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DIARY OF B. W. TAYLOR

ON

CANADIAN GOVERNMENT EXPEDITION TO HUDSON STRAIT

Summer of 1928.

June 24: Quebec: Sailed to-day at 9.A.M. Materials in between decks aft. Came aboard yesterday evening.

June 25: Father Point: 5. A.M. Mist lifted somewhat but rain in the morning. Air Temp. 11° C. (rain). Arranged water bottles to throw over early tomorrow. Picked up a man at Clark City after supper. 7. P.M. to replace sick man, put off at Father Point. Saw several whales during afternoon.

June 26: Water temp. at surface 11.3° C. Air 10° C at 1.30 P.M. Rose at four A.M. and put over drift water bottles #9390—#9523 inclusive. This kept me occupied until 12. P.M. (noon). Two bottles every fifteen minutes, or three every thirty minutes or two every thirty minutes, according to speed of ship. See reports. Weather misty, and heavy fog held up progress of ship considerably.

June 27: 10. A.M. Surface temp. 10.7° C. 1. P.M. 10.8° C. Fine day, sunshine, could see sky overhead yet we were surrounded on all sides by a heavy mist. Later dense fog and is holding up ships.

June 28: 8. A.M. surface water 9.7° C. and air 11° C. Mist accompanied by fine rain. Position about Flat Island. 11.30 A.M. surface water 10° C. and air 11° C. 3.15 P.M. off Ferrole Pt. 7.15 P.M. surface water 7.4° C. and air 8.25° C. Ice reported this evening, did not see any myself. Dense fog still prevalent. 8.30 P.M. saw a small ice-berg, about a quarter of a mile off.

June 29: Anchored in Forteau Bay, because of bad weather which has been reported ahead of us, all of last night and until this evening. Ship's compass was thirteen degrees off due to iron used as ballast in launch which was stored forward. Captain brought a large quantity of cod aboard and many caplin which we had for dinner and supper. Adjusted compass and raised anchor this evening. Weather cleared, now nice with a clear moon.

June 30: 7.30 A.M. surface water 7.5° C. and air 10° C. Clouds; a few cirriform and two or three stratiform. Seven to eight ice-bergs of varying size in view. 12.30 P.M. surface water 9° C. and air 12° C. At 6.30 P.M. Air 10° C. surface water 8.8° C. Beautiful day. Saw ice-bergs all day.

July 1 : 8.30 A.M. surface water 5.5° C. Air 7.5° C. Windy and rain all day.

July 2: 8. A.M. surface water 5.5° C. Air 10.0° C. Rain, expect to arrive at Port Burwell to-morrow. Very little ice seen so far to-day. 2. P.M. Surface water 4° C. Air 5° C. at 7.15 P.M. Saw some larger bergs later in afternoon. Rain and fog all day.

July 3: 8. A.M. Surface water 4° C. Air 9° C. Land in sight snow capped mountains. Fine day with sunshine but not without mist. 7.45 P.M. Surface water 2.2° C. Air 4.5° C. Expect to enter Port Burwell this evening. Expected to see aeroplanes to-day which had planned to greet us. According to wireless report they could see us distinctly whilst we could not see them at all. Have had only two days of nice weather so far.

July 4: 8.30 A.M. Surface water 2° C. Air 8° C. Arrived Port Burwell at 9.00 last evening. Are now in harbour and hope to get ashore. 7.30 P.M. Surface water 3.5° C. Air 8.5° C. Was ashore this morning and collected some amphipods along with a worm or two and some larval forms; all preserved together, from a small brook. Temperature of water of brook 9° C., pool 9° C. and water of brook above pool 7° C. Amphipods (sea-lice) very common along shore and in above stream. Saw periwinkles, barnacles and remains of three long dead crabs along shore this afternoon; tide was ebbing but not right out. No opportunity for further collecting.

July will be here again, however, and for a longer time. Crows reported to stay here all winter. Saw collected and squashed (by accident) an ant with abdomen greatly swollen as though gravid, quite spherical, and ant was black. Small black flies and mosquitoes already present though not so as to bother one. Now, 7.45 P.M. enroute for Wakeham Bay. Saw a seal.

July 5: 8.A.M. Surface-Temperature 1° C. Air 2° C. A fine day ice around which we met last night at 12 midnight. 6.30 P.M. Air 3.5° C. Surface-temperature 2.8° C. though water is abundant with ice, I should expect temperature to be lower. In ice all day and it becomes thicker.

July 6: 9.30 A.M. Surface-temperature 0.5° C. Air 5° C. Not all but only a few of those crows (Ravens?) remain throughout the winter. 7. P.M. Surface water 0.5° C Air 2° C. Still in the ice, yet enroute for Wakeham Bay. This morning Major McLean presented me with a bucket of ice and gravel, gathered from ice pans, Under the Microscope (Medical officer's) a sample of this gravel showed several sporophytes, one diatom and several reticulate algae-like organisms.

July 7: 9. A.M. Surface-temperature 1.0° C. Air 5.5° C. Still in heavy ice and dense fog. A bear was shot last night at 11.30 P.M. which by report weighs three quarters of a ton to one ton, kind of ton not specified. When first observed it was feeding on a large seal, a square flipper. Am anxious to get the os penis which Major McLean says is reserved for Mr. Johnson the deputy minister, so my hope appears to be a forlorn one. See many Murres each day. Are on north side of Hudson Strait a long time getting to Wakeham Bay. 8.00 P.M. surface-temperature 1.° C. Air 4.5° C. The bear has been skinned, cleaned, and quartered. 10.00 P.M. Have changed plans and are going to Nottingham Is. since our position when fog and ice cleared made this more convenient.

July 8: 9. A.M. Surface-temperature 1.8° C. Air 7.5° C. We are now making for Wakeham Bay. The truth being we are glad to make any harbour the ice will permit. No ice around now. Arrived Wakeham Bay 2. P.M. and inspected shore for specimens, tide was ebbing; saw a dead crab, periwinkle, barnacles and a mussel, also many short ground clinging flowers. Life (apparently) not as abundant as at Port Burwell.

July 9: 9.30 A.M. Surface-temperature 2.5° C. Air 3.5 °C. Fine, clear day. 7. P.M. Surface-temperature 1.9° C. Air 5.° C. Enroute for Nottingham Island. Some, not much, ice.

July 10: 9. A.M. Surface-temperature 3.4° C. Air 6° C. A fine, clear day at this writing and are off Digges Island. Arrived at Nottingham Island at 10.30 A.M. No chance to go ashore, put out #5 net to let it drift. Preserved result in a one pt. jar; included chaetognaths (Sagittae) Crustacea. Copepods with long red antennae, a jelly fish and numerous other species of organisms. Left here at 2. P.M. At 6.45 P.M. Surface-temperature 3.6° C. Air 7° C. and just off Eric Cove.

July 11: Another fine day At Sugluk Creek went ashore and gathered amphipods, small minnows and a mussel. This afternoon followed creek up a ways but could detect no life in it. There were, however, many flies, mosquitoes and moths to be seen as well as sand pipers (Iregna alpina?) Went in skipper's dory to do some towing--had permission of 3rd.

officer to use the boat--but was ordered out by Capt. Hearn after first tow. 2 tows #5 net, 1 at surface and 1 about 6 metres. 3 vertical tows of 20 metres, each haul preserved in 1 pt. jar. Stopping here to water for boilers. Not much chance to do any work so far, and this is by no means a scientific expedition. Sounding 12fths. There is a tide here of only six feet, which possibly accounts for the paucity of littoral life seen this morning.

July 12: Off Charles Island at noon and surface-temperature was 3.5° C. Made three vertical hauls at 12fths. There is considerable plankton here. Tide at rate of 2 M. P. H. At 3.30 P.M. made four tows 2 #5 surface and 2 # 0 net at depth of 8-12 metres in Charles Island Inlet, as Major McLean was going prospecting I had the above opportunity. A murre was shot and large flocks--five or six--with twenty to forty members of eider ducks seen. 7. P.M. Two vertical hauls at 12fths. both in one 1 pt. jar. 9. P.M. Surface-temperature 1.5 °C. Air 6° C. Later one Murre and four sea pigeons shot.

July 13: 10. A.M. Surface-temperature 3.5° C. Air 10.° C. Went ashore at Observation Camp, eight or ten miles from the base at Wakeham Bay along with G. R. Madill a magnetician and G. Valiquette the photographer for the expedition and were hosp-

pitably entertained by Captain King. We stayed there from 3. P.M. Friday until 7. A.M. Monday, at which hour the Montcalm returned to pick us up. Made some tows at 3. P.M. and collected some jelly fish with the dip net. At 11. P.M.--low tide--visited and collected material from the shore.

July 14: Arose at 3. A.M. due to mosquitoes and made a few tows in flat-bottomed row boat but desisted because of wind and difficulty in rowing. Collected crustacea etc. from fresh water pond, about two to three ft. in depth, Temperature 11° C. Later, with help of Captain King made some more tows. Minnows in abundance.

July 15: Visited two other coves and two fresh water ponds and collected from each. Collected galls from willows on hill tops and a few insects all preserved.

July 16: Came aboard at 8. A.M. and arranged material en route for Port Burwell,

July 17: Off Cape Hopes Advance was presented with but will not keep the cranium of a caribou as it is not in a good state of preservation. Hope to get a better one later. Some ice present here and 50% reported at Port Burwell. Have not yet had an opportunity to make any sections, the ice, so far, would not permit in any case.

July 18: Have again talked to Major McLean re sections. He sees no immediate prospect of doing these. 2.30 P. M. made two vertical hauls

from poop deck. Dirty weather just now, rain. 3. P.M. surface temperature 4.6° C. Air 6° C. Went in launch and made two tows #0 net and #18 net, the latter damaged but not beyond repair, the launch is unsuited to towing. Returned because of bad weather. Plankton in #0 net abundant, 1 quart jar.

July 19: Remaining in lee of island (Diana Bay) Cape Hopes Advance because of dirty weather, and presence of ice at Port Burwell.

July 20: At 8.30 A.M. went ashore on island (Advance or Hearn Is.) to collect specimens, the net result was one spider and one water beetle. The fauna of the island is very restricted. Made two horizontal tows with #0 net from poop deck, ship at anchor, but strong tide. 4 m.p.h. and secured two well filled quart jars. One vertical haul #0 net kept in one qt. jar. Received and preserved a young gull. Two vials of mosquitoes. Nice day but very windy this morning. Ship is now taking water, either I go ashore or employ myself on poop deck since launch is unsuited to towing--too fast--and until we reach one of the bases no other craft is available. The island is very bare and rocky, Occasional clumps of mosses and several rills flowing (dripping) over the rock. Some black and white mica seen in small pieces. A valley (a draw) runs across the island and appears to have been scoured out by the ice. I wish I knew some geology.

July 21: En route for Port Burwell. 10. A.M. Surface-temperature 2.3° C.

July 22: A mother bear and female cub shot early this morning and then hoisted aboard. 10. A.M. surface-temperature 2.6° C. Saw but

was unable to secure a large, eight to nine inches worm; probably Nereis. Port Burwell. Expect to meet the "Larch" here. Harbour thickly dotted with ice. Fog very heavy; cleared later. Saw and collected Nereis; one, swimming in surface water near stern of ship.

July 23; Left here at 4. A.M. for Resolution Is. 8. A.M. surface-temperature 2.0° C. Ship scouted Resolution Is. looking for a possible landing site; now returning to pass the night in the Buttons. A blow coming on. 8. P.M. surface-temperature 1.5° C. Threw drift bottles no's. 9526-9527 inclusive over from 6.15 P.M. until 11.15 P.M. at which time we were off the Button Islands.

July 24: 10. A.M. Surface-temperature 2.5° C. 7.15 P.M. 2.25° C. In Buttons all day at anchor. Made two vertical hauls preserved in two 1 pint jars.

July 25: Went with exploring or scouting party looking for a site for a wireless station. Collected some sea lice(shore amphipods) in 4 oz. bottle, also an aquatic larval form white from fresh water pool on Grfffin Is. We were out the entire day and saw seals, fulmars, gulls, (plovers?) sea pigeons. Have been presented with two huge whale vertebrae.

July 26: Met the "Larch" at Port Burwell and received our mail. Surprised to meet Sheppard, a close friend, on the Nascopie. Went ashore and received a donation, some sea-anemones.

July 27: En route for Cape Hopes Advance. Dr. Harris expects to fly to

Wakeham Bay to assist Dr. Clothier operate on a native. Two rainbows visible at 9. P.M. one triple banded at Zenith. Very beautiful sight. Arrived and anchored about 9.30 P.M.

ly 28: A few maggots from the ships beets put into a vial. Two vertical hauls of plankton from ships stem. qt. jars. Base E is to be situated here and the ship is at present unloading.

ug. 29: Was ashore with G. R. Madill for the 29th, 30th, and 31st during practically al. of this time confined to tent due to heavy and continual rain and mist. Collected about twenty prickly backed fish, 2~~0~~3" from a lake a short distance inshore. Temperature of lake water 7.5° C. Cove where base is situated is very rocky and at low tide only a few periwinkles to be seen, even the common shore amphipods are absent here. Collected a few more willow galls. Returned to ship with construction gang from "Larch". Two members of this gang attempted to return by a short-cut--we were going overland--and they lost their way. The siren of the Montcalm was sounded every five minutes accompanied by the discharge of sky rockets throughout the night but without success. The next morning, Aug. 1, 1928, three search parties were organized. I was a member of the third party. Shortly after we set out, the lost were found but not by us and as we were unable to hear the recall signal due to fog rain and wind, we continued returning about four in the afternoon tired, hungry and blistered but glad to hear the good news.

ug. 2: Received a good sized holothurian from one of the sailors who picked it up yesterday when setting out on the above search. Preserved in 70% alcohol. Bad weather, mist, rain and high wind, no landing was attempted during the afternoon.

ug. 3: Promises fairer to-day. 7. A.M. surface-temperature 4.0° C. Fished and jigged unsuccessfully all morning getting only one small bunch of red sea cherries(tunicates?). Have not yet had the use of a boat since we have been here, they are all required for the unloading of material for the base but will get one later as the pressure eases. However, Captain Hearn took me out in his dory this afternoon. We visited and collected, sea lice, four large sculpins, one bunch of sea cherries and a mussel from Hearn Island. One at least of the sculpins contained round worms in the body cavity, and a sample kept. Later visited a small cove near the ship in Diana Bay and got several mussels, sea lice, small sculpins, a caplin, a polychaete worm and a periwinkle besides some other material which has been preserved in two pt. jars with formalin. It has been a beautiful day much appreciated after the past five or six days of miserable weather, very enjoyable as well as productive.

Aug. 4: 7.30. A.M. surface-temperature 4.5° C. Fine day overhead but thick and foggy about ship. Dr. Harris is quite sick. Spent the day ashore. Got four spiders. One of these a female with capsule-spherical-attached to abdomen was dug out of hole or nest with fore-finger. At low tide (a big tide tO-day) collected one six rayed starfish, several sea anemones, tubiculous worms,

mussels, clams, etc. from a cove in Diana Bay. Fog lifted and weather was beautiful, very warm, a few mosquitoes around. Got a sponge attached to rock at low tide, below water surface, saw several sculpins but did not gather any.

Aug. 5: Weather fine, jelly fish and ctenophores around ship becoming larger and more numerous. Jigging and fishing; beef as bait; unsuccessful.

Aug. 6: Went ashore around noon, got a lemming male and preserved it. Collected a few insect larvae from under stones in running water. These are few in number, in fact it is only the occasional stone which harbours any specimens. Have been looking, as yet unsuccessfully, for Hydra. At low tide many mussels and clams secured, samples of these preserved. Sea lice of a different appearance seen and representatives gathered, (Nebalia?). Some, to me, peculiar crustacea from fronds of sea-weed, superficially--attitude at least--not dissimilar to the preying Mantus (Cyprella). Also collected a few tubiculous worms; sea anemones and some small round white worms from cast up sea weed at high tide mark, I gathered only a few of the latter since fog was approaching rapidly and I was some distance from camp.

Aug. 7: Remained at camp over night and in the morning investigated one of the small fresh water streams which are so abundant here. Saw no fish life with the exception of one or two small prickly backs. Picked up a large larvae 2" with fine silky hairs radiating from the entire body surface. Got some grubs and a few worms by digging for them in stream bottom, fine gravelly bottom. Gathered more of the small white worms mentioned yesterday. No earthworms seen during excavations for the buildings of the base. Returned aboard and received a young female eider duck along with a "fish doctor".

from Captain Hearn. This "fish doctor" according to Captain Hearn's description is an ectoparasitic form from a cod fish and was given to him for me by Mr. Hall, a trader, who visited the ship whilst I was ashore.

Aug. 8: Occasional rain and fog throughout the day. Did not go ashore to-day. Go to-morrow to pack up and investigate some reported worms. Had planned to collect mussels with Captain this morning at low tide 5. A.M. but water too rough, swell from high winds of yesterday, so did not go.

Aug. 9: Went ashore at 6. A.M. and packed up. Collected half a pint of willow galls containing white segmented larvae (saw fly larvae) with three pairs of appendages. Looked with Mr. Wilson for worms which he had seen yesterday but we could not locate same place and our search was without avail. Collected a small larvae from interfaces of rock along with a small red spider. Three more of these spider like creatures later. Just as I was boarding the launch to go aboard one of the men of the"Larch" presented me with a large wasp which I shall keep also received a Norther Diver from the hand of G. Madill. Expect we are through here. Dr. Harris is now on his feet again although very weak.

Aug. 10: A six rayed starfish and a sea urchin came up with the anchor, given to me by "Chippy" and preserved in 70% alcohol. Arranged material collected here. Left at 3. A.M. for Wakeham Bay. Saw Major McLean about the sections I am to make and to mention the fact that I needed better accommodations in the way of a small boat for dredging, etc. He assured me that he was doing his

his best for my work and that the probability of making any of the sections was at best remote; further am to be presented with a statement from him to this effect. Arrived at Wakeham Bay around 4.30 P.M. and proceeded to head of bay beyond the base where we were joined by the "Larch" for coaling purposes. Met Captain Balcolm of the "Larch" who has a trout for me.

Aug. 11: Received a trout 30 cm. in length from Captain Hearn who netted five dozen of them. Preserved it in formalin along with the alimentary tract of another. Opened several stomachs of these trout and took samples of content, i. e., small minnows and amphipods. Many tape worms taken from interior of intestine, none of them observed attached to interior, in one case, however, a capsule containing these worms was found attached to interior. That position of the intestine posterior to this capsule was filled with small rolled bunches of these tape worms. Several worms were observed attached to exterior of intestine as though occurring in coelom. This seems unusual and in all probability does not ordinarily occur. I did not eviscerate the trout myself; the viscerae were presented to me, and so I did not have an opportunity to examine any of the body cavities. No parasites could be detected in any of the gills examined. Minnows in stomachs were practically all young sculpins. Went ashore with Captain Balcolm of the "Larch" immediately after lunch. Collected about twenty young sculpins slightly larger than those found in trout stomachs, i. e., 2-3 cm. and two stickle backs of a species different than those already in hand. Dug up an Eskimo grave and brought back all the bones available though the remains are far from complete in fact a large number of them

is missing including the skull. Vegatation most profuse and varied yet seen, alder bushes 2-5' in height and one 5" in diam. Returned to ship which then proceeded to the base where an epidemic of influenza is raging among the natives, and in consequence of which we were requested to remain aboard. Fished an "Artic Cod" about 9 Cm. in length and will keep. Scow aground and can not get off until high water to-morrow. 4.15 A.M. Scheduled to leave for Nottingham Is. immediately after. Trout from Captain Balcolm 5. A.M. and partially dried preserved with one from Captain Hearn in gal. jar. During the afternoon excursion hardly any life could be observed under the numerous rocks which I turned over, one brown female ant (gravid); two black beetles and a minute spider was the total life observed. Each of these occurred under a separate rock and out of a numerous number of rocks inspected only four sheltered any observable life.

Aug. 12: Sunday. Fine weather during fore-noon. Cloudy and rain during the afternoon and evening. Put out two drift bottles every 15 minutes from 12 noon until 7.30 P.M. No's 9568-9629 inclusive with the folowing exceptions No's. 9570and 9576 missing and No. 9587 duplicated. Position at noon 62.27 N. and 72.50 W.
7.30 P. M. 6227 N. and 75.5W.

Course N. W. Magnetic.

Aug. 13: Fog very thick, anchored a beam of station at Nottingham Is. about five miles off. Wind getting up so decided to move to Cape Wolstenholme for shelter.

Aug. 14: Anchored in Eric Cove high winds reported outside. Some talk of small pox among natives here and quarantine instituted only to

be lifted later as unfounded. Several vertical hauls #0 net made and sum total hardly exceeded a couple of dozen of minute jelly fish which were not kept. Find that I have much time upon my hands.

Aug. 15: Sailed for Nottingham Island at 3. A.M. Drift bottles no's. 9630-9668 with exceptions of 9642 and 9643. 9647. 9648. 9649 which were missing and no. 9667 of which there were two. The last interval was not of fifteen but ten minutes duration. Positions at start 3.30 A.M. 62.36 N and 77.8 W at end 7.25 A. M. 77.46 N and 63.6½ W. Course was N.29 W. and about .33 miles long. Went ashore in afternoon. Collected fresh water Schizopods male and female from pond just in front of power house. Also some ostracods and one large crustacea with shovel-like carapace. There was only one of these to be seen although exuvia were present in numbers and several were collected. The pond was shallow and small, the depth of water being nowhere over one foot. In places the bottom, a fine vegetative detritis, had a depth of one to two feet. A few worms also gathered. Mr. Hudson, radio engineer, gave me two gull eggs and Dr. Wickwire gave me his "bug collection" consisting of bumble bees, with parasites, flies, spiders, mosquitoes, and caterpillars, etc. Large number of shore Crustacea collected (Nebalia?). Helped Madill and his assistant Rump to erect tent and make home just across the inlet from the station. I am staying with them while ashore. Three caterpillars picked up and preserved with a fly taken in the act of laying her eggs. These caterpillars are reported as being seen slowly crawling over the snow fully two miles from any uncovered moss or stone. The hives of the bumble bees are situated, according to

to local investigation and report, under stones underground. The chaps here appear to take a keen interest in "Natural History." Much loose sandstone on beach bearing fossils, none observed in place and none collected. Have heard of a fossil claw some distance away and in place, but Dr. Wickwire has prior rights.

Aug. 16: Flock of young ducks, with mother on pond hardly more than thirty feet from camp. Made several dredges in inlet, depth of ten to fifteen fathoms, with assistance of Charles Rump and made rich hauls consisting of worms and tubes; sculpins, all of same species; prawns; amphipods, holothurians; hydrids, whelks etc. Samples of all kept including a small three armed starfish which is in 70% alcohol. Forenoon clear and bright, afternoon fog came down and an ethnological expedition which had been planned had to be dropped. Dapy the new cook for the base requested some bottles and formalin as he intends to collect some specimens. I was glad to be able to accommodate him.

Aug. 17: It was raining when we awoke so we made breakfast in our (their) tent rather than cross the inlet to the base. After breakfast gathered some of those entomostraca with the shovel like carapace from a pond just in the rear of our camp. Then went to the "pond" in order to observe the flock of ducks mentioned above. Our arrival must have disturbed them for they had disappeared. Saw Major McLean who advised me that, weather permitting, there would be an opportunity to make a section from here to Eric Cove. I went aboard in the afternoon in order to organize and on my arrival was presented with two of the above ducks by Bill, one of the sailors. This, in part at least,

accounts for the disappearance of the flock. Have endoskeletons of two crabs with complete outfit of appendages though not all attached.

g. 17: Made a two from stem of Montcalm, tide was running, depth about ten metres and preserved the results, mostly algae and sagittae. A very small ophiuroid came up on the outside of the net and was preserved separately in alcohol. So far four of the five classes of Echinoderms have been observed i. e., Asteroids, Echinoids, Holothurians and one Ophiuroid. Am surprised that I have not yet observed any Ascidians at least not recognized any (with probable exception of sea-cherries from Diana Bay).

. 18: Started to work at four A.M. with the reversing thermometer. Only one of these could be made to reverse last evening and this morning the other one also refused to do so. Thus was forced to restrict my activities to plankton work and this was far from satisfactory. The run was from Nottingham Island to Eric Cove; two stations a mile or so from either shore and one in the centre. The immediate result of the first net overboard was the loss of the net, this despite the slowness of speed of the ship (two or three minutes ahead and then stop for five or six minutes) #0 net rope snapped. Three samples of plankton were taken at the three stations. i. e., #0 at surface; #18 about 1 metre below; #5 net about five metres below. At third station was able to secure a fourth sample i. e., #0 net at 25 m. approx.--closed tow. Time allowed for each tow 15 min. as nearly as possible. All samples kept as they will, no doubt, be of qualitative though hardly of quantitative value. Several adjustments of my gear are necessary for efficient operation. I will also attempt to adjust thermom-

eters, which may have been jostled, as they have been kept in box in between deck aft, this I judged to be safer than my cabin where the box can not be accommodated. This has been my first opportunity to test or use the gear.

Aug. 19: Sugluk Creek, baited and put over stem both dredges throughout the day. Drew in at intervals of one to two hours and secured the following specimens: about twenty crabs, most of them infested with barnacles and worms(Spirorbis borealis) and one crab carried a beautiful pink sea-anemone on its back, samples of these kept along with a typical healthy uninfected individual; several hydroids prawns, worms, etc. Went ashore in canoe, Mr. Hall's, and gathered young prawns which are present here in large numbers. Secured tape worms from intestine of trout caught by Captain with sample of stomach contents i. e., small crustacea and caplin; also some trout ova.

Aug. 20: Left Sugluk Creek at 1.30 A.M. for Wakeham Bay and arrived here at 5. P.M. Put both dredges, baited, over in 23 fths. of water for the night. Fishing for tommy cod unsuccessful but got a sculpin on the jigger as far as the surface of the water when jigger line became entangled in one of the dredge lines and I lost my sculpin and could not raise any others. Then I went ashore about 8.30 P.M. to wish bon voyage to those of the personnel of the base who are flying out this Friday. On my return, drew in dredges, one of which was empty, the other contained a raw-red sea-cucumber, part of the test being scale-like in appearance and part of it modified as an organ of attachment

to rocks or other surfaces; called a rock sucker by the sailors, and said to be common along the Labrador coast.

Aug. 21: Left Wakeham Bay at 3.30 A.M. for Charles Island where we arrived before supper. Heard music from London, England, on loud speaker. Put both dredges over in 26 fths. and got the benefit of the ship's swing. Got one crab, did not keep, and twenty large amphipods all kept; many of the total number of these amphipods were lost through the large mesh of the dredges. In future I purpose to use a gunny sack in place of the mesh. A very strange-to me-creature came up with the amphipods. It is about 8 mm long with a broad flat wax-like back. Proceeding from the cephalon, the back broadens to a hump and then inclines ventrad and narrows. This posterior portion carries a dorsal ridge. The mid-portion i. e., cephalon to hump carries ventrally six pairs of appendages which are spike-like in nature as is the single unpaired appendage of the cephalon. The specimen is unsegmented and, apart from the appendages, looks and feels more like a wax model than a genuine organism. Am keeping separate in 4 oz. bottle, formalin.

Aug. 22: Rose early and proceeded to draw up dredges since considerable wind had arisen during the night. One of the dredges was empty the other was missing. As the bad weather continued the anchor was hauled up and we spent the day in cruising the strait. Even members of the crew were sick as well as most of the land lubbers. Towards evening 6. P.M. the wind dropped and we anchored just off Charles Island. High wind during most of the night.

Aug. 23: Very boisterous wind all day, lying in cove of island. Ship

rolling uncomfortably. Wind during night 70-75 M. P. H. logged as terrific gale. At 6. P.M. changed anchorage.

Aug. 24: Explored island when waves had subsided sufficiently. I was not in exploring party remaining by ship to put nets, traps and dredges overboard as feasible. Winds variable and rain later in day. Jigging and fishing during day but could not get any bites. Dredges over three times secured a hydroid and sea-urchin first time, preserved together, and nothing in the other two. Phytoplankton secured in quantity down to 25 m. Samples kept of #18 net 0-5 m; #5 net 15 m; and #5 net 25m. approximately. No crabs or other specimens were found in traps, two which I baited and set. Higher winds as night drew on.

Aug. 25: Added six rayed starfish, hydroid, and sea-lice to yesterday's collection. A crab with back covered with barnacles and one of these barnacles carrying a worm kept. Also a small sea-urchin. Bad weather unable to land.

Aug. 26: Sunday weather fine. Island investigated and site for wireless station to be erected next year chosen. Was not ashore. Dulse very common here, by report, a sample kept in 4 oz. bottle. At 1. P.M. sailed for Sugluk Creek. Have not yet been able to adjust thermometers, have no case with me in which to swing them. Anchored in Sugluk Creek at 6.30 P.M. Set crab nets. This is the headquarters of Herbert H. Hall, trader for whom we have some supplies. Believe we are to coal here from the "Larch" which is expected to arrive to-morrow.

Aug. 27: Wind in forenoon with stratiform clouds. Contents of crab traps; two small prawns, one amphipod and four minute ophiuroids, the arms of one only being intact. Rain threatening toward noon. Requested use of Major McLean's launch, this was refused but was offered short use of ships launch which is not geared to run at slow speeds--see entry of July 20th. I accepted the offer and found that the launch is capable of going as slowly as the one in charge desires. Made the following planktonic collection #18 net at surfact for 15 minutes at 1.30 P.M. contents in ½ pt. jar; #5 net .0-5 M. contents preserved in pt. jar, this was a very scanty haul hardly a copepod to be seen and hardly anything else; #5 net at 15-20 M. depth for 15 minutes. Time 1.50 P.M. 1 pt. jar; #5 net at 20-25 M. for 15 minutes time 2.15 P.M. 1 pt. jar. Plankton very scanty here probably due to advancing season. Dredged at depth of 26 fths for twenty minutes only to find instead of the expected rich haul the mesh of the dredge badly torn. In future will dredge with salt bags. Returned at three o'clock since launch was needed by ship for watering or some other purpose. Did not use # 0 net as it is in need of repairs. I frequently put this one over the stem of the "Montcalm" when she is at anchor and not infrequently it touches bottom and in some cases suffers from this contact. It might be that I should refrain from this practice with my one remaining # 0 net-neither of the other two are effective, too small, when thus used-but the opportunities of using it otherwise are so seldom I have not scrupled to do so; from now on, however, will reserve it for use of sections however remote their possibility.

Captain Hearn netted 118 trout. I asked him for one of the large ones and he gave me the largest which I have preserved in a barrel. Outside of some sculpins this is the first fish which has gone into the barrel. Two large jelly fish, from bosun, preserved in one gal. jar which they filled to capacity. Some fungi, including puff-balls, and some other plants among the latter a fernwere given to me. Kept a selection of these including representatives of all. Had "bake apples" for supper. There were given to Captain by Mr. Hall.

It is discouraging to have one's professional activities so curtailed because of lack of accommodation. Personally I have nothing of which to complain, there is hardly a person aboard the ship who has not made a donation towards my collection and there has been more than one gift from people quite apart from the ship or expedition. Kindness is prevalent but accommodation is lacking. "Larch" arrived around suppertime, and, after Captain's return we went alongside her to coal; coaling is now going on. Met Captain Balcolm again.

Aug. 28: Fliers left to-day, expected to but did not meet the "Ocean Eagle" which has the mail for Nottingham Island.

Aug. 29: Left Sugluk Creek at six this morning for Nottingham Island. We heard, en route, that one of the planes had crashed, when taking off at Eric Cove so we immediately hastened there, arriving around two o'clock this afternoon. Nobody, fortunately, was hurt and the machine--Coghill's, so I hear--is not beyond repair if taken to Nottingham Island. Latest developments point to the probable relinquishment of the flight. Crabs are plentiful here. I have

already caught a dozen of them in the traps but do not intend to keep any of them as they appear identical with the specimens already observed.

Aug. 30: Crabs continue to come up two and three at a time usually bearing acorn barnacles and worms. (Sperorbis borealis?). Several, six, vertical hauls made. The total result was one Sagitta and three small jelly fish which I did not keep. Am rather surprised at the, apparently complete absence of copepods. Many large jelly fish and an occasional ctenophore were seen around the ship. One ctenophore was secured and five jelly fish, these were preserved in pt. jars along with two small minnows and many small crustacea, which were entangled and in some cases engulfed by the jelly fish. One enormous jelly fish had two minnows in its gastric cavity and a crustacean of the kind mentioned above, larger, in its tentacles. These crustacea have large prominent green unstalked eyes, both cephalothorax and abdomen are segmented. The general superficial appearance is not unlike that of "Diastylis stygia"aand I therefore judge it to be a member of the sub-order Cumacea. A Scyphozoa in strobilisation was noticed adhering to one of the preserved jelly fish. A few amphipods from bottom, 17 fathoms, preserved in 4 oz. bottle.

Aug. 31: Aviators left to-day on the "Ungava", bound for St. John's Nfld. Harris and Leach whose planes are in good condition left for Wakeham Bay where they will await the "Canadian Voyageur" and return by her. Mr. Milton the manager of the Hudson Bay post here--Eric Cove--attempted or threatened to claim salvage rights on the

plane that crashed. This appears to be a rather unfriendly act since our entire outfit was on hand within a few hours of the accident. More crabs to-day, the smallest of which I kept. As darkness drew on I threw small objects overboard to observe luminescence of sea, if any. Small flashes of a pale yellow green light were observed and occasionally large flashes of the same quality but longer duration could also be seen. I put a baited dredge overboard-17 fths. to bottom--intending to leave it out overnight. At 2. A.M. I heard the engines turning over and feared we were setting out for Nottingham Island. Dressing hastily, I went aft and hauled in the dredge. Its sides and bottom were covered by intermittent luminescent flashes of the same quality mentioned above. The contents of the dredge--a combination of two salt bags and a barrel hoop consisted solely of a large number of good sized amphipods. Luminescence continued to occur in flashes when these amphipods, which are quite common, were transferred to a bucket of seawater. It, therefore, looks as though these amphipods are luminescent although it is quite possible that they serve only as stimuli, their rapid ubiquitous movements, for minute luminescent organisms possibly contained in the bucket of seawater. The latter possibility did not occur to me at the time and I did not think to test the possible luminescence of the seawater in the absence of the amphipods. Preserved only a single pt. jar of these organisms as already have several small quantities of them from various places. Ship did not put out until six A.M.

Sept. 1: Left Eric Cove for Nottingham Island at 6. A.M. but returned at 8.30 A.M. There was a heavy fog rolling in accompanied by a westerly wind. The wind was continually freshening and this caused our return as Nottingham Island affords no protection to a ship at anchor from a west wind. Whilst the fog which is very dense can be seen only a few miles away. It is a bright sunshiny day here, within the cove. The contrast is remarkable. 4.30 P.M. Surface-temperature 6° C. This water was carefully skimmed from the upper two or three inches of the surface. Captain Hearn tried cod fishing but without success. He shot some birds including the following: eider duck, murre, sea pigeon, and a small female pin-tailed duck. The latter presumably about a year old. Examined all the crabs for parasites but could not find any unless the barnacles and worms be considered as such which does not seem reasonable.

Sept. 2: Sailed for Nottingham Island at 5.30 A.M. 9. A.M. Surface-temperature 0.9° C. At. 6.30 P.M. 1. 1° C. Arrived at base in forenoon went ashore and had dinner. In the afternoon took a walk as far as the lake from which numerous large trout are caught by Eskimos of the base. Three insect larvae as well as two or three fossils picked up. Visited an uninhabited Eskimo winter dwelling (wooden) just across the inlet from the station. There were many bones lying around, including a seal skull but as it was far from complete, I did not bother with it, none of the others appeared worth collection either. Then visited

Mr. Madill and received two insect larvae as well as a caterpillar which he had collected and put by for me during my absence. On crossing the inlet to the base I gathered that the work of the expedition at Nottingham Island was behind expectations. Geese seen on island. Snow fell around 6.30 A.M. though only a few flakes. Polar bear skull with dentition intact given to me by Dr. Wickwire. Fog settling as evening advances.

Sept. 3: 8.30 A.M. Surface-temperature 1° C. During the day heard that work of establishing bases would have to be rushed in order to complete it this season. I questioned Major McLean who said that there was possibility of an opportunity to make the sections which I had been sent to do. The present condition of the thermometers is that one does not reverse whilst the other occasionally does when swung at the end of a line. In view of this, the scant opportunity of doing any biological work, the late season at which the expedition is expected to return and my own desire for an earlier return, I sent the following radiogram to Dr. Huntsman at St. Andrews N. B. "(Urgent) Calibrating section between Eric Cove and Nottingham Island made. Gear not satisfactory. Major McLean informs no further sections possible and will return late. Anxious to arrive McGill for fall term. Opportunity to get out with gear, and collected on Canadian Voyageur. Should appreciate immediate advice.

Regards,

B. W. Taylor."

I have kept a copy of this message which carries Major McLean's

base in Wakeham Bay at 7. A.M. "Canadian Voyageur" already here, but does not sail until 8th of October. Requested Major McLean to put me ashore in order to await the day of sailing and to do what I could in the way of collection biological specimens. This he refused to do and would give no reason when asked. This means that I shall have to unpack my apparatus in order to take advantage of any opportunities which, judging from past experience, are not apt to occur, whereas opportunities ashore here are much more definite. Am assured by Major McLean we will return in time to sail by "Voyageur".

Sept.12: Sailed for Cape Hopes Advance and on arrival anchored in lee of Hearn's Island in Diana Bay.

Sept.16: Wakeham Bay. Arrived here this morning and made ready to go ashore. Whilst landing gear a gal. jar mostly colonial tunicates but also including barnacles, worms, and at least one scallop (Pecten ?) very small was lost, that is, jar broken and contents washed away. These were gathered off Hearn Island by jigging. The jigger often brought up what was in reality a small animal community which usually had as common centre and foundation a small rock. Regret the loss of these specimens. Did not go ashore at Cape Hopes Advance.

Sept.17: Am now established ashore at Wakeham Bay awaiting sailing of "Canadian Voyageur" on which I am to return. We expect to sail on or about the 8th of October but can be sure of nothing. Sent messages via Ottawa to Home, Dr. Willey and Dr. Huntsman to this effect. During the morning took a walk back of the base, could

observe no life in any of the pools, many of these I imagine are only existant because of the recent rains, nor in the brook which I followed for some distance and then across country from the brook. I was looking particularly for geese which have been plentiful here until now. In the afternoon visited Dr. Konig, a German ethnologist who is staying at Revillon Freres and who has been in the country for some time. In the evening sent the messages mentioned above.

Sept.18: Dull and cloudy here in morning. Rain later in day. Took a walk in a different direction than yesterday, saw only a lemming which I did not secure. The "Morso" arrived.

Sept.19: Wind throughout day until sunset. Skulls of white whale, walrus, seal and dog plentiful. Samples of bones of inner ear of white whale collected, four in number. Saw a spider, black. Made arrangements to return by "Morso" and so advised home, Dr. Willey and Dr. A. G. Huntsman. The latter I requested to forward instructions to St. Johns. Nfld. where "Morso" is bound. Hope to sail to-morrow.

Sept.23: Left on "Morso" this afternoon, have been waiting for fair winds. The "Morso" is a three masted schooner equipped whith oil motors so we are to some extent independent of the winds. Am using bunk in Captain Randell's room. Quarters rather cramped.

Sept.24: Somewhere in Hudson Strait.

Oct. 9: St. Johns Nfld. Arrived here on the 7th of October on board the "Morso". The trip was long requiring thirteen days. We were held up by adverse winds. Went into Domino Run to anchor overnight.

In the morning, October 4th, we shifted our anchorage to Bateau Harbour, as a fair wind was coming up, we stayed there only a few hours. The "Morso" goes from St. Johns to Halifax but time of sailing not certain. Have left specimens and gear aboard to go with here to Halifax from where specimens will be forwarded to Dr. Huntsman at Toronto as instructed. During the trip out, a barrel containing, birds, sculpins and one large trout and formalin was upset. The ballast, among which the specimens were upset, small rocks damaged them beyond use so I put the remains overboard. I regret the loss of the trout which was 70 cm. in length and weighed between eight and nine pounds. The "Morso" a small schooner rolled and pitched a great deal. Leave St. Johns to-day for Montreal.