Ekblaw Journal First Trip to Ellesmere Island

[cover] [1]

Book 1 Ellesmereland Trip March-June 1915 W. Elmer Ekblaw, Geologist Crockerland [sic] Expedition

[inside cover and first page: faded notes and calculations] [2]

[page opposite page 1] [3]

The Record made by W. Elmer Ekblaw, Geologist to the Crocker Land Expedition, of his journey and observations from Etah to Isfjeldodden from March 24 to April 24, 1915, [crossed out] his trip across Ellesmereland by way of Flagler Fjord and Bay Fjord up Eureka sound, up Canon and Greely Fjords to explore them, across Grant Land to Lake Hazen and Fort Conger, and return to Etah by Kennedy Channel and Kane Basin, accompanied by two reliable, faithful Eskimo, Esayoo and Etukashoo

1 [3]

Sketches of [superscript] some of the [end superscript] fossils found in limestone at Camp Etukashoo Fosheim Peninsula April 20, 21, and 22, 1915 W Elmer Ekblaw

[sketches]

[crossed out] form

Lingula form

Spirifer form

2 [4]

[sketches] Some Fragments of Fossils from Shales in Sample EG3. Geology Notes. Camp Allen to Camp Midnight Sun dyke sends out sills at several horizons some of which taper out in

view from the sea ice--Schematic sketch

[sketch]

Sill Dyke Sill

3 [4]

Geology Notes:

From Blaamanden the shore is rather cliff-like until about [crossed out] ten miles north of Slidre Fjord where low rolling plains, somewhatt [sic] terraced by former sea-levels come in. These plains have a gravelly sandy clay soil, rather deep and studded with boulders apparently erratics dropped from icebergs

Camp Etukashoo.

This is a broad rolling plain much like the moraine country of central Illinois, trenched by a network of minor streams and more or less terraced by old seashores. Two very conspicuous old levels are revealed, one about 200 feet above sea level and another about 350 feet. These are distinctively reflected on the north shore of the Fjord near Harefjordet. Many minor beach lines show themselves; there are eleven very distinct and separate beach ridges from the ice foot to the first considerable terrace, separated by intervals varying from 3 to 25 feet in altitude. These must indicate a rather rapid and intermittent withdrawal of

4 [5]

Geology

the sea in relatively recent times.

The soil of the plain is pebbly, gravelly clay, studded with boulders which I consider have been carried by ice in former seas. The pebbles are largely of limestone and dionte from igneous intrusions which outcrop here and there, with considerable sandstone and shale.

Across the Sound I am struck by a broad deltal plain which lies on the north east side of Schei Island, the delta of a river which apparently once cut across the island and deposited its detritus. The head of this deltal fan lies at the level of the Acpohon peneplain and I think that at tha [sic] period when that plain was formed a considerable river flowed there, and that Schei island was part of the mainland (of Axel Heiberg Land). This deltal alluvial fan is almost model-like [sketch]

Map of Schei Island showing windgap and alluvial delta Northwest side of Schei Island showing alluvial plain

5 [5]

Geology

Across to the northward the sedimentaries are considerably folded into broad antrolums [?] and synclines and penetrated by dykes and separated by dark sills, Blaafjeld is a sheer [?] wall of dark rock revealing no stratifications so I fell [sic] sure it is an igneous linear dyke.

Back of the plain the ridges are formed by horizontally bedded sedimentaries with some igneous intrusions. Few cliffs reveal themselves and the slope from the plain to the ridge behind is quite gradual. In a small stream bed a short distance from shore, I found an outcrop of richly fossiliferous lime stone of which I collected a fairly good representation of the fauna in spite of the difficult conditions. Section. See April 20.

Massive limestone over 5ft.

Dark carbonaceous shale 1 1/2 feet

Gray shale, calcareous veins of calcite .2 feet

Dark, compact, massively bedded limestone, richly fossiliferous 10ft

Geology

On April 21 I climbed a hill east of camp and on it I found an exposure of shale from which I collected several fossil fragments – a trilobite or two, a gastropod, several pelecypods and several cephalapods [sic]. In none of the rocks of this section nor of the creek bed did I see any corals or bryozoa, but in both cases the deep mantle of snow prevented successful search. The shale was filled with nodules of limonite and many veins of pyrite with pyrite in joint and stratification crevices. Some of the fossils are pyritized.

The shale itself is a dark, friable, thinly bedded series of over six feet in thickness, so far as I could judge, and underlaid by a dyke of brown micaceous basaltic rock which formed considerable cliffs along the mountain side below the shale.

The top of the mountain was a rubble of blocks of this same brown micaceous rock. An adjacent mountain some five or six miles to the northward offered a good field for further study but I was unable to go on to it.

7 [6]

Botany

Eriophorum Polystachium, Alopecurus alpinum, Glyceria distans, Poa sp, Carex sp Luzula, Ranunculus sp (probably sulfureus). In a sunny hillside gully I came upon a rich heath formation of Cassiope tetragona, Myrtillus (Vaccinium) uliginosum, Pyrola grandiflora, Dryas integrifolia, Festuca ovina, Calamagrostis, Trisetum spicatum, Pedicularis (hirsuta [sic parenthesis] I think, Poa sp., Glyceria tenella, Arnica alpine and Antennaria sp. Here the ground was relatively bare and I could feel more certain of my determinations than I have usually been. Always when examining these dessicated [sic] snow- and wind swept plants I am reluctant to state with certainty that I have found such and such a plant even though I feel reasonably sure it can be nothing else.

I fancy that these warm plains and hillsides are a botanist's rich collecting ground two months hence with bog, moor, beach and transitional associations in abundance. The rock formations and the physiographic variety of forms, furnish all kinds of environments of complexities of both edaphic and climatic factors

8 [7]

Botany

to an extent that few places in the Arctic do.

It must be a striking sight on this lonely shores [sic] when the sun is high, the snow gone, the birds here in numbers and the grasses and flowers in bloom. The hillslopes must be white with the creamy dryasblossoms and the clay-gravel beach ridges mere purple bands of the glorious saxifrage oppositifolia. I thought last year at Umanak that I [crossed out] should never see a greater profusion of bloom than the dryas, cassiope, and saxifrage afforded, but these plains are much more thickly carpeted than were those about Umanak.

I doubt whether the slopes ever become green, for the short grasses and sedges are nearly always brown-tipped or the green shoots are hidden by the gray and brown shoots of last year. Only on the

6 [6]

richly manured bird cliffs or the neighborhood of igloos or tupics have I seen what I could reasonably call the green of a growing vegetation.

9 [7]

March 24 Leave Etah and return. Cache.

Mar. 24

All ready, our dogs fed heavily last night, and our home people anxious to have us set out, we started off this morning.

My party besides myself comprised Esayoo and Etukashoo who would accompany me all the way if all goes well; Arklio and Nukapingwa who will accompany me as far as the mouth of Bay Fjord; and Oobloyah and Okpuddyshoa who will go as far as the head of Beistadt Fjord.

When we got our sledges loaded they were heavier than I had expected and were piled high As we set off, Allen took some moving pictures of our departure.

We drove swiftly over the smooth ice until we reached the [crossed out] rougher ice near Sunrise Point. From here on we worked our way laboriously along the icefoot and over the

10 [8]

March 24 Cache

rough stretches of the bays as far as Cape Ohlsen without breaking a sledge or suffering any mishap. When we got thus far the strong northwest wind which we had encountered as we rounded Sunrise Point has [sic] become almost a gale, and with the drifting snow made it well nigh impossible to go on. Besides our clothes were wet and full of snow so we decided that since we could get back to Etah in a couple of hours with empty sledges it would be better to cache our loads on the ice foot and go back for the night. This we did and by half past four or five. As when we left this morning at nine o'clock a fair breeze was blowing and a little snow driving, but nothing like that beyond Sunrise Point. The only thing we forgot this morning was an oil box or two.

When we returned the weather was quite rough at Etah and growing worse, with the wind changing

11 [8]

Mar 25 Leave Etah + Return Mar 25—

At Etah it was calm and clear when we rose this morning but fast flying clouds above head [sic], with curtains over the tops of the cliffs, and a driving veil of white haze out towards sea indicated a heavy wind; but at Mac's insistent assurance that it would be all right beyond Sunrise Point we again set out. No sooner has we rounded Sunrise Point than we met a northwest gale through which it was impossible to see or to drive the dogs. On the approval of the Eskimo of my decision that it would be folly to try to go on we turned back again, but stopped at a cache of meat to which Ahcommodingwah had accompanied us and from which we dug out with considerable effort a quantity of meat. We got back to Etah at dinner time. They were surprised to find that it was wind that turned us back. Oobloyah went rabbit hunting on his way back and got two big fine rabbits.

12 [9]

Mar 25-26

When we returned for the night the wind had gone south and was blowing hard and disagreeably.

March 26.

The indications of yesterday were repeated today and Esayoo and Ooblyah both asserted that we should not go. Soon after breakfast the wind began blowing intermittently at the house, but at every lull, Mac would declare the wind gone and urge us to start. Between him and the Eskimo who were loathe [sic] to leave I [?] was in a dilemma.

About six o'clock in the evening however the wind had so far stopped that Oobloyah came to me and said he was going to set out. I at once decided to go, as did Esayoo and Arklio. In a few minutes we were ready and away we went

Nukapingwa and Okpuddyshaho [sic] waited for Etukashoo who was out hunting.

We fed our dogs a short distance from the house with boxes of meat that we took out with us. Green very graciously accompanied

13 [9]

Mar. 26 Camp Sonntag Going rough

me and helped me.

We got to our caches in a short time, and when we were nearly loaded, Nukapingwah Okpuddyshao, and Etukashoo cam [sic] along. We waited for them and started out all together at just eight o'clock. For about a mile our way lay along a rough ice-foot along which we took up a box of biscuit and a case of oil. Then we got out on smooth ice about half way through the sound between Lyttleton [sic] Island and the mainland. We made good time to Nowayadi [?] where we again took the icefoot to the point where we made camp on the icefoot beside some big rocks (2 photos next morning.)

We soon hitched our dog [sic], got our stove going, and at two o'clock in the morning crept into our sleeping bags for a little rest.

The temperature was -36C. but it was very calm and clear and moonlighted.

14 [10]

Nowayadi 7:45a.m. Fine weather <u>Mar 27.</u> (Camp Hayes) (=8p.m. -38C NE1) Mar. 27—

We rose at seven o'clock & a day as calm and fair as a Southland spring day. We made a hurried breakfast of pemmican and tea and set off around the point on the ice-foot. It was fairly good going and we kept to the ice foot for about a mile when we cut across the bay. We cut over land to the next bay. While we stopped to rest when we got down to the icefoot, two bright mock-suns made me fear bad weather; as a compensation we saw when we climbed a knoll on the point, a belt of smooth ice extending towards Cape Sabine as far as we could see. Only a narrow stretch of bad going separated us from the good ice, but this stretch took us a half hours [sic] work as hard as any I've ever put in. Once on the smooth ice we soon rounded the next point to the cache at Comma

15 [10]

Raven tracks at cache at Commawitz Mar 27 – Camp Hayes

witz. Here we unloaded our sledges, polished our runners, made tea, and brought down from the cache 8 cans of milk 2 cases oil, [crossed out] 3 cans of beans, 3 of peaches, and 2 of cherries. We reloaded our sledges and when we put out across the sound it was four o'clock.

We traveled fast for about three hours and then made camp beside a small iceberg in a pressure ridge. We built two igloos, one large, occupied by Etukashoo, Nukapingwa Arklio and I and a smaller for Esayoo, Okpuddyshao, and Oobloyah.

As soon as the iglooeeas were done the men went out on the ice to spear seals through holes in the thin ice of the leads. Etukashoo got one, so all hands had a full meal of fresh meat for supper.

We turned in at one o'clock tired, but full-fed and much pleased with the prospect for the morrow

16 [11]

Fine weather Mar 28. Igloosuah (7:30a.m. -42C NO)

Etukashoo was cook in our iglooea and he got us up early so that by half past eight we were on the way. Our course was almost a replica of that of last years [sic] trips but the going was better. In the hope of getting seal of which we saw the breathing holes of many, we followed leads wherever they led in the general direction of our course. All along the going was fine. Our route lay in a belt of smooth ice about a mile wide between old ice of last year very rough, and a [?] band of extremely crushed and rough ice next [sic] the open water, a band from one to three miles wide.

Nowhere was the snow deep. Most of it was flat-drifted rippled kind; very little of it was the pimpled kind that is so hard on the dogs [sic] feet; and none of it was of the f[?]ty kind so soften occurring on salt ice, through which

17 [11]

March 28—Igloosuah Going good.

the sledge pulls so heavily. Not until we rounded the south point of Brevoort Island did we strike rough ice, and then only a little and not very much.

All the way we kept almost within call of each other so nearly were our dogs and loads balanced. The sun shone bright and until two o'clock it was perfectly calm. Then a cold northwest wind struck us but it wasn't hard until after we had got into Igloosuah and fed our dogs.

We stopped at Stalknecht island as we came along and opened one of the caches of meat from which we took out enough to feed our dogs tonight, enough to give them a generous feed. It was hard work digging out the meat with nothing but hatchets and rocks.

At Igloosuah we feasted on pemmican stew, and coffee, and cherries and crackers + tea and went to sleep about eleven o'clock.

18 [12]

No bear tracks on way across Two ravens at igloosuah [sic] March 28—Igloosuah 9:00p.m. -32 NW3

Toward the north from Brevoort Island the ice looked very bad around the North end of Bedford Pym [sic] Island. For that matter the ice to the south did not look very good but the men say we will leave by that old way through Rice straight. As last year the ice to the north of Payer Harbor between Breevoort [sic] and Pym [sic] Islands is chaotic, impassible.

The wind is blowing hard now at bedtime, presaging an unpleasant day on the morrow when we get some more meat for our dogs.

Old Igloosuah is most comfortable tonight as we go to bed for our stoves have warmed it just enough to make it seem temperate without melting the snow on the roof to a precipitation of rain on everything within.

Though I am wearing the same kamiks, kooletah and mittens that I have when I left Etah they are still dry.

19 [12]

<u>Fine weather</u> <u>March 29</u> Igloosuah 6:00a.m. [symbol] 9p.m -25C. NE4 6p.m -24C N1 9am -32C NW3 12 Noon -26C NW1

Nukapingwa who was cook for the crowd routed us at six o'clock to drink tea that he had prepared. We all got back into our bags to loaf a while but got out finally before nine...

After another cup of tea all around the Innuits [sic] patched up the stove pipe and got a fire going to thaw out meat, and made two komatiks ready to bring in more

The men are surprised that there are no signs of bear. The meat caches had not been disturbed and we saw no tracks at all where last year they were numerous.

All day long we kept a hot fire from wood torn out of the house and gathered up outside. We thawed out 7 big pieces of meat, enough for a dog pemmican box and a half for each team. The dogs were filled to repletion and would eat no more.

Despite the big fire and warm igloo our belongings did not get very wet for Oobloyah

20 [13]

Mar. 29—Igloosuah.

and I went over the ceiling with a piece of deerskin and kept the moisture from falling until about three o'clock the ceiling was quite dried off.

Oobloyah and Okpuddyshao went out after hares but got none. Arklio and Nukapingwa went after more meat. The Eskimo have suggested that we leave pemmican here and take meat with us instead and I have agreed.

This has been a leisurely day here, and fairly still though out on the Sound it is stormy and snow driving thickly.

Every one of us is drying his clothes and I think by the time we start tomorrow everything will be dry as when we left Etah.

This has been a cheerful evening after a sumptuous farewell and anniversary supper of pemmican stew, beans, crackers, pears and tea. The wind is blowing a gale from the North east but in the igloo we are warm and well fed, our dogs

21 [13]

Mar. 29 – 30 Camp Greely

are well fed, and we have meat for at least one more feed.

Etukashoo and Arklio are sewing harness, Oobloyah is playing solitaire and the rest are cuddled down on their furs chatting. I am watching my kamiks and owduksies which I am drying by a Primus stove. At half past nine we are all thinking of going to bed.

March 30—Camp Greely

A heavy wind delayed our starting but finally we decided that perhaps if we could round the south end of Pym [sic] Island we would proceed father so we set out. The ice was good but the wind was "fierce." Everyone donned his kamikpucks, face mask and whatever else he had to keep warm. I was afraid I should freeze my feet again. It took us three hours to get into Rice Strait proper. There in a little cove where we stopped to make some

22 [14]

Fine weather. <u>Mar 30--</u> 9:a.m. -26C. NW3 Igloosuah 9a.m [symbol] 9 p.m -34 [?] C. SW1

tea to warm up a little we saw three rabbits on the hillside but got none.

After this stop the rest of the way kept getting better and better By the time we passed Svendsen's cross the wind was still, the going superb. From C. Rutherford we headed straight for Cape Camperdown. This was on Esayoo's advice, when we saw how deep the snow was along the south side of the sound.

The ice was rough and snowdrifted so we made rather slow progress. In spite of this we got one third way across Buchanan Strait before we made camp. Here Oobloyah made himself a small igloo, Okpuddyshao and Nukapingwa themselves one while the rest of us put up the tent for a southwest wind threatened. We got into our sleeping bags about ten o'clock.

23 [14]

Fine weather [light pencil] Innuits <u>Mar. 31</u> Camp Small along Buche Pen. [symbol] 12:00 noon -33 [degree symbol] C In sun -29 C.

At ten o'clock we were on our way again. As we went along over chaotic ice and deep drifts I began to doubt Esayo's [sic] judgment and wished we had struck to the old trail. The other Innuits [sic] also "roasted" him but he only smiled and said "ootchoro" [?]

And sure enough when we neared the land of Bache Peninsula we struck smooth going with very little snow and often glare ice, over which we sped at a lively clip, faster than one could run comfortably. We stopped about three o'clock beside a big iceberg to make tea and afterward went on almost to Fort

Juliana.

Here at the point of the land we made Camp Small. Etukashoo and Nukapingwa built the biggest snow house I have yet seen, over 15 feet wide and 10 long, large enough to accommodate all of us comfortably. We fed our dogs permican tonight. We fed them nothing last

24 [15]

Nukapingwa dog sick Mar. 31 Camp Small

night. We are saving the piece of walrus meat we brought with us, for later use on the glacier. Thanks to Esayoo's good head we are camped tonight within sight of the Big Cache. We could easily have made it but we feared there would be no snow there for houses, and the Innuits [sic] decided that it would be easier to bring the supplies over here and continue on the good going of this side. The route we took today is much shorter and better than our old one of last year.

Tonight the Innuits [sic] are all satisfied, elated even, and enthusiastically discussing the trip and hunting. Tomorrow they will try for seal and bring the boxes and supplies over from the big cache. One of my dogs, Nukapingwa is ill, and I am afraid we shall lose him. The day has been warm

25 [15]

Native primary copper deposit Apr. 1 Camp Small

and pleasant, relatively speaking, with clear skies and very little wind. It has been a pleasure to travel especially since we struck the good going.

Along Bache peninsula [sic] I saw a raven, the tracks of several rabbits and foxes.

Nukapingwa showed me some green patches on the rocks and upon investigation I found they were stains of malachite formed from small crystals of copper in the syenite and granite evidently synguretic [?] with the granite itself. In fact I am quite sure of it. I had no chance to climb up to the sedimentaries, for I could not afford to delay when the going was so good and the Eskimo so eager to go on. The basal formation seemed very much like that of Etah syenite, diorite, with [?]ed blocks of basalt and pegmatites of feldspar and quartz.

26 [16]

Fine weather Apr. 1 <u>Camp Small</u> wind W0 10:00a.m. -29C 3p.m. -26C

April 1.

As soon as we had breakfast all the men except Esayo [sic] who had the bellyache, went out to look for seal. Soon after, Nukapingwa came in reporting no water, no seal. He and I at once went over to the Big Cache after supplies. The Eskimo have decided to go back by the same way we came, and Oobloyah and Okpuddyshao wish to have all that we have brought over here so that they can take it back to Igloosuah When Nukapingwa and I got there I was astounded at the size of the pile. We each took big loads and there was still enough left for four loads.

On our way across we ran across the tracks of three bears, and [sic] old one with two cubs, and coming back we met Etukashoo who reported a maze of tracks further up the fjord. Esayo [sic] and I dried mittens and kamiks; I wrote up my diary and began a letter to the Etah people; took some pictures, fixed up my

27 [16]

<u>Apr 1</u> Camp Small Bear.

field glasses, put a new roll of films into my camera, and did a half score other things of little moment. My Nukapingwa dog is very sick and I am afraid he will die. I believe it is worms that are killing him. About five o'clock came in. He had killed the big bear of which we had seen the tracks, and Arklio had killed one of the cubs. Arklio and Okpuddyshao were in pursuit of the other cub. As soon as Nukapingwa heard Oobloyah's exultant shout he set off with his dogs, hoping, I suppose to participate in the kill of the other cub. But soon after he left Okpuddyshao and Arklio came in saying the cub had cut up across land and got away from them. Nukapingwa did not come in until late.

We had a big feast of bear meat and I ate to repletion.

At Esayoo's suggestion we decided to cross Ellesmereland by the Flagler Fjord Route for the Eskimo are agreed that it will take us two days to get to the head of Beitstedt [sic] Fjd. because of deep

28 [17]

Two ravens over Ytteröen <u>Apr 1</u> Camp Small.

snow, while we can get to the head of Flagler in one march. We will save another day by not having to <u>tump</u> [superscript "?" over word] up the glacier, and may save another day in crossing for Esayo [sic] avers that <u>when last</u> he crossed, he got over from ice to ice in two days, with a komatik heavily laden with skins and meat. He says we go up the river as long as the ice is good, and then go up on the glacier, cutting across to the same descent as where I came back last year.

We decided further to stay here at Cape Small another day for we have to bring over the rest of the supplies from the Big Cache. With plenty of meat, oil, milk, and crackers, I am not reluctant to take this extra day, for it gives the Nukapingwa dog a longer chance to get well.

Except for some frozen finger ends, I am feeling fine, and the men are satisfied and happy. The weather could not be more beautiful.

29 [17]

<u>Apr 1 – 2</u> Camp Small Wind W. 0 12 noon -28C. Wind W1 6 p.m -36C

The sunset this evening was glorious. Everything was softly golden and as we gave our dogs a big feed I was struck by the startling beauty and calm of the whole world, while about our snow-house lay piled the bloody remains of two of the few denizens of this Sound.

<u>Apr. 2</u>

We rose at eight o'clock. Etukashoo, Okpuddyshao and Nukapingwa went out after bear while Esayoo, Arklio, and Oobloyah went after the remains of the Big Cache. According to my instructions they left

there one case white biscuit, ten tins milk four sounding leads and one pick.

I have directed Oobloyah and Okpuddyshao to take to Igloosuak 50 lbs. whole wheat crackers, 36 blue tins pemmican, 7 gallon oil, and seven snowshoes and four picks—big enough load for them with the bearskin and meat they take back.

There are left here on the ice

30 [18]

Fine weather Apr. 2 Camp Jot Small [symbol] C.J. Small 3:00 pm

150 lbs whole wheat biscuit and 36 tins pemmican. I have told Arklio and Nukapingwa in case they are not too heavily laden with skins upon their return to take with them to Igloosuah all if possible, or as much as they can, taking pemmican in preference to biscuit; of the latter I suspect half to be mouldy [sic]. All that they leave I have instructed them to cache on the small island of the Weyprecht group nearest the south point of Knud Peninsula.

Also I have left here for the four men when they return a gallons oil, 5 tins milk pemmican for their dogs and a tin white biscuit.

After the men came back from the big cache, Nukapingwa came in unsuccessful. All of us at camp then polished and iced our runners, packed our pemmican bags, fed our dogs, and made ready for the morrow's departure.

31 [18]

Apr. 2 Camp Small

Esayoo is all right today, but I have a violent headache. My Nukakapingwa dog is still very sick. I shall not soon forget the beautiful afternoon on this sound—clear, bright sunshine a haze hanging over Bache Peninsula, Thorvald Peninsula, and Alpe-Landet, the white ice cap of Thorvald Pen. the great cliffs about the sound the berg-studded ice, the confusion about camp.

Okpuddyshao and Etukashoo came in late having failed to get the bear. The bear had cut up across land toward Princess Marie Bay and they had had to give him up. They fed their dogs and then we all turned in.

32 [19]

Fine weather – Going Fine Apr 3. Saturday. Camp Sverdrup 12 Noon -26C. Wind NW. 6p.m -31 Wind N.

When we were all ready to go this morning my Nukapingwa dog had a spasm and afterward stiffened out as dead. When he came to he was too weak to stand, and [crossed out] so after making him as comfortable as I could behind a wind shelter and on a sealskin that Nukapingwa had abandoned, I left him behind. I cut up a can of pemmican and left with him [sic] so he won't starve if he recovers. If he gets well Oobloyah will take him on to Etah.

Kisheewikow and Brindle were acting as if sick, and with one dog all in, and these two not active I felt rather blue, especially as the Eskimo said the Nukapingwa dog had the Cape York disease which has killed so many dogs there this spring. Arklio did not cheer me much when he said that all our dogs might die when we got across.

The going up the first third of Flagler Fjord was fine—hard smooth snow, and smooth ice. The inner two thirds of the fjord had not broken out last

33 [19]

Apr 3. Camp <u>Sverdrup</u> <u>Botany</u>

year, so the ice there was hummocky but the going was good just the same.

We reached the head of the fjord in very good time, after about six hours fast going and cast about for a suitable place to build our snow houses. After two changes because of poor snow we finally decided upon a bank right along salt ice. Here we made Camp Sverdrup.

Across the bay on the top of a sharp peak, Esayoo pointed out a cairn that he and Peary built. He could not remember whether or not they put a record in it. We could easily see it with our field glasses, a large high pile on the very summit of the peak.

The scenery here is magnificent The rock is all sedimentary on both sides. The pass opens up before us—an inviting gateway. I found Salix arctica, Alopecurus alpina, Dryas integrifolia, Glyceria distans ? [Ekblaw's notation] Eriophorum polystachium [sic], Saxifrage groenlandica, and Draba sp. Rabbit spoor plentiful.

34 [20]

Fine weather. Good going. <u>Apr 4 Sunday.</u> – perhaps Easter 9 a.m -38C. 3p.m. -22C. Wind South

It was after ten o'clock when we set out across the outward plain at the head of the fjord. Our course was up over the smooth ice of a small creek that flows through the plain and along the hard snow drifts that flank the low banks of the terraces that have been formed by the stream's trenching itself in the plain. We encountered few rocks or gravel. Nowhere were we hindered long. The dogs raced along at a lively clip throughout the day. At first we saw only rabbit tracks, but later we began seeing rabbits too. About three o'clock when we stopped to rest the dogs and to make tea Etukashoo killed one, and soon after Okpuddyshao killed one. At half past three we saw fresh spoor and tracks of muskoxen. We wouldn't have stopped on a sandpaper trail then. About four o'clock we passed through a narrow defile that led us into a second great wide valley. Here there were hundreds of rabbits. We paused to rest and to determine where to

35 [20]

Musk-ox [sic]. Apr. 4 Camp Green

camp, when Arklio descried with my big glasses, a big shaggy muskox about three miles up the valley. We waited until the rest came up and then I told them that Oobloyah and Okpuddyshao (they had asked to accompany us one day inland and I had granted their request) were to do the killing. We set off down the valley but had not gone far when the musk ox winded us and started up the rocks. Oobloyah and Okpuddyshao at once unloaded their sledges and set out post-haste the rest of us following as best we could with our loads. It was exciting to watch Ob. and Ok. dash up the side of the valley. They loosed their dogs when they got near the beast. Soon two reports rang out and I knew the quarry was ours. Nukapingwa, Arklio, and Esayo [sic] all let their dogs loose but Etukashoo and I drove on to the base of the slope. The ox was an old fellow with both horns broken and the dogs had so mutilated the skin that it was worthless as a specimen

36 [21]

Apr 4 Camp Green Going good.

We made camp which I called Camp Fitzhugh Green, because he had given me a letter to read—and a fine one it was—at our first musk ox [sic] kill. We fed our dogs well here and had a feast of boiled meat and oxtail soup ourselves.

It was three oclock [sic] when we were ready for bed.

This Sunday has been magnificent, the best day I have had in the Arctic. All day we traveled on a plain from a quarter of a mile to a mile wide through which the water course winds. It is flanked on both sides by great cliffs, talus slopes, and ridges. On the plateaux great snow covered domes glistened in the sunshine The gradient of the valley could not have been over 20 or 25 feet to the mile. It was an imperceptible rise. The day was perfect, for though up on the mountain top we could see snow drifting indicating wind down in the valley it was calm and mild as a kitchen

37 [21]

Apr. 4 Camp Green Rabbits

The rabbits are numerous and quite unafraid. After we passed through the defile I think we must have seen two hundred feeding within easy rifle range. The dogs were continually chasing after them. They are so numerous as to run in big flocks and when a flock get [sic] started over the hard snow it really seems like snow. Toward midnight a flock running along looked like drifting snow. We can come within a few feet of them and tomorrow I shall try to get some pictures. We have all we want to eat. The only drawback to this camp is the distance we have to go for ice for water there is none near at hand.

On the whole this has been a wonderful day, a memorable day. Even should some unforeseen necessity occasion my return to Etah I should consider this much of the trip at least well worth while [sic]. Tomorrow we mount the glacier and the day following we shall camp on Bd. Fjord.

38 [22]

Apr. 4 Camp Green Geology Botany

I feel certain that the valley up which we traveled today has been glaciated. Relics on lateral moraines, and lateral scouring were numerous. Also not far from the head of the fjord I saw great beds of glacial loess such as is formed at the end of Brother John's glacier at Etah. Besides this I saw several broad U-shaped hanging valleys and old circues above the valley.

I watched the vegetation as we came along. The rabbits feed most upon the Salix arctica. The most of the grass of the meadows is Alopecurus alpine, and Arctagrostis latifolia. I saw considerable Eriophorum polystachium [sic], Juncus biglumus [sic] Luzula sp., Carex incurva on top of the moraines, Potentilla Vahliana, Pleuropogon Sabinii frozen in a little pool, Dryas integrifolia everywhere, Draba sp., Pedicularis sp. and Glyceria distans. The vegetation of the meadows is relatively luxuriant

39 [22]

Camp Green Apr 4-5

12 Noon -28 C Wind S.W.

Windy, cloudy weather 6 p.m -32C [superscript] Wind So

All along the way I saw only sedimentaries in the walls of the valley, though we crossed two ledges of syenite, igneous. [crossed out] I could not take time to stop to examine the composition terrain, but from time to time I examined limestones usually gray or blue in color, sandstones gray or brown. It is a field most enticing to a geologist and it vexed me sorely to have to pass along without more than glancing at it and wishing I could spend a season here.

Apr 5

This morning we did not rise till noon for it was three o'clock when we got to bed. Besides we could here [sic] the wind blowing so we knew we could not mount the glacier.

About three o'clock the men went out hunting and got about 30 altogether in less than an hour. About four o'clock we loaded our sledges for the wind had calmed and took part of our loads up on

40 [23]

Apr. 5. Monday Camp Green Camp Green 6 p.m. [symbol]

glacier. We went up a small snow-filled gully then eastward along the edge of the glacier and then mounted it by a slope much the same as that at C. Alexander. We got up fairly easily for the snow was good. Oobloyah and Okpuddyshao helped us to the top. We shall get down on sea ice the day after tomorrow so Esayo [sic] and Nukapingwa who have gone this route before declare. We came back flying, for the wind had risen, and was on our backs on the down grade.

Okpuddyshao and Oobloyah, I feel sure, would like very much to go across with us; much as I wish they could, I can not [sic] permit it now.

The weather tonight while not inclement is worse than any we have encountered on the trip except at Igoosuah

Our dogs are apparently in fair shape and I hope will continue so.

41 [23]

Apr 6. Tuesday Camp Green Wind SW 4 12 Noon -36C 6p.m.

The heavy wind of last night continued today, stronger than ever. The prospect on the glacier was too unfavorable to warrant our setting out, so we stayed in the snow house, dried clothes, thawed out the

remainder of our walrus meat and let the wind howl.

Nukapingwa and Etukashoo went out and in half an hour got a dozen rabbits to feed their dogs. There is no end to the rabbits here; by the way they have no fleas as have the Greenland hares. At five o'clock in the evening Oobloyah and Okpuddyshao started back to Etah. The wind was blowing a gale but it was from behind them, and they thought that as soon as they got through the pass they would find comparative calm. My regret at seeing them go is an earnest of the way I shall feel when I shall bid them a final goodbye, and turn southward to home and civilization. Oobloyah especially I shall hate to leave.

42 [24]

Apr 7. Camp Green 7:00p.m [symbol] 12 Noon -28C. Wind W.3 9p.m -32 Wind NW

Because it was still windy we stuck in camp this morning. Nukapingwa and Etukashoo went out and each got half a dozen rabbits. About four o'clock Esayoo came in and said that after awhile [sic] the wind would stop, and that we had better get ready to start. We cooked some meat and some tea, got our sledges lashed and set out at eight o'clock. At camp it was still windy, but when we mounted the glacier at 9 o'clock it had stopped.

We made an easy ascent loaded on the cache we left here day before yesterday and proceeded in a South-westerly direction across the glacier. When I got to Camp Green I took the altitude and found it to be about 280 feet. Using this as a base we attained on the glacier an altitude of 2340 feet above this base. Since we made this height in four hours it must be nearly correct.

Just before sunrise about half past two in the morning we reached the crest and caught sight of the

43 [24]

Apr. 8 Enroute [sic] over glacier 3a.m -38C. Wind SSE2

jagged peaks about the north side of Bay Fjord which I have designated the Allen Cordillera from the confusion of crests and peaks arising from it. The temperature at this time was -38C During the ascent to the crest the wind blew slightly, and an occasional cloud drifted by.

We made tea and during the making the sun rose back of us over the ice cap. It was a glorious sight. Bfore [sic] us lay the rugged land and slender Fjord, the peaks all reddened by morning sunshine. The gleaming snow was mottled by the cloud shadows and white mists hovered about the higher crests. Behind us stretched the rolling ice-cap.

Tea over, we started down the glacier and made land at five o'clock. We got up on the ridge without trouble and at once began seeing life. A fox ran across our path. Lemming tracks netted [?] the snow. Rabbit tracks innumerable everywhere. We dashed down into a little gully and startled from their feeding 38 rabbits which

44 [25]

Apr 8. Enroute [sic] over glacier Ptarmigan Rabbits Muskox Lemming I counted. Hundreds of rabbits scampered about over the hills, and our dogs were constantly dashing wildly aside after them threatening often to drag our sledges over cliffs and slopes to destruction. It was a wild ride down to the plain. We got down about noon. Muskox tracks were everywhere. Etukashoo shot a ptarmigan that alighted near us.

We got to old Camp Ekblaw just at one o'clock in the afternoon. Nukapingwa went up to take a look at the oil and immediately rushed down again – "Oomingmuksuah". He had seen several on the terrace across the plain, at the same place where they were feeding last year when we came. With our glasses we made out that there were quite a number. We unloaded our sledges and I gave Nukapingwa and Arklio word to take the lead. The rest of us followed more leisurely. The musk oxen [sic] had winded us and were moving rapidly up the steep slope east of the plain.

45 [25]

[sketch entitled] Route across Glacier" Apr 7-8 1915

46 [26]

Apr 8. Enroute [sic] Apr 9. Camp Tanquary

Nukapingwa's and Arklio's dogs were tired after the long march and went along so slowly that before they got to the foot of the hill the muskoxen were out of sight over the crest. We thought they were gone, and Arklio came back to us, but soon we heard shouts, and a shot, and a great black hulk came rolling down the slope. The rest of us hurried up and soon eight big fellows 2 cows, 2 old bulls, 3 two-year olds (one cow and two bulls) and 1 yearling were piled up along the slope. One yearling slipped through a pass in the rocks and made a successful get a way [sic]. We rolled all the carcasses down to the foot of the slope near our komatiks and after tea skinned and quartered them [superscript] Apr 9. It was three o'clock [superscript] in the morning [end superscript] when finally we established Camp Tanquary which this first sleep was merely two beds of muskox skins into which we nestled without undressing. We were all dripping sweat from the march and the kill, and none of us were reluctant to rest.

47 [26]

[sketch] Sun at 5:33 p.m. Compass bearing 11 [degree symbol] S of Sun

48 [27]

2 p.m -26C. Wind SSE1 Snowing slightly Apr. 9. Camp Tanquary

Despite our damp state we all slept well, and so did our dogs for they were full gorged on warm meat barely able to move.

We rose and had meat and tea at one o'clock. Afterward Etukashoo and I went upon the mountain back of us, a toilsome march indeed up the steep slope and through the deep snow. I made a sketch of as much of the fjord as I could, and froze four fingers handling the compass and sextant doing so. I wished

very much to have some pictures of the fine views about me, but forgot when leaving that the roll in my camera was of six films instead of 10 and since I had taken 6 I was disappointed.

Arklio went over to Camp Ekblaw after some milk, kamiks and the tent. While I went up the valley on my snowshoes botanizing and geologizing, the Eskimo built a house of snow blocks and roofed it with the tent, and had tea and muskox ready for me when I got back. We went to bed at midnight

49 [27]

[sketch]

50 [28]

Camp Tanquary 9 a.m [symbol] 10 am. Wind SSE 1 [?] Snowing slightly Apr 10. To Camp MacMillan.

At ten o'clock we set out again We put two skins for Mac—a male and a female—and a fine set of horns for Jot, inside the igloo as well as a lot of meat, piled up snow, skins, and superfluous meat all about. We each took a quarter on our sledges. Of the eight we had killed I had hoped to get one good skin of a yearling to complete my group, but the one we did kill was so badly mutilated that it was worthless as a specimen.

At eleven o'clock we were again at Camp Ekblaw to reload. We took on each sledge 7 gal oil, 6 [illegible] tins pemmican, 3 blue tins pemmican, two 12 ½ pound biscuit tins. We had two cases of milk. We left Camp Ekblaw 38 red tins pemmican, 15 blue tins pemmican and 2 gallons oil. This last I expect Arklio and Nukapingwa will use on their return. We found at Camp Ekblaw when we got there 1-25 lb. case biscuit

51 [28]

3pm Wind SE. Apr 10 Camp MacMillan

and ten gallons oil.

All over the hills were tracks of rabbits, over the plain of foxes rabbits, wolves, lemming, ermine and muskoxen.

We left Camp Ekblaw at noon but stopped as soon as we got on the sea ice to polish our runners, which had been much roughened by the rocks.

At six o'clock we made Camp MacMillan where Mac made his first stop last year. Here I resolved to stay a day in order to do some more sketching, to wrte [sic] letters back, to geologize and to get up my diary which I had neglected since leaving Camp Green

Our dogs were all in fine condition, but lazy because they were filled up with so much meat. There was but little snow on the sea ice and the ice was good. Ever since leaving Camp Green the weather has been clear and calm and pleasant.

Nukapingwa this morning smashed my small thermometer, and since the others are no good this is the end of my temperatures.

52 [29]

Coal. See new bag [?] Apr 11. Camp MacMillan

Arklio and I went up on the mountain back of the camp to take a look about. Here for two hours I took bearings and sketched all that I could see with my glass. The simple fjord that Sverdrup delineates is really a very complicated affair of which I have obtained a fairly good representation.

The altitude of the sun today at 12 noon, if my reading was right was 18 [degree symbol] 22' with an index correction of -10 (10 <u>on</u> the scale)

Sketching and taking readings is very difficult, and I froze my fingers severely.

Afterward I examined the coal seams up the stream bed, investigated carefully as I could the vegetation of the delta, and came back. After rearranging my sledge, feeding my dogs, and getting ready for an early departure for the morrow, I wrote letters back, completed my diary to date, and revised my sketch.

Arklio and I made out a large herd of muskoxen across the Fjord

53 [29]

1 p.m. -Wind East. Fine day Apr 11 Camp Mac Millan [sic]

northwest of us and tomorrow we are going after them. The day after I intend sending Arklio and Nukapingwa back to Etah.

The day has been chilly for a cold wind has blown down off the ice-cap to the south. I think Braskerudflyen is of limited extent for a branch of the fjord comes in back of us. I think it was down into this that Braskerud and Isachsen looked. At any rate I think I shall make no effort to penetrate the land from this camp, as I had previously planned but cross to the other side and look over that branch of the fjord.

Th Eskimo are elated over the prospect of another big kill and I am looking forward to some good pictures, for the herd is a big one, and since it is on a big plain will probably form the "square" for which they are famous. A good set of musk ox [sic] pictures would certainly be well worth while [sic].

54 [30]

Botany Notes See lists

Camp Green. Apr 5-6-7.

Carex capitata, Ellyna bellardi 3, Glyceria tenella 2, Calamagrostis pupurascens, Dryas integrifolia, Papaver radicatum, Oxyria digyna, Saxifraga oppositifolia, Potentilla sp. Draba sp. Pedicularis sp Cassiope In valley rather luxuriant vegetation, meadowlike, as on moister terraces. On drier rockier slopes sparse—dryas, carex cap. Ellyna bellardi saxifrage oppo.

Valley affords pasturage for many hare, muskoxen.

Salix arctica abundant everywhere.

Camp Tanquary. Apr. 8-9-10

Heathy vegetation on hillside moor vegetation on plain beneath. Dryas integrifolia, Potentilla vahl. Cassiope tetras. Pyrola rotun [sic] Glyceria distans + tenella, Ellyna bellardi, Carex capitata, Carex incurva, Poa sp. Juncus biglumis, Drab asp. Papaver radica Potentilla sp. Luxuriant. Mary [sic] rabbits, lemming. I saw stalks of Pedicularis lantata, and I think of P. hirsuta. Here on

55 [30]

Botany Notes See lists

these plains the summer vegetation must be much more luxuriant than on the Greenland shore. Salix arctica flourished much larger and abundant.

Camp MacMillan Apr 11.

The snow was too deep for successful botany. Great drifts of willow along seas shore and in bed of brook.

Potentilla sp. Pedicularis lanuta; Cardamine bellidifolia; Ranunculus sp. Carex pulla ? [Ekblaw's notation] Carex incurve Ellyna bellardi, Arctagrostis lat. Trisetum spicat. Alopecurus alp. (rather rare) Glyceria tenella and distans abundant. Oxyria digyna, Saxfraga [sic] oppositifolia Dryas integrifolia, Poa sp Calamagrostis, Draba sp. Papaver radicatum (common)

Camp Hunt Apr 13

We removed the snow from a considerable area today when we built our snow house, and in the area cleaned I found Eriophorum polysta. Carex 3 sp Taraxacum. Dryas integ. etc

56 [31]

Geology Notes Geology Notes.

Allen Cordillera of tilted strata dip to North 80 degrees west. Scarps on south east side. These rise above a peneplain about 300 feet above sea ice. Five very distinct terraces below this peneplain 20 feet, 30 feet, 10 feet, 15 ft. 30 ft successively. These are very plain at head of Fjord. The mountains rise monadnocklike above peneplain.

Bay Fjord is not really a fjord but a submerged valley perhaps never glaciated, though erratics lying about on sedimentaries indicated glaciation.

Coal is in thin seams from a fraction of an inch to 2 feet and in the section I saw exposed extended through about 80 feet of arenaceous and calcareous shales and limestone. Coal partings were numerous. All indications of fluctuation of sea level were present, from coarse sandstone to silt, coal shale and limestone. I could

57 [31]

Geology Notes

find no fossils, but the strata were so inaccessible or so deeply covered with snow and talus as to afford little opportunity for search. The talus slopes revealed none.

The coal itself is a glossy coal of good quality and burns well. It is rich in tar products for when we burned it the rocks became covered with oil.

Camp Hunt.

One the flat plain here are relics of five distinct terraces. The peneplain of which I have spoken with the monadnocks is very distinct. The peneplain was probably raised, the [?] land when the region was still

young submerged again so that the Bay Fjord and its branches are really submerged valleys again rising, as the terraces indicate, probably even now rising. Greater glaciation has probably prevailed but has played small part in the formation of the topography

58 [32]

Botany Notes Continued

Salix arctica, Draba sp. Pedicularis sp. and Papaver. On the plain I have found Glyceria distans and Tenella, Po asp. Calamagrostis, Cardamine bellidifolia, and Arctagrostis. I have seen but little Alopecurus alpine.

Camp Isachsen—

One the gravelly shore here I saw Saxifraga oppositifolia, Salix arctica, Drab asp., Glyceria sp. and Carex sp. No time for looking about

Camp Allen.

The vegetation here was sparse, Saxifraga oppositifolia [superscript] tricuspidata [end superscript] Dryas integrifolia, Luzula sp. Carex capitata, Ellyna bellardi, Calamagrostis sp., Festuca ovina, and Alsine stricta were all that I could find in the most careful search. I think the hills are too dry in summer, for the snow must melt off quickly.

Near Slidre Fjord

On the hillside here I found a small patch of heath exposed—Vaccinium uliginosum, Cassiope tetragon [sic] Pyrola grandiflora, Antennaria glabrata, Festuca ovina, Saxif. oppos. Dryas integrifolia, Carex capitata, and Ellyna bellardi

59 [32]

Geology notes continued.

Along the Axel Heiberg coast the few escarpments indicated a strike and dip about the same as at Bay Fjord, partially concealed and confused by great blocks of strata that had fallen from the scarp. Saw only sedimentaries, except for one dark basaltic dyke. Relief is discussed elsewhere Camp Allen.

In a long walk this afternoon over the low fens hills and stream bed near this camp, I found scattered lumps of coal everywhere, nodules of limonites, lumps of sandstone concretions and pieces of chert, sandstone and limestone. I examined carefully an exposure of sandstone shale and coal in a small creek, some 150 ft thick. The shale and coal about 30 feet in thickness all told lay beneath the sandstone. The strata dipped S 42 [degree symbol] west. The coal seams were all thin from a fraction of an inch to six inches. The sandstone was fine, of rounded grains, loosely indurated (perhaps because of weathering, much crossbedded, and interpolated were seams of coal and limonite with bands of See page 79

60 [33]

Muskox April 12 Camp Hunt

We left Camp MacMillan about eleven o'clock and headed straight across the fjord in a northwesterly direction to where the muskoxen were feeding. We had hardly got off the ice-foot before our dogs set

off after a pair of wolves that was hanging about camp. The wolves took to the hills and escaped without being shot at though I thought Etukashoo would get a crack at one.

After a half hours [sic] going we crossed the fresh track of a bear and Nukapingwa set out up the fjord after him.

When we got about half a mile from the muskoxen and perhaps 200 yds from shore we unloaded all superfluous boxes, etc from our komatiks, taking only our stoves, fuel and sleeping necessities We then set up the land to where on a plainlike

61 [33]

Apr 12 Camp Hunt 3p.m Calm Fine weather Musk oxen [sic] kill. Pictures. Horns. Skin

meadow the terraced stream valley, the herd was feeding. We crossed a low divide and came upon them suddenly. They at once formed a square, horns out; the dogs which the Eskimo let loose kept the square intact except when an old bull would charge out after the dogs.

The Eskimo refrained from shooting until I got nine pictures. Then I gave the word to fire and in a moment six noble brutes lay dead. The remainder of the herd then stampeded but the dogs brought them up short

We singled out three calves and shot them, and then killed a big fellow with a fine set of horns to send back to Jot. Arklio then shot another two-year old of which he wishes the skin

I then took half a dozen pictures at close range of the remainder of the herd as they stood squared.

62 [34]

Muskox skins Pukey Apr 12 Camp Hunt

We gathered up the dogs, all except Pukey who would not be caught. The remainder of the herd, 25 in number then made off to the northward rapidly with Pukey in hot pursuit, though all the rest of the dogs were quiet.

We set to work skinning at once. Each team was given a whole muskox. The set of horns that I got for Jot was a beauty and another set equally as good I got for Tank and asked the boys to take both back. The skin of one of the yearling calves I had prepared as a specimen to complete the group which I hope to get back to the Univ. of Illinois. It was a fine skin.

We then built a snow house after deciding that the tent which we set up, was unsatisfactory. Etukashoo took my dogs and sledge and set out after Pukey who was acting wild and

63 [34]

Lemming Fine weather Apr 12, Camp Hunt could not be coaxed to come in. He drove about after her for an hour, but when she set off up a ravine he gave up the chase and came in.

While building our snow house we saw a little lemming scooting about on the snow and though it burrowed the moment we set after it, the men soon uncovered it. For half an hour while our tea and meat were cooking we watched this diminutive little ball of fur, so much like a tiny guinea pig, burrow and dig and try to get away from us. It burrowed into the snow much as a mole burrows into the earth, and somewhat resembles an albino mole. Its fore claws are peculiar in being bifurcated vertically: that is, each claw consists of two prongs, one above the other. It grades from white to buff to gray in color from back downwards and is a pretty little creature.

Several wolves hung about our kill during the night, for

64 [35]

Geology April 12-13 Camp Hunt

it was four o'clock in the morning when Nukapingwa came in and we went to sleep.

Nukapingwa had pursued the bear well up into the fjord and finally killed him. He cached the skin near the head of the fjord About a mile from camp he saw a wolf, fired at it, and wounded it, but it escaped into the hills.

The plain on which we are camped is the beginning of the divide between this main fjord and a smaller one to the northward. It is rather extensive and is trenched by several stream valleys. The banks of the streams show the same five terraces that were so evident at the head of the fjord. Across the fjord the old peneplain shows up very clearly, with its monadnocks and ranges. Behind us rises the jagged peaks of the Allen Cordillera, in the forefront of which is a noble mountain which I have named Mt. James. To the east of us rises a rounded dome with three peaks beside it

65 [35]

Geology Fine weather Apr 12-13 Camp Hunt

companion mountain to a large peak across the fjord. The mouth of a tributary fjord running up towards the south east [sic], and which I saw in its length from the mountain up which I climbed yesterday, opens up. This Bay Fjord becomes a rather complicated bay rather than a simple fjord. In the strict sense of the word, it is not a fjord at all, for it is a submerged valley of a previous erosional period subsequent to the uplift of the old peneplain. This peneplain is not altogether a peneplain, for the bold relief [crossed out] of the ridges rising from it suggest rather a coastal plain with more rugged interior approaching maturity. The present cycle is much father advanced on this side of the island than that on the east side. None of the valleys are gorge like [sic], there are no such vertical cliffs, no streams with such vertical gradients. The scenery here if forested would be much like that along the Mohawk perhaps a little more rugged, not all all [sic] so grand as in Flagler and Beitstedt [sic] Fjords.

66 [36]

Camp Hunt 1pm [symbol] Camp Hunt 9p.m [symbol] Pukey

Muskox April 13. Camp Hunt.

We rose at one o'clock and after some tea went out to round up Pukey. She was not hard to get this time after we found her for she was shot through the body just behind the kidneys. She had been the wolf Nukapingwa shot yesterday, and all night had lain in a little gully on the hillside, bleeding. Thus she paid a price altogether too high for her prank of yesterday. She might recover if she were back in Etah, but I fear her end is near. Nukapingwa is in no wise to blame for he could not know that she had run wild, and besides she looks just like one of these wolves anyway. He gave me my choice of his team and I picked out one that looked like Pukey, and that appeared tractable, strong, and alert. Time will tell how my choice was wise or not.

We fed our dogs, each team two quarters of a musk ox [sic]. These muskoxen here are rolling in fat, and their hides are sleek and well kept, showing that they are feeding on pastures abundant

67 [36]

Letters to Mac, Tank, and Jot, and the bunch. 6 rolls of films return to Etah, moslty [sic] of muskoxen Lemming carcass to Tank Owl. Apr 13 Camp Hunt.

and nourishing. The meat is tender and of a delicious flavor.

We cached beside a rock some four feet high that rises conspicuous like a small monument from the crest of a little knoll near our camp, six red cans of dog pemmican and three blue cans of man pemmican. This knoll with the rock is conspicuous from the sea ice and is perhaps a little over a quarter of a mile distant from it.

In the snow that covered the rock were the tracks and spoor of a snowy owl, only recently left. After we cached the pemmican Arklio and I took a six-hour walk up the top of a small mountain to the west so that I might survey the fjord which he says has its head just beyond the divide. Sure enough it approaches near to our camp, and I believe it is less than two miles, probably a little over one, from sea ice to sea ice. A small lake lies just above the head of the fjord and two islands one of them large, the other small lie in the bend of the fjord. The

68 [37]

Survey from top of Mt. Fine weather Apr. 13 Camp Hunt

air was so clear that I could make out everything distinctly with my glasses. A large herd of muskoxen were feeding on a small plain across the tributary fjord to the north west ward [sic] of us. It looked to me as if we could easily proceed by this smaller fjord for it would be easy to cross the divide, but Arklio thought there might be deep snow.

We got back to camp about ten o'clock, and while the men were cooking meat and tea, I completed my letters back to camp and sealed them.

Arklio and Nukapingwa will start back tomorrow, while Esayo [sic] and Etukashoo and I will go our way.

Our dogs are well rested now, and well fed, and we ought to make good time for several days. At our next big muskox kill, I shall stop for several days to dry our kamiks and sleeping bags, sew up all rents in our clothes, and prepare for our exploration of Greely and Canon Fjords. Henceforth, there will be only the three of us.

69 [37]

Camp Isachsen Apr 15 [symbol] 10a.m. Fine weather Good going April 14 To Camp Isachsen

About noon today we packed and loaded our sledges. Arklio and Nukapingwa accompanied us to the cache we made on the ice day before yesterday and there left us, to return to Etah while we were to set off down the fjord.

We smoothed our runners and coated them with ice, reloaded our sledges and made ready to go. Nukapingwa had thought Pukey might be able to go back to Etah, but he had to abandon her on the ice because she could not walk. Her hind quarters were stiff and cold, and I saw it was but the matter of a few hours till she would die, so to spare her the pain I shot her. The shot, the sinking of her head without a quiver, and all was over for poor Pukey.

We started down the fjord Etukashoo leading, then I next, and Esayo [sic]. At first the snow was soft and deep, but the going kept getting better and better and soon the snow crust bore the dogs and sledges easily. We sped along at a rapid rate, and

70 [38]

Bear tracks Seal holes. Wind N. West all day. April 14 Camp Isachsen

soon were out of the Fjord and looking up the sound. We made camp on the ice-foot about a mile south of the fjord which I have described as heading near yesterday's camp.

On our way we saw the fresh tracks of many bears, and near our camping site were the tracks of five, two large and three smaller. We saw many wolf and fox tracks, and on the hillsides the feeding grounds of many rabbits. Our dogs from time to time acted as if the [sic] smelled muskoxen, for the wind was from the land. We passed several seal holes, and twice Etukashoo stopped and waited for a chance to harpoon one.

Esayo [sic], as we went along, pointed out places where he, Arklio, Satow, Anowe, and Teddyluigwa [?] had killed bears and muskoxen when they were over here two years ago.

The weather has been fine today, the going good, and we have made a good march despite our late start.

71 [38]

Muskoxen Ice conditions Fine weather Wind South

Good going. April 15 To Camp Schei

Today we crossed the Sound to the Axel Heiberg Land side and on the hard snow and smooth ice sped rapidly along until a cold wind and drifting snow from the south east induced us to build a snow house and make camp about a quarter of a mile from shore.

The going was good today but the ice all over the sound as far as we could see was somewhat broken while it was freezing. Low small ridges and hummocks formed when the ice was about six inches thick were everywhere, making the ice look much rougher than we really found it. The sound everywhere indicates that the ice goes out during the summer, as it evidently does from Bay Fjord. We saw only four icebergs all day, none of them very large.

During the early part of the day we would survey the hills on the Ellesmereland side for muskoxen, and with our glasses made out three large herds on the terraces north of Veste Fjord. Just before making camp we saw two wildly galloping over

72 [39]

Erosion data. Gulls. Blaamanden in sight Lemming track in middle of fjd Fine weather all day until night Camp. South wind Apr 15 To Camp Schei

the hills about two miles from shore on the Axel Heiberg shore. We crossed many bear tracks today, and several fox tracks. I was surprised to find several lemming tracks on the sea ice half way [sic] across the Fjord.

Esayo [sic] told me today that thousands of gulls [crossed out] nest on Storven and on the on the adjacent coast of Axel Heiberg Land and that there are many muskoxen still left on Storven for he saw them there and did not kill them.

The Axel Heiberg coast is much like the Piedmont region of the Atlantic coast, rolling somewhat broken but never mountainous, at least not near the coast. The same plain is apparent here as in the fjord, and this sound, too, suggests a submerged valley, with terraces. To the eastward and northward as far as I could see the Allen Cordillera rose, but always nearer the shore was the plain.

Tonight as we made camp Blaamanden showed up clear and distinct to the north of us. It has been a fine day and good going

73 [39]

Loads on sledge-supplies + caches Apr 15 Camp Schei

When we left Camp Hunt we took with us 100 lbs crackers, 33 gallons oils, 2 cases condensed milk 192 lbs dog pemmican and 72 lbs man pemmican. At Camp Isachsen we cached 48 lbs. (6 tins) dog pemmican and 18 lbs (3 tins) man pemmican. We now have 6 tins dog pemmican, and three tins man

pemmican apiece, rather a small amount in case game should fail us, rather enough in case we kill plenty of dog food.

The cache at Camp Isachsen is on a small gravel knoll along the shore on a delta projecting out from a small gulch. It was quite conspicuous from the sea ice, and could not be mistaken two hundred yards from shore. It is a mile or two south of the mouth of the fjord I have described.

Should we for any reason be forced to turn back in the next week or so we should still have resources with which to do it, for we have made caches of dog food all along the way, sufficient in quantities to get to Etah. However, I anticipate no such necessity whatever. It's Lake Hazen now, or bust!

74 [40]

White fox Musk ox tracks on sea ice Hazy, cold, South East wind Drifting snow Apr. 16 To Camp Allen.

We set out at noon today. The air was hazy, and the Ellesmereland side was hidden by drifting snow. We traveled fast northward along the Axel Heiberg Land shore toward Blaamanden. As we rounded the point of Axel Heiberg Land and headed northwestward for the Ellesmereland side, a strong cold south east wind struck us, and we turned [?] in toward land a little to get into a lee to rest and untangle our traces.

Before roundind [sic] the point we came upon musk ox [sic] tracks on the sea ice, and followed them some distance. Both Esayo [sic] and Etukashoo were much surprised to find them They said it was the first time they had ever seen muskox tracks on salt ice. This goes to show that the beasts are not averse to migrating from island to island when prompted to it to seek new or better pastures Our dogs also chased a white fox that scampered a head [sic] of us but it quickly took to the land. As we neared the Ellesmereland side, a dark hummock on the slope near the sea ice, which we all had supposed

75 [40]

Muskox kill. 2. Apr 16 Camp Allen

was a rock, took form and life in the character of two musk oxen [sic] rumbling up the hill. Our dogs immediately took up the chase. The moment we struck the icefoot, Esayoo let his dogs go, and they soon rounded up the muskoxen, about 100 [?] yds from shore. Esayoo and Etukashoo shot them, and then by a small snow filled gully we took our sledges up near the muskoxen. After skinning one and feeding our dogs, we found very good snow near our sledges built a snow house, and established Camp Allen, so named because the morrow which we shall spend here resting and feeding our dogs is Allen's birthday if I remember aright.

It was two o'clock when we got into bed, prepared to sleep late tomorrow. I am well content to spend a day here for our last three marches have been good ones; and camped about three miles east of Blaamanden we are within a day's march of Greeley [sic] Fjord where we shall spend several weeks, I think. If we should travel as we have these three days we shall be back in Etah by June!

76 [41]

Camp Allen 6 pm [symbol] Snow Wind—south west Rest in camp. No fat on muskoxen. Heel frost bitten. Apr. 17. Camp Allen.

We made tea at noon today. Etukashoo went out to take a look at the weather and the dogs while Esayoo and I keep the igloo.

I think I frosted my heel slightly yesterday, for the wind was cold and thanks to the carelessness of the women at Etah, I had not enough grass in my kamik. However the frost-bite if such it be is not of much consequence, not serious I am sure.

One of Esayoo's dogs is under the weather today for it was rather severely bruised by one of the muskoxen yesterday.

The musk oxen [sic] we killed yesterday were old and skinny, all fat gone. The bones instead of being full of red rich fat marrow, were full of water, not at all like those of Bay Fjord. Insufficient pasturage I suppose is the cause.

The low hills here are covered with a deep, pebbly soil, cracked and dried, with but little grass. Everywhere are lying about small lumps of coal, pebbles of limestone and sandstone, but I have

77 [41]

New grass Nukapingwa dog. Fat muskox. Cold, cloudy, snowy Wind Southeast 3.

found no fossils. I found a grass which I have not heretofore seen, with coarse and large seed. I am much pleased with my new dog, for though not Pukeys [sic] equal, he is a good puller and a well behaved dog. He gets along well with my team and gives me little trouble. His only fault seems as yet to be that he is so slow an eater that he won't get his share of the feeds. He isn't in very good condition, as it is.

We found on cutting up the second muskox that it was well fattened so the lean condition of the one we skinned yesterday was probably due to poor teeth or poor digestion. We fed our dogs again all they could eat, so they ought to be ready to make a good march tomorrow.

When I came back from my walk Esayo [sic] boiled some meat, Etukashoo some tea. Afterward I sewed up my kooletah, Esayoo repaired his harnesses, Etukashoo fixed up his whip, and then we all made our beds and went to sleep shortly after midnight. This has been a good day to be resting—cold, cloudy, snowy windy

78 [42]

Zoology Notes: Muskoxen

Muskox—We began seeing muskoxen a day's march from the head of Flagler Fjord. Here at Camp Green we killed an old bull, an outcast I suppose, both horns broken, and coat all rough and shaggy. He was reeking [?] fat however for in the fertile valley where he was feeding pasturage was abundant, and he had only the numerous hares to compete with him.

At the head of Bay Fjord we killed eight of a herd of nine, that scenting us where they were feeding on a grassy valley meadow, at once took to the hills, making their stand on the comb of the ridge. Here we shot them as recorded elsewhere. All were well-fed and fat.

Half way [sic] down the fjord on the north side we found another herd –36 all told—of which we shot eleven. These were feeding on the rich pasturage of the plain and for miles about we could see where they had broken through the crusted snow with their fore feet to get at the grasses and sedges beneath. On this plain they had been feeding on Carex

79 [42]

Geology Notes (continued on page 2)

limonite, and nodular concretions at various distances. One band about two feet in thickness appeared made up of round concretionary, loosely cemented sand grains, the nodules much the size and shape and color of rabbit droppings so much so that when I first saw them in the creek bed, I was surprised at the number of rabbits that must have frequented the gully as a toilet. I found many rippled blocks but not a single fossil though I searched till my hands and feet were numb with cold. The sandstone and shale indicated fluctuating and shoal water conditions at the time of deposition.

The surface of the ground here is everywhere cracked like the dried surface of the shores of a low pond or of tidal flats. May not mud-crack thus indicate cold climate?

From Blaamanden to Camp Midnight sun [sic]—sandstone slopes and cliffs predominated. South of Slidre Fjd is a high dark cliff sustained by a dark deontic sill which may be seen upholding a sheer dark cliff on the west side of the sound. This sill has been supplied from a dyke which is exposed south of Slidre Fjord. This

80 [43]

Fine weather Good going Geology Bear April 18 Camp Midnight Sun.

We left Camp Allen at noon today and with well-fed, rested dogs proceaded [sic] rapidly up the coast, keeping rather close to land. The dark cliffs of the opposite shore sustained, I think by the same igneous intrusion that forms a steep scarp along the crest of the shore of Fosheim peninsula [sic], loomed up all the afternoon. At five o'clock we were in the mouth of Slidre Fjord. Esayoo looking back saw a large bear following us and approaching rapidly. We set after him pell-mell, he took up the hill-side with Etukashoo's and Esayoo's dogs hot after him, but by a skillful back track [sic] he eluded him [sic]. While Esayo [sic] and Etukashoo climbed the hill I stayed on the ice foot and watched the whole performance. When the bear back-tracked down a small gully I thought he was coming down again by that way and set out to head him off. If such had been his intention he changed his mind and set off posthaste over the mountain We gave up the chase. I observed the vegetation on the hillside, a

81 [43]

Wolfves [sic] Botany Muskox Muskox tracks on ice Ice rough. Good icefoot Apr 18, Camp Midnight Sun

typical heath association. We then penetrated Slidre Fjord until we saw its head, and about eight o'clock stopped along side [sic] a big iceberg at its mouth and made tea. Hereafter I shall observe Sunday by afternoon tea.

Before reaching Slidre Fjord, our dogs chased two wolves up the bank a way. Both men shot at them but did not get them. On the shore Esayoo and I saw the skull and tusks, old indeed, of a large male walrus, and I noted the vegetation.

Proceeding on our way we passed by a herd of six muskoxen too high up on the hillside to warrant pursuit, and a caribou hurrying up over the rocks.

For ten miles we followed the tracks of muskoxen on the sea ice and everywhere [illegible] the ice along shore was the relatively fresh dung of the animals. Every little while our dogs smelled game and tried to get up on land.

Just after we passed the last high cliff we struck rough ice and

82 [44]

Prospect

April 18, Camp Midnight Sun.

for 6 or 8 miles followed the broad icefoot along the low rolling plain.

It was two o'clock the morning of the 19th when we finally made camp. It was our first glimpse of the midnight sun, for though it [?] had been above the horizon several days, the land had always hidden it. We also saw the moon, only a day or two old, at this camp, gleaming high over the north end of Schei Island.

As far as we could see in all directions the ice was rough and broken and a dozen or more great icebergs lay up the sound and up Greely Fjord. It was a most beautiful night, just as the day had been glorious, and I was well content, after a good supper to snuggle down in my sleeping bag at five o'clock in the morning and go to sleep. My Eskimo thought that perhaps on the morrow we would stop here and look for musk-ox [sic] back in the hills

83 [44]

Fine weather Wind NE by E. Calm Clear April 19 Camp Etukashoo

When we set out today at two o'clock we could see no more trace of muskoxen, but I told the men that even if we saw none today we should make but a short march. If we saw any we were to stop and kill all up to as many as 18; for I had promised them all along that when we got up into this country and saw a large herd we should stop for a stay of six days to put our dogs in the best of shape for the Canon-Greely Fjord trip, to dry our footgear and sleeping bags, and do the dozen and one little things the wear and tear of the trail make necessary

We started out along the icefoot but had traveled a bare half hour when our dogs turned sharply aside and dashed up over the low ridge along shore, and here feeding within one hundred yards of the icefoot was a large herd of muskoxen.

The muskoxen retreated up the gentle slope ahead of us and took their stand beside a large erratic lying on a low flat ridge. Here

84 [45]

Big muskox kill April 19 Camp Etukashoo

they formed the "square" and here after I had taken two pictures we began the kill. Three volleys from three rifles in quick succession laid nine mature oxen on the ground. (I had estimated that there were twenty animals in the herd, so I told the men to kill all.) The herd now broke and scattered, and we dropped them as they ran. This was the only bit of "sport" I have had shooting muskoxen. The dogs herded them into two groups and Esayo [sic] and Etukashoo finished them up. When the kill was over twenty-one beasts lay about, only one of them an old one, and only three calves. The herd was made up largely of two-, three-, and four year olds.

We set to work skinning at once and skinned six. We each selected one with a particularly sleek and thick skin which we wished to dry and keep for our sledges, and Esayoo also selected one of the yearlings. I fed my dogs six quarters, four hind quarters and two four quarters

85 [45]

Long Camp April 19. Camp Etukashoo

before they gave up trying to eat anymore. They were so gorged that they could scarcely drag the sledge down to the shore, where along the first low ridge Esayoo had selected a site for a snow house. The snow was splendid for building and Etukashoo rapidly put up a large comfortable structure for our week's stay.

We hitched our dogs, took everything we needed into the iglooeea made everything as snug as we could and turned in.

The day has been superb. Clear, mild, and calm it could scarcely be improved upon. The sun is rising high, and growing so warm that our [sic] the snow is melting in sheltered niches.

This is a good place for a long camp. We have all the meat we want for ourselves and dogs for a week; we have a commodious snow-house; the sun makes a complete circle uninterrupted by hill or cliff; and we are on the field most important in the trip.

86 [46]

[written across the top margin of pages 86 & 87]

This record was not deposited for while on our way from Camp Midnight Sun to the point of the peninsula, our dogs scented game, dashed up over the beach ridge, and started in pursuit of a herd of

muskoxen grazing within one hundred yards of the icefoot. We killed the entire herd, made camp, and stayed for six days to rest and fatten our dogs, 21 muskoxen in herd

April 19.

Copy of Record left in cairn at northernmost point of Fosheim Pennsula [sic]:

April 19, 1915

On this day, April 19, 1915, my two Eskimo, Esayo [sic] and Etukashoo, and I, rounded this cape. We were camped last night a short distance west of this point, having made the distance from Blaamanden in one march. We left Blaamanden –where we killed two muskoxen, and stayed during the 17th to feed our dogs—yesterday forenoon at ten o'clock, and made camp at midnight, the first night we had seen the midnight sun. I named our camp, Camp Midnight Sun. On our way we saw six muskoxen, two wolves and one large bear.

Our dogs are well fed and in good condition. We have ample supplies for the successful completion of our journey. My Eskimo and I are all well and enthusiastic. Muskox tracks are numerous

87 [46]

near here.

Tomorrow we shall penetrate Canon Fjord, leaving here all our loads except enough supplies for the trip to the head of the fjord and return. Upon our return we shall continue our way up Greely Fjord. The ice off the point here is very rough, but the ice-foot, on which we traveled over five miles yesterday is good. The weather is fine—clear, mild, calm.

W. Elmer Ekblaw,

Geologist, Crockerland [sic] Expedition April 19, 1915

On envelope How do you do? I am glad you got here safe and found my cairn and record. Good luck to you. W. Elmer Ekblaw, April 19, 1915

On back of record First stanza of "Illinois"

88 [47]

[sketch, horizontal]

Pencil sketch of Mt. Hovey on the N.W. point of Fosheim peninsula [sic]. Surrounded on all sides by undulating plain.

Two very distinct old terraces are evident over this plain one the upper being probably the same as the Acpohon peneplain of Bay Fjord, the other one of the lower terraces. These two levels one about 300 ft above sea level the other perhaps 450 are very distinctively reflected on the east shore of Harefjordet [?] across the Sound. On the plain here, I counted eleven old beach lines from the icefoot to a ridge about half a mile inshore, indicating rapid, and intermittent,

89 [47]

Zoology notes (continued [sic parenthesis] Muskoxen

capitata, and Carex nardina (?) [Ekblaw's notation], Glyceria tenella and distanss [sic], Alopecurus alpine, Eriophorum Scheuchzeri, and Poa sp. Of these Carex and Glyceria predominated. The panuches [?] of the animals were all well filled with macerated grasses.

When the dogs approached the herd they formed a group, somewhat square, with the horned bulls and cows facing outward protecting the calves and younger beasts within this outer row. It is an imposing array of horns that bars one's approach, too formidable for wolf attack.

Two of the oldest veterans in the herd took their stand in advance of the herd and most aggressively charged the attacking dogs. From time to time one of the herd would charge, returning to his place in the square, or seeking another place. Upon our firing the square broke and dispersed but soon reformed to meet the attacks of the dogs. The square broke occasionally as the beasts became alarmed beyond endurance, but always

90 [48]

Zoology Muskoxen

reformed until finally the [crossed out] part of the herd remaining after our killing -25 in number) [sic parenthesis] took precipitate flight to the hills. All the animals were rolling in fat, their horns and hides were sleek and smooth, and show every evidence of the rich pasturage.

We saw muskoxen on every flat on the east side of Eureka some probably 150 all told, and two on the Axel Heiberg side. As we rode along about a mile from shore we came upon the tracks of several muskoxen out on the sea-ice, traveling northward.

Just west of Blaamanden we killed two, one an old bull and one a young cow, and saw four more farther up across the plain. The animals were lying down and we mistook them for a rock until they took flight. The old bull was lean, his coat was rough, and the marrow in his bones was all water. The cow was fat and in good condition.

From Blaamanden to Camp Etukashoo near the north end of

91 [48]

Zoology Muskoxen

Fosheim Peninsula we saw six musk beasts on the hills too far up to get. We followed for at least ten miles on the ice the relatively fresh tracks of several and towards the end of the march when rough ice forced us to the icefoot we saw fresh dung all along the ice. Esayoo showed me a place where he said they had been licking the ice to get the salt. He says both muskoxen and caribou come often down to the ice to get salt.

Not far from the end of Fosheim peninsula [sic] our dogs scented a herd and chased up over the icefoot. The herd was feeding less than a hundred yards from shore, and upon our approach ran to a low ridge a short distance up the plain and there formed the square. We shot the entire herd of twenty one—all two, three and four year olds except one old bull and three yearling calves. All were fat, had sleek horns and hides and indicated good pasturage.

I took a ten mile walk over the plain here, what must be at least 100 sq mi. in extent, with several streams and without my glasses could

92 [49]

Zoology Muskoxen + Hare

discern four herds ranging over the plain—one of 23 head, one of six head, one of four head, and one of three head the herds at distances from 1 to 4 miles from each other.

The mature cows that we have killed have all been with calf—the time of birth is imminent, for the calves are fully formed, coated with a warm hide, and apparently full sized, so Etukashoo says. -Hares.-

We first saw hares on Bedford Pym [sic] Island, then again at the point of Knud Penninula, and along the shores of Flagler Fjord. We killed them first in the valley above the head of the Flagler Fjord. Here they were exceedingly abundant, singly and in flocks sometimes numbering forty. They looked like drifting snow as they scampered up the hillside. They were not at all shy, and our dogs frequently approached very near them. In this valley we must have seen five hundred hare, feeding on the grasses, willows, and other plants. They are smaller than the hares of Greenland, I believe, and

93 [49]

Zoology Hare

have no fleas.

When we got down to the land on the west side at the head of Bay Fjord, we again saw them by the hundreds.

The hillsides and valleys looked as if great herds of muskoxen had been feeding there, so extensively had the hares torn up the snow. Here too they were not at all shy. All along Bay Fjord we saw the hares, their feeding grounds, their paths over plain and hillside. At no place along Eureka Sound where we approached land did we fail to see with hares or their feeding grounds.

On the plain back of Camp Etukashoo near the point of Fosheim Peninsula, I found them again by the hundreds frequently paired. From their behavior I should judge that the mating season was on full blast. On April 21st when I ascended a hill to the southeastward of the camp, I came upon a sheltered gulch on the south side of the hill where the soil was formed from a black shale, where a luxuriant heath formation had flourished the preceding summer, and where

94 [50]

Zoology Hare and Lemming

the snow was already gone. Here the hillside was literally white with rabbits, several hundreds of them, quite unafraid until I fired at a ptarmigan, when they hopped like a frightened bunch of white sheep up the hillside. Such a sight as this I never before saw. Besides the hares here, there were thirty or forty ptarmigan, and the tracks of foxes, wolves, lemming, caribou and muskoxen. The ledge rocks were covered with the dung of snow-bunting of the previous summer, and in a crevise [sic] I found the nest of a snow-bunting. Everywhere on the plain were the tracks and dung of hare, and on every sunny spot were a pair or several feeding.

-Lemming.-

We saw the first tracks of the lemming in the valley at the head of Flagler Fjord, but it was not until we got into the hills beyond the glacier at the head of Bay Fjord that we saw the little creature first. Here their tracks crisscrossed the snow-clad hills

95 [50]

Zoology Lemming

in every direction, and every once in a while we saw one of the furry little balls "rolling" over the snow to burrow like a mole at the first alarm.

We saw their tracks everywhere along Bay Fjord. At Camp Hunt where we stopped for two days to give our dogs rest while feeding on muskoxen we pursued one of the little fellows and kept after him when he burrowed until we got him. It was no easy matter for by the time we finally caught him he had burrowed over twenty-five feet of snow. We caught him by listening where he was scraping and then digging up the snow in a semicircle ahead of him while Etukashoo kept after him. He looked like a diminutive guinea pig, gray, white, and buff. Placed on the snow, the would waddle as fast as his short little legs would carry him for ten or fifteen feet and then in the twinkling of an eye he would burrow himself out of sight. Caught again, he protested by squeaking like a mouse and endeavoring to bite his captors. We finally

96 [51]

Zoology Lemming-Wolf

killed him, and I sent him back for Tanquary, by Arklio.

All along our way down Bay Fjord and up Eureka sound [sic] we saw the tracks of the little creatures even out on the ice in the middle of the sound. At Camp Etukashoo they were numerous. The snow is full of their burrows and though they frequently come out on the snow and cover [crossed out] considerable distances, they do most of their tunneling under the snow, where they feed upon the needs of the grasses, and upon the roots of pedicularis, draba, etc. Their fore claws are peculiarly bifurcated.

-Wolf.-

We saw our first wolves on Bay Fjord, a pair at first near Camp MacMillan, and afterward a number, probably eight all told about Camp Hunt. They were rather shy, unaggressive creatures, not at all to be feared, and behaving much like the coyote of our western plains. Their large tracks occurred everywhere down Bay Fjord and up Eureka Sound.

97 [51]

Zoology Wolf Bear

Near Slidre Fjord our dogs chased two up the hillside as far as there was any snow. Esayoo says they nearly always occur in pairs, a male and a female. At Camp Etukashoo, though their tracks were more numerous than anywhere preceding we saw but three that appeared upon a bank above me where I was pounding out fossils, but quickly disappeared when I turned about to get my revolver. -Bear.-

We killed one old bear and one cub near Camp Small on April first a second cub belonging to the same dam escaped by climbing the hills and crossing to Harnesworth Bay.

In Bay Fjord Nukapingwa killed a two-year old. In the lower reaches of Bay Fjord and all up Eureka Sound we came upon their tracks. At Camp Isachsen, the tracks of a large old dam with four yearling cubs, had recently been made along the icefoot and on the shore.

98 [52]

Zoology. Bear Fox Seal

At the mouth of Slidre Fjord a large bear pursued us, but when we turned our dogs about to get him he made for the hills at a gallop. He eluded the dogs by a quick back track [sic] down a snow-covered gully, over a ridge into another gully, and the up over the crest of the hills.

Everywhere we have seen their tracks and the places where they have killed or tried to kill seals. Foxes.

I have seen three white foxes and two black thus far Camp Etukashoo, but their tracks have been numerous everywhere particularly about the holes where the bears had killed seals. Seals.

On Smith Sound we found the holes of many seals along the frozen "leads" and Etukashoo killed one at Camp Hayes. Again in Bay Fjord and up Eureka Sound we came frequently upon their breathing holes, though we saw none upon the ice.

99 [52]

Zoology – Ornithology Whale Caribou Raven Ptarmig [sic]

Whale

We found the skull and ribs of an old male whale on the beach just south of Slidre Fjord, on April 18. Caribou.

I saw a caribou climbing the hills just north of Slidre Fjord, and back at Camp Etukashoo, I came upon their dung and trails on the hills. I think they are not numerous here, but there must be a few. I wonder if there is an ancestral aversion of muskoxen to grazing on caribou grounds and vice versa, as there is between cattle and sheep.

Ravens.

I saw a pair of ravens about Bedford Pym [sic] Island, and again a pair along Flagler Fjord, but none on the west coast.

Ptarmigan.

We saw our first ptarmigans at the head of Bay Fjord; again at Camp Etukashoo where their tracks and dung were numerous over the plain. In a little valley where I pounded out fossils, I saw several, and in a warm

100 [53]

Ptarmigan Snow Bunting Owl. Ornithology

sunny spot on the hillside back of camp about ten miles, I found over thirty feeding. I shot four at this camp, two males and two females all yellow with fat like butterballs. The generative organs of both sexes showed no signs of development as yet. The birds had been feeding upon willow buds, and the tips of dryas integrifolia, saxfrage [sic] tricuspidata and Pedicularis -Snow Bunting-

[superscript] At C. Etukashoo [end superscript] on every rock ledge in every brookbed [sic] and on every hillside I found the droppings of snow-buntings and in a crevice on the hillside back of camp I found a last year's nest.

-Owl-

At Camp Hunt we saw the fresh tracks and spoor of an owl in the snow on the top of a large rock on the plain. Again at Camp Allen and at Camp Etukashoo I saw the tracks and spoor but no owl. Ptarmigan.

The ptarmigan are prone to roost in burrows about three to six inches

101 [53]

Ornithology – Ptarmigan Zoology – Ermine

deep in the snow on top of, or along the sides of large rocks wherever there are rocks. They usually scrape out burrows in the snow in which they sleep. At Camp Etukashoo they were not at all shy. They scratch with their feather clad claws like chickens, and pick and peck with their bills much like quail and prairie chickens. The female has a call for her mates much like that of a prairie hen—a nervous "hyank— hyank."

Ermine

We saw the tracks of ermine again this year on Yttreöen [sic] and on a small island off the point of Knud peninsula [sic]. Their tracks are very much like those of mink, only smaller:

[drawing of ermine tracks]

Last year I thought they were the tracks of lemming. I again saw ermine tracks about the rock ledges back of Camp Etukashoo. They can not [sic] be very numerous or we should more frequently see their tracks, or else they do not wander far afield from their burrows.

102 [54]

Fine weather Fossils Clear Calm Wind N.E April 20 Camp Etukashoo.

Etukashoo got up early today and scraped and stretched his musk ox [sic] skin to dry. Soon after Esayoo and I too got up. I arranged all my kamiks and stockings to dry, and then went for a hike over the plain to a stream a mile and a half or two miles up the coast. On the way I killed a ptarmigan and a hare. I saw many tracks of both but saw only two other hares. The best part of the trip was finding a small exposure of limestone richly fossiliferous, the first I have found on the trip. The exposure was a small one, and most of the ledge was covered with snow, but about 20 feet was bare at places The exposure consisted of about 10 ft of compact, dark limestone richly fossiliferous and impregnated with replacements of pyrites, which lay at the base. This was succeeded by a gray calcareous shale with veins of calcite, and nodules or fragments of a more richly [?] disintegrated calcareous rock, not stratified. It was also penetrated by dark, cylindrical somewhat carbonaceous masses

103 [54]

Camp Etukashoo 9 p.m [symbol] Dogs and Feed April 20 Camp Etukashoo which I considered slegmaria [?]. This shale which lay upon the limestone was two feet thick. Superimposed upon it was a [superscript] black [end superscript] carbonaceous shale, thinly laminated, toward the top almost coal, and interrupted by two thick continuous beds of gray shale. In this entire layer I could find no fossils, upon this shale [superscript] which was about 18 inches thick [end superscript] lay a bed of massive limestone, over five feet thick and of which I could not find the top, and in which I could discover no fossils

Upon returning to camp, I found that Esayo [sic] and Etukashoo had skinned three muskoxen, one for each of us, so I cut up four quarters and again fed the dogs till they could eat no more. It was laughable to see the old king lie down on and look longingly at Brindle and Blackie still eating, and be quite unable to devour a single piece more. Brindle, even when so full that she vomits, will not give up, but keeps eating, going off the length of her trace, vomiting, and coming back for more. It is astonishing how much these dogs can eat.

104 [55]

Drying muskox skins Fine weather Clear Calm Wind NE by E. April 21. Camp Etukashoo

Esayo [sic] stretched out his muskox skin this morning upon a snow rampart that he made of four great blocks, by pegging it out. Etukashoo stretched his yesterday by making a frame of a harpoon, the tent pole, and two snow shoes and lacing the skin to it with his siniksha. His skin was quite dry this afternoon, so he took it down and scraped mine and put it up.

We have covered the bed platform of our snow house with a mass of undried skins and even have one for a mat on our floor. It is too bad that we can't have this abundance of fine skins at headquarters at Etah! How the fellows would revel in them!

I set out over the plain today to a small mountain about ten miles away, in the hope that I might see Greely Fjord beyond. I walked for three hours steadily, over fairly good going, almost level, before I got to the top. Instead of Greely Fjord, a small bay lay before me, and the coast stretched on to the eastward another ten miles at least, where another mountainous ridge cut

105 [55]

Camp Etukashoo 5 p.m [symbol] View from camp April 21 Camp Etukashoo

off the view. The prospect from the top of the hill was magnificent. Just to the north of me lay Mt Hovey now covered and imposing. Before me lay a smooth icecovered [sic] bay bordered by a great smooth plain that stretched far to the southwestward in a great level valley bounded by two ridges of mountains of horizontally bedded rock. Across the bay to the westward rose another mountainous ridge. To the northwestward lay Greely Fjord with its dark distant shore showing through the haze. Beyond and westward of Mt Hovey rose Blaafjeld [?] sheer from the sea ice black as the ace of spades [arrow indicating that "black as the ace of spades" should immediately follow "Mt Hovey rose"]. To the northwestward limited by great mountainous walls stretched Fridtjof Nansen Sound, and back of me to the westward of Schei Island and Axel Heiberg Land lay gleaming in the sunshine. All the ice to the

westward of me looked rough and rubbled and almost a score of great icebergs studded the sound. Like a geographical model, a great deltal plain spread out on the northeast side of Schei Isl.

106 [56]

Animal Life + Vegetation. April 21 C

On my way to the mountain and from its top I could see four herds of muskoxen, one of twenty-three, one of six, one of four, and one of three head, grazing upon the plain at intervals of from one to four miles. Everywhere I saw the tracks of Ptarmigan [sic], hare, muskox, lemming, fox, and wolf. I came upon a little gully-like hollow in the side of the hill, facing the noon sun that was almost bare of snow and here feeding upon the luxuriant heath growth of last year were many many rabbits and upwards of thirty ptarmigan with tracks of caribou, wolf, lemming, muskox, and fox abundant all about. Neither the hare nor ptarmigan were shy and it was not until I shot three [?] ptarmigan that the hare made any attempt to get away and then they went hopping up the hills like white jacks-in-the-box. The vegetation in this gully was the most luxuriant I have yet found—a typical heath association Along the side of this gully I found an exposure of black calcareous shale, richly fossiliferous, but

107 [56]

Fossils in shale April 21 Camp Etukashoo

unfortunately almost inaccessible because of a steep snow bank. I endeavored to collect but endeavored only in getting a poor representation I am sure—one or two fragments of trilobites; a gastropod; one or two pelecypods, and one or two cephalapods [sic]. I feel sure that at a more favorable season I could make a rich collection here.

I got back to camp about ten o'clock, fed my dogs, rearranged my kamiks and stockings, and after a big supper of meat and crackers and tea, turned in. We are eating all we can hold these days, for we have plenty of everything except biscuit. We have eaten but one can of pemmican this month, and that merely as a relish, for we have constantly had all the meat we wanted.

This has been another luxuriously fine day. I feel sure that the season on this side is much earlier than on the east side, that the precipitation is not so heavy, and that the mean annual temperature is considerably higher!

108 [57]

Fine day Clear Calm Wind ENE. Fossils April 22. Camp Etuksahoo.

After I had disposed of a good breakfast and various and sundry domestic duties, I took myself off to my fossil bed again to make another collection. I spent four solid hours pounding at the rocks along the stream bed ledges with fairly good success. The fossiliferous limestone is so compact, so massively bedded that it is no easy matter to get out good fossils even under the best conditions, and when one must lie around in the snow, the temperature considerably below freezing, one [sic] fingers and toes

soon become too uncomfortable to permit continued staying in one place. Often I had to quit my work and walk about flapping [?] my hands together to get up a more vigorous circulation. My stay was [?] enlivened by a brief visit of three wolves that came and from their position on the bank above me leered down at me, looking at one another from time to time as much as to say "Do you suppose he has any idea of what he is doing." As soon as I moved to get my revolver from my specimen bag they

[written up left side of page] I saw the tracks of two ermine on the top of this hill

109 [57]

Shells April 22 Camp Etukashoo

took their hasty departure. On my way back along the shore I collected some fragments of shells which I shall take back to Tank—three species, like those we found at Umanak in numbers last year. When I got back to camp Esayo [sic] and Etukashoo had hauled the muskoxen down to camp and were skinning them. We all fed our dogs to repletion again.

Tonight we are all leaving our sleeping bags outside to dry in the sunshine, for we sleep now from midnight or past until noon or past, and the sun shines clear and warm all the time. We shall sleep under our warm, well dried muskox skins. It is hard to believe how light and soft and heavy green hide becomes when it has been dried but a day—quite time enough to dry it thoroughly, however. One side of our large iglooeea is caving in, and Etukashoo says that on the morrow we shall cut out the sinking blocks and put in new ones.

We are comfortable, well-fed, content

110 [58]

Fine day Clear Calm Mild Wind E N. E Repair snowhouse April 23 Camp Etukashoo

Our first duty today was repairing our snow house. We cut down almost all of it and replaced it with a whole set of large new blocks, the largest I have handled. The largest, which required both Esayo's [sic] and my hands to get to position was over five feet long, and nearly three feet wide. The snow is just right for good blocks, and a warm house. Etukashoo made the most of his big blocks, and rebuilt the house into the highest, most commodious house we have had. I could stand erect on the bed platform and not touch the top with my head.

We skinned and cut up three muskoxen for our dogs today. The beasts are beginning to smell pretty strong and neither yesterday nor today could we take the meat for our own use. Hereafter we shall not kill more than enough for three days, at any one time I think. At this camp we have had a superabundance of muskox—boiled, fried, and one meal of fried breaded brains; one meal of hare; and one of ptarmigan.

111 [58]

Camp duties Camp Etukashoo 8 p.m [symbol] Apr. 23 Camp Etukashoo.

Today I tended my kamiks, patched and mended my clothes, sharpened my knives, labeled and recorded my specimens, and wrote up my scientific notes.

It has been another fine day, a repetition of those we have enjoyed at this camp, for that matter of those we have had continuously since we reached Bay Fjord. I should like very much to spend a summer in this locality, rich in flora, fauna, avifauna, and paleofauna and geology. It is a field that any naturalist could [illegible] contentedly over and gather a rich harvest of material. At this season the snow hides much that would be interesting and besides it is not yet time to expect any birds or plant life. Two months from now, I imagine this land is ablossom with flowers and green with grasses, and teeming with life, both on land and water. I fancy that these broad plains are the nesting-grounds of innumerable snipe, plover, and sandpiper species

112 [59]

Fine day a little cloudy, calm, mild Wind N.E. Prepare to leave. April 24 Camp Etukashoo

After a luxurious night's sleep between our muskox robes, and a big breakfast of soup, muskox, coffee, and crackers we got out to look after things and begin our preparations for leaving this camp tomorrow. Etukashoo hauled down two big muskoxen for dog-food to finish up on at this camp. All my kamiks and stockings except the pair I am wearing are dry, and my sleeping bag is almost as dry as it was when I left Etah. My men are equally well prepared to push on so far as clothes are concerned. We polished our sledge runners, repacked our boxes, put new snappers on our whip, looked over our dog-harnesses and -traces and made ready for an early start tomorrow. I cooked a meal of oatmeal, the first we have had on the trip, not because we needed it particularly but because I could more conveniently do so than when we are on the march. It was good, very good. I boiled it in a double boiler made

113 [59]

by putting my little blue teapot in our big meat pot.

We have feasted and rested sumptuously at this comfortable camp; we have had nothing but sunshine all the time, no wind, no storm, and very little clouds. The dogs are so well-fed that I fancy that only by a long march tomorrow will we get over much ground. At the end of the morrow's march, I hope, we shall cache our surplus boxes and baggage, taking provisions enough for a week's trip down Greely Fjord and return. I suppose the only reason for going is to study the geology, and to gather notes on the vegetation, but I consider it worth our while, now that our dogs are in good shape and we have the time.

Nevertheless I am eager to begin work in Greely Fjord proper where my work will really be exploratory and pioneer effort. By May 12th I think, we shall be at the head of Greely Fjord, and by June first be leaving Fort Conger on our way back to Etah.

114 [60]

Botany Notes.

Camp Etukashoo:

From the large number of hare, ptarmigan and muskoxen feeding on the plain about this camp I was sure that the vegetal covering was relatively luxuriant at least in the way of grasses and sedges. Examination abo [sic] the feeding ground showed that I w [sic] not mistaken. Everywhere there was an abundance of short grass and sedg [sic] mainly a dry moor vegetation. Ellyn [sic] bellardi, Carex capitata, Festuca ovina Glyceria tenella or angustata, Poa sp probably glauca, and Calamagrostis grew abundant. Of these Glyceria and Ellyna were the most abundant Saxifraga oppositifolia and Dryas integrifolia carpeted all the bare spaces. Draba, probably alpine, Cerastium alpinum and Trigynum, Stellaria longipes, Alsine stricta, Papver radicatum, Salix arctica, Oxyria digyna, Polygonum viviparum, Luzula sp, Juncus biglumis and Pedicularis lanata I found on the beach ridges that margined the plain. On a sandy clay ridge near the ice I found Stellaria humifusa.

In the lower pool-like places I found Continued on page 7.

115 [60]

*Probably spoiled—Shutter failed to work

Roll #10

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1 Mt Hovey—N.W. of C. Etukashoo 10 on 11 stop
*2 Mts N. of C Etukashoo 3 sec on 16 stop spoiled
*3 " " " " " 3 sec on 16 stop spoiled
*4 " " " " " 3 sec on 16 stop spoiled
5 " " " " " " 1 sec on 8 stop
6 My First Fossil Ledge 1/10 sec on 11 stop
Roll #11
Game Seen + Killed
Hare Bear Muskox Wolf Ptarmigan Lemming Caribou Ermine Fox
[spreadsheet]
First column seen, Second column killed
* Tracks.
116 [61]
Roll No 3
6 Cutting up muskox spoiled
Roll No 4
1 Camp Tanguary Apr 10
2 Mt. above C. Tanquary at head of Bay Fjd
3 View up the head of Bay Fid
4 Musk ox [sic] picture
5 " " "
6 " " "
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Roll No 5 All musk ox [sic] pictures Roll No. 6 All Musk ox [sic] " no. 6 spoiled Roll No 7 All muskox " except #6 which is Camp Hunt. Roll No. 8 1 Camp Isachen. Esayo [sic] seated near iglooeea [superscript] 11-1/10 2 Camp Allen as we left 3 " Midnight Sun just ready 4 Ice off Isfjeldodden. 5 Muskox square/point of Fosheim Pen. 6 " " " " " " " Roll #9 1 The Sole Survivor Fosheim Pen. 2 " " " " " " 3 His Last Stand " " 4 Camp Etukashoo in Making Apr. 19 5 " " on Apr 20 6 Looking across to Blaafjeld 117 [61] Roll I 1 Camp Sonnetag 11 1/5 2 " " 11 ½ 3 Tea and rest at Commawitz 4 Camp Greely 11 1/5 5 A line of sledges: 11 1/5 6 Tea near C. Camperdown 11-1/5 7 Large igloo at Camp Small 11-1/5 8 " " " " " 11-1/5 9 Camp Small 11-1/5 10 Camp Small 11 1/5 Roll II 1 Looking out into Flagler Fjord from Camp Sverdrup, Mt with Peary's cairn in center of picture 11-1/2 2 Looking up Flagler Fjord to Pass 11 1/2 3 Same 11 1/5 4 Camp Sverdrup 11 1/5 5 Spoiled 6 Near view of Sverdrup Pass 11-1/5 7 Camp Green. Apr 5 8 First view of land across glacier 9 Tea on divide of glacier Apr. 7-8 10 Looking down into Bay Fjord from glacier

Roll No 3 1 Rabbit tracks on the hillside 2 Our first muskox kill 3 " " " " Apr 8 4 Cutting up muskox [illegible] ? [Ekblaw's notation] 5 " " " ? [Ekblaw's notation]

118 [62]

Questions: [across the top of two pages] How are Tanks toes? Was amputation necessary?

When did Oobloyah + Okpuddysho [sic] get bac [sic] Did they kill more than 2 bears—any on way back Did they bring back Nukapingwa dog, or was he dead? Were you surprised at muskox skin they brought? At choice of Flagler Fjd route? How did the roll of films turn out that they brought back. Were they over-exposed. [line erased]

When did Arklio + Nukapingwa get back.

How many muskox skins did they return with.

" " bear " " " " with?

Were Mac's two skins all right.

" Jots [sic] + Tank's horns all right.

Was my calf skin all right

" the lemming in good condition.

Did they bring back coal? Thermometers

How did the muskox + other films they brought back turn out? Who developed the films. Have any prints been made.

What report did the men make? Did they tell about Pukey?

119 [62]

When did Hal and Peter leave? How many in their party? When did they get back? Did they have a hard trip: What did they see? What did they discover.

When did Peter come to Etah? How long did he stay? How did you like him?

T [sic] What kind of success have they had in Petoravik [?]?

What has Jot been doing? Green? Mac?

What is the news in general. What are new plans?

[sketch]

A crude but careful sketch of the sun with attendant parkelia [parahelia?] near the mouth of Bay Fjord on April 13, 1915 between six and eight p.m. The shaded portion represents the prismatic colors except the central cross which was golden.

120 [63]

Zoology—Shells.

on a clayey beach ridge near Camp Etukashoo I collected fragments of the shells of three specimens of mollusks, one a scalloplike [sic] form, and two clamlike [sic]. The scallop forms were so fragmentary that I could not reproduce them The two clam-like forms were:

Accession No. EZ1 [sketch below] Clamlike form

Accession No. EZ2 [sketch below] Clamlike form

Accession No EZ2 [sketch below] fragment of scallop

Geology Bag G8 Contains EG4 Nodular sandstone from Camp Allen Fosheim Penin. Layer 2ft thick in sandstone ledge 30 ft exposed Apr 17. EG5 Black deontic sill + dyke south of Slidre Fjord Apr. 18. EG6 Brown micaceous dyke cutting EG1 and EG2 Apr. 22, 1915

121 [63]

Specimens collected Geology **1** Specimen Travertine 1 "Calcareous Sinter 1 Bag Coal Bay Fid 1 " " with sandstone + limestone Bay Fiord [bracket around the above items on left of page with notation "Sent back"] Zoology. 1 Adult Female MuskOx [sic] Skin and Skull 1 Adult Male """" Skull 1 Yearling Male Muskox Skin and Skull 1 Lemming—Entire 1 Bag Shells.—No. Z1 Containing EZ1; EZ2; EZ3 [bracket around the above items on left of page with notation "Sent back"] Geology. Bag G.1 Contains E.G1. Fossiliferous limestone Bag G2 Contains same as G1 Bg G3

Same as G.1

Bag G4

Contains E.G2 Fossiliferous limestone Bag G5 Contains EG3 Fossiliferous shale.

[64]

Thus at the end of the first third of our journey at the northern end of Fosheim Peninsula, at our camp of six restful, easy, well-fed days—Camp Etukashoo—I complete this book. It is a modest record of almost a month's travel and scientific observation, all the more difficult because of the cold, the snow, and the constant attention and care demanded by the dogs and equipment. All has gone well. The route has been good—crossing Ellesmereland by way of Flagler Fjord is much better than by way of Beitstedt [sic] Fjd; the weather has been uniformly and generally calm, clear, and mild; the dogs have done well, and are now in the pink of condition; my men, both of the two supporting parties and my companions of the trail, have been cheerful, helpful, and satisfactory in every

way; I am well satisfied. With no ill luck, we shall proceed on our way tomorrow, and in due time complete our work and our journey—successfully, I hope.

W. Elmer Ekblaw,

Camp Etukashoo, 7:00 p. m. April 24, 1915