doc. 94

Anticosti

June 1908.

Victoria - Quebec
Barge Captain Belanger
Louis Basin.

Stanislas Poirier

Zephirin Lemieux

Le Lucas about Blue Fox Culture
for Mr Malouin.

doc. 94 #310

3019

Trip to Anticosti 1908.

Charles Schuchert
Yale University
Peabody Museum
New Haven,
Connecticut
U.S.A.

[+ Quebec area]

* means sent my Anticosti papers to them on July 10-1911.

* Mr J. Edwin Lemieux
South West Point,
Anticosti.

Light Keeper

* Capt. H. Bakehouse
Bassé Bobin, Bassé, Quebec

George F. Gibsone
Advocate, Quebec.
92 St. Pierre.

Henry Chenier
* 8 Rue Alfred de Vigny
Paris France

Mr. Alfred Malouin
* in charge of Anticosti
West Point, Anticosti

A. Joseph Schmitt.
West Point, Anticosti,

L. F. Rolfe, Auburn, N.Y.

Docta Georges Martin-Jede
West Point
* Anticosti.

Photographs

Film I.

~~A.S.1 Redpath Mem. Rear view. Dark day 16 time. Port.~~

~~A.S.2 " " Front " " " Hort.~~

1-10 Champlain statue in front of the Frontenac. Hort. 16.

1-9 The cmpl. in Lower Quebec. E & M. bright sun 16 snap. S. Falcon

1-7 The Citadel of Montmorenci. Slip to N.L. Snap 16 cloudy

1-8 Montmorenci Falls. " " " " "

1-6 " " "

1-5 Dance & Time 1/32

1-4 " 6 " " Missed

1-3 Contact of Trenton on Laurentian at Montmorenci Falls. 8 stop. Snaps.

1-2 The whole factory near Clarke City station near Seven Islands City. A little shade in mouth and a large one [illegible]

1-1 The village of Seven Islands.

Film II.

2-12 Ellis Bay wharf. The end, and Sandreaux house.

2-11 N.W. Light breeze from the west.

2-10 East Cliffs to entrance to Natashquan River valley.

2-8, 2-9 Jupiter River Cliffs. Dark B 1/16 looking West

2-7 " " " " " " East.

2-6 " " trout fishing.

2-5 " " Our boat at anchor.

2-3, 2-4 " " delta. looking north.

2-2 " " looking east along shore

2-1 " " Camp.

Film III

3-12 Another scene view of Jupiter R. valley. Dark day Norford

3-11 " " " " "

3-10 Indians at Provo returning with one of Jupiter Tents.

3-9 Pres. Grant's house at Salt Lake.

3-8 The cattle ship Ontario at P.O. Light House. Norford

3-7 Bear River camp. } 6 P.M.

3-6 Bear River at mouth. }

3-5 A low shore covered with reeds and low vegetation

3-4 Same as 3 from the front side Norford

3-3 The beach, drift wood, and the foot of the low cliffs Salt 1/32 6.15 P.M.

3-1,3-2 Bear River cliffs just west of camp B. 1/32 6.30 P.M.

Film IV.

4-12 Bear River cliffs at low tide. P.M. two round trees } 1/32 Norford
4-11 " " " " } B.

4-10 " " front.

4-8,4-9 " Gulls feeding on Carp. Driving

4-3,4-7 Views about Egg Island Point July 1.

4-2 Norford.

4-1 Ogden. July 1.

Film V

5-12 Ogden Depot

5-11 Bear River. Hay Scows boat taking on cargo of hay.

5-6 Ft. Orem & Lucin bridge just at Weber River.

5-7 Passengers of Big Emma.

5-5,5-10 Views about Side boat. 5-5 Norford.

5-8 Loading Salmon at " Norford

5-9 Pomelas 5-6

5-2,5-4 Church July 6 St. Anne de Beaupre.

5-1 " Lady over altar " "

Film VI

6-8 & 6-12 Above St Anne de Beaupré. Phil says a duplicate.
6-5, 6-6, 6-7 Views on the upper plain with the Laurentides not over 1/2 miles away.
6-4 St. Anne from the upper farms n level.
6-1, 6-2 The third conglomerate in Lower Levis.

Film VII.

1 Conglomerate at Levis Point.
2 Above St Irénée. Montreal-Quebec steamer.

New Haven, May 30 1908

Left for Montreal via Springfield at 5.45 P.M. One hour waste at the latter place where one gets the sleeper. The route is via Bellows Falls, Rutland, and Burlington to Montreal.

May 31 – 1908

Arrived at 7.11. A.M. after a good night's rest in the sleeper.

Transfered my baggage to the C. P. R., Paz Clever Station for Quebec.

The day is dark and almost raining. Started out to see the city. Looked up McGill University and took time for Peter Redpath Museum.

Then climbed up to the top of Mount Royal said to be 500' above the sea & 700' above the river. If the day was clear the outlook would have been great. Mount Royal is situated almost alone in a great plain through which flows the St. Lawrence. Far away on the South side of the river can be seen the Laachine Hills.

As one goes up Mount Royal considerable
heavy bedded limestone is to be seen. Its dark
to light blue, dense, fracturing conchoidally and
gives one the lithic impression of the Lowville.
Higher up the beds become shaly but nowhere did I
see fossils to remind me of the Trenton. The
top of the Mountain has a fine crystalline vol-
canic. There is about 300' feet of this capping.

Amie states that one is Trenton and that it
has been elevated by the volcanic action above
the regular horizon of the Trenton about 400 feet.
See if Adams agrees to this.

Going up Mount Royal every now and then
one sees a small dike cutting the dense lime-
stone.

Purchased a number of Montreal photos.

Left for Quebec at 2 P. M. on the
C. P. R. Arrived at 7.10 P. M.

Extensive quarries in the Trenton several
miles east of Montreal on the C. P. R. Trolleys
also go here. There should be good collecting
here. The place is formerly "Mile End" which
is five miles east of the city.

On the P. R. R.

For two hours this morning into Montreal,
then from Mount Royal and now again going east

To Quebec one rides over the Ordovician plain. There is no reason why the Ordovician and subsequent seas should not have spread far and wide over the St Lawrence Valley. This became its present low attitude.

In most places along the St Lawrence the plain is flat and rises gently north. It is a rock ground = "St Lawrence" glacial deposits. Wherever the higher ground appears it is either Trenton or glacial boulders.

West of Louisville there is a flat ridge to the Ordovician plain: about 100 feet high. To the South of this is the same flat plain of glacial clay. The ridge may have been a former bounding coast of the St Lawrence.

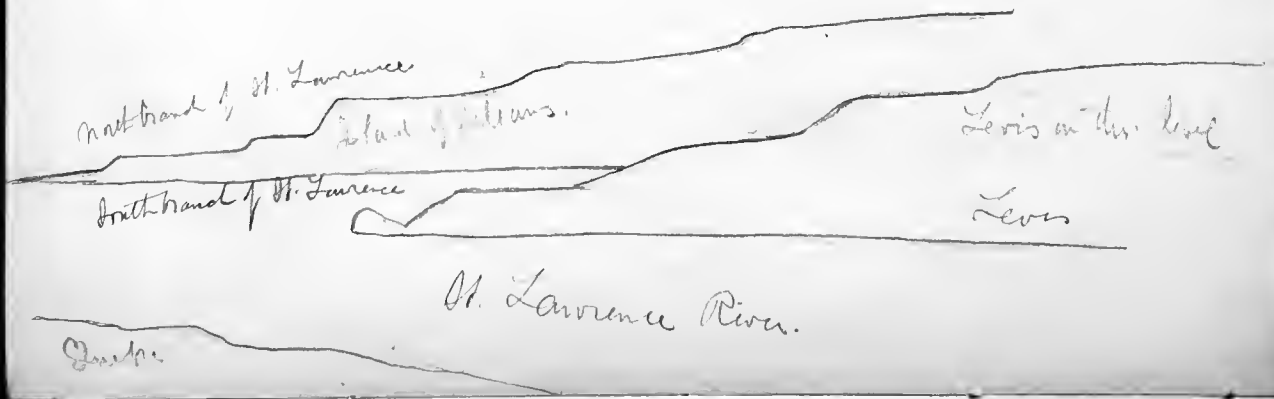
Near Portneuf or 138 miles E. of Montreal the topography changes and the country becomes more hilly and higher. The river Too is in a deep canyon. The broad Ordovician plain is about gone and from here east the topography becomes more and more that of very hilly Quebec. Later it is probable that the Ordovician plain lies further to the north.

I saw one more Trenton hill exposure much further east than Three Rivers, at Dupuy.

Very cool here in Quebec, chilly all day.

The Sand point between the St. Joseph of Orleans and the island.

Shewing the various river banks.



Quebec June 1 – 1908. Monday

Slept last night under enough cover for winter weather. Quite cool this morning and we all put on our heavy overcoats.

Called on Mr. George F. Gibsone 92 St Pierre St. It seems that either my letter or some other application was not in proper form to please his French clemands and he said to Gibsone that he did not care to answer the letter. There are four applications one from Montreal (apparently Prof. Adams) one from Boston etc. (Later Mrs. Lapoint mentioned doubts this statement of four applications)

While Mr. Gibsone could not under the circumstances extend full courtesies he had no objection to my visiting the island and would introduce me to Monsieur Arch. Maloumin. His letter reads as follows:-

Quebec June 1 – 1908

Dear Mr Maloumin.

This will introduce to you Mr. Charles Archibald of Yale Univ. You remember Mr. Bradbury spoke of us about the visit he desired to make to the Island and we ourselves talked the matter. I am sure you will facilitate him in any way you can.

Yours Very Truly
Geo. T. Gibbons.

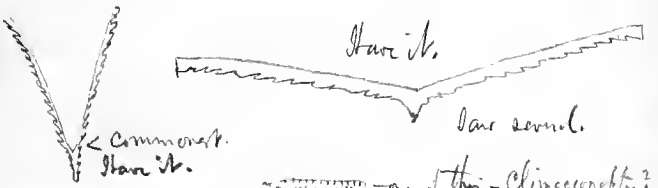
Holliday Bros are at St Pierre and agents for the vessel going to Anticosti. There are two vessels. Tomorrow will arrive the Darry sailing early on Wednesday morning.

Fare one way $25
Round trip $47.50 Half the fare if I see you in 40 days. This is the rate to strangers. Natives go for less.

King Edward was the other vessel but they have given her up for the Darry. They start their coasting early in April.

Just in front of the Arsenal building in Upper Quebec they are digging a dark-grey dense limestone for road metal. In it I only saw this one doubtful trace of a few graptolites very poorly resembling one of the Hermannsville species. There is here more limestone than shale.

In the afternoon walked about 3 miles up the St. Lawrence from Wolfe's Cove. At the Citadel there is massive limestone, often in beds 2-3 feet thick, with calcareous shale. As one goes up the river the regular limestone succession of goes out, more and more calcareous shales come in and within 1000 feet of the brick toll gate house at Wolfe's Cove I found graptolites like this:



Beyond the toll house soon black very fissile shale comes in. This for a half mile, gradually comes in beds that weather red and for all on another half mile all is red shale that weathers down into thin flakes, mostly by talus slopes. The same red beds also across the river.

No fossils otherwise.

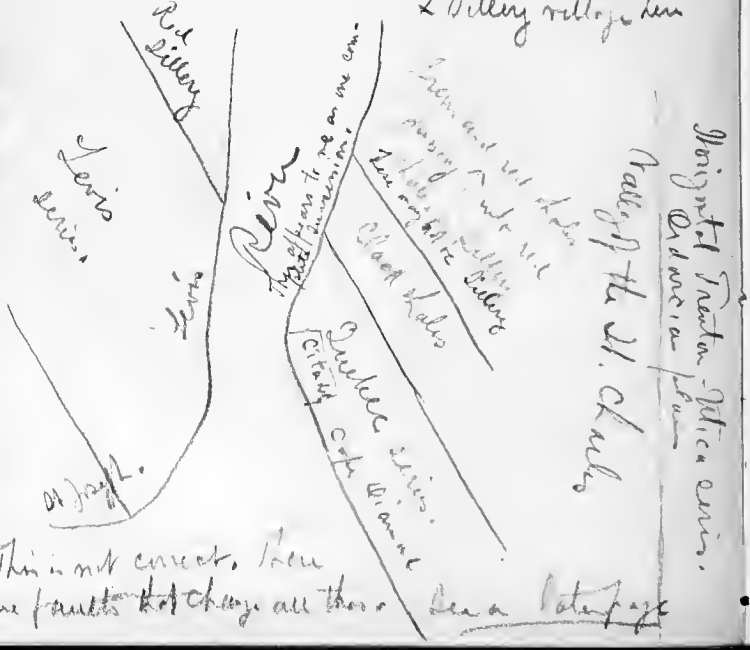
For the first two miles one walks almost along the strike and along the third mile the beds come to be more transverse to the road.

These same red shales are seen across the river of the stream from the Levis beds with the limestone conglomerate.

The thickness in the first two miles, nevertheless that one walks mostly along the strike, is great. There may be some faulting more as there seems to be no repetition.

The question now arises did I go up or down the section. According to Amie down into the Cambrian = Lilly red shale.

As I saw the Ordovician about Quebec
× Lilly village here



This is not correct. There are faults but always all these a later fault

Quebec June 2 1908 Tuesday.

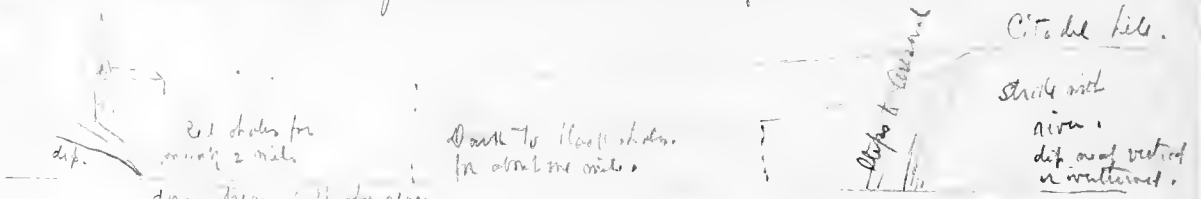
Walked up the St Lawrence on the Levis side about 2 miles and then sat down to make these notes and the sketch on other side.

All of the strata at Levis are very different from those of Quebec. There are beds of crystalline whitish limestone, Dolomite ~~Dolomite~~ and considerable limestone of a milky white color in the vicinity. There are also purple shales and there are red and green shales and there are red shales within 2 miles of the ferry.

It seems to me the section is complete across from Levis to Quebec. If this is so, must it not be a local syncline?

Then walked down the river from Levis Ferry to St. Joseph. Here one sees several conglomerates one especially very well developed and probably ten feet or more thick. I can not believe that these are conglomerates in the ordinary sense rather intraformational conglomerates. In one place the beds underneath the conglomerate is an arenaceous limestone and the stratification somewhat obscured. Then follows the conglomerate with the pieces of all sizes and

Section as seen from above Lewis. Farm of stream to Lewis



This shales to the hills are continuous seen as yet none of the Lewis beds appear in this section.

are rounded. Usually the limestone pieces are flat and thin and most are of a white limestone in an arenaceous paste. There is also some shale, but the variety of material is not such as one expects in a conglomerate of this kind.

Dale Bell's idea of fossils in the pebbles being different than those of the Paleozoic does not explain, nor the fact that Coyle has Cambrian fossils mingled with Ordovician.

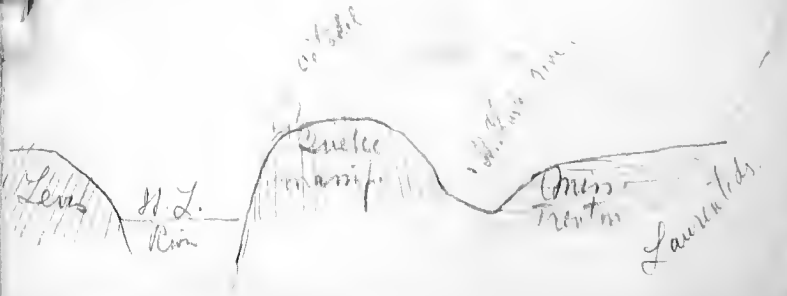
As one goes towards St. Joseph and strikes the first cut on the Intercolonial having rock on the two sides one sees the shale gone black weathering rusty, about ten feet thick between a green shale stratum below and a conglomerate above with the Phyllograptus Tetragraptus fauna.

As one goes on further towards St. Joseph the strata give the impression of the rocks along Champlain Street in Quebec.

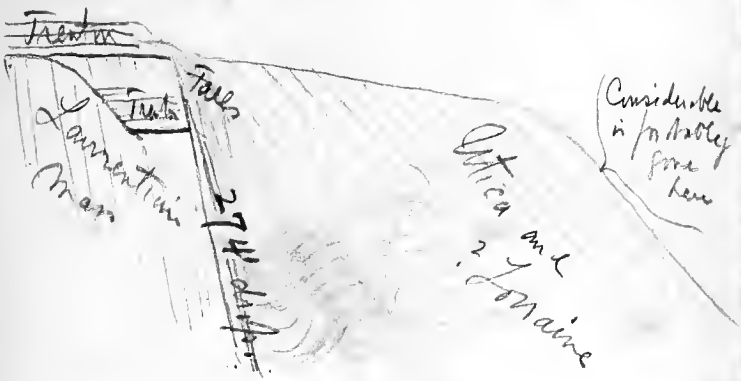
From St. Joseph one has a fine view of the Laurentides and the cut Ordovician plain with the falls of Montmorenci dipping it is said 275 feet to the St.

Lawrence. The plain lies in front, as a fore land, of the Laurentides, and extends back (north) to Quebec. As these strata of the plain are horizontal one gets a good idea of the over thrusts Lilley - Levis - Quebec series. I wonder if the dip of the horizontal strata is towards the St. Lawrence allowing me easy the Levis channel material to slide and role over it. In fact this is not so then the Montmorency material was either washed out at Quebec or pushed and cutted away by the glacier ice. This are underneath.

From Levis Point one gets a think the clue to the structure. Across the river it is thus



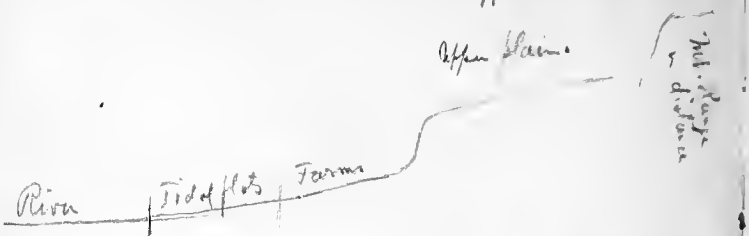
Montmorenci Falls, in the afternoon.



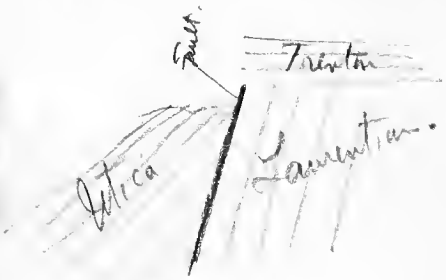
Outside some pieces of the Utica collected a few graptolites, Climacograptus and possibly a second species. A very soft shale, dark but not at all as black as the Utica of New York. Ch some layers the surface shows flowing current action like the Postdam Limestone slabs and in most cases, especially the thin sandy layers the graptolites are all laid one way - point in one direction only.

At the top of the Falls is a first class Hotel - House. From here one gets a good view across the St Lawrence to the south side. There as on this side the section is thus

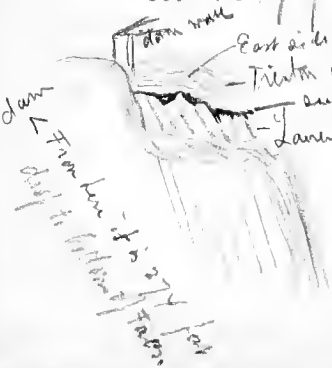
St. Lawrence south side of Montmorenci.



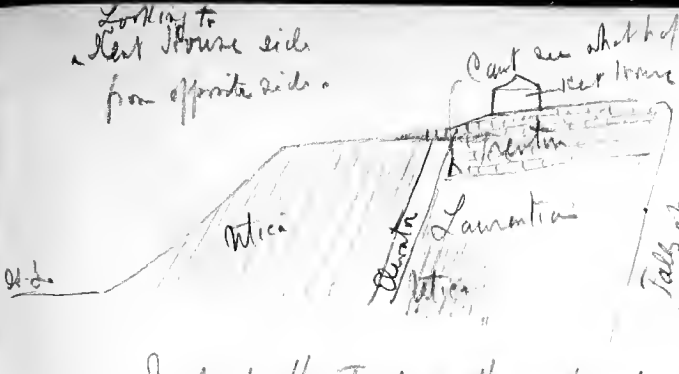
On a small gulch between the falls and the elevator nine living flame one sees near the top horizontal Trenton rocks thus



At the top of the Falls thus



Trenton in thin beds 2-6" thick of a mealy structure no fossils visible seen. Thin on west side, many fine seen east side and at Laurentian contact.



Just at the Falls on the east side I
climbed down and saw the contact between the
Lawrentian and Trenton. The old flow is very con-
spicuous and in all the creeks the mouth of the in-
vading sea has filled them. Fossils occur in
these filled creeks of the Lawrentian. Have
a ? Cocinium and a large Plasmopora from there

A few feet higher in the regular bedded limestone
saw Triarthrus concentricus, Ceraurus pleurexanthemus, Calymene callicephala, Dalmanella testudinaria, Conularia.

At the contact there is no evidence of land
and the Lawrentian is worn smooth. There should
be sand somewhere, but it is not at the spot.

Then went up the stream to the upper
dam. Here the limestone seems to be at the
very top of the Trenton. It is black with black shale

fastings. The fossils I saw were Trinucleus concentricus, Ceraurus Flexicaudatus, a large peculiar Lingula rounded at both ends or oval, another smaller plumper form, and very large Orthis recurvirostra.

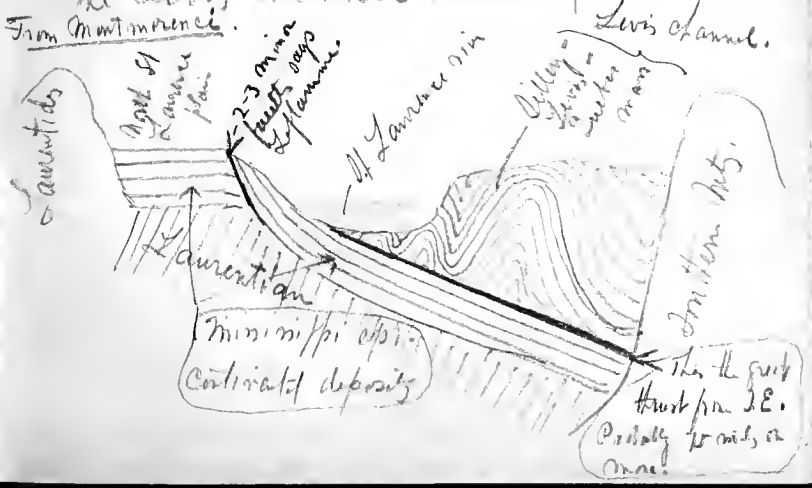
These Hall limestones make the upper plains-level and there is no Utica above, only glacial or natural blue clay on the Trenton.

There is probably at most never over more than 50 to 75 feet of Trenton. The Utica is very much thicker, several hundred feet. Probably nearer 600 feet. Lorraine over 318 feet. The balance is Lorraine.

On the other shore one has a good view of Quebec. The city is on ridge that extends many miles inland and across to Levis where it soon dies down to the Plain level. Through the ridge the St Lawrence has cut. The Charles River is on one side

of this ridge, the St Lawrence on the other.

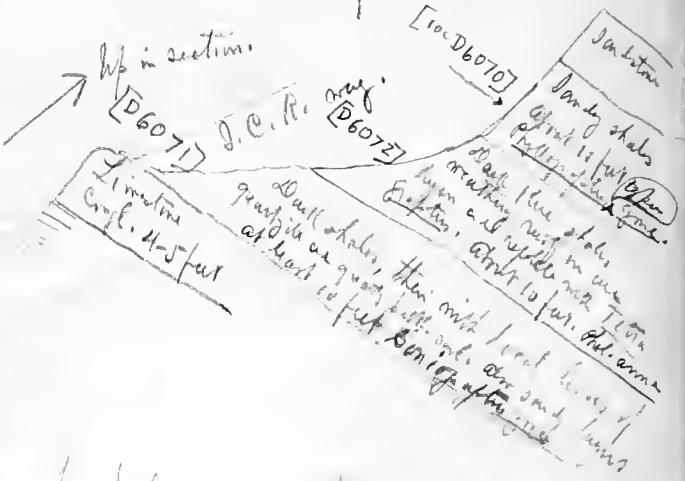
To the north is a chain of hills the Laurentide proper usually 2000 feet or more high in places. Across the St. Lawrence many miles to the south is another high ridge, said to be the White Mountains, as high or higher than the Laurentides. Did the Ordovician once extend over the top of these hills? Or the Trenton Utica-Cincinnati series was faulted down and again faulted at the St. Lawrence - the Great St Lawrence fault of Logan over which has been pressed north-westward the Levis channel mentioned. Thus



Lewis June 3 – Wednesday

[About half way between the Lewis Ferry & St. Joseph]
Collected most of the day at the graptolite locality at the first D. C. R. cutting [illegible] wall on both sides, east of Lewis Ferry

The section is as follows:



The shale [illegible] contains a [illegible]
several hundred feet and there is more shale
and less sandy material. Then thin dolomitic
layers are inserted, these become thicker and
thin all [illegible] more and more calcareous
shales. Apparently one of these rocks, all
those seem alike, [illegible] at Lewis.

Quebec. June 4–1908 Thursday.

The Savoy arrived last night. Called to see the steamer and found it a small grey steamer very clearly built. The Captain is a Mr. Belanger. From him learned that Oscar Dehnmitt was now in Quebec. Then looked him up at E. Roumilhac 48 Rue du Palais or next door to the Victoria Hotel. Found him a stout man with a fine face, about 45 years of age. He then introduced me to the head book keeper for Manson who had left the island via Halifax and will go back by the Savoy His name is Leon Lacroix "Chief Book keeper"

Dr. Dehnmitt offered me any part or all of his collection of the Island, As a gift.

Then packed up and will leave two trunks of Leon's effects at the Victoria Hotel.

Dr. Dehnmitt asked to introduce me to Prof. or rather Monsignor Laflamme

[D6083-3 units combined]

Laval University. He told me he had been on the Island of Anticosti for two weeks. If I took a small sail boat, called by the men "bat" and manned by two men that I could would be safe anywhere as there are so many small streams to put the bat in at night. He also called my attention to the fact that the flies are bad, rather he spoke only of the mosquitoes.

The north side of the island he said was perfectly monotonous and it may be that I had not for further than Macarthy or Macarthy Mountain. The south side on the more interesting one and especially famous for fish are the Salt Lakes, Englamme Bright I should like the D. R. side as far east as D. R. Light House.

Was introduced to Leo M. Mace, Captain of the Customs vessel Constance of Quebec. He knew Ch. Rakeham.

Also was introduced Jos Le

Rouzés Instructor at English Bay
He speaks a little english but Mr.
Lawrence much more.

From these men I learn that
Mercier paid $200,000 for the island [Matevain said 161,000]
and has it now 12 years. During the
time he has spent annually $200,000 [Red Book says $125,000]
and hardly a penny has he received
in return. At Ellis Bay he has had
built a Chateau costing 800,000 francs.
This a place to live for himself and
to entertain his guests. So far he has
been on the island each alternate year.

At present Mercier seems to be
much disgusted with his investment
and is letting go. The Lawyer took
away on his last trip to Quebec at
least 30 people depleting the island's
population which was not over 350 per-
sons at any time.

The Savoy sailed at 6.20 P.M. and I have good accomodation. I can expect a boat at Anticosti every ten days.

The tides at Quebec is 18 feet. At ours to Three Rivers at Anticosti 6 feet.

On the way to Anticosti

Friday June 5.

No sea on and slept fairly well and arose not feeling particularly bad.

After breakfast Mr. Menges showed me his Anticosti pictures and I was agreeably surprised with the considerable civilization established on the west end of Anticosti by Mr. Menier. His estate is certainly a Landsome home with many settlers, a luxury in the wilderness. Here he has an automobile and a fine road that runs 12 miles from English Bay to Ellis Bay. The road costs more than

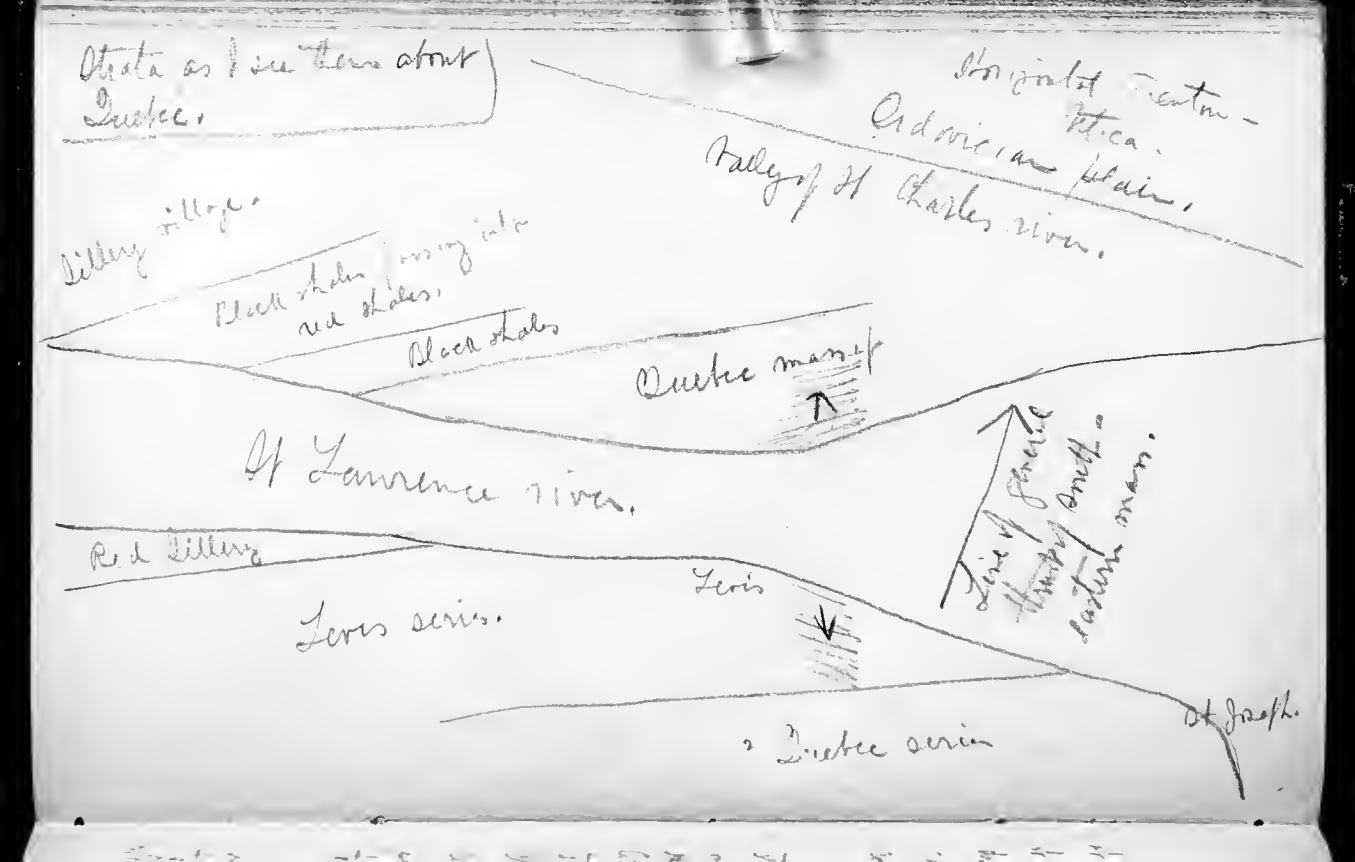
$2000 per mile To build.

At Enfield Bay there are many houses far more than I had thought. A school, Roman house, church, and residences of Mounties officers. They have several horses and many cows here.

At different places along the south shore are a number of "camps" a small shanty with a stove, wooden bunks and wood at hand for the stove. I suppose Dean uses these places. All in all it should be very fine to go ashore in case Dean not turned down by Malcolm.

(on the south shore at Rimouski)

At one o'clock we stopped at Pointe au Père to take on 40 men engineers for the pulp mills at Seven Islands. These are also here on ocean liner James us but before doing so drops her pilot at the point called Father Point. There is considerable high land south of Rimouski, mountains several thousand feet high. On the opposite or north shore the land is flatter for many miles nothing over 1000 feet high.


Strata as I saw them about Quebec.
Hudson River Group.
Utica.
Trenton.
Adirondack plain.
Valley of St Charles river.
Lorraine.
Black shales
Black shales passing into red shales.
Quebec group
St Lawrence river.
Red Lorraine
Levis series.
Levis
Levis shales
Hudson River shales
Eastern group.
St Joseph.
Quebec series

Still on the sea. June 6 Saturday

A sea began to kick up this morning at 4 and as the port hole to my room is broken it soon became impossible for me to keep dry. Almost sick I had to get out of the room and lay around elsewhere as best I could.

At about 10 o'clock we pass a whaling station. One whale is cut up and ready to go into the factory. On the ways lies a small specimen apparently a young Sulen whale. At the point beyond we stop at Juneau the terminus of a nine mile railroad to Douglas City. At this place an American company has invested 3 millions in a plant for gold milling. One forty mean port of here to here the mills print almost ready to start.

The bay here is a large one hemmed in by seven islands that give the name to the whaling station to the village on the opposite shore, a view of which I took from a picture.

The land here looks good for all the

The metamorphics are dark, largely feldspar rocks and with the trees the landscape is almost a Scotch land. The hills run up to 1000 feet and all are of the same rounded hills. Of houses one sees none except as in the villages of Seven Islands. Here and there a bird is seen flying an idea of northern old land.

The Saros is a fine roller and although there is no sea the slightest motion of the water moves it rather rolls the vessel. It rolls too much for me and so I went to bed at 3 P.M. and stayed there until morning.

Still on the Gulf. Sunday June 7.

Some rain.

As the boat is not going much I get up in time the morning and return passengers. There are more sand flats in front of the land this morning and the tide is low. As close-

where snow lies around.

At about eleven A.M we are at Long Point in front of which are the Minjan Islands and here we are transferred to the Calypha a tug used at Anticosti to tug either the lighters for the loading at Fox Bay on the north-eastern end of the island. There is some sea on and after some manouvering the Calypha ties up to the lee side of the Idony and we are transferred.

Of the Minjan Islands I saw but little and only those of the small islands did I get close enough to see the rocks. The sedimentary seemed like a very hard laddal dolerite.

From Long Point to English Bay by way of Macastey the distance is said to be 25 miles and we steamed across in 2½ hours. As we approach Anticosti we come nearest to Macastey Mt the highest land of Anticosti. From here to English Bay it is a series of cliffs or bluffs at the latter place the elevation does not seem

The more 100 to 150 feet.

English Bay is a small crescentic bay
nearly two miles across. From the sea
it is pleasant to behold, one of the finest
villages of the northern country I have seen.
All the houses are painted white with red
painted roofs. The Governors House now occu-
pied by Mrs. Malkin is a rather large
summer house in which I am writing. It
is a splendid home for those parts of the
world. Around each house there is a lattice
fence, the only villages with such ornaments.
Mr. Malkin is looking after me in
royal style and is doing more than he should.
He promises to furnish me 2 or 3 men and
a boat to take me to the Salt Waters. The
2 men and boat are to cost me 4/- per day.
He advises me to take a third man for
cook and always take with me and to
stay with me at night in case the other 2 men
have to put out in bad weather therefore with
the boat. A tent, stove, blankets is with

furnish and advises me to buy a mattress
Other things can be had at the store.

After 5 P.M. walked over to English Head
to see the rocks. Saw almost no fossils well
preserved and it is plain that I will have to
hunt closely in the Quebrada for a good
collection.

Mrs. Menier spent last year on the island $180,000. This
year but $45,000. She paid in 1895 $16,000 for the entire island.

English Bay Mondue June 8.
Rain all day.

Dark and raining but no wind.

After 8 o'clock put on my rubber coat
and started for English Head about one
mile north of English Bay or as it is
called on U.S. Johnston map Bay St.
Croix. Here the cliffs may be from
75 to 100 feet high and made up of A4
of Richardson's section. There are many
fossils but almost none that are good
enough to determine. By careful search
I got a bag full mainly of Ostrea

cava densis and Fasciola gibbandica. Turcides and finger sponges are also common. In the dolomitic band, holding Obolus by the millions occur most of the fossils. I must collect these fossils more in detail. For next the morning to do good work.

Ten beneath the Obolus beds probably 20 feet that the Fasciola collected this morning occur. With it also occur the Streptelasma.

In the afternoon it is still raining but started not on the same place as the morning. In the zone with Fasciola and Streptelasma there is considerable intraformational conglomerate the flattened and rounded edged pieces being from small pebbles up to pieces 6 inches by 2 and 3 to 4 inches wide by ½ to 1 inch thick. With these occur the corals. One bed has suffered considerable lateral pressure and every ten to twenty feet the bed which is less than one foot thick is completely crum-

filled. Thus

cross bedded

These upended pieces I saw in several places. The entire series of beds were laid down in a shallow sea, as ripple marks are common, wash action in the comminution of crinoids ripple cross bedding, separation of brachiopod valves, limestones separated by pure shales all point this way.

One Fossil Lethlandica measured 2 feet across, by 18 inches in width and 14 inches high. It is a fine specimen but I will probably have to leave it.

One peculiarity of these beds is the almost complete absence of Tetrastomata. So far I have not seen any of the regular forms and the large piece collected this afternoon is totally different from any of the Mississippian sea. One did I see any

parasitic forms. The gasteropods are decidedly Ordovician but not necessarily Richmond while the brachiopods do not remind of the Regular Richmond even though one or two are identical forms. Then the presence of Favosites and Stromatopora point rather to the Silurian.

There is rarely a large Ostracod to be seen reminding some of Leperditia. Calcifera.

So far my results are not brilliant but then it rained all day and would not work to advantage.

Mrs Malouin is doing wonders in every direction. Today Shaw had floating island pudding and for dinner Irish stew and fritters. It is a surprise to see the cook things once served.

English Bay. Tuesday June 9-

Some rain

As the wind is still from the east and threatning to rain we conclude not to sail for the Salt Lakes.

Started out for the day east to West End Lighthouse. Found very little of value along the shore (in the first mile) except a few Fucus gelatinosus, Rhodomela americana, and Plocamium. A half mile further F. gelatinosus, small and large cavallinus, Fucus stellata and Plasmodium.

In the cliffs beside the road about half way between English Bay and West End Light H. got Endocarpus, Rufescens, Callithrix, Rhynchotrema capax (Agardh) Ependilia candidans etc. (Endocarpus 2 sp.)

This is probably Richardsons B6.

East of the West End Light the rock seems softer and is more finely broken and along the road Artificial that the corals are more common, and the Bostrichia.

In the evening looked over Johnsitt's collection of fossils and was surprised to see how little of value he had. I picked out about all that had value and do not think the lot will weigh 15 pounds.

Drew shown Beatrice from the Macdelen Islands which if true is a fortune value. Along with these were Fossils Scotlandicus and a slab with Cuttles Cuttlefish and Crinoidea that I fear are from Anticosti Cliffs region of Anticosti. I have taken some of the material but it needs all to be looked into before being accepted.

Also took a slab with the track described by Richardson and named by Billings Dactichnites obscurus.

From Red Book 1st ed. Anticosti Island.
2,500,000 acres, 140 miles long 30 miles broad.
Mention paid $25,000.

English Bay. Wednesday June 10

As the wind is favorable but light we conclude to sail and all is ready by 9 A.M. The boat in which we attempt 30 feet long with two masts and can take up to tonnes of flour = tentons total. Is the boat of Mr. Francisco Poirier and he in has charge of it. For fifteen years he has sailed it around the island carrying mail and provisions. He says the island is 135 miles long. Then 2/2 miles to West End Light from English Bay, then 50 miles to South West Light and 15 miles more to Salt Lakes. He has with him on the trip his son Edmund, and have a young man to assist one in Mr. William Rogers. He is to stay with me on shore and help generally when the boat is kept to have one on account of the weather. All is to cost one five dollars per day.

As we are just past the West End Light a fisherman catches a Lobster of about 100 pounds and then head. Mr. Power to say that he once got one that was 9' 3" long, 12" thick and weighed a little more than 500 pounds.

The wind is so light that it has taken me from 4 to 7 to West End Light.

All the way from English Bay to Jamestown Cliff the top of the island appears as one plain. About one mile west of Jamestown Cliff the land is suddenly 50-70 feet higher and then it slopes away again to the former level towards Cape Henry. West of Jamestown Cliff is a large cove = Strawberry Cove

The reef jutting out from Cape Henry extends three miles and it is curious and alarming to see the waves roll land inward or from out to sea. In hours we see this Cape and do not seem to get nearer.

At 5 P.M. we land at the low Ellis Bay wharf of Mr. Mennier. I start out at once for the White Cliffs and find it interesting collecting. The common fossils are Orthis lamellosa, Schuchertella, Rhipidomella. There are quite a number of other fossils.

The lower half of the cliff is a shale Lorijon, the upper half a gray and buff, dense crystalline fossiliferous limestone. Out of the Ortho got a small slab with several crinoid heads. Was surprised to see two Beatricea undulata and Protaraea retusta.

In the shale Orthis lamellosa is common, rarely a Rhipidella and along the beach Platystrophia and Anastrophia. Tomorrow Doris take one or two men with me and set them to picking these small things.

Slept at the end of the wharf at Mr. Harris

Sandreau. He catches plenty of lobsters often as many as 14 in the day and one single a fish. He is going to let us have some at five cents a piece. Had lobster for supper, boiled, very fine.

English Bay Thursday June 11.

As there is fog on from the north it was feared the wind would be no good and so Rogus, Edmond and I started out for the White Cliffs on the eastern side of Ellis Bay. I set the boys collecting on the reef in the shale ones, A white bryozoa on most a little other fish in the shale one. Here Platythoa and Anthothoa are not only very common but also one good. They attached on the higher land sometimes and formed a fine dendritic growth. Then walked on to Eagle Cove

Then I sat down to have my lunch of crackers and cheese. By the time I left back to the White Cliff the tide would be low enough to wade again on the reefs. The section from the wreck to Cape Eagle is about as follows.

Mc Cuaig's wreck

Hard light blue limestone makes Cape.

C 11 = 11 ± 12

Nodular shale with Pleurotomaria sp. common. Large Hormotoma, Tentaculites Bellerophon and small a Bathmean undulata. Also Asterocera. The Bathmeria are almost vertical all these fossils are crushed flat. Plate contains a few pieces. Some not shown in sketch.

Probably C 10" = 5

Probably C 9 = 12'

Cape Pleureuse. (mean water fall)

Hard light blue limestone almost white. with Orthis Canadensis common. A few trilobites, Proetus and very rare Bathmeria undulata. These are all cal prostrate.

C 8 = 21

White Cliff (Mc Cuaig's Point) about 70'

Soft shale with many brachiopods. At bottom Orthis porcata, Rhipha marginalis Thamnotrochus Canadensis, Rem. of Platystrophia and Anastrophia, these also rare Plasmopora. With Anastrophia still dense but not in centre of bottom.

C 7 = 17

Shale Zone A

C 6" = 20

Hard blue limestone not in fine fossils. A little quarry here of Bathmeria undulata. Did not take any thing.

C 5" = 6'

Mc Cuaig's wreck.

All in all I have a good collection of the fossils on the east side of Elles Bay.

The wind has been strong all day and we could easily have sailed to the Salt Lakes.

Most of the fossils collected today are from the Lake zone C3. Most of these are trachiopods, one little cup coral, and 2 species of Plasmopora.

I am strongly impressed with the collection today that there is nothing Silurian in the fossils seen, i.e. Silurian in the sense of our faunas in the United States. The Pleotambonites ^ Porterna like
^ hanssreesalis, and the presence of Atrypa marginalis, Plasmopora, Stinodella, rarely Stromatopora, are commonly Schuchertella do seeming of the Silurian. On the other hand ^ Reatricea undulata Orthis precata, Orthisina vermeuili Orthis Camerotina, Orthis maria, Porterna vetusta, Leptaena rhomboidalis it's more Richmond like than Waldron great rather to the Wenlockian. If Niagara is to be regarded as the base of the Silurian then

Antiesti Division i (basal half) must be regarded as Ordovician.

On the other hand I see nothing in any of the horizons of Ian studied to be directly correlated with the Richmond, i.e. a common fauna. Certainly Division A and B belong to a distinct sea province, of Atlantic type, but there may have been some intercommunication between this sea and the Interior by way of a northern passage connecting with Manitoba and thus with the Mississippi valley. A great deal of identification should result of the extensive work in regard to my paleogeography of Middle and Upper Ordovician and early Silurian times.

Slept again at Mr. Baudreau's house on the end of the wharf.

Ellis Bay Friday June 12-

A fine morning and as the wind is in the right direction we are off for the Salt Lake.

As we get out of the Bay I see that I did not get to Bear Point yesterday but only to Cape Eagle. Bear Point is probably 2 or more miles east and Poirier says there is a cliff around the point & the east. The cliff are about 1/2 mile long.

Long Point shows up well sticking out as a prominent cape.

We can also plainly see South Shore of the St. Lawrence Gulf. This is the high land to the N-E of Cape Rozier. It does not stick out prominently but still there as a long blue irregular line off to the south.

A low coast all the way to Black River. Here there is a camp and low cliffs not over 10-15 feet high. It is now 8 miles to Pecosie River a fine place for trout.

We see South West Point very well from west of Black River.

At 10.15 we see the low falls of Little River.

Camps are established at all the rivers.
At 12 noon we pass Beesie River. A very low coastal clay here and apparently all the way to St Marys Cliffs. These are seen for many miles inland. Seen them for the last 2½ hours.
At 12½ o'clock we are opposite the low St Marys Cliffs to the S-E of the river. The same name is given.
~~Here is a good sheltering cove.~~ To the S of the river there is also a small cliff. The clay of these cliffs from the sea is whitish.

There is another low cliff about 1½ miles east of St. Marys Cliffs and a much higher low one about 1½ miles still further east. On P. tau and lei zone.

High cliffs again come in at St. Cosmas Cove, which is probably 4-5 miles S E of the last mentioned low clay cliff. These cliffs are very clay more than one mile and are probably good for the fossils of Division D. All sand.

Alta River has a low cliff, and lower exposures occur for a mile or more back.

The next cliffs are on each side of Seen River (River au Fossil). From here there

are low but long cliffs all the way to Jupiter River.

From Sun River to O.B. Light it is 15 miles.

Inland low to the N.E. of Jupiter river cliffs there is high land. The flat tops are probably 400 feet high.

Jupiter river cliff is a fine one, 1 mile or more long. To the east of the river are other low cliffs extending several miles east to the light house.

As we approach South West Point Light House the wind changes to the south and we have to tack to the point for seven miles. With the change the temperature grows milder and shivering I approach the light house with all care.

All along the west from Jupiter River the rock is exposed in low cliffs from a few feet to 15 or more feet in height. The cliff is as elsewhere to the south.

The Pipes in these formations have

over the light but it now is taken care of by M. Jefferson Lemieux who used to be a sea copi(= a mate) on a South American boats. I saw him light the 15 lamps and get things started for the night.

He tells me the flies are so bad here that life is almost unbearable. When he first came and after they were bitten by them their heads always swelled. But now that they are used to them the swelling no longer shows but the ladies still undergo the trouble. He says the flies will not come yet for two weeks and possibly three weeks.

South West Light House June 13-

A fine warm day.

Started out north and west along the coast from the Light House.

At the Light there is a great thickness of a crinoidal, granular limestone with an immense profusion of great crinoid stems and roots. Heads there are none, all are broken and the limestone shows evidence of crushing. These must be Richardsons gone F.

Then for more than half mile the rocks are concealed by an elevated bank of pebbles, Richardsons, or a moraine perhaps between ridges concealed ted E 10.

Then east. The first bank, one collected a number of the slabs abounding in Cyathocrinites, Pleurotomaria sp. as long as broad, Cyathocrinites, hemispherical in the Clinton form and great numbers of Bryozoa.

Then in Richardsons E. 9 near the top. Just west of the bank may be seen little exposures of the same Lorain Limestone with Pentamerus oblongus (Lime in bank) and Orthis Hallii in two very fine localities. The former are larger than the Clinton form. Had three fine specimens but

Rogus fought to bring them.

From this book to the next one work it may be 1/2 to 3/4 mile and nothing can be seen. We have passed now over all the beds of E 9-E 8 but I saw but few Strickl. candinia lirata unless I mistake it for the Pentamerus Knightii which is common here.

Between the third and fourth book from the Cliff we came upon the Strickl. candinia beds Richardsons E 6 and E 7. (These beds are made up of these Pentamerids in most cases all are matched and broken and piled together like so many dishes. Irregularly one finds pockets of them in their Latest growth, beds shown with the arterior ends of valves up. Also for this reason that of few of the large ones are perfect. Only when one lies flat on the bedding is it apt to be entire, but because the shells are so thin all are more or less distorted. With the Strickl. candinia occurs Ostracoda and rarely a Stromatopora one foot in diameter and never of size as in Wolfcliffe (saw but one specimen up side down.)

To me all of these upper measures of E are equivalent to the eastern Clinton. This is seen in the Beyrichia, Ostracoda, Strickland-dinia, Pentamerus Oblongus, Leptocoelia hemisphærica and the Brachiopods. This however not the highest Clinton as seen at Niagara Falls and Rochester. The faunas of the two regions are however a common one and had one source, and are quite distinct from the Ohio so-called Clinton.

Broad as hard as one will great faunas can not be pattered. The fossils are hard together because of so much limestone and then the fossil zones are limited to a few feet and then great thickness of lime-stone almost barren or a scattered few fossils of those already seen. Then for when fossils are common they are very apt to be the same species. In the upper part for instance Atrypa reticularis and Catarina hystrix are the common species. In the Strickandinia beds there is al-

work nothing else.

However this limited Clinton fauna is in harmony with the same sparse fauna in the western Clinton.

Packed and labeled all the fossils so far collected and put away in bags.

Slept again at the Light House on the first floor.

South West Light House Done rain

June 14. Sunday

three miles east of the Light

Started out for the Jumpus where the contact between the granular crinoidal limestone, Richardson F, and the thin bedded blue limestone and shale, Lowville E, may be seen. Many fossils are to be had but all are in slabs.

The lower part F. is regularly bedded light colored limestone with green shale partings. The Favosites favosus in the sheets nearly one inch thick and of the 2 feet in diameter in the argillaceous fossil. With the above occurs Platystylus Alveolites, Stromatopora, very rare Halysites. Gradually the corals are displaced by the crinoids and then the limestone is full of crinoids and but few corals, only a few other fossils may be picked up. The corals are here in the crinoidal plus a clear ratio rock,

Very near the F. megalensis zone also occur a large Orthoceras and a Phragmoceras

At the base of F. occur Strickendinia and then come in Leptaenella semisphaerica. Probably less than 10 feet below occur Pentamerus Oblongus, all as separated valves.

Here again at the very top of E all of the fossils that I know suggest only Clinton. It is true that we have a far more prolific Clinton fauna and the individuals more abundant, still the fauna is Clinton. I see none of the Arctic guide species. Spirifer radiatus is very rare at Anticosti and where are the other spire bearing brachiopods.

The collection made to-day from the top beds of E 10 and F 1 is not as large as I had expected to make. As there are almost no fine fossils everything has to be taken on a chance. This is one of the surprises of Anticosti that there is so much limestone and so little shale.

According to Richardsons account all the corals collected today and a great many other things like Stichlandinia and Pentamerus also belong to zone F 1. All the Lepidocrinus Lemnifferica Stats are accordingly from E 10.

To me this is a matter of divinity but in the main Richardson is probably correct as to corals, Stichlandinia come from the Wenlock beds at the base of F 1. E 10 are upper beds and somewhat darker rock. It is here that Stichlandinia and Pentamerus occur.

Bear I

At the narrows saw a small bear crossing along the beach. Any fresh Anticosti bear. Tracks of bear, deer and fox are common all along the beach 1½ miles east of the Light House, and in the Portage valley.

The sky is a dark, frigid one, with the wind just a tendency to rain. The night is stormy from the south.

Slept again at the Light House.

Division F at both the Light House and east to the Jumpers lies in an undulating, domed manner. It is only as one approaches the Jumpers that the zone F rises bringing to the surface the top beds of zone E. The undulations are sometimes quite sharp but never of long duration. In general the undulations do not exceed 10 feet depth.

Have several Eucalyptocrinus but all are too poor to take away. Got an entire Ecastes (Phacops) and a Calymene.

Brachiopods are the prevailing fossils. Where the layers L. laminosa occur. The next common fossil is the Leperditia. Bryozoa are rare and almost no Trepostomata. Another peculiarity is the scarcity of corals and cephalopods.

Could the Clinton have come into the U. S. by way of the Great Lakes from the north?

At the Jumpers there is water layer like the one at Ludlow Kentucky in the Fenton.

Jupiter River, Monday June 6th
June rain.

Strong wind and a heavy fog on and I am held up for the present.

Left the Light and Obs. Peninsula at 10 45 and at 11,30 was ashore on the east side of Jupiter river valley collecting a few graptolites and Silurfossils in zone E 3.

While was collecting Mr Rivers walked to the river mouth to see how to get in and by 12,30 we lifted anchor and are away for the river.

In the afternoon collected at the high Jupiter River cliffs just within the river. The cliffs are near 150 feet high, the upper 70-80 feet being of the water lime like limestone-shale holding a very sparse fauna and Dimorphograptus. The lower part of cliff is a soft shale without graptolites, zone E 2, the upper being zone E 3.

Took 3 pictures of the cliff in a cloudy day. Built 1/2.

In zone E3 at the Jupiter Rock Cliffs the fossil most often seen is the Micraster large form. All the other fossils are rare, Ctenopora reticularis, Leptocardia Semisphærica, Cidaris, Micraster, Hemiaster, Oncocrinus, Nucleolites, Anastrophia, ? Pentamerus.

The formation is much jointed in the cliffs, the cliff is vertical above the shale zone E2 and great masses of the upper stuff drifts down & ground up by the sea making flat patches. The lower zone E2 is a very stiff greenish shale and weathers down into a clay. Does not fossils but the portals because of large masses drift away from the cliff. This is the most marked variation of zone E2 on Gatcombe. Why does it occur?

The Jupiter has a wide mouth, but is nearly closed by a bank of shells thrown up by the action of the sea outside, which has been full swept from the south both east and west. The actual mouth is not more 200 feet wide.

There probably was not much life in zone E3 but it seems to me that some of it has been

destroyed by the diagenenetic changes.

Put up for the night in the Mennia Camp. A little round house in which a herdsman stays alone all winter. Mr. Poirer puts up in a similar shanty on Beccie River. For the night William Rogers is my companion. Started at 9 P.M. To be up early tomorrow.

The next day I saw but one / one fossil, except the graptolites above noted, and better, in zone E4 and E5. His custom here often we sees crinoid columns, nearly always / one species, and yet not a head. Occasionally we sees an arm with pinnules. In certain layers one sees the separated stems with cirri and plates. Sometimes the stems remain standing for a time longer than the head which crumbles and falls apart. The would account for the abundant presence of stems and so rare a head.

Jupiter River, Tuesday June 16.

~~June rain. Heavy rain at night.~~

Started at 6 A.M. after a bad night's rest on a very hard bed. Then too it rained a little during the night and considerably between 5-6 A.M. The wind is again rising from the south so we are bound to this place for the entire day.

At 6 A.M. I start out along the shore with Rogers to connect my station of June 13.

The first cliff marking the eastern side of the Jupiter delta is the same zone as that at the top of the Jupiter Cliff = zone E 3. Did not stop to collect here.

In about one mile the softer nature of E 3 gives way to Lard beds = E. 4. The fossils are very scarce here, the commonest being Ostreas. Going still further east one comes to four brooks one (the most eastern one) a pretty riffling water fall. Between

these beds occurs E 5 and extending at least 1½ miles further, before we came to where we had collected so many Strickl. landinia in zone E 7 and the base of E 6.

E 5 is a hard encrinoidally fracturing limestone, of light grey colour with almost no shale parting. The commonest fossil is again the Encrinus, in fact zones E 3 to E 5 should be called the Encrinus beds. The next most abundant fossils is a Schuchertella or surfaces with Tentaculites and Ostracoda. Also occurred three entire Cyrtoceras orientis and Rogus picked up a very large and fine Calymene nasuta. Here we also rarely meets with a Favosites.

Richardson constantly mentions fossils that I do not find in the Raisin, some of which I am certain are loose and from the moraine material covering this part of Anticosti. I saw no Strickl landinia in any of the beds of zones 3—zone 5.

For the actual distribution of the forms depend on my collection as we carefully collect only material from the rocks in place. Occasionally Rogers posts me a Pentamerus Oblongus from the moraine above.

Had five trout for dinner, several of the fishes caught being 18 inches long. These are caught with trout tail in sea water at the time when the tide is about 1-2 hours flowing in. Hardly is the line in the water and there is a fish on it.

Poiver told me that last winter Mr Schmidt in a lake on Beesie river got out of a hole cut in the ice 300 trout in one day.

Police has now cooked trout two ways and in neither way is there a very particularly fine flavor. I know several fishes that I like better than trout. The three men are catching trout this afternoon while I am about telling fictions.

As we are tented to this place on account of adverse winds all went fishing for trout at the sea end of the Jupiter River. They got 70 individuals, but few are large, and they must have lost at least 30 more.

I walked up the river a mile and half and took a number of pictures. I fear they will not be good because of the dark misty day. At 9 PM it began to rain hard and will continue at intervals throughout the night.

A very sad night in the wilderness.

Jupiter River, Wednesday June 17.

Some gain.

In a heavy rain in these parts from the south one must to bed in the little camp house. It pattered hard against the roof and in several places ran down into the room but the beds are dry. We made a little fire in the big wood stove and at 8.30 turned in.

About midnight the wind turned and at 2 A.M. the thundering of the northwester waves waked me up. I started with some fear and looking out of the window into the dark almost thought the breakers would reach the shanty. Looking closer down they were still some distance away but the grinding roar was terrifying. This was at the height of the tide and with the ebb the noise became some fainter. I wondered what the boat and Poirier was doing

and at breakfast learned that his anchor and the shore rope were drifting at 2 A M. so he had to get up and sail the boat back to the anchorage. He was down up the river several hundred feet. At 7 A M. the sight of the waves was a wonderful! Some were ten feet high curling and grinding up the beach. All of the river mouth had been changed during the night and the bars looked very different. The storm lasted all day. Having a gale with sun-shine and occasional rain.

As there could be no thought of sailing today Rogers and I concluded to explore the shore west of Sufferer River. The elder Priest took us across the river in the tender and landed us on the farther shore without getting wet. As we walked

It soon became apparent that all of the debris of the Jupiter cliffs had been washed away exposing in many places some E2 at the base of the cliffs. Up the track curled and saw the fresh traces while the grinding under tree and the roar made it impossible to speak. In the teeth of the wind we proceeded westward and hardly one a mile onto the trail came a magnificent female bear with one cub about two feet long. She too was headed westward and did not see us, walking along the track in search of food. The wind partially deterred her from the again turned into the trail. Fearing we may have trouble with her we proceeded slowly and again saw her in the first trees along the track while the little fellow was climbing around in the conifer tree. Finally she passed deeper into the bush

Bears II and III.

and we got to Hunts near without geese and boarded by with hammers and collecting traps.

The rest of exposure until we got about 2 miles west of Jupiter River were a hard of some size came falling over the reef. There is a small exposure of light green or grey limestone in the beds, 1-3 inches. These we followed for another half mile when all is covered again by the down slope of the glacial Blue Clay. In this clay recur a number of fossil forms of recent looking but we can identify invertebrate fossil shells other than for the fact that the species are all different from those of the present (or Pleistocene D?)

One D 9 has not many fossils but those collected are good and very interesting. The finest I got was a fine and large shell that I mistook for Pleurotomaria. As I collected more it soon

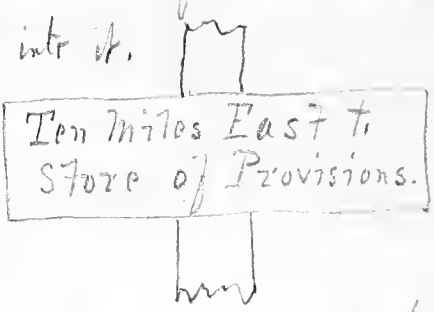
became apparent that not only was the tide different but also there were no radial striae Later I made it out as Triplesia ortoni. Hearens what a lesson! This seems the Richardsons Hazelia Complex!
Associated species are Atrypa reticularis, A. marginalis, Leptocoelia hemisphaerica, Bilobites biloba by dozens out variety, Schuchertella striata, Leptaena rhomboidalis, Acastes, Cheirurus, Bumastus Platystrophia ? new (has decided ridges), Atrypa Ostiacoda. Favosites gothlandica occurs rarely, one layer massy about 16 inches across the head and one another probably 20 inches wide. Pentamerus Oblongus also occurs and in certain layers in separated valves abundantly. Saw no Strickland. viá.

As the tide continues we were afloat to stop collecting. Tried all to get back to the boat before the high tide cut us off. Otherwise we could not get in until after ten o'clock. Then too we could see

no cliffs ahead. Poirier tells me there is a high cliff 5 miles west of Jospeths River.

All in all June D is Silurian but the fact seen today in Ohio Clinton while the eastern Clinton is of June E.

About one mile east of the brook nailed to a tree is a sign board with the inscription deeply into it.



A further dead fact east of the sign is a little shanty that may be intended as a Camp or as a shelter for the ship wrecked.

(From the low angled dip of Division D it is probable that we are still in D 9 but somewhat lower. In any case the Triplesia ortonii bed as above and the Atrypa congesta beds below.) Dec 7 mne '21

Jupiter River June 18. Thursday.

June rain.

A fine bright morning to be ashore but there is no wind and one want to be at sea to go either east or west! Then too the breakers are rather stiff in front of the river mouth, the wind up the river instead of out, and so on, the old old story of a sailing craft. A gasoline engine would be a very decided advantage to a sail boat when you want to go. But these people are too poor and too primitive for these things.

By ten o'clock it is dark with slight rain. It rained then to 12 o'clock

At 1 P.M. Rogus and I go west and at about 3½ miles west of Jupiter River find the bedded blue limestones with shales stranding in Meleagrina, Pleuridictya, Byssopsina, Atrypa, Reticulariina and a thread Spirifer radiata like shell (this is probably the Letiopa carpata of Richardson). In a way this fauna appears

† This is the D 7 = D 9

to me to be the time equivalent of the Edgewood, Missouri fauna. The horizon of this fauna appear to me more like those of the Medina found at Hamilton than any others. Pascalus occurs probably less than 15 feet above the above mentioned fauna.

My sensations of yesterday and today are correct I have made a great discovery.

We intended to go to a large expanse about five miles east of the Infinite River and when within a mile of it when we were blocked by a considerable stream. To cross it meant wet feet and this I did not care to do. On the other hand I am glad we did not for because I was tired out to the point of exhaustion when I reached the camp. It is not the distance that tires or fat to walk on a gentle track and with 30 or more pounds to carry is what does it.

Half a mile beyond the river that blocked our passage we saw our fourth

Year IV.

tear.

Along the head I saw the interesting phenomenon of thousands of caplon being driven ashore in the surf. They make a great struggle but it is a hopeless one for eventually their strength gives out. The head in places is fairly alive with writhing and jumping caplon. For 2 miles there were dead caplon along the line of high tide.

The last storm also brought up a great cram of kelp and around the stems were clustered clumps of thousands of fish eggs. Some were yellow, orange, pink but most of somewhat different sizes. In the kelp were also picked up some large Nautus still alive.

There was a feast along the head tonight for the gears. All along the shore where the caplon were coming ashore we saw many seals among the breakers after the fish. Also gulls and gannets congregated but fishing

only the live ones in the water. Along the
beach they did not touch the seaweed, although here and there one sees one bitten
into an end gone.

The temperature was 61° F. The wind blew off E 10
Nice spring water, but not abundant

N.

14

E 10

sea level

East.

There is one good reason
here that we did not see the
others.

Jupiter River Inlet Friday

Slight rain early and late today.

As I went to bed very tired last a rest less night.

At 4 A.M. Poirier called us at the camp and said the tide and wind were favorable to get out of the river into the sea. By 4.30 they had rowed out of the Jupiter mouth where we had been for four days, about 2½ days longer than I wanted to stay.

At 7.30 we are in front of South Bird Light and they salute us with the flag. At 8 Poirier and William go ashore in the surf boat to get some eggs of Sandpipers which and by 8.15 we are away again for the Salt Lakes.

We arrive at the Lagoon of the Salt Lakes at 11 A.M. and find the coast a very low

one and not a single rock or stone anywhere in sight. Then too none here contain any of the fossils. Small cliffs are repeated to the east and west about four miles. Where Terrell gets his fossils I do not yet know.

At Salt Lake lives Jos. Bourget the man that tends after the telegraph lines along the island. He is a tall and very stout man of Jersey extraction and is equal to all that Centinela demands. Single handed he will go along the line and during the summer his worst enemy is the mosquitos especially when he is up on the poles. He also says that they are so common in the summer that while shooting ducks he often can not see to aim. Shots there must be few during the summer and yet this family seems to be happy with one son and three daughters. However they are on the island but for years.

We had a chicken dinner at Mrs. Bourgets. In coffee capacity.

After dinner walked first west for more than a mile and saw no prospects in this direction. Then started southfully five miles more or saw the crinoidal limestone F. here with a pinkish color, more dense and would make a fine marble. As the strata dipped to the west only 15° strata could come in and at the next point we could also discern the limestone of F.

The region of the Salt Lakes is a very low land between semicircular ridge to the west 15° from N. This low land is in part below sea level, the sea flooding it through the ravine of Salt Lakes. There are two great and two small Salt Lakes. Over the top of this surface lie a glacial blue clay with pieces of limestone and crystallines, on the lower recent marine shells here as elsewhere. In front of the lakes the sea has thrown up a fine bar sloping inward now covered with low aquatic bushes. Beneath it is a dark turf of peat up to four feet

thick. In many places the land is practically a tundra for Mr. Bonyet says he often encounters frozen ground in digging holes for telegraph posts. These lakes are great breeding grounds for ducks and we secured a number of several breeding varieties. Of one flock of two or more we secured 7 and presented them to the Bonyet children.

In our walk today we found a mountain cottontail dead on the shore but not as many as yesterday. All along the shore as well as at the Jupiter River camp and there we have a red head. They are quite common all along the coast.

This morning early we got past the Jupiter River camp when I saw a big bear crawling down the upper shanty hill. A second bear was seen near the campers. Here about the Salt Lakes bears are so common that the Bonyets are always

Bear IX, XI.

on the look out for them. The children do not stray far from the house and when the boy goes inland the corral he is apt to see a few. They are now far more common than they used to be due to Mennier's rule that no one must do any hunting. ~~This rule was given up the month~~.

The population of the island of Gaticoati in 1898 was 253. It is now less. Here at Salt Lake before Mennier got the island there was a small Whaling factory settlement. All are now gone except the remnants of many Whalers huts. The only man living between Salt Lake and South West Point is Bought.

My trip to the Salt Lake, has been a fools errand. At least one day lost.

Salt Lakes, Saturday, June 20

Heavy rain in the afternoon and night.

Had a good night's rest at the house of the keeper.

Arose at 5 a.m., had eggs for breakfast and as the wind is from the East we could not make much progress for Sum River (Rivière du Fusil). Our Keeper goes out to look after the line.

At 9.30 we are again at South West Light and the "mail" goes ashore. At 10 we sail on the Sum River in a good breeze. At 10.45 we are opposite the [illegible] River [illegible]. Curtis we found South West Light keeper in comes the Canada ship Ontario to look after the cable that runs from here to Sarpe. This now 8th of years.

The boat puts us ashore at the Lilrevey cliff and we find it very low collecting. This about 4 miles east of the Sum River and about 5½ miles west of the Jupiter River. We are now again in the same type of rock seen about

Arm of Cape

English Bay, thin bedded grey, concretionary fracture of limestones with almost no shale partings. The fossils are almost none, the commonest being Helopora (bryozoa) and Receptaculites; in these then are the Paracyclus (Calcarea = DQ). beds we saw June 18 underlying D ^
At this cliff there is a very slight anticline and eastward the dip is exceedingly slight. In this region one has to go miles before getting into known horizons. There are a number of conglomerate layers of no particular significance but there is one beneath the Paracyclus horizon towards the west of this cliff that is about 3 feet thick and of the same character as that described from June 9. These beds must have been made when this layer was the sea bottom and a violent storm churned up and disturbed the bottom. In the rolled balls are the zoolar fossils belonging to the horizon. Just above this admixtic conglomerate layer

there are more recent limestones in which Fossils (have some) and rarely a Stromatopora occur.

I can not quite make out from Richardson's account of this Region is D 5 or the one D 6 which the state is concealed. In June 21 Probably nothing beyond D 7.

It rained or had showers after we got ashore that it took the effect both of me. Then I for it is or cold that I am uncomfortable besides. Here first symptoms of the intermittent fever.

In the rain we arrive at the canal at Riviere aux Fusils and try to dry out.

At 7 P.M. the two "Lions" arrive with a Horse and 2 large dogs. Here we are all to sleep tonight in a pavilion. The Party will hold all of us but as we can to close the door and there are other visitors I fear that I will be all the more quiet in the morning.

If now looks as if Q. 5 and D 6 are more Ordovician than Clinton. To-morrow we may learn more about this. For we have 4 to 5 miles west to Otter River to see the "Otter River section."

Later June 22

As none of the beds seen are lower than D 7 having more Silurian fossils than Richmond conclude that Billings is correct in placing all these beds into Silurian.

Sun Riva, June 21 Sunday.

Hard rain in the morning

Well we have had a hard night in the camp. Had the best and softest bed in the waggon tent while at my feet were lay three of the line men. On the floor lay the other line man and Mr Bruyck. The dogs and boys were outside the camp. We retired at nine and soon a hard rain set in and as the roof leaked some soon everyone was being disturbed. However the boys soon bailed out the water and there was no more trouble for the remainder. As soon as the only man with a blanket the stove had to be kept going and soon after the room was like an oven. The door was then opened and the men on the floor got cold and the door had to be closed. Mr Bruyck & Mr Ross were the heavy smokers of the night and between it was a job to

with an awful hyhead.

The rain kept up all night and it rains this morning with the promise that it will do so all the morning.

As the tide is high at 7 A.M. the line men can not get around the capes until low tide. So they remain in camp sewing pipes until 9.30 A.M. I remain in camp too for the same reason and the further one that I would like to have the rain stop. The rain and fog will however will probably hold on all day.

At 10.30 we started west in the fog and rain for Otter River. Point round as around Seven River and immediately to the west of this river there are low cliffs, more less undercut, for the next three miles. The character and fauna these beds are practically the same as those east of the Seven River. Only that to the west Pacellus is a very rare

fossils while corals as Favosites gothlandica
Halysites, Chaetetes sp. and a Stylopleuroma are the
common fossils. These corals are often
associated with the peculiar "Conglomerate"
layers. In all cases when the conglomerate
is decided the beds are also cross bedded
or wavy and in most cases the corals are
rolled and often overturned. The Stylopl-
asma are often common in conglomerate
layers that is not decidedly disturbed. Sometimes
they are large as ten acres in diameter. Ends often rounded.
Above the Coral horizon for 10–15 feet
in which
in a zone not all so fat there occur an
abundance of Meristella tostudinaria (lin),
Hebertella maria, Rafinesquina alternata?
Leptaena rhomboidalis and several Strophomena.
Corals also occur in this zone but in isolated
specimens. Both horizons are in Richardsons D 4.
These two horizons are about 2½ to 3
miles west of Lees River. Between Lees River
and Otter River the strata dip but very

little or that the lower part of D must be away, for, to the west from present position

Again there is nothing Silurian in these beds, not as much as the White Cliff at Ellis Bay.

We get back to camp at 5 P.M. with the seen out in all its glory. The world is again bright, and we have the camp to ourselves.

After supper took a number of snaps shots about camp and collected a few pieces of limestone, just to the west of our camp with Bel. Spira and Eg. Spirifer and Dalmanella. The cliff I photographed and it is about ½ mile east of Seven River. The foreign marble in D 5. I also got Richardsons Atrypa compressa and large Leperditia.

According to Richardson all that we have seen of D of 4. Otter River are the zones D 10 to D 7 both inclusive = 166 feet. According to this most of my labels are registered too low in the section. Correct this.

Sun Rise, Monday June 22.

Had a fine night's rest in the camp with Rogers as my companion. As there was no call from Poirier I remained asleep until 6 and then had a shave. At seven had breakfast and learned that it would not be possible to sail now for the west as the wind is from the northwest, the direction in which we want to go.

At nine A.M. the wind is high and there is no prospect of our getting out to-day.

Later I reexamined the cliff about half way between Sun Rise and Cape McGilvery which is about 2 miles east of the River. Found one good Illaenus head, some Ruffinesquina and a few corals. Also saw here the Atrypa reticularis but too far to take, and three Cothurnocystis elizabethae one of which I have. With the finding of these fossils and the Atrypa reticularis with a Schuchertella in the cliff near Sun

& the collection marked as D8.

River it becomes plain that all these beds of D (up to at least the Otter River) are Silurian, i.e. Silurian older than any we know in the United States and not Richmond.

The corals collected today 2 miles east of Sun River are again connecting with Englands. They have been rolled, are worn and hardly any are of large size. Then too the beds are wavy and undulating, even slightly cross bedded.

Returned to camp at one o'clock completely exausted and shivering to the spine. Tried to get warm in camp and had some hot tea but all to no avail. Fever set in and I quaked for at least two hours and it was not until 6 P.M that the fever left me. Had some tea and crackers for supper and then had 2 "Mother Seigels Pills" and "Syrup". Then a hot water foot bath with wood ashes and a cup of hot water to drink. With this I retired for the night and soon got into a sweat. The

pills worked about midnight and had
4 get up twice. My tearing headache soon
left, the fever was practically gone at 7
P.M. and I rested fairly well during the
night. But I am very weak and especially in
the region of the kidneys.

Had a similar chill day before
yesterday but by no means so decided.
I am therefore wondering if I have a case
of chills and fever or intermittent fever.
If so I ought to have the fever again
tomorrow. In this case I must get some
quinine.

Lem River, Tuesday, June 23

Got up at six and while I am much better still I am very weak. No energy no activity desired. Had tea and crackers for breakfast.

Packed the few fossils collected yesterday & was to have all ready for sailing when the wind changes. It is still northwest but very gentle.

Remained at Lem River all day as the wind continues strong from the northwest.

Poirier caught a few good trout in a lake of the Lem River rapids. He had a good many more on his hook than he could land. More than half broke away from the hook. Had them for supper.

This evening the Lemets are fishing capelan. From an elevation of about 50 feet they dive into the sea and get their fish, then fly

forward bars, circle back with the wind and swoop around rising in the air to about 50 feet when they again plunge into the sea with a great splash. In this way they feed together in great quantity, often many hundred fish. Upon the capelin feed not only these fish, but also the salmon, trout and seals, and probably other animals. They are one of the most substantial great fishes as the cod is in the human species.

About the day resting beside a fire. This evening after the first capelin I feel better. I hope the wind changes to morrow so that we may go to sea.

St. Marys Cliffs, Wednesday June 24

Did not rest the best last night.

Poirier called us at 4.30 and at 5 M we were out into a very stiff breeze for St Marys Cliffs. There is no saying when we will get there. From Bear River to Otter River it is about 4 miles and from the latter place it is 8 miles more to the cliffs.

At Anne cliffs are 1 moranic sands. Poirier says the same for St. Marys cliffs, but there is a small exposure about one mile to the east of the latter that we are heading for.

At 10.30 we go ashore to see the small exposures about one mile east of St. Marys cliffs and find the limestone to be a lighter color than those farther east with a little more shale partings. Fossils are very scarce except the corals as Favosites gothlandicus, Halysites catenulatus and Stromatopora. The horizon is evidently in the Cyrtidium tornquisti zone for the waves

small specimens may be seen everywhere in the rock. Also saw the small bryozoa Hedfona but nothing else.

I could make no better collection for I was very sea sick and vomitting at the time. I don't know if I could have secured many other species than those mentioned.

Under the circumstances I constantly recurring sea sickness I concluded to go on to Elles Bay as the formation is same as the 100 feet of the Conchidium zone. We lay in the trough of the sea and finally in a cross current sea so that I became a very sick man. I do not know of a worse case of sea sickness and vomitting continued with shivering to the close. The same fever came on and though the cabin was hot I could not get warm. Drinks of cold water during the latter part of the fever did me much good and finally I was able to lay without a fire in the cabin.

We arrived at Ellis Bay at 4.45 P.M. and Latmee went to Mr. Bandreau's house who took care of me for the night. First had a little cocoa nibsky and Latmee bread butter and Tea. Retired at 6 P.M and soon fell asleep not to wake again until a little before day break about 2 o'clock.

In the morning I am still weak and feel the heavy of the sea. Bandreau gives me boiled lobster for breakfast with tea and skips soon to be able to go to the west shore of Ellis Bay.

Ellis Bay, Thursday June 25.

At 7 A.M. started for the west shore.

At the most northerly locality directly opposite Mr. Meurier's house along the track and cliffs one begins to find an abundance of fossils. The horizon is C 3. Here all the fossils again collected on June 11 besides an abundance of Stiridella. Also some interesting pasterfords but these are always rare.

From here to the outer Cape = Cape Henry the distance appears to be less than 2 miles. one passes over all the beds into C 12. In the Pentamerid beds are at a number of localities which I took to be undoubtedly P. pyramidata. A little north down in the same one (= C 11) are very large examples of Hyattidina and crinoids, and the slabs with Syringopora.

This series of beds is an alternation of limestones with much shale, perhaps separated by others that have more shale or are all in a calcareous shale. In the weather these calcareous beds break down into a mud but under water remain hard and then appear more as

limestones. It is very difficult to follow Richardson section without the aid of fossils just because the entire series is so much alike and more because his descriptions seem to be based on the nature of the strata in the cliffs, i.e. under water.

Glyptaspis at Mrs. Saunders.

Left a letter from Bostwick. Left N.H. June 6 and got to Ellis Bay June 17. It has been here since then.

Ellis Bay Friday June 26

Started out for the west shore and Transitum Cliff (= near Thrashing Cove) at 7 A.M.

As we got around Cape Henry or that we came on Thrashing Cove there a low cliff of the Cape at the base of which are the domes & cones in C 11. ^ describing by Richardson The main Canal is Stalagsites, next Tarsales, Stromatolites are the huge stalagtheroma. Above these small reef domes the beds are undulating. Of the domes reefs there are not many.

[illegible]

A less than a mile further we begin to see along the rock the Conostichus of zone C 3. Fossil are at Transitum Cliff but before we get there my old trouble is upon

me. It was quite apparent that I have a recurrence of my lumbago trouble but this year in the form of intermittant fever. However I am now where I have quinine and can dose myself.

Collected nothing today but walked without intermission from Ellis Bay to Strawberry Cove, where I arrived and at once went to bed in Mr. Duquet's house. Had him telephone to Mr. Malouin that I was sick and to send a carriage for me. He arrived at 3 P.M. and in 20 minutes we were back to English Bay.

There is a fine overhanging cliff just east of Strawberry Cove but did not examine it.

I understand that Mr. Martin the Lieutenant is to arrive on the King Edward next Tuesday or Wednesday. I am going to try to have all my material packed so that I may go with her and be near doctors in case I can not come myself with the Equipe.

It is to be hoped that this sickness should have come upon me at this time. It has interfered with my work all the past week and so far as division D is concerned I only know the upper half. The lower half with Mr Lawrence Ramandi have missed completely. As far as I know the loss is not a great one. The greatest loss will be my failure to see the lower ends of Division A but if I can I will try to see it.

Saturday June 27 English Bay.

Went to bed last night at 7 P.M and slept fairly well until midnight After that short slumbers and considerable wakes. Took quinine about every 3 hours and this morning I am quite sick and dizzy. Dressed and went to the breakfast table but could eat only one egg, a small piece of bread and a cup of coffee. The latter soon made my head ache all the more but in half hour it ceased.

After o'clock I feel a little better and am up writing these words.

The day is fine and I hope Poirier will be able to sail to this place.

Poirier arrived with the boat at 4 P.M. Had vermicelli soup, a glass of milk and a piece of bread for lunch.

about every three hours I have a glass of milk and some quinine.

According to the last record of my fever if I have it not checked the first chills will be in tomorrow morning at 6. I do hope I have it checked. If I have can then travel more safely to New Haven.

English Bay Sunday June 28.

Had no chills nor fever today. Very weak but began to get an appetite and eat a good dinner at Malouins and a hearty supper at Rouges.

Did not get up until 10 A.M. and after that all went well. Walked towards English Head and later with Rouges to Lake Pleuncon to gather some of the fresh water shells making the bottom. It is a mud with the top layer one mass of shells, of Physa in the main. Also got a number of yellow orchids Cypripidium.

The finest day and the warmest on Anticosti. Not too warm for me.

English Bay, Monday June 29.

Get up at six A.M. feeling only the effects of the quinine.

With the assistance of Pointu and another man we hope to make the necessary boxes and complete the packing of the birds gathered. To-morrow the King Edward may be in when I want to be ready to go with her to Quatsino.

At 2 P.M. we have four large and one small boxes packed and marked

Yale Museum
Charles Johnchest.
New Haven
Connecticut.
U.S.A.

I then start out to pay my bills. These are as follows:-

William Rogers for 18 days.	18.00
Poirier, son and boat for 20 days	80.00
Groceries and camp supplies.	48.93
Boxes made to order	2.00
	148.93
Present to Poirier	5.00
Present to Rogers	2.00
	155.93

The collection is expensive considering the results but it is the best that I could do in the time and under the conditions of work. Then too much of the material must be broken before it reaches Museum.

For the many kind favors shown me by Mr. McLaurin I am unable to make any returns. He entertains me as his guest.

A telegram came that the King Edward

would be in some time today. Finally another one that she would be at English Bay late in the afternoon. She came about 10.30 P.M. and Mr. Martin came ashore. A very tall powerful man of about 35 to 38 years, speaking fluently a good english. He seem to be all questions about the surgical possibilities in the way of economic products, asked about gas, land oil, coal, and minerals in connection with the two Queen Cities that are the islands on the north coast. The only possibility I can see are for lime and cement, lime about South west Light out of the crystal limestone, and cement out of the ashes at Jupiter Cliff. Our conversation was very short as all was ready for me to go on board. This I did at 11.30 P.M.

The King Edward is a far better boat than the Skeena, I am told adapted

for passenger service.

Today was for Corticosti a very hot day and while I was dressing this morning the work brought a little perspiration. The natives however showed the effects of the hot weather which was as cool as a cucumber. The fly days will soon be on now and there no doubts are on at Still Bay West.

My boys are on board the King Edward and for my Corticosti trip closes successfully. My next from seems to be fine and I am resting in the quinine.

On the Gulf, Tuesday, June 30.

Did not sleep well at all last night due to the shaking of the boat. The cabins are all astern and one feels the constant working of the machinery.

Got up at 8 and had breakfast which is much better cooked and served on this steamer than on the Saxon.

Around the Mingan Islands and again along the North shore one sees very distinctly an elevated beach (probably glacial material) fronting the harbor and. Along the North shore beyond this elevated beach extend the hilly lands, a rugged country of mountains in their last stage of wear before being reduced to rounded featureless elevations. When did this elevation occur? Was from the [illegible] eroded the former Ordovician and

Silurian deposits. The structure now is something like this.

As we go along the Minjan Islands we see fine cliffs of the Carnarvon dolomite and at the end of one island there is a large quarry. The island rises to one level apparently a former peneplain, this elevation being 200 feet or more. I saw no houses on the islands, but as the settlement Egeimaung Point is close by we could arrange to get a boat at this place.

There is abroad a party of six New Zealanders going to Matsuyama on last step eastward to visit Dr Solomon.

One of the party has been coming to this place for 18 years although the camp, which is 14 miles up the river, was built about 30 years ago. They have a great lot of trunks and fishing traps and a colored man to attend the camp. And all this in comfort and luxury.

Since leaving Edmund last night all my travels have been in the way direction. At 8 P.M. we turn around and head for home.

It is cold, a little ice and a frost still.

Saw a lot of Indians at Nata. Saw a small lot of men outlandishly dressed in knee boots of the Zulu and native kilts. All display some tribal scars, a remnant of old.

On the Gulf, Wednesday July 1-

Slept the usual troubled sleep.

Retired at 7 and had breakfast at 8.

At 9 we are at Esquimaux Point and as the day is bright we have a fine view of the country. There live about 175 families. We again see the cliffs of dolomite and if fossils are present it would be very easy about here for Esquimaux Point. The point is a low sand bar with the back ground high and mountainous. The islands are table topped with the strata about horizontal a Point slightly undulating. Took several pictures of the

At 11 A.M. we are at Mingan. Again sand on the North Shore but heavy bedded dolomite on the island opposite. Have one picture of the village.

At 11.30 we are at Long Point. Hotuges of salt goes ashore. The Laurentians 20 to 1 the north, 20 miles away are up about 3000 feet. at the highest and down to 1000 feet at the base. One sees plainly Cuticosti from here.

The fine land along the coast. There is low mountain for hills. This low for many miles inland, in places of to 30 miles. Back of this low plain rises the Laurentian hills. Is this fine land to be interpreted the same as the Ordovician plain about Quebec?

The wind has let down and we go ahead for St. Johns River at 6.30. There was no real necessity for this long delay as I found it discussed by the Dixies and Penzen. At 8 P.M. we are at St. Johns. We did not get the Salmon and Halibut until 2 o'clock and did not again get away until 4 P.M.

On the Gulf Thursday July 2.

As we were anchored all night in front of St. Johns River, the river named by Jean Ribaut to first Palmetto in, had a quiet night's rest.

Started as usual on a steamer at 7.30 and had breakfast at 8. We are now going by Hell Gate. The shore here is of coast alluvial rock, low probably nowhere higher than 10 feet but much in the distance are as elsewhere the higher hills of the Lowcountry.

At 9 AM we are at Little River a settlement with about 20 houses and no church.

As we proceed along all the morning there is no more like sea of the flat-pine land. The country to the north is rolling and hilly but not high. What has become of the Okefenokee plain we are further east.

Philip Holliday

To Holliday Bros, Parker & Co.

J. G. Strange
Labatie,
Can: Labrador
P.Q.
Trader

Louis Bruneau
151 St. Peter Street, Quebec

Land to all the Journal rivers.

At 12.45 we are at Moisie River one of the largest rivers of the coast. Runs also the finest Salmon River. [illegible] side of the river for some miles then on a low sandy coast which back of the sea about 25 miles again are the high mountains. At 2.30 we leave Moisie River

At 4 P.M we enter the Seven Islands and put off at Clarke City Landing, then the Pilot Landing and then the village of Seven Islands. Here we put ashore

about 20 indians. What they intend to do here I could not learn. Men, women, children and dogs with considerable baggage.

The Seven Islands are of crystalline rocks, the mountains rising up to nearly 1000 feet. Along the North Shore there are some sand flats.

The weather is extraordinarily fine ever since last Saturday. Sunshine and hardly any wind.

On the Gulf, Friday, July 3.

My birth day and 50 years completed. In these years much has been accomplished and yet under proper conditions how much more could have been done. I still have 50 good years before me so far as teaching and research work is concerned. At Yale I should have good opportunities to make good.

At 8 A.M. we are at Sitka with a string of about 20 houses on the beach in front of high crystalline mountains. The South West horizon is high and mountainous with a town pre-land. If there ever was any Russian [illegible] there is nothing now in the [illegible] to indicate it. It seems to me more probable that the western

Sea did not attain 2 per cent.

Some sportsmen have come aboard during the night and as Bradbrook as the last stop we are now direct on our way to Quebec where we expect to arrive in not more 24 hours.

Renato Aldrich is on board one of the Salmon fishermen. He got aboard at Moise River.

Along the North Shore opposite Little Metis the mountains are all of one level dissected here and there. Is this to be interpreted as an elevated peneplain? If so this elevation must have been very recent. This peneplain begins not far west of Bradbrook.

Bic has a high mountain back of it whose altitude probably was 1000 feet. Along the face is a vertical cliff in a syncline of either sandstone or dolomite.

At 7 P.M we are in front of Red Island Light ship no 3 and have a fine view into the wide mouth of the Great Saguenay River. The mountains begin to be more rugged and high some miles east of the River and appear to get more and more broken westward. There is no flat sky line, it is all up and down but is rounded from the south shore is a flat tract of land gradually rising higher from the river. Nothing of the Appalachians can be seen from the river.

It seems to me very probable that the Laurentians are of recent elevation and that even the top rock in contact the Ordovician and possibly later strata. For they are all eroded in past when covered in down faulted places as the Lake St. John region.

Quebec, July 4. Saturday

The steamer King Edward arrived this morning at 7 and I at once went ashore. Stopping at the Clarendon Hotel.

Had a hair cut, shave &c and then purchased one dozen silver tea spoons for Mr and Mrs Malcolm on Anticosti. Sent off by registered mail. A letter to

Then wrote letters to Rose, Alfred, Phil, Bostwick and Corcoran.

After lunch got the boxes at Victoria Hotel, took them down to the steamer and from there took the seven boxes to the Quebec Central freight office and shipped all in bond. Paid 50¢ to have the papers made out. Charges collect.

three quarters of a mile to the next river bench. Here too the soil is dark and fertile as in the main of Hudson River but there is more arkosic sand and many large crystalline glacial boulders scattered in. Going up this rise onto the bench the soil becomes thinner and more sandy with more smaller boulders many more or less angular and broken. Here near here that the Laurentian rocks begin.

Here now clear from the lap of the Ordovician rocks that the Laurentians have already broken through them. From their tops have long since been stripped the Ordovician beds.

The river terraces are very plain also the northern shore and must extend up to at least 400 feet above the present level of the St. Lawrence. Opposite on the island of Orleans they are not so plain.

Montmorenci Falls is quite near for the gorge it has cut back from the river is not more 1000 feet.

Quebec Monday July 6.

Spent the morning at Levis looking at
fossils conglomerates and flints picked those
at and near the Point.

Left on the Quebec Central at 3 P.M.
New Haven. After we get beyond N.
Joseph and on the upper land the country
is undulating with no high ground. Soon
we come upon the Chaudiere a large river
in a deep and wide valley.

About St. Marys there is higher country but
still no hills.

At Beauce where we cross the Chaudiere.
The river is in a deep and somewhat wide valley
300 feet higher in the upper undulating land.
After crossing we at once rise out of the western
side and overlook the wide and rich
valley of the Chaudiere, here a small
stream.

At East Broughton we are in metamorphics

and asbestos mines. About Broughton there are hills of to nearly 1000 feet.

At Kettle Mines there is a great new development of asbestos. Half the houses are new. The mines are on each side of the track and are very complete workings.

More and more granite asbestos mines at Black Lake. Here it is quite mountainous.

Between Thetford and Lake Aylmer we are out of the hills and in an undulating slightly farmed region. Thin clay seems to be again of the water shed. Many small lakes.

Are the hills about Black Lake to be regarded as the termini on the western side of which are the Mica, Dominion deposits? The Atlantic Ordovician is of course on both sides. I see now no hills to the west, only to the east of the Lakes. At Sudbury junction low hills appear to the west.

At Hartford we are in the midst of a fine farming country and a rolling land. But there are none in sight.

New Haven July 7 Tuesday

Arrived at 5.47 A.M.
At my desk at 6.

Fraises = Strawberry
Hirondelle = Swallow
Graines = Grey
de l'Ours = Bear
Chute = Jumps

Fever

First attack	Sat. June	20.	About 2 P.M.
Sec. "	Mon. "	22	" 12 noon
Third "	Wed. "	24	" 10 A.M.
Fourth "	Friday "	26	" 8 "
Fifth "	broken by quinine		

Started Tuesday June 9
Ret. Saturday " 28.
20
4
$ 80 in boat.

Rogers 18 days = 18.

20
41.50
72
133.50