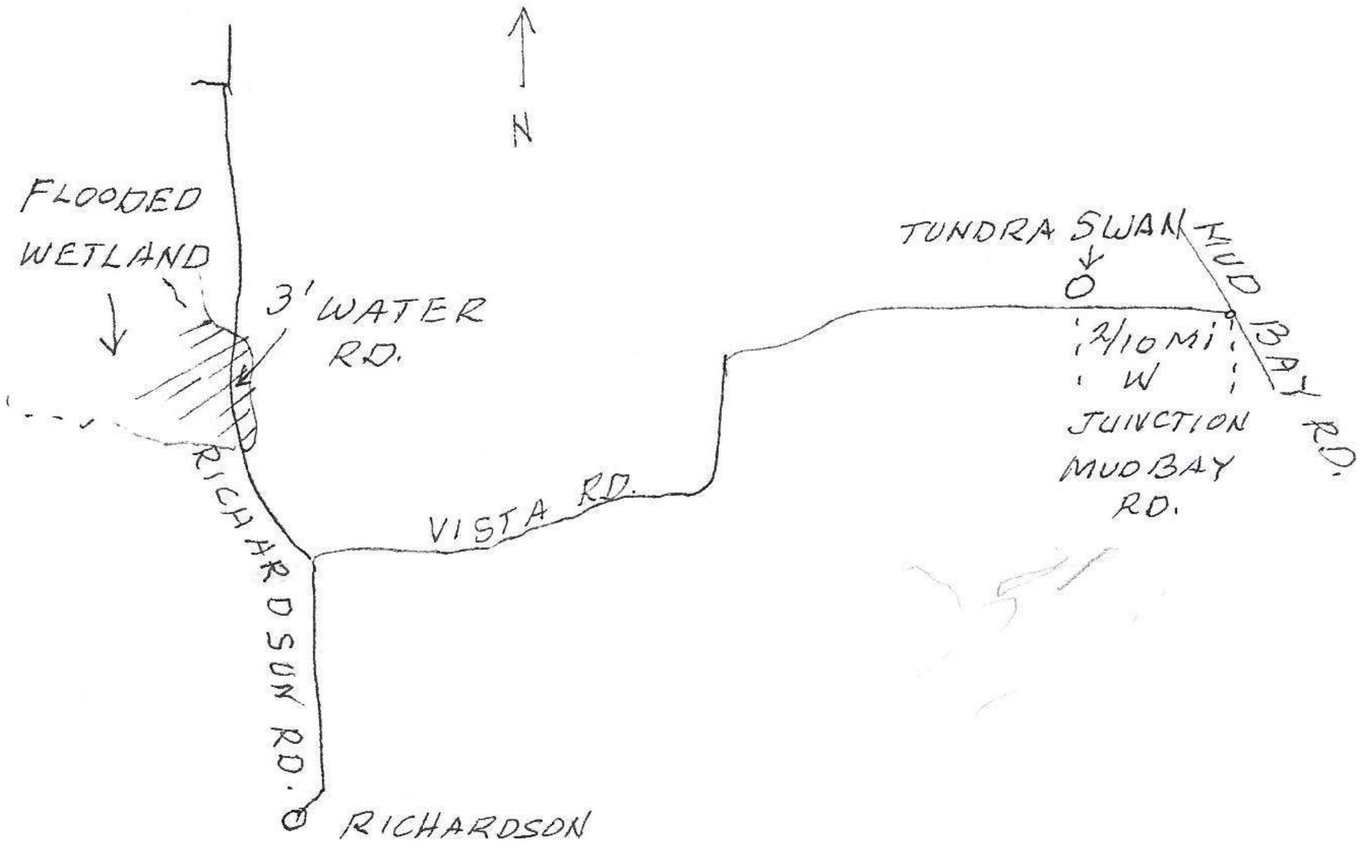


5 photo (taken in fading light) of the flow of water in Spring Cove.

901123-1 entrance water over brink Spring Cove
901123-2 " " " " " "
901123-3 down cove from headwater entrance
901123-4 from main road toward culvert (to S)
901123-5 ibid
901123-6 SW into Spring Cove from Bee House.

At 2/10 mi. W on Vista Road from mud Bay junction, observed 2 Tundra swans Cygnus columbianus at edge of flood wetlands.

Continued to Richerson Store that recently was distroyed by fire.



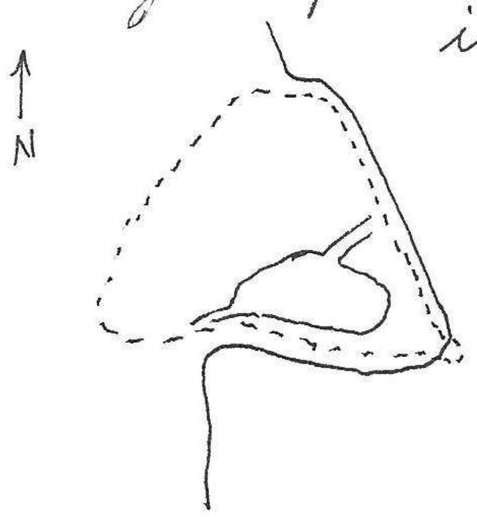
Nov. 25, 1990

Rains of last ~~few~~ days have kept constant volume of runoff in Spring Cove.

Rubber raft dingy 1/2 full of water from rain.

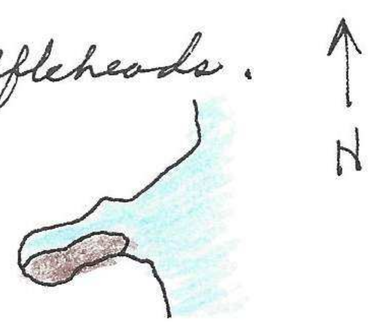
In S Fishermans Bay Lagoon observed: 5 Harelquin ducks, on W side of causeway in same area as they have been observed on previous occasions. On E side causeway water to full length of road covering wetlands and lakes. Old logs on N end are now floating in high water. 4 groups of surf scoters totalling 32 birds. 35 bufflehead's feeding over inundated vegetation.

Swift Lagoon flooded. water over road SE end, all homes at least 1/2 inundated, water to road at N end. Birds in flooded area 2 mallards, 6 godwalls, 8 bufflehead's.



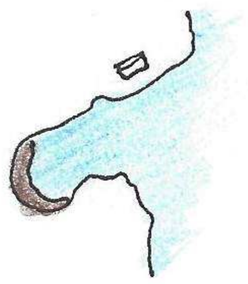
In Humphrey Lagoon 4 bufflehead's.

water (muddy) in Spring Cove.



Nov. 26, 1990

9:15 A.M. 5 river otter swam N past Bee House (one group),



Spring Cove restricted muddy water.
Townsend chipmunk active. 2:00 P.M water from culvert under road at top Spring Cove 1.6 gal per second. noted eastern gray squirrel on beachland above Shoal Bay marina.

Nov. 27, 1990

Townsend chipmunk active.
Ferry to Anacortes. no complete census of birds. Bald eagle in tree SW end Blakely Island (on shoreline). Pelagic cormorant, common murres in groups of 1-8-6-4-7, new gull, glaucous-winged gull, In Rosario Straits a marbled murrelet. Arrived Anacortes, thence to Chris' on Lord Lake in Snohomish Co.

At Chris' Steve had just returned from elk hunt S side Olympic mts. He observed 4 elk but no coyotes or bobcats.

Nov. 29, 1990

On return from Chris' at junction of I-5 and Conway turnoff, at a point 1/2 mi to E, observed 13 swans (sp?), They flew S the N at approx 150'. Area below flooded. One ad. bald eagle in area.

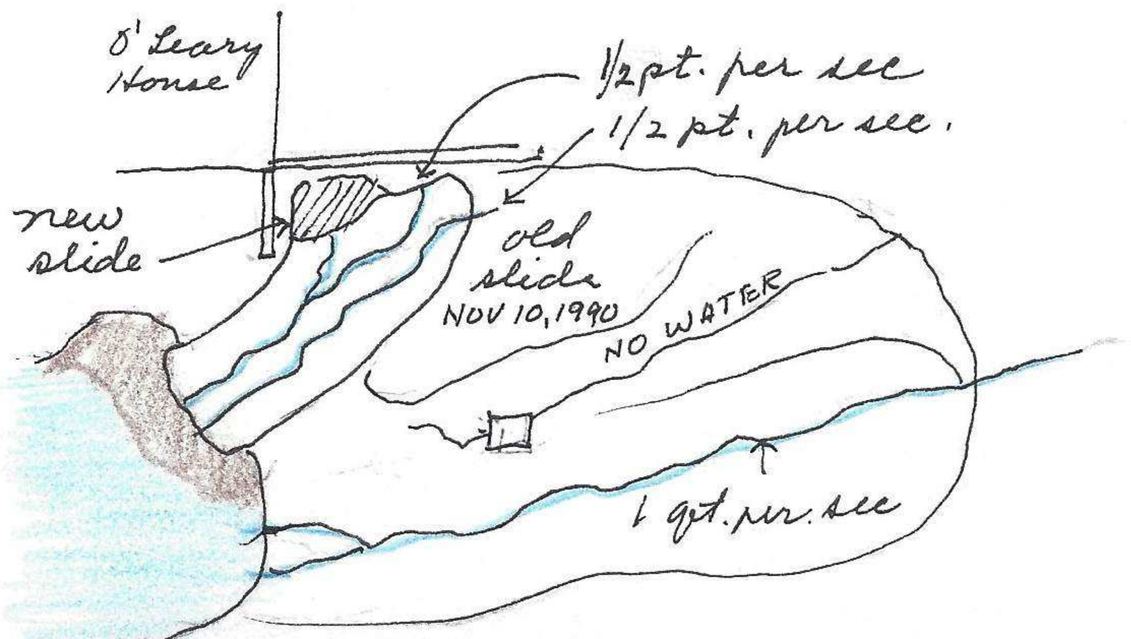
At N end Best Rd. in Skagit Valley a red-tailed hawk. Continued to Anacortes, thence Lopez Island.

Nov. 30, 1990

No Townsend chipmunks active; so between Nov 27 and 30, the chipmunks retired to hibernation

3 sightings of bald eagles this A.M. 2 flocks of surf scoters flew N past Bee House, each flock approx. 50 birds.

Last night a new slide in Spring Cove; displaced debris 8 feet below head of slide. slide.
no water from original Spring Cove drainage.
1 gpt per second from main source of water.



made trip on Humphrey Head from Bee House, Transverse Trail, marina, N along shoreline as near to water as possible to Switchback Road to main road to pump house and thence main road (Humphrey Road) to Bee House. No birds on Transverse Trail to marina, 1 8 golden-crowned kinglet (one group both feeding on ground and in trees, 31 american robins in open places W side, 4 winter wrens, individuals. At marina SE Shoal Bay, 1 common loon, 1 Harlequin duck, 1 hooded merganser, 8 surf scoters, 1 mew gull, 2 bufflehead.

At logging trail N of Switchback Road water a 1/2 pt in 30'. In road 1 pt per second. At pond at garden area 14" below overflow. Two main areas of tree rubbing by ♂ mule deer: 1/2 way across Transverse Trail and W of logging trail 100' of junction with main road (Humphrey Rd).



At Bee House, a dark-eyed junco flew into window. The one killed yesterday by same method had been removed from place of falling on ground.

Dec. 1, 1990

At Swift Lagoon at 3:25 P.M observed: 4 green-winged teal, 2 bufflehead, 6 shoveller ducks, 2 mallards, 4 Canada geese, 18 baldpate ducks,

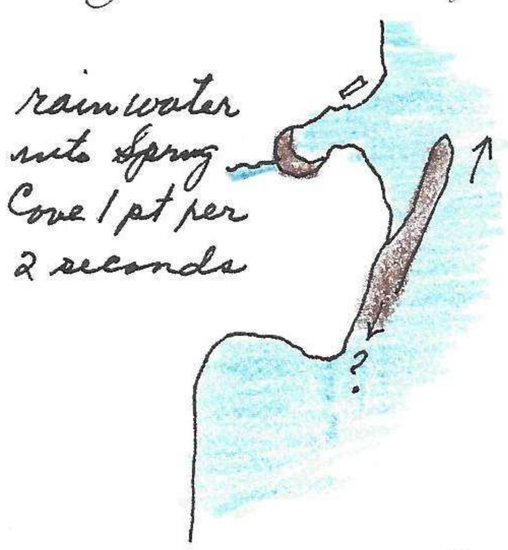
at N Fishermans Bay Lagoon: 18 bufflehead, 11 baldpate (widgeon)

Dec 2, 1990

Snow last night to 1/3 way down Bald Bluff on Blakely.

Dec. 3, 1990

Junco killed yesterday gone from ground today.



At 12:00 P.M brown muddy water restricted in Spring Cove and from Lichen Point NE out 200'. Source from S along shoreline but ded not determine exact source.

made circuit trip on Humphrey Head. No birds Tranverse Trail. 23 great blue heron resting in conifer trees SE of marina. they left without calling and 6 returned to resting trees but left again. at marina 2 orange-crowned kinglets and 1 hooded merganser. One W side to Switchback Road, 46 American robins and 28 dark-eyed juncos.

Continued to Cedar Flat (flat area between Hitchcock Rd and Humphrey Road.) The grand fir blown down last year has a root system, now perpendicular of 20' x 20'. 2 eastern gray squirrels in the flat.

Dec 4, 1990

High winds last 24 hours, estimated at 50-60 MPH. Temp 40°F at 8:00 A.M.

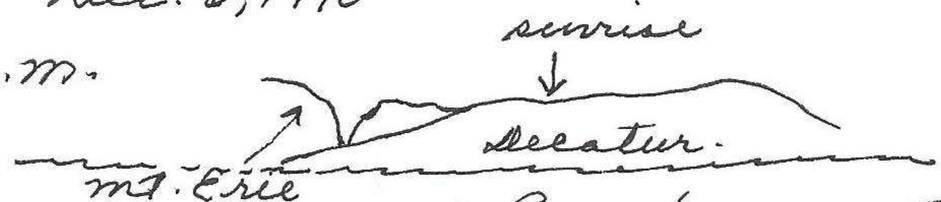
Exceptional high tide last 2 days and today is the first time all logs and debris are cleared of Spring Cove beach & bay.

At 10:00 A.M. calm, approx. 1 hr. sunshine. Since last night no electricity up to 10:30 A.M. today.

made circuit route on Humphrey Head. no birds to marina. At marina 1 red-necked grebe, 2 double-crested cormorants and 2 horned grebes. They were all feeding on small minnows in the moorage area. Cooper hawk W side half way between marina and Switchback Rd. No other birds observed.

Dec. 6, 1990

Sunrise 7:54:15 A.M.



sky clear.

11:55 A.M. River otter swam N past Bee House. Temp (air) 45°F

At Bee House ♂ mule deer with 4 tine left side, 3 right side, including eye tine. One mule deer ♂ with 3 each tine each side including 2 eye tines.

Dec. 7, 1990

To Chris at Lost Lake in Snohomish Co., Left Lopez Island 7:50 A.M for Anacortes. Sky clear except high cirrus. At Head Humphrey Head 48 western grebes, 4 glaucous-winged gulls. Leo Reef. Bonaparte gull, marbled murrelet, 2 common murres, 1 mew gull. Willow Island. 2 pigeon guillemots. SW Blakely Island beacon. 2 pelagic cormorants, 2 mew gulls, logs and debris approx average every 150', mew gull, common murre, 3 mew gulls. E Thatcher Pass. marbled murrelet. Beacon SW Cypress. 2 double-crested cormorants, 1 pelagic cormorant, common murre, 1 pelagic cormorant. Arrive Anacortes. At 1 mi E of bridge over Swinomish Canal and 200' were 2 American roughleg hawks.

Dec. 9, 1990

To Sultan and return to Chris, on highway 522. Driftwood from last flood

in parts of the valley and where convenient is cut for firewood. Considerable damage to buildings and fences. Returned to Lopez Island.

Humphrey Head, Lopez Island, San Juan Co., Washington
Dec 10, 1990

At sunrise clouds this side mt. Erie light but when same clouds beyond mt Erie background were dark.

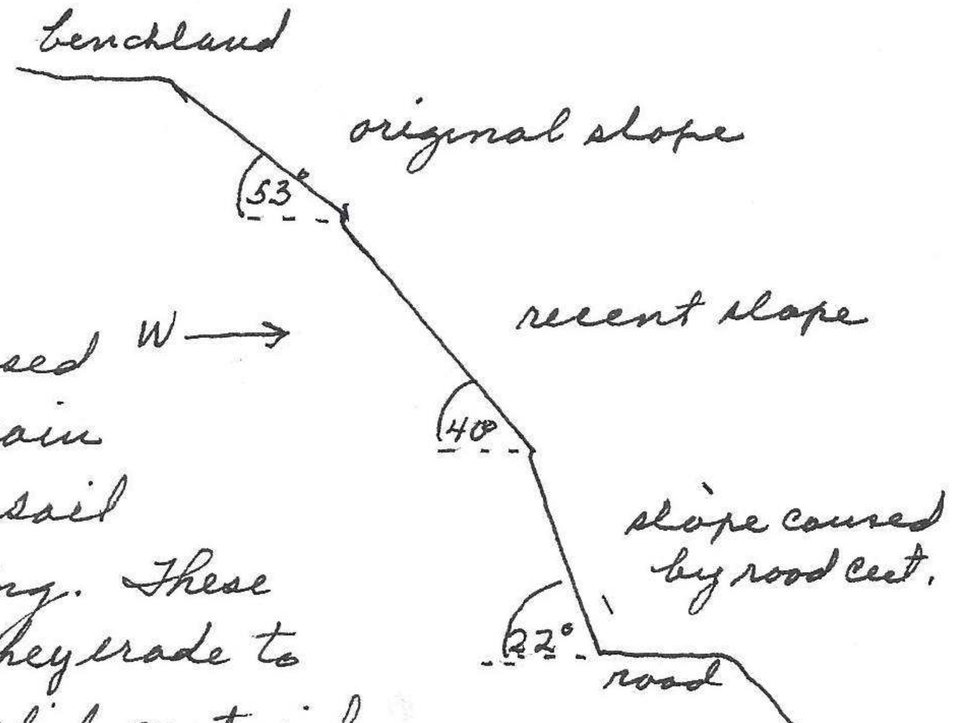
This A.M 3 groups of American robin averaging 40 bird per group flew N past Bea House at 20 minute interval. One group of appros 40 bird flew S later

Dark-eyed juncos average 25 in groups at feeder daily

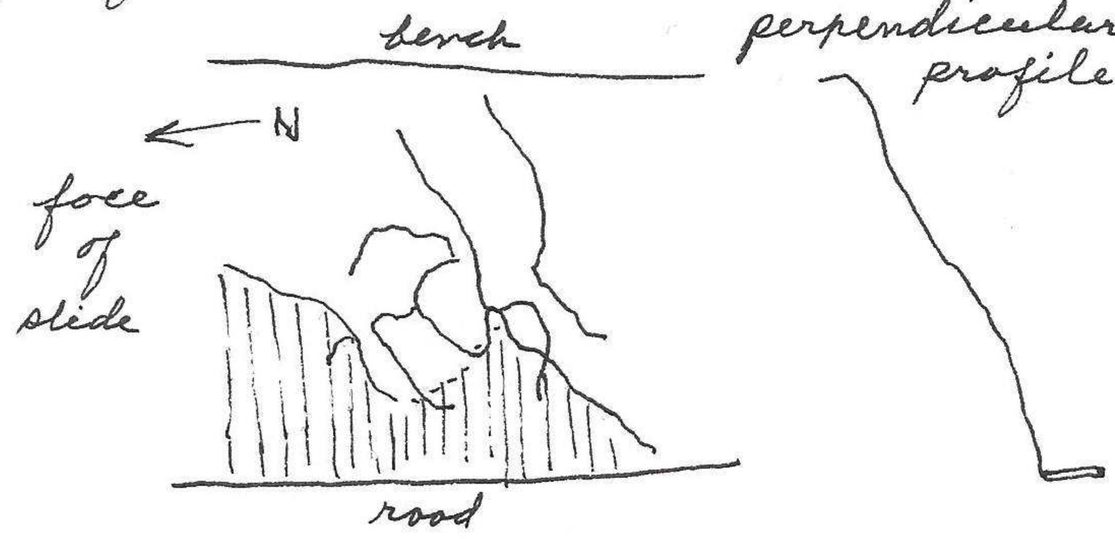
made circuit trip on Humphrey Head. Counted used deer trails that entered route traverse but crossroad trails counted as one. An Transverse trail to west side Log Rock 19, from there to marina road S, 11, from where Transverse Trail crosses W.S. Log Trail to below Hitchcock Place 9, from there to Divide 2, 1 to forks in trail and 7 to Switchback Road and 1 to Humphrey Road

At marina, 12 great blue herons left roosting tree SW marina in conifer tree. Usually they call when 1 or 2 leave but as a group they do not call.

measured different angles of sliding at Shoal Bay marina Road. The slope of roadcut varied to 2° or nearly perpendicular. The slides are caused by supersaturation of slope from rain and drainage and from removing said from basal support by road building. These slopes will never stabelize until they grade to the 50°-60° gravitational repose. All slide material on road should be removed and should never be pushed over onto or into bay. muddy drainage should be directed to settling basin before discharged into marine water In general, drainage from all roads and areas denuded of vegetation by man should be run thru a settling facility.



A a point before E bend marina road is a fracture system of face of slope prior to sliding. Thatched area already has slipped into road.



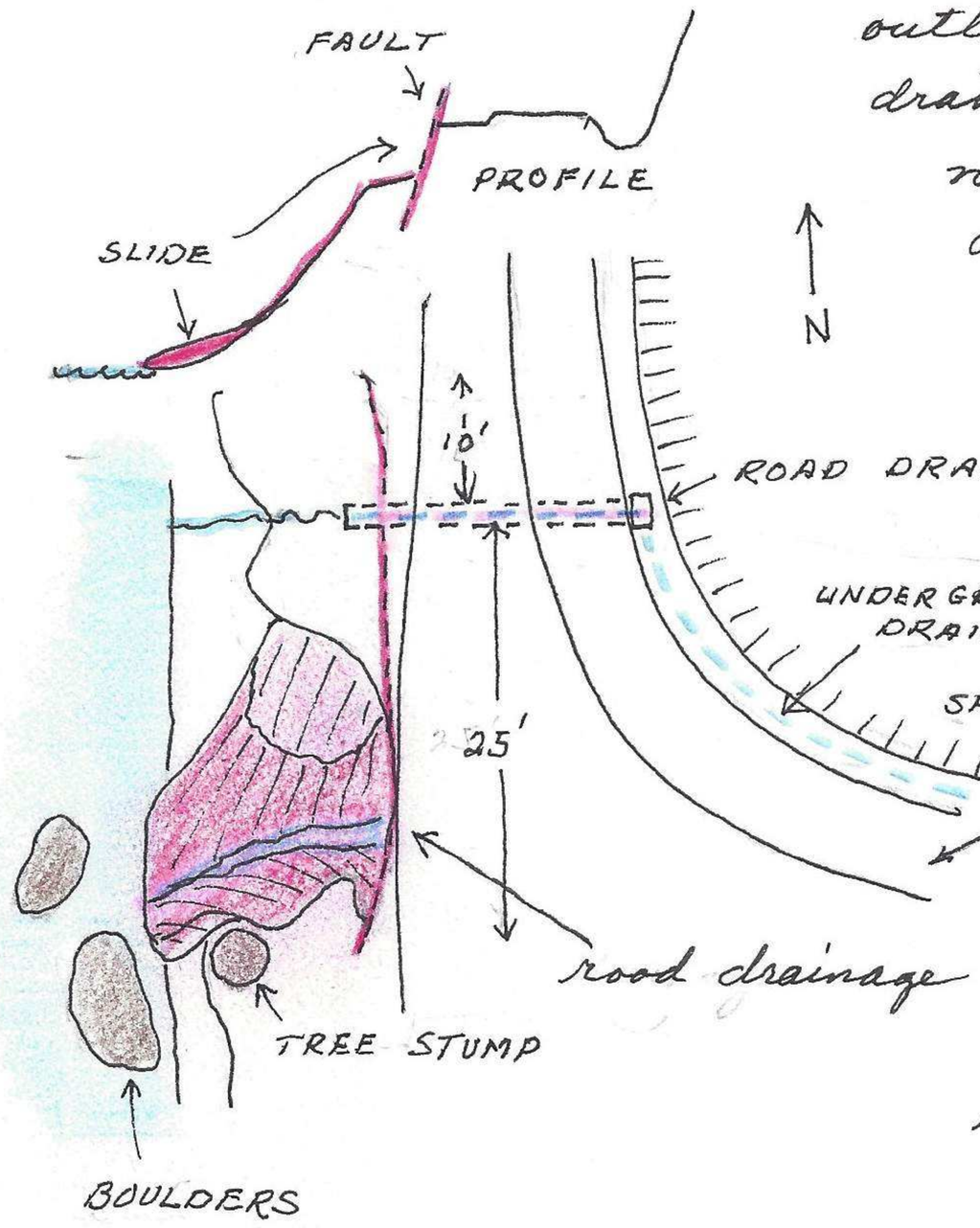
Dec 11, 1990

3:50 P.M. 2 hooded mergansers resting on flat point dropped 2 feet to water.

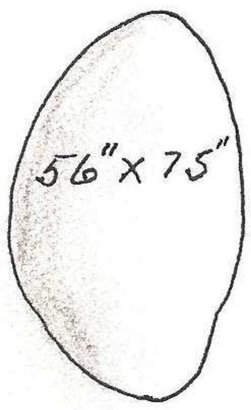
Dec. 14, 1990

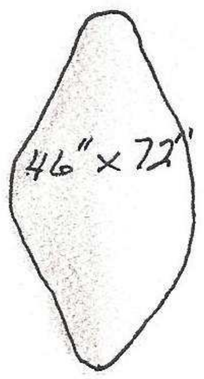
11:00 P.M. water from road culvert at head Spring Cove flowing 1 quart per sec. 8/10 of water from N, 2/10 from S along road.

Slide area on Shoal Bay marina Road. outlined below caused by road drainage from a limited area of not over 60'×60'. Overflow of drainage at intake of underground pipe may also have contributed to the initiation of the slide, at least enough to supersaturate the unconsolidated soils of the road bed. There is no evidence of the underroad drain contributing to the slede unless there is a leak between the drain head and the outlet.



Two granite erratics dislodge on edge on E side of road N beyond this slede, measured;





21 great blue heron resting in conifers SE of Shoal Bay marina left without calling when disturbed.

At marina 2 golden-crowned kinglets. 1 common goldeneye duck + 1 hooded merganser together among the moored boats.

at the N end of marina rock quarry 2 great blue herons left from resting trees 1/2 way up slope (Douglas fir).

Dec. 15, 1990

3:20 P.M 21 western grebes in one group 175' N Leo Reef.

Adult bald eagle 2' from nest (same level) NE Front Island. After sunset at exit of Fishermans Bay Channel 12 western grebes swam by toward San Juan Channel. One harbor seal swam in same direction.

Dec. 16, 1990

4 bald eagle sightings this A.M from daybreak to 9:00 A.M.

Dec. 17, 1990

In front Bee House, 2 adult bald eagles flew S at 60' above water and out 30' from shore at early dawn.

8:30 A.M 2 common mergansers and 2 hooded merganser 150' E Bee House.

11:00 A.M. To Lopez Village.. At Humphrey Lagoon 2 bufflehead. At Swift Lagoon, 14 mallards, 2 buffleheads. At pond SE junction Port Stanley and Cross Rds, 4 Canada geese, 2 american widgeon, 2 bufflehead ducks. W side causeway SW end Fishermans Bay, 2 golden plover. On E side causeway, 12 surf scoters, 11 bufflehead ducks, 2 great blue herons, 2 american widgeons. At lagoon N end Fishermans Bay, 32 american widgeon, 6 green-winged teal, 11 mallards, 2 buffleheads. At field S Highschool, an adult bald eagle soared above and buffetted by strong wind. Returned to Bee House. SE Bee House between there and Leo Reef, 13 arctic loon, 2 common mergansers, 2 common murre, 3 mew gulls, 2 W grebes, 1 horned grebe, 9 pelagic cormorant, 20 buffleheads.

Dec. 18, 1990

Started to snow on Humphrey Head at 10:10 A.M & ended with 3/4" deposit at 12:00 P.M followed later by high wind with waves 14 per second and 4'-5' high. Checked birds as follows: Hummel Lake 8 American Coot. W side causeway SW end Fishermans Bay (high tide) only 2 bufflehead ducks. In Lagoon on E side of causeway, 8 mallards, 1 great blue heron, 13 buffleheads, 11 surf scoters. At N end Fisherman Bay in lagoon, 3 buffleheads, Pond SE junction Port Stanley and Cross roads, 9 Canada geese, 2 buffleheads. In Swift Bay 8 mallards, 4 buffleheads. At Humphrey Lagoon, 2 buffleheads.

Dec 19, 1990

Storm interupted electricity in Bee House and elsewhere last night This A.M. outside temp 15°F, inside 40°F. This is result of winter north-easterly storm that builds up E of Cascades and overflows down Frozier River in Canada and out into the San Juan Islands. Took several photos from

Bee House on Humphrey Head, Lopez Island.

901219-3 phato to S, Frast Island in distance, wave 40-60 feet intervals, 4'-5' high.

901219-5 wave breaking against Round Point on shoreline S of Spring Cove.

901219-9 ibid. and some action on Lieken Point.

901219-10 ibid.

901219-11 ibid.

901219- 14 general wave pattern from S Bee House.

901219- 15 ibid.

901219- 18 Below Bee House on shoreline. Backwove action.

901219- 20 S showing general wave action. The greater velocity of wind the greater wave interval and lower the wave heighth.

901219- 21 ibid.

901219-23 ibid.

From ridge above Shoal Bay Marina, phato 901219-27 of new snow and wave action in Shoal Bay. Phato to W.

901219-29 phato frm ridge E above Shoal Bay Marina showing wave barrier and general wave actin to W in Shoal Bay. I am informed that the boulders are gradually being displaced by wave action and that the current passage on E end in increasing in width.

901219-30 phato ibid.

901219-32 Barbers sail boat with jibsail damage from this wind. Boat at Shoal Bay marina.

901219-33 Shoal Bay marina, Lopez Island. From benchland S & E of marina.

Left Bee House for circuit route on Humphrey Head at 11:00 A.M. On driveway between first and second driveway, Douglas fir branches (2 to 15" long) every 8". On main road below entrance Bee E slate, Conifer branches every 5" and more on E side than W side of road because of downdraft on W side. O'Leary driveway and main road S of his entrance is swept clean of Conifer bows and loose dirt. 4 more trees down on S side of his driveway. Noise of wind in these channel area has increase with forest opening up. Returned to main road and followed N to pond at garden plat. The ice is 1/2 inch thick. at SW corner of garden plat a grand fir was blown over. It is 100' long and in diameter (circumference). Probably from supersaturated soils from garden watering and clearing of plat. A section of this tree shows annulae. Associated with the road that passes the pond (To Hitchcocks) in the first 200' had 5 downed trees across the road.

need measurements

continued up flats to Rock Quarry Road. Among large conifers observed an orange-crowned kinglet that allowed me to reach within 8" of it. Along log road to S 4 trees across trail at convergence of log trails near divide 4 deer tracks in snow; also 1 orange-crowned kinglet and 8 dark-eyed juncos. The kinglet was confiding to 1 foot away. 4 American robins below in conifer. In partial clearing noted tracks of the great blue heron in the fresh snow. Another orange-crowned kinglet confiding to within 1½ ft. all bird were observed feeding on ground. On surf of SW Swift Bay, 62 mew gulls and 15 glaucous-winged gulls flying from inches to a foot above waves and feeding. 5-20' off shore. 4 common goldeneye ducks feeding in water below. On return trip on Traverse Trail did not observe birds and only 2 small conifer boughs on trail. On first clearing on trail an adult ♀ and young male deer. In driveway of Bee Estate one golden-crowned kinglet feeding on ground and confiding to 2 feet, 8 dark-eyed juncos and 2 American robins.

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

Dec. 20, 1991

8:00 A.M temp. outside 08°F, inside 38°F, still without electricity.

Sunrise 8:05:55

Two adult eagles flew N.

3 4×8 plywood and many logs blown into Spring Cove. as tide when down logs remained on beach but plywood still in water and being buffetted by the surf. Waves 17 per minute.

.....ice level down to this level yesterday.

.....ice forming on shoreline down to this line.

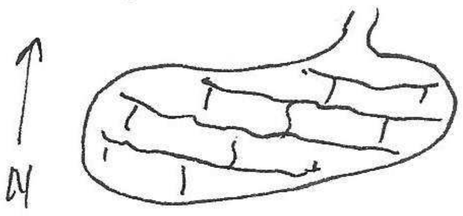
Heigth of ice determined by tide level & wave heigth. Wind blowing whitecaps.

15 conifer trees blown down on Fralic's property between Jack Saul and Joyce old home. Drainage frozen W of Joyces new home at base of cleared field above measuring 3'×30' of solid ice. Opening of drain feed for laterals has caused these trees to be blown down.

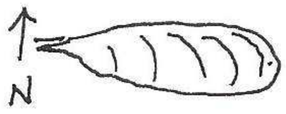
On Shoal Bay marina road, 3 hillside sledes near S bend of road. In S end Shoal Bay; 19 common goldeneye, 8 mew gulls, 11 glaucous-winged gulls, 2 common cormorants, 15 bufflehead ducks.

One tree down on road SW Grace Church property, two or 3 small trees N of same. One on Lund property. 5 on driveway of Gaus property.

To Lopez Village: on Humphrey Lagoon 8 glaucous-winged gulls, 7 western sandpipers, 1 greater yellowlegs, 14 mew gulls.



Ice fracture system on the lagoon. On Beach of Swifts Bay: 320 mew gulls, 24 glaucous-winged gulls, 8 common goldeneye ducks, 14 bufflehead ducks, Swift Lagoon: In the Lopez Village ridges of soft ice.



in nursery is fresh water pond with 3" of ice. Causeway SW Fishermans Bay on W side in San Juan Channel, no birds. On E side 8 glaucous-winged, 21 bufflehead ducks, 8 American Crow, 6 common raven. On Summel Lake: 6 trumpeters swans resting on ice in middle of lake. Photo 901220-1 of these swan. Lake frozen except a lead of 100'x 30' at outlet where there are 38 common mergansers in water.

At Bee House a red-breasted nuthatch drinking from one of the few fresh water resources in the area at Lower Parking Lot on Bee Estate. Water base of willow trees.

When wind and freezing weather during the night, mule deer do not visit feeder for sometimes a day and a half.

Dec 21, 1990

Sunrise 8:06:17 AM. Temp 14°F outside 65 inside. Bald eagle flew past house at daybreak (to S).

10:00 A.M Wind from E, no whitecaps.

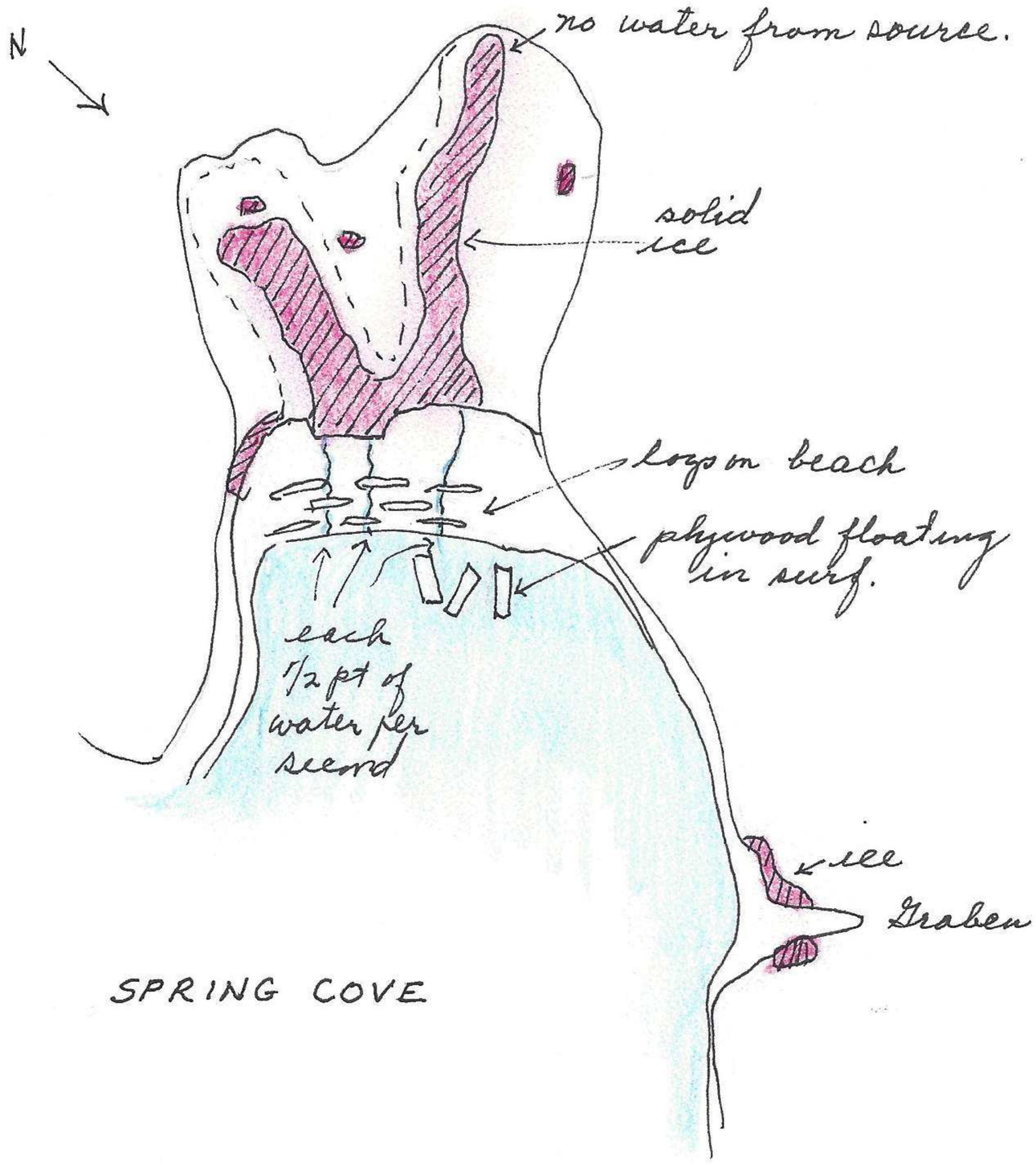
10:10 A.M 45 American Crows at feeder.

10:30 A.M Left Bee House to check on birds in the area. at SE Shoal Bay: 19 glaucous-winged gulls, 28 Comm goldeneye ducks, 32 bufflehead ducks, 5 mew gulls, 3 American Crows. In Humphrey Head Lagoon: 13 western sandpipers, 6 glaucous-winged gulls, 1 mew gull, 11 American Crow on ice. At Odlin Park: 8 glaucous-winged gulls, 6 bufflehead ducks, 4 red-necked grebes. Solid ice on wall of rock quarry from certain strata.  7 domestic rabbits, 2 trees down in area. On east side of Fisherman Bay: 31 bufflehead, 9 double-crested cormorant, 8 glaucous-winged gulls, On W side causeway: 19 bufflehead ducks, 4 glaucous-winged gulls, 11 surf scaters, 1 black-bellied plover. On E side of causeway: feeding in

grass and sedges along water, 24 mallards, 18 American widgeon, 2 European widgeon, 9 canada geese, 9 pintails, in water, 6 gadwalls, 78 bufflehead ducks, 37 greater scaup ducks, 3 common goldeneyes, 9 glaucous-winged gulls, Hummel Lake completely frozen, no birds. Beach and water S Swift Bay 58 bufflehead, 21 american widgeon, 17 sanderling, 4 western sandpipers, 21 mew gulls, 15 glaucous-wingedgulls, 15 glaucous-winged gulls, 6 surf scoters, 3 common goldeneyes, 13 greater scaup ducks, 2 cormorants, the western sandpipers were feeding among the American mergansers. Photo 901221-1 of both mew and glaucous-winged gull searching surf as debris is brought in from the bay.

Photo 901221-2 The 'Bee' boat at Shoal Bay marina, note ice on dock on N end, several inches of ice had accumulated on aft boat and aft dingy.

Returned home, 2:40 P.M.



Dec 22, 1990

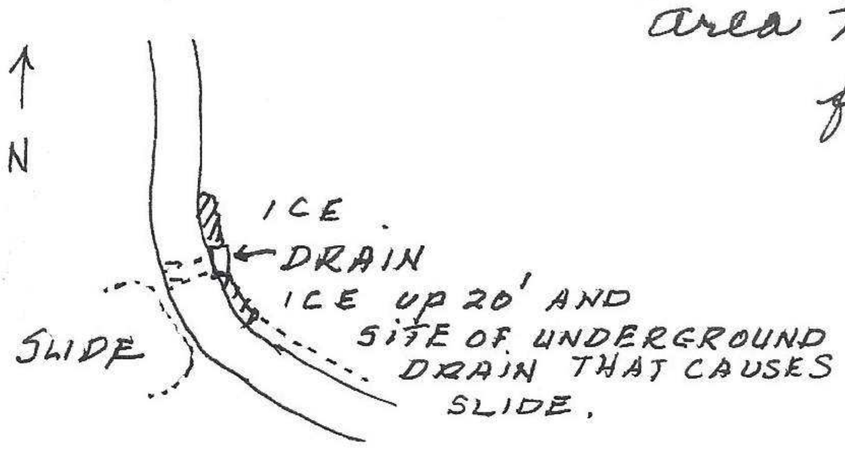
Fog, temp 18°F outside, 56°F inside. Snow last night covering all surfaces and shoreline to 3/8 inches. Birds at feeder: 3 purple finch, 3 varied thrushes, 27 dark-eyed juneos, 6 American

robin, 23 american crows, 1 rufous-sided towhee.

Reminder to acquire Backs Chorale Prelude for organ, Lords Prayer, Vater unser im Summelreich, Klavierübung, part 3. This is considered the most difficeelt to play and comprehend of all Backs work.

Dec. 23, 1990

made census circuit on Humphrey Head (see map next page. Left 10:30 A.M. new film of snow last night. 6 tracks mule deer going w up Bee driveway, 1 medium size deer track to n from middle driveway. 15 down conifers in upper driveway Joyce Fralic (new home) and 8 at end into her garage area. 2 down conifers Jock Sauls, sw Garden Plat 11 trees crossing roadway to Hitchcocks, 12 beyond up the road. Continued on old log trail to main road, thence w to Rock Quary Road, thence w to Upper Logging Trail that trends S. 20' beyond on this trail 1 medium sized deer track going S for 40'. 100 S of beginning of trail 1 medium sized deer track going S for 40' then W. 200' S on trail 3 trees (conifer) across trail, 1 Eastern gray squirrel. 220' S on trail 2 large deer tracks crossed trail to E. 30' beyond lower and upper Logging Trail Convergence 1 large deer track going E. 40' S of Summit of Trail 1 large deer going E. 70' S Summit Trail medium deer track going E. and first domestic rabbit track. at beginning open slope 1 large deer track S, down trail and then up hill thru oaks just S Hitchcocks. water below to W in Shoal Bay Calm. at beginning Bench Trail 2 large deer going S down trail. 110 down trail 1 medium size deer track crossed trail and going W. 200' S on Bench Trail 2 dark-eyed juncos. 100 N of S end Bench Trail, 1 winter wren. At slide area noted ice 25' above drain formed from underground drainage pipe and course of slide on W side of road.



Continued on road to Shoal Bay marina and checked the Bee boat. Photo 901223-1 of ice on boat, and 901223-2 on rubber raft. Birds in area 2 American robins, 8 glaucous-winged gulls, 3 bufflehead ducks, mostly S end Shoal Bay. 1 Common goldeneye in marina among boats. Left marina, retraced Bench Trail to Traverse Trail. 1 small deer track in trail to 200' thence N off trail. no deer activity at deer rubbing trees but 2 crossed trail and continued uphill. Just be-

901223-150

HUMPHREY HEAD

LOPES ISLAND, WA.

A. SAUL III
B. SKERRIT
C. SMITH
D. CAPER
E. SIMMONS
F. SAUL III & SACK
G. SAUL JR.
H. FRALIC
I. KNEELAND
J. BEE
K. O'LEARY
L. KLEIN
M. GROUS
N. KAREKEN
O. PLUMMER
P. JOHNSON
Q. SUTHERLAND
R. GHANZZI
S. LUND
T. FOSS
U. SCHWENDEMAN
V. JENSEN
W. GRACE EP. CH.
X. BARBER
Y. RICHLAND
Z. HITCHCOCK
AA GARDEN
BB POND
CC WATER TANK
DD BREAKWATER
EE SHOAL BAY MAR.
FF SUMMIT OF TRAIL
GG SPRING COVE
HH TRAVERSE TRAIL
II OTTER COVE
JJ REEF COVE KK SVLIAR
LL VAUCHAN MM N ROCK QUARRY
NN SOUTH ROCK QUARRY

DEER CENSUS
DEC 23, 1990

D.D.

DIRECTION TRACK IN SNOW OF MULE DEER

CONCENTRATED WIND BLOWN TREES ON GROUND, ALL MATURE GROWTH, DOUGLAS AND GRAND FIR AN CEDARS.

1 MM = 12:66 FT.
1 IN. = 316.5 FT
1 MI = 16.68 IN.

N

LENGTH
5317.2 FT - 240 MM

WIDTH (* - *)
1493.88 FT. - 118 MM.

DOWN TREE OF LAST STORM AND MULE DEER TRACKS IN SNOW OF DEC 23, 1990

JWB. 12/23/1990

beyond 3 deer tracks joined trail from S and continued E on Traverse Trail. Half way to divide 2 small deer crossed trail going N. at divide where Traverse Trail trends S 2 medium deer tracks along trail to S. 1 medium deer track at S end clearing from S. Continued E to first open clearing and 1 small track in trail all way from first clearing. at N end trail emerging across from entrance Bee Estate 2 large and 4 small deer tracks going E. From here checked O'Leary property. 1 medium size crossed road to W from Spring Cove. Juniper tree down NW O'Leary house next to shed, 8 on S side driveway. Returned to beginning Horizontal Trail, 4 deer trails medium going E. One domestic Rabbit at Glaciated Knolls. deer tracks on all trails near Bee House. made side trip to Groul property to check on downed trees new road and clearing for house just N Groul has caused the trees to blow down

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

Dec. 24, 1990

Temp this AM approx. 18°F. made trip via ferry to Anacortes at 7:45 A.M., will record complete census: 1 double-crested cormorant, Flower Island on N end 1/2 way up slope in ice, rest on E side 1/3 way up slope. W. Thatcher Pass, 1 glaucous-winged gull, 1 common murre. Ice on shoreline N exposure Decatur. no white caps. 1 pelagic cormorant in Rosario Straights. arrive Anacortes, thence S to Chris home on Lost Lake for Christmas.

Dec 25, 1990

Christmas at Chris'.

Dec. 26, 1990

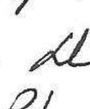
Returned to Lopez. Redtailed hawk 2 mi. N. Everett, also 4 great blue heron 20' from Interstate Highway 5.

Lunch at Boomers Landing (E of lumber loading docks). Observed here: 3 hooded mergansers, 2 double-crested cormorant, 1 glaucous-winged gull, 1 pigeon guillemot, 4 western grebe, 1 song sparrow, 1 great blue heron, 4 American Crows, 16 loon sp., 4 common mergansers, 1 ♀ bufflehead, 1 harbor seal, 1 red-necked grebe, 1 great blue heron.

Continued to Anacortes ferry terminal. at 3:00 P.M while waiting in line for ferry, observed 156 American Crows fly N to Guemes Island from area of terminal, between 3:00 P.M & 3:15 P.M. The smallest group was 4, the largest 41. A glaucous-winged gull displaced American crow at trash can. Both species dropped 10" down into

bucket to retrie paper bag of food waste. Left ferry terminal 3:37 P.M. Enroute to Lopez observed 1 glaucous-winged gull in Roserio Straits. At Willow Island 1 double-crested cormorant, 4 mew gulls, 1 glaucous-winged gull.

Dec. 27, 1990

Day calm and warm in contrast to windy and cold of previous days. Trip to boat at Shoal marina via circuit trail on Humphrey Head. Water entering head Spring Cove at culvert 1 quart in 21 seconds. Garden Pond ice at edge 

. Raven offered low gutteral cluck from ridge above. Logging trail N of divide (W side head) covered with branches of conifers pruned by winter winds. These limbs, mainly 1/2" deameter along with other debris and soil formed a mat 4" deep. This mat was frozen and deer and man sank the 4" to regular soil. 2 adult bald eagles in top of tree directly E of marina. No small birds encountered along entire trail or route. Deer tracks from single to group of 5 at 6 places along route.

Dec. 28, 1990

Snow last night, 60 MPR winds. Spring Cove full of damage docks and miscellaneous wood. I have named this weather the "Storm of Splinters) from evidence of debris in cave.

Made circuit trip to boat at Shoal Bay marina. Photo 901228-1 of twin Douglas firs below lower parking area on Bee Estate. Photo 901228-2 at divide of logging trail on W side Humphrey Head of shadowed trail and Swift Bay beyond Photo 901228-3 Open slope above Shoal Bay marina (quarry) shooting to S. with Shoal Bay, Humphrey Lagoon and Swift Bay in background.

Returned to Bee House via Transverse Trail. On bench above marina observed 3 northern flickers and 2 ravens. No other birds observed on entire trip.

Shoreline S of Spring Cove to Lichen Point is like result of first storm. Profile:



Salvaged wood of 2 damaged docks that moved into cove. Photo 901228-4 Broad fir down at Darden on Humphrey Head 901228-5 ibid from this winter storms

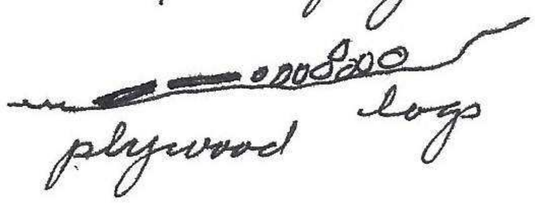
Dec. 29, 1990

Severe winds all day from SE. Ice on shore S Spring Cove down to 1 foot of water level. 45 American Crows at feeder at 8:30 A.M.

no take on suet hung 2 days ago. For last month 4-6 Eastern grey squirrels at feeder at one time. They feed on a regular basics all day. The varied thrush 1-5 have been in area for at least the last 5 days.

Dec. 30, 1990

Temp this A.M 25° F. Wind now W having changed from S. Spring Cove has 1/4 of cove in logs and debris including 15, 4x8 plywood sheets in various stages of damage. 2 of them are 10' above high tide on the slope of the cove. As tide moves out, the plywood is the last to come to rest on the exposed beach



Ice still on shoreline. 41 american crows and 61 starling fed on madrona berries for 10 minutes then left. The starling are rarely observed at the Bee Haven. The American crows of 2-3 flocks of 10-40 each per day at feeder. A feeder of thistle seed has been in place all spring, summer and winter and so far no take. 2 2" spike mule deer at feeder and first ones observed for at least a month.

Dec. 31, 1990

12:00 P.m. Culvert from road drainage into Spring Cove 1/2 in ice. (111). Water flowing 1 qt in 35 seconds. Ice in drainage ditch long road. Snow gone from nearly all areas.

Humphrey Lagoon:  ice N end, water open in blue area

Swift Bay entirely in ice.

Hummel Lake. all ice but melting.

Fishermans Bay and South Fishermans Bay Lagoon all water.

at Fishermans Bay Causeway on W side only 1 black-bellied plover. On E side 28 bufflehead generally distributed. also 2 great blue heron.