



2572 Boston

doc. 0112

Please return to
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Cincinnati, O.

Taken Cin. O. Sept. 17-19. 6

Summit, O. Sept. 12-19. 6



3426

Aug 30 - Sep. 24
1916

NY, Ont., Ohio

w/ Raymond +
Clarke

3477

Aug. 9-13, 1920
CS + P. Raymond
Eastern Mass



3426

New Haven, August 30 1916

Started at 4:08 P.M. on Greenfield Mass to meet Professor Raymond, and his student Clark. Tomorrow morning we all go together in an auto to see the Ordovician between Waterbury and Stratton.

Greenfield, Aug 31-1916

Met Raymond and Mr Clark at 8:30 at the Mansion House, and we started at once for Albany, N.Y. in the former auto. In Greenfield there was a heavy fog on but in a half hour along the Mohawk trail the air cleared and we had a fine sunny view of the Berkshire, near North Adams and Williamstown. Got to Albany by 2:30. Then called on Dr. Clark at the museum for the rest of the afternoon. His new museum is fine and splendidly



mounted. The models of the insect strata
are better than any I have seen elsewhere.
Stopping at the Reelin Hotel.

Friday Sep. 1 - Albany to Canajoharie.

Started out at seven in the morning for
Johnesbury and then beyond to Patersonville
to see the section described by Prosser and
Cummings in Fifteenth Annual Report of N.Y.
State Geologist, 1895; 656-658. Patersonville
is between Johnesbury and Amsterdam.

All the brown sand from the Orchard and
the canal up is of Beekmantown, and of which
about 183 feet can be seen. In the quarry on
the side of the hills about one-half mile ^{west} south of
Patersonville may be seen resting on the
Beekmantown the

Black River seven feet thick. In the basal two
feet fossils are scarce. About five feet above the
base Columbaria abbreviata are very common

Se lamulla on (koti) (koti).

six to eight inches thick

and in one place they made a thin reef. Bryozoa are common here, and occasionally there is an Orthis. Then follows the

Amsterdam limestone eight feet thick. The contact seemed to be without break and many fossils are common to both. Here Strophomena incurvata and Solenopora are very common, more so than I ever saw before. No Clemaria here but got a fine head of Stromatoceras. Rafinesquina alternata, Plectambonites seniceus, Rhynchotrema inaequalis, Isorthis recurvirostris, Orthis pectinella, Plectrothis plicatella, Camarella in stavanensis also occurs here. Trinacelus concentricus is somewhat common, and Leberditia ^{also the leptonia} furcata. Then come the

Glens Falls limestone, nodular, from ten to twelve feet thick. Here all Solenopora are absent, but the common fossils are Isotelus sp., Pruvotina, Strophomena incurvata (rare), Rafinesquina alternata, Plectambonites seniceus and many



lygon like those of the Paet River beds of Minnesota. Above comes in shale probably the Caraythane shale.

We then moved to Amsterdam. Along the river from just west of the bridge may be seen the contact of the Lovville with the Beekmantown.

Bed in

Knobby Amsterdam

Beekmantown like Lovville 5-6 feet

~~Beekmantown~~

~~Dips about 50° W.~~

The angular unconformity between the Beekmantown and the Beekmantown is easily seen here. The Lovville is the typical milky white (blue on side) stone but the Beekmantown are not well developed though there are many irregular thin and short crystalline radial tubes (1/8 inch or less in diameter). There is considerable intraformational crystallization and as usual no fossils

The next morning we found if Amsterdam
is not a Black River because in places, accor-
ding to B.R. has no ^{carving} in it. It is a part
of the B.R. the higher part without the
Chlorine. The two belong to one invasion.

are to be seen excepting an occasional section
of a bivalve or a gastropod. About one foot
beneath the top is a layer with many Diap-
telasma profundum? and several Strophomena.
I also thought I saw an Orthis. The
only Amsterdam ^{dates} comes in somewhat
sharply but I don't think there is a real be-
tween them. There is no evidence of Black-
River here, certainly none like that at Patu-
enville, and its place may be taken by the
Lorraine.

Leaving Amsterdam we went to Triton
Hill and then across the Mohawk to the
Bellmantle quarry (on a mile east
of Fort Hunter). Here near the top of the
Triton Hill part of the Bellmantle occurs.
The light fossiliferous Triton Hill formation. The
bed occurs in pockets about four feet beneath
the top of the quarry, or about 30 feet beneath
the top of the Bellmantle. Raymond says
this design is the same as the most fossiliferous

This Trenton (Anderson - 1904, p. 162) slate is
- the Glen Falls formation, the lower Trenton, and we
no longer regarded as a part of the true Trenton
because it does not occur at Trenton Falls.

The Canaan shale appears to be, according
to Ruedemann, equivalent to the lower ^{and middle} beds of the
Trenton as shown at Trenton Falls.

This then would explain the head and the concretion
at the base of the Canaan shale (see Bull. N.Y.
162:29).

about 30 inches apart. The Canajoharie shale
shale (forming the strata) comes in sharply above
the Trenton. Here again the top of the Trenton
like the Redman town has the top somewhat
eroded and the basal one inch of the shale is
is more lying and (last ^{part} of the ^{thin} limestone up to
eight inches across and steel scale fossils. Then
all is dark blue somewhat lying shales - the
Canajoharie.

The fossils cited by Rudemann (Miss. Bull
162, 1912: 20-26) show that the ls. and shales
belong to one successive series. Even though there
may be a break between them, it seems to have no
time (geologic) value. The same fossils occur
in the shales of the limestone that are found
in the Canajoharie. Some of the limestone will
persist into Canajoharie shales but as a rule
most chf. is.

The Redman town is more divided into the
upper Falls Hill, the prolific - fossiliferous origin, and
the lower Little Falls. The greatest thickness is about

As the Trilobite Hill fauna occurs here near the top of the Redman Town and at Bellefonte Pa, near the base, it follows that the Redman town of this region is only basal Redman town and only a small part of the same formation of the Champlain valley.

This is the original area for Birdseye formation. It is a local character, and the so-called birdseye shales here are due to other causes. The crystalline fillings so common to all other localities show no evidence of being due to this formation. At best there is no evidence to connect them with the fillings, if they were due to this formation then in some places we should find the evidence of the corals.

350 feet, ^{though the average appears like near 200 feet.} The Tarkenton Hill in places intrapartamental with edge zone conglomerate. The Freund of nature is due to the country form of Lacate. Raymond states that the two members are inseparable and are of one continuous deposition. The Tarkenton Hill member appears not like very thick, probably not more than 100 feet.

Saturday Feb 2. Canada in air - Hartman.

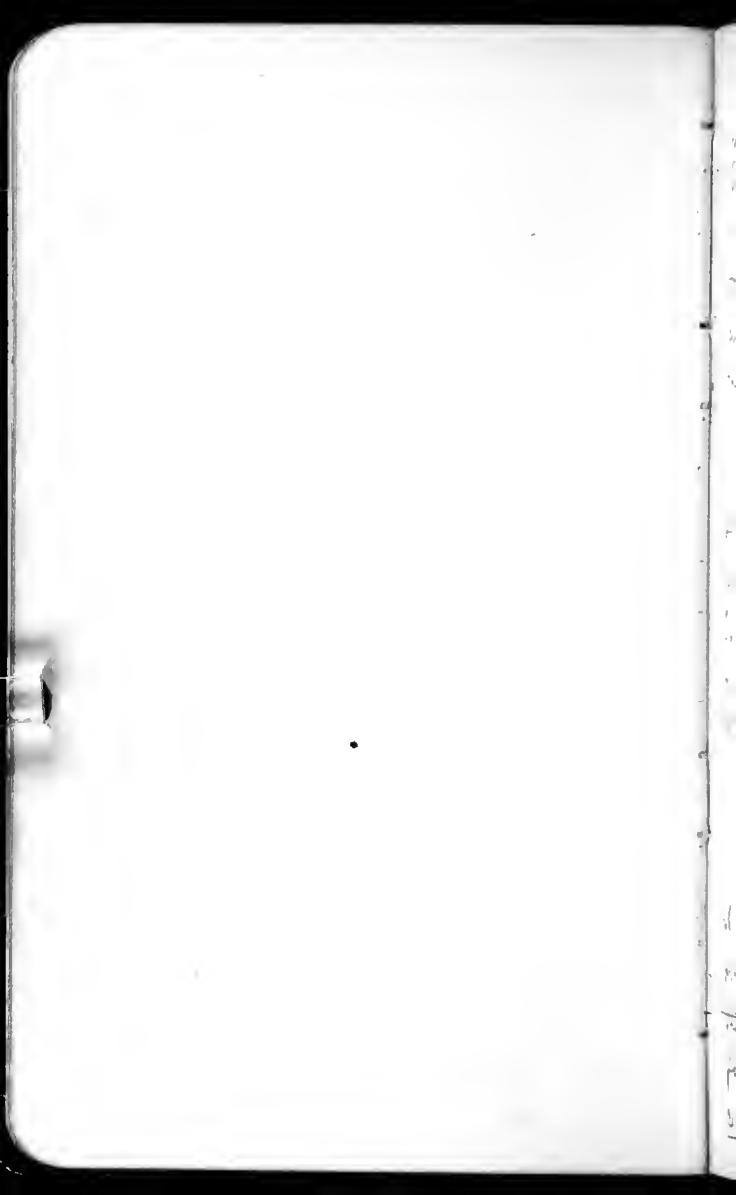
About five miles north of Canada in air at Helliston or opposite Fort Plain are seen in the stone fences along the road considerable of the typical *Sideroxylon* or *S. arville*. The tubes are thin and in layers up to eight inches thick and in section one sees that all branch like plants. There are usually several branches to each original starting tube. They are lined by a carbonaceous mud and inside of this material the filling is granular friable material. They are usually ^{undisturbed} _{the form is more or less} *S. arville* though in one tree ^{of intra-}

Was this elevation subsequent to the Paleozoics
on top of the Beesmantown? Probably for otherwise there
should be an island here with later rocks on it
than Beesmantown.

mation of character, saw no *Tetradium* in any of the tubes and not even in any of the ^{small} middle limestone.

At Little Falls, the Precambrian rocks rise above the ² ^{phenomena down my neck the unchar-} ^{level about 2000 feet} ^{in the railway cut near the station of the Westchester RR} ^{NE saw contact} On the opposite side of the river, we saw contact with the ^{Carboniferous} ^{at Little Falls in the} ^{map} ^{just east of the West Shore Station.} ^{the} ^{layer is fat in} a thin bedded shaly ^{carboniferous} ^{could not} get close to see the detail. The Little Falls dolomite about 15 to 25 ft. above the base is full of coarse well rounded sand and even pebbles of 1/2 inch. The ^{carboniferous} ^{red} comes in high ^{in the hills and probably more than 100} ^{feet above the base.} ^{At Little Falls, just} ^{above the granite, in a} ^{Pool south of the} ^{some} ^{granite} ^{are} ^{collected} ^{*Lepidolite*} ^{*ac-*} ^{*mirata*}

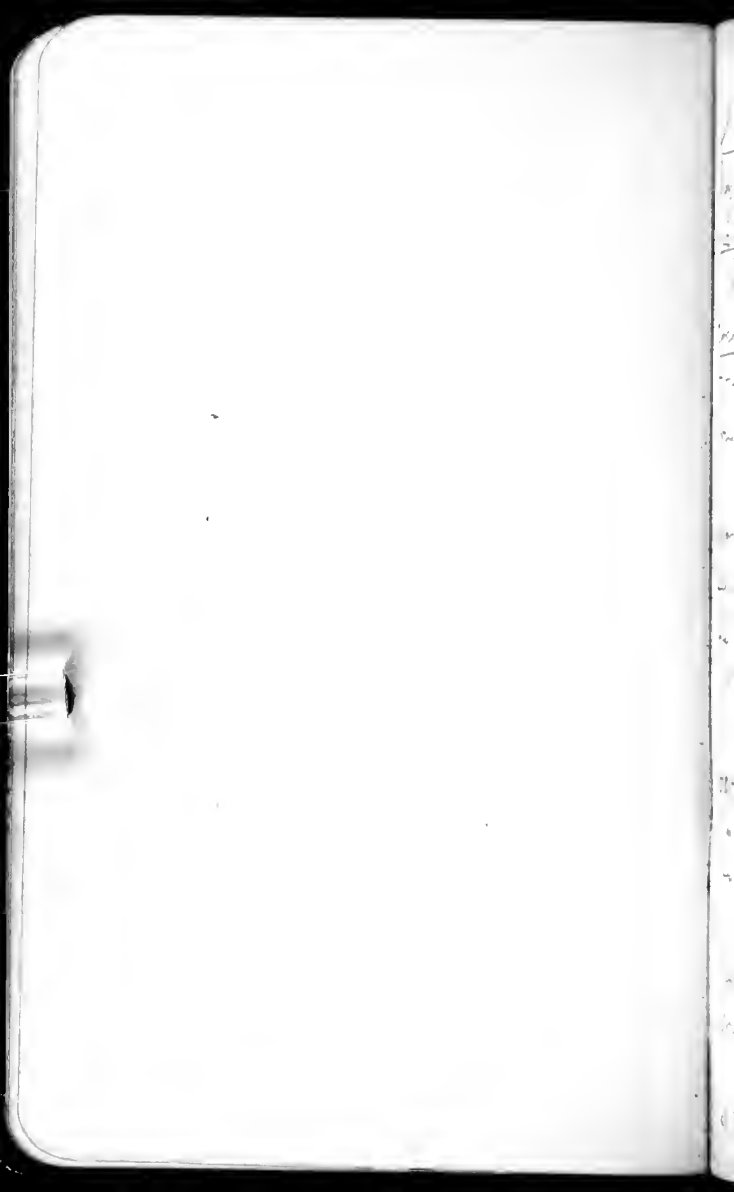
In the top of the ^{some miles} ^{at Little Falls} we again saw the ^{Amsterdam li.} full of ^{*Sphaeroceras*} ^{and} ^{with} ^{pieces} ^{of} ^{the} ^{Bridge li.} This



means another break between the Lovelle and
 Amsterdam ^(Coney = Blyed River). Here also occurs a little of
 the Beudantic for Columnaria abundata was
 found. The Lovelle is here full ^{typical} of P. virgata
 and of very large oysters, up to half inch in dia-
 meter.

In the afternoon autoed to Pushing Point (see the
 Herkimer Co. report) along the ^{some ten miles north of} middle of
 the bottom of the Beudantic over the Beudantic.
 On it rests ^{disconformably} the Beudantic, 15 feet thick, in a series of un-
 dulating beds, the undulation due to the Beudantic surface of
 the Beudantic zone. Almost throughout the Beudantic zone are
 some ^{more or less} Beudantic Beudantic and some Beudantic Beudantic.
 There is no Beudantic here on any Beudantic.

The Beudantic rests disconformably upon the Lovelle
 which is a dense light blue and heavy bedded limestone
 almost devoid of fossils, while the Beudantic is dark blue,
 thin bedded, with shale partings, and abundantly fossiliferous.
 In the basal beds St. resolutivaria and P. virgata
Beudantic are exceedingly common. So are Plectambonites



Plicatella, Dinorthis pectinella, Q. triceraria.
Very rare are Parastrophia semiplicata, Chonetes
incrassatus.

At about 20 feet above the base appear Trinucleus
concentricus and they continue to the top of the ^{series} lign
70 feet. Bygonia are very common and Mass. br.
were seen throughout.

The base of the Trenton has fossils of the Louisville
showing there is a break between them. It does not
seem to me that all of the Trenton is here.
The Trenton limestone is about 100 feet thick, and is
followed by a transition zone of thin dense micri-
nally fracturing li. with thin shale partings, about
100 feet thick. Then the Utica shale. In the transi-
tion zone, ^{near Berlin} I saw many Strophomena and Trinucleus lign
but no graptolites.

The Trenton at several places has given me
layers with the oolite, some 2 to 3 inches apart. The
evidence is all for shallow water deposit.

We then returned to Herkimer. Part of
at the Palmer House. I found a box here.

The Black River is full of fossils but are not good. *Carduus*, *gast.* *Lep. parvula*, *Pter. thren* and *Bathyronia* ^{utans} are the usual ones. Also *Columella* in

The Louisville towards the bottom is sandy and in places the basal layer is a sandstone.

The base of the Black River here has no fossils in it of older formation.

As no other fossils are exposed at this site, the thickness of the Black River is about 300 feet and is of the 32-
feet.

These layers remind me of the top of the
Trenton at Ludlow, Pa., in the same layer
that the joints in the two places are different.

Mr. John Raymond tells me next morning
that contact on the west side of Trenton. Also
this means a break here: the usual
interpretation

top is a zone 27 feet thick of heavy bedded ^{crystalline} li.
made of washed together material, some of
which is crinoidal matter. Platystrophia bifurcata, small,
and A. testudinaria are very common, and more
rarely P. deltoidea, P. sericeus.

Below this is the upper Trenton of thin bedded
li. with much shale partings. It is the P. deltoidea
horizon. It is between 75 and 100' at the top. The
main or upper crinoidal zone occurs about 20' or
below the top. P. bifurcata occurs often. Haloth's
quarry is in the horizon and is about 1/2 mile
west of the camp, but about two miles away from
the camp. The lower local zone of crinoidal li. occurs
just below the upper Trenton.

The lower crin. Trenton is more heavily bedded
and consists ^{little} of shale and li. with some much
occasional Prasopora, A. testudinaria, P. sericeus
etc. Triplera ^{here} occurs near the middle of Trenton.

Left Trenton Falls at 3:45 and 5:30 are
put up for the day at Martin's bay, a little
Inn on the upper level, out of the upper Trenton

Cast. Hart. ... 4-9.6

section of Ripley Brook.

... to about 3 feet difference.

Willse (red) 30" ... 10" altase.

Dense coarse ... 15. ...

Black dense li. ... 55 inches

Laminated ...

Blue li. 1 foot

Thin bedded fine ...

Remains down ...

Thin bedded dark li. ...

Higher up ...

Four ...

interf. ...

... the ...

... Cushing ...

... 85 feet ...

... detail ...

Cushing ...

... then comes the ...

... Tolpeltin ...

The ...

A. ...

See Miller, N.J. State Survey, New York 125, 1910

It is ...

Martinsburg, N.Y. Sep. 2 - 1916

Walked east $2\frac{1}{2}$ miles to East Martinsburg. Here we began on the Cincinnati granite, a fairly even plain and on which sits the Paruelia. It starts in with a coarse sandstone with some ^{thin quartz} pebbles of to $\frac{1}{2}$ inch across. Then follows the generalised section described in Geology.

The thickness is probably 85 feet (Cushing gives it as 75 feet).

The Venetia goes with it but is not possible and all in a shallow water deposit, the water at no time being more than 20 feet deep. Where the sea-creeching occurs there the ripples are about $\frac{1}{4}$ " from crest to crest. If the Paruelia is stratified with P. cellulosa - the thickness is 40 feet (Cushing is 30 feet) the black clay with it is concreted and is a

'welded contact' save as follows. There are many fossils in the Leray but all are small things and then but few are good. The thickness is about 10 feet.

The Trenton begins at once with Strophis, Orthotrichonaria, Alimorthis, fectivella. Then the regular laminar, amidoides and upper Trenton as at Trenton Falls. The crinoidal crinoids ^{upper Trenton} is also here but far less well developed and on top of it is the higher Trenton fine white to red rock. In the lower beds occur Rapinogonia deltoidea and Strophomena trilobata.

The total thickness of the Trenton in the Roaring
Brook is 475 feet according to Miller. This is
about 175 feet thicker than at Trenton Falls. The Trenton
thickens to the N.W. at the expense of the Utica.

Miller gives the Utica in the Roaring Brook
as being 200 feet of similar fossiliferous
with the same Utica fossils and is bounded by Miller
as being of the same age. The rock layers are rare here.
The lower Utica is the same as the upper or upper
Utica is a shaly gray limestone and becomes more
and more a sandstone and is replete with fossils.

The lower Utica is the same as the upper
at least 100 feet thick.

near the middle of the Trenton, at the peak of
of Rensselaer we again saw distorted beds, not less
or than at Tappan Valley.

Lata along with large Stromatolites, Trachonema,
Raphiostoma. Hypodonta also rarely seen here

hisulcata. I also thought I saw Stromatolites remifolius of O. Sewell. Stromatolites occurs rough
In the afternoon rode about 4 or 5 miles east

to meet some horse to see the Utica and the
high Cincinnati series. The Utica is the
normal Haell shale with some layers of a few
red in large specimens. Endronus retiformis is

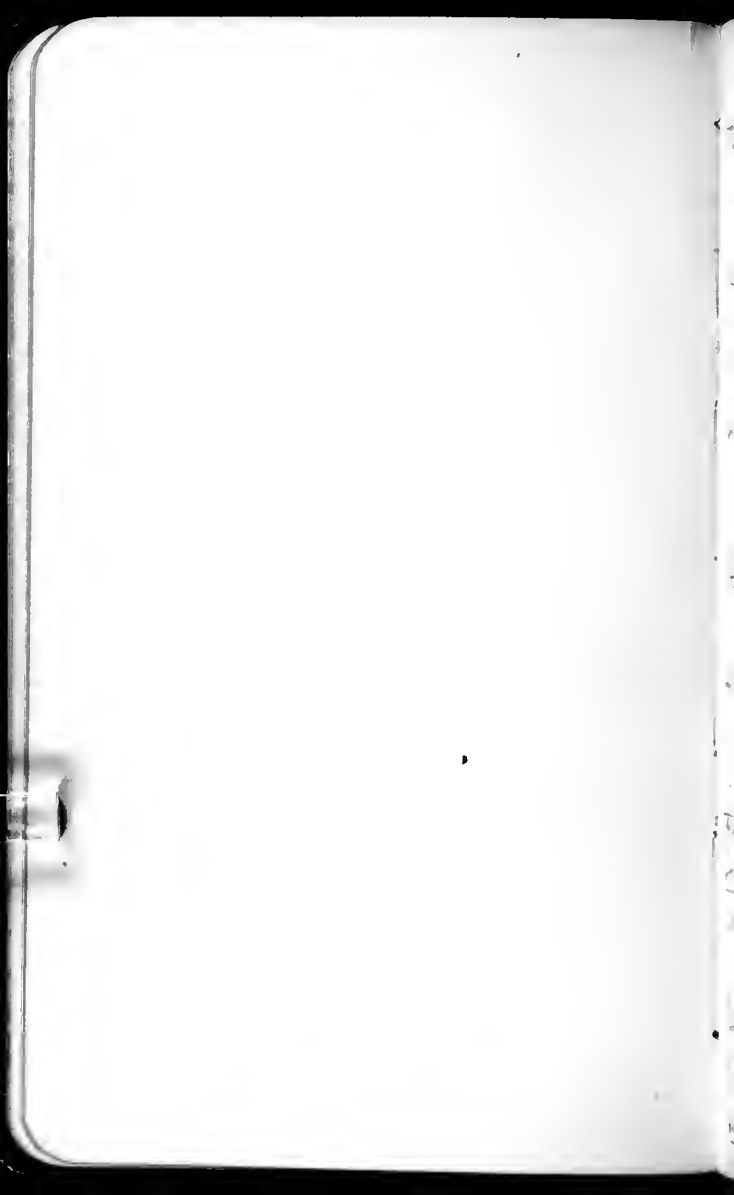
also common. Strophomena are seen and other
forms. These Haell shales are very greenish
sandy shales that happen to introduce more and more

thin sandstones (from 1/2 to 2 inches thick) and more
rarely thin sandy limestone. Stromatolites than in the persistent conglomerate zone, all is shale.

Calmanella, Stromatolites are not as common as in the
also Stromatolites, Stromatolites concentricum.

In the thin sandstones the same forms occur but
most often Calmanella, Stromatolites, Bryozoa radia,
Stromatolites medialis and other small

forms. Also seen within Stromatolites (always single)
or Tentaculites. Saw one Stromatolites subrecessus
and probably Stromatolites. Stromatolites columnaris are



the most common fossils. Saw no Eggenria heads.

Got to Watertown at 6.45. Stopping at the Le Ray Hotel.

Watertown is one of the prettiest of villages so far seen along the route.

Watertown, N.Y., Sep. 5 - Tuesday.

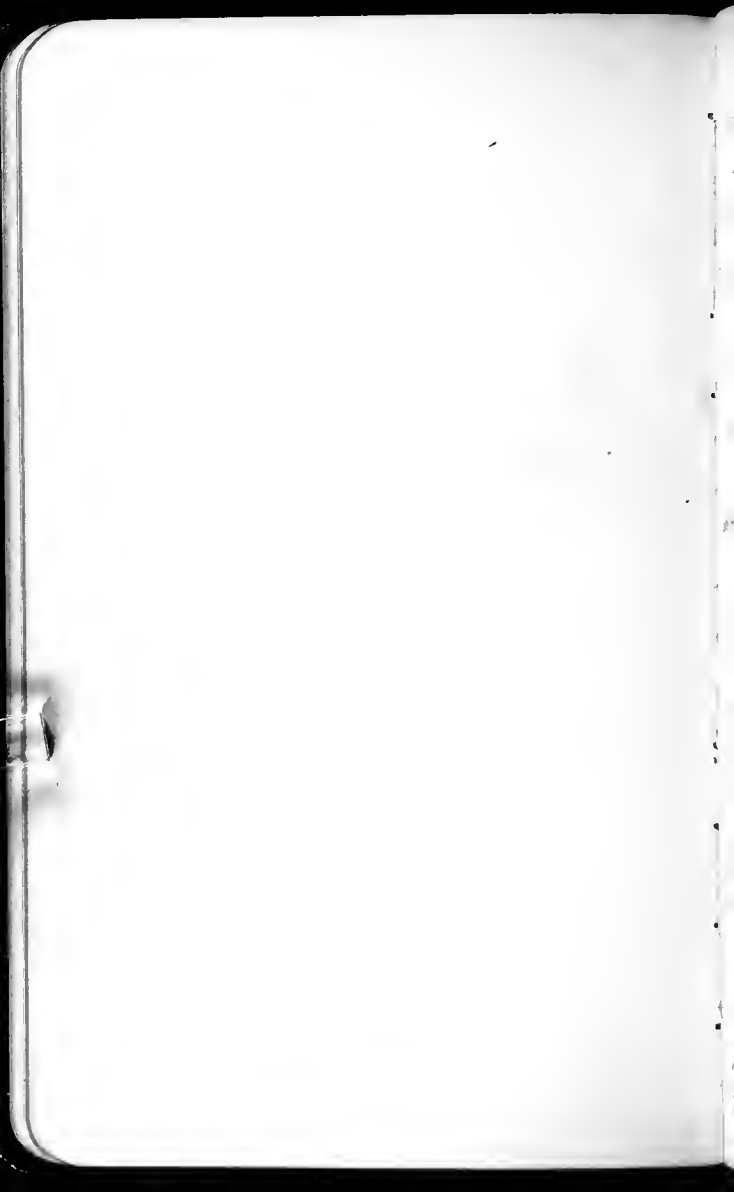
Spent the morning collecting in the hills and Watertown (= Wood River) north of the city.

The Watertown area seems to be a good one in a large pasture to the north of Watertown less than three miles out. Cymoceras is abundant here and Seneceras rare (one specimen was seen about 8 inches across the aperture, and 8 inches long indicating a length of about 1/2 inch). We also saw an occasional long endocrone of an Endocrinus, Cysticeras, and Cryptomites. Of brachiopods Orthis truncata ^{the subsequent} sericeus, P. alternata, P. montosus, a single

Camarella and G. neuvirata. Byzora are
common but not well preserved. Columaria was
seen only. Two small species. Strophomena
profundum is common.

A half mile farther north in the
Fossiliferous Formation Fossils are
in the middle of the Formation. Here Chonetes are
rare, but saw some small Chonetes, and two
specimens of Crinoides tenuifolia. The common
fossil is a Strophomena near filitesta, and
Plectambonites sericeus. Other fossils are
Plectambonites, G. neuvirata, G. neuboschii
(Raymond says it occurs here), and I thought I
saw P. minnesotensis. Byzora minnesotensis
and Strophomena. Lepidodictya. Byzora. Tetradium
Cellulosa is common associated with Stro-
matoceras and Strophomena. Impressaria Strophomena Strophomena. All in
all the fossils are small. Strophomena and
I don't if there is a well known. The two for-
mations.

In the afternoon went south to see Trenton
but did not see anything of note. The exposures are
all small.



Waterbury Sep. 5 Wed. a day.

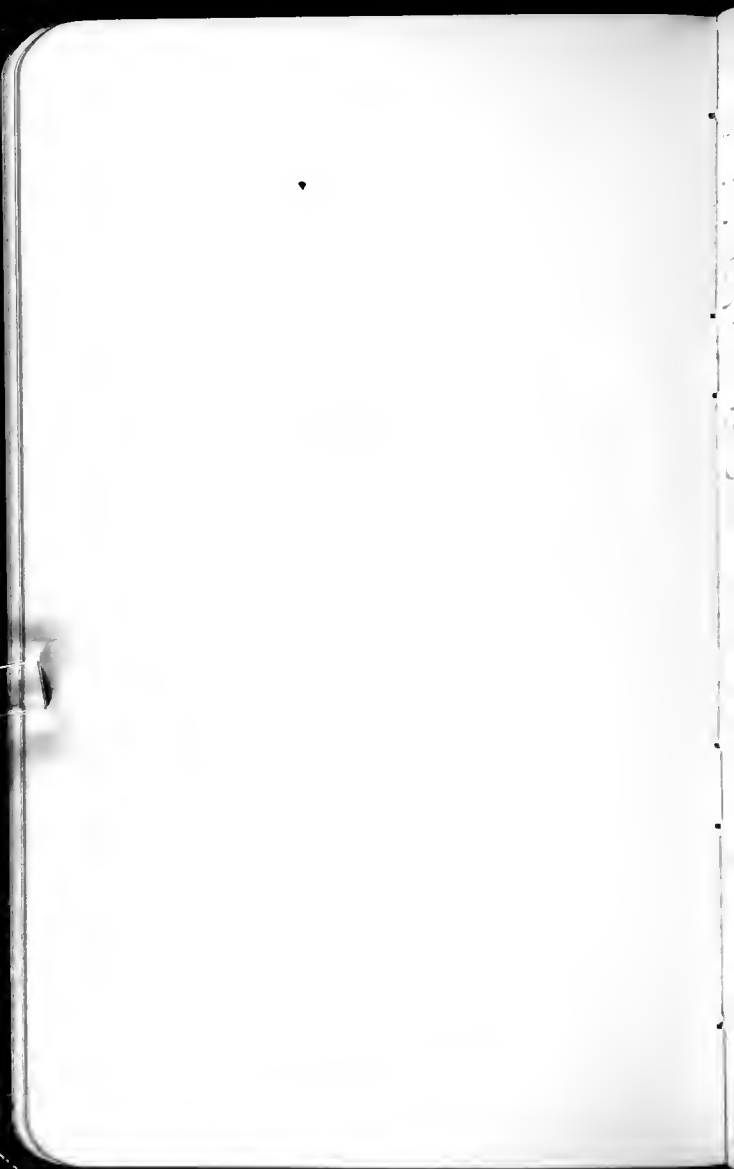
Spent morning looking about Waterbury and at noon went to Clayton over the Thousand Islands (then are 1692). Got back at two o'clock.

At Clayton there is little bedded ^{rock} or dark on the islands. Here the strata are more bedded sandstone, is by a ~~small~~ ^{small} ~~amount~~. What the age is can be determined from the Thousand Islands report. Five miles out in the line are in granite.

Waterbury Sep. 7 Thursday.

Left at 12.10 P.M. for ~~Clayton~~ to take the steamer for ~~Clayton~~. Note Emma that should be on hills ~~near~~ ^{near} 17. At Hamilton, Ontario ~~17.02.~~

Had an hour at Clayton on the shore of Lake Ontario to see the basalt blocks on the granite. It is a thin and thick bedded fine grained clearly washed



and more or less cross-bedded quartz sandstone. It is
 a little rippled (crests 1/2" apart, and the depression
 very shallow) and there are also some small semi-crests.
 On the surfaces between the layers there is a tendency
 to be cryptolaminar, the fossils in some places.
 The side north stone in Clayton are probably
 of the fine-sandy Pamela and are rippled (fine)
 and much semi-eroded (all small).
 Did not see contact with the granite.

Toronto Dec 2-1916. Friday

The steamer arrived at Toronto on time
 a little before noon in the afternoon. Stop
 at Queen's Hotel. Spent the morning at the
 University, and in afternoon at the
 University or Royal Ontario Museum.
 Tom Flood's assistant to Ethology of animals and
 crests Zoology and Geology. I saw not there a
 another ornithological collection from the one point of view



Toronto Saturday, Sep. 9-1916

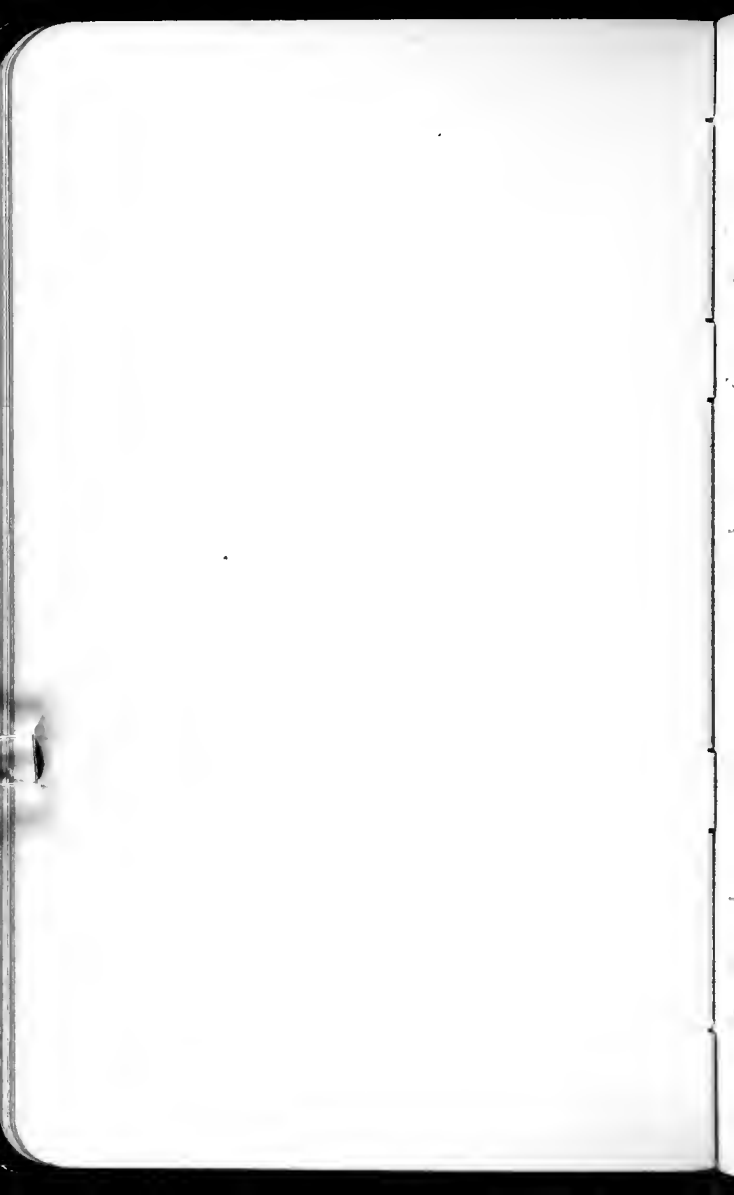
Took the train at 6.40 North Toronto for
Cataract to collect all day in the
Get back at 9.30 P.M.

Collecting was good as we always
have been around recently. Got some good bryozoa
and bivalve shells in the uppermost Cataract.
Most of my specimens come from the limestone
series above the significant sandstone.

Toronto Sunday, Sep 10-1916

In the afternoon worked up the Toronto
River in the New British lands in northeastern
Toronto. About 100 feet in height; a blue shale
series with ^{some} thin beds (1 to 5") of quartzite in the
and being in strata. These thin beds are male. The
thick ^{sometimes} beds are thin and on their surface are
seen most of the fossils. The commonest fossils are a large
form of P. sericeus, ^{and also a small form of bryozoa} G. modesta, Leptorhynchia
radiata, Mord. nodularis, P. sericeus 2 or 3 species,
Cyrtites ornatus, Quadrilobus and ... On the

Shipped the ... to ...



Hamilton Feb. 12-1916

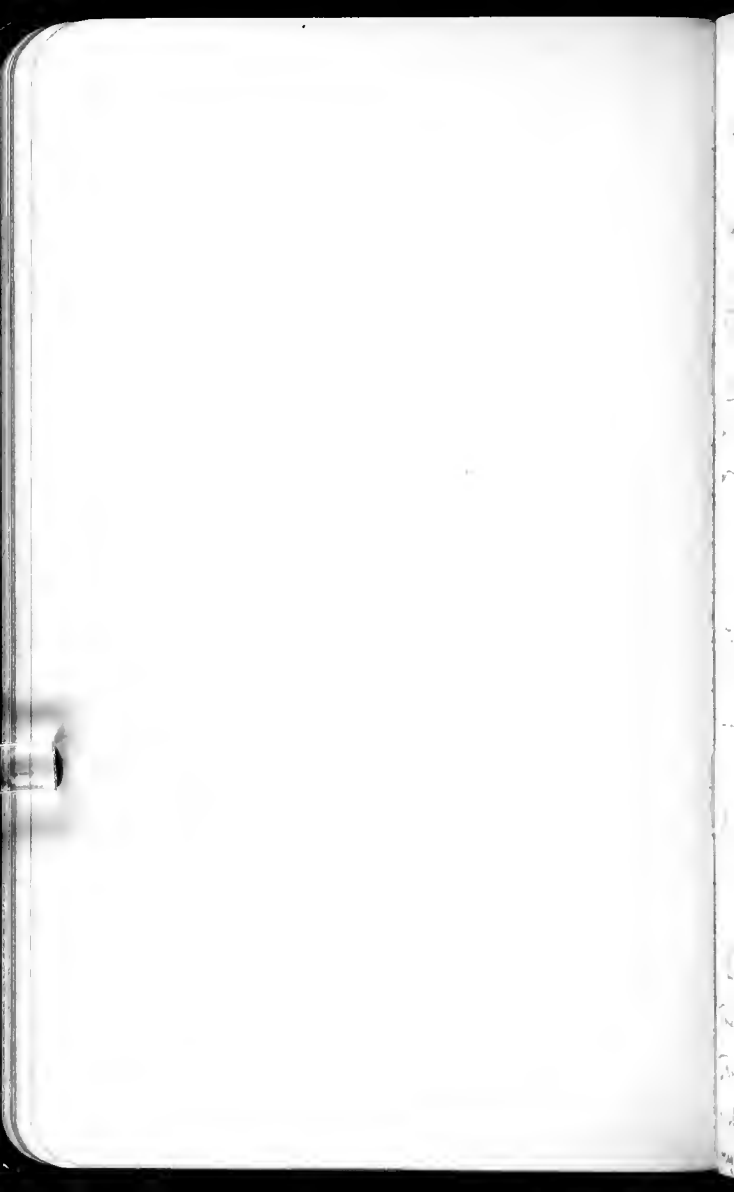
Spent the morning at Dundas collecting in the Cataract. I got only bivalves from the upper part - the true Medina. The great lay out of bryozoa of a few years ago is practically all gone. The section, however, shows as well as ever.

In the afternoon moved to Brimsby and put up ^{at} the good Village Inn, the best country hotel so far seen on trips.

Brimsby Feb. 13. Wednesday.

Spent the morning on the bank coming down the mountain. Got but little of value. Arthrochelus archimedes is still well shown.

Took a large piece somewhat weathered that shows the markings on the tube very well. Took four photos at close range, six to ten feet.



Erinoby Dec. 14. Thursday.

Spent the morning at Storey Creek, ^{1/2} mile west of Lee. Collecting was fairly good in the "attract" just above the Whirlpool sandstone. The commonest fossils are Plectambonites, Dalmanella djavanala, Chazyella ^{subumbonialis} and especially a species of Orthis. ^{later} Orthis appears at about ten feet above the sandstone and occurs in the ^{widely separated} Orthis beds up to the first ^{middle} red Orthis beds. The Orthis and Orthis are associated and made of regular shell conglomerate in these beds from 3 to 5 m. thick.

In the afternoon I went to the top and slipped it and the Orthis one was taken to the Orthis level.

The Whirlpool sandstone fits into the sun-cracks of the Orthis, and is rippled in small and at times irregular ripples. The shales at times also show tiny ripples about $\frac{3}{16}$ " from east to west. These tiny ripples should be looked into to get correct depth = very shallow, probably less than 20 feet.



At Cataract Dundas, Hamilton and Honey
Creek the upper horizon in the midst of the red
lignite beds are characterized by small bivalves.
The latter are also present at ^{the} same level at
Niagara Falls or that they range geographically all
the way from N. F. to at least Cataract. Farther
northwest more and limestone is developed and the
bivalves die out.

Orthis planocorvexa holds the horizon
just above the sandstone and is a range of
not more than 15 feet. At times they look much
like Atrypa reticularis and this is partly certainly
true at Honey Creek.

Cornulites is especially common at Honey
Creek. Plectambonites is common only at Honey
Creek and Hamilton, most or at the former
places.

Some day someone will get a large crinoid.
The stems look much like those of Crinoides.
There were also other species of crinoids.

Arctia valulinea Stucco

Cathartophis lequeuxi

Chonarisites graniripennis

Cricotoides d'arceus

Dioryella sp.

Suppl. ...

Cithreus undulatum

Tarehrens gelidus

Grimsby Feb. 15, Friday

Left at 9.45 pm for St. John Falls.

Stopping again at the Hermit and Hotel.

It is a dark and cold day.

Spent much of the day on the Canadian side. It is really very interesting.

Niagara Falls Feb. 16, Saturday

Left at 10. pm for Buffalo. Spent an hour

at the Natural History Society, and about two

Lower at the Bennett quarries,

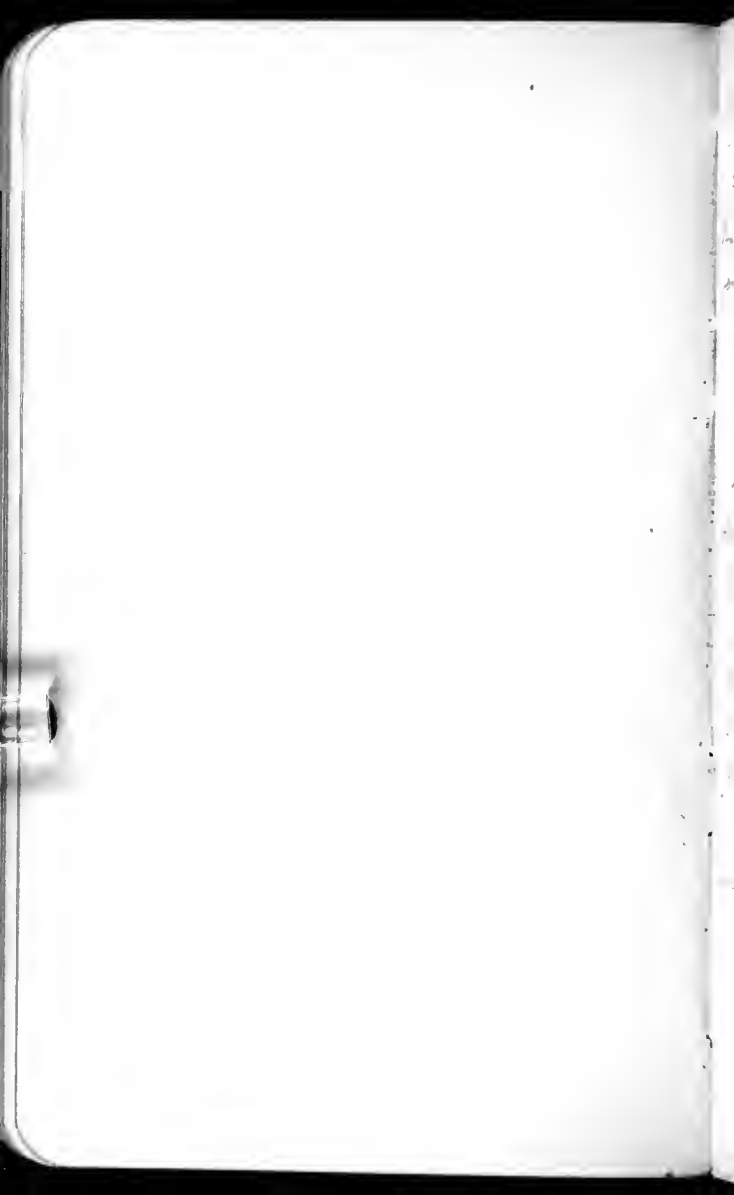
The Natural History Society

have a fine collection of Pittsford corals, from
Pittsford and Fairport, N. Y.

Teller Collection is here and in exhibition.

Among the large Bennett Collection of corals -
terids, what has become of it?

In the Bennett quarries, paid most attention
to the Alleghenie - Onondaga contact. As
a rule it is an undulating contact varying
between six inches but in places it is as much
as eighteen inches. In most places there is ^{not a need} a
carbonaceous, slightly sandy shale with scattered
pieces of the Alleghenie, and some are white.
The Onondaga limestone begins above with an
abundance of fossils, many rock-herms, and
a fairly pure limestone. In places the basal
Onondaga may be sandy or conglomeratic, but
as a rule there is none of the latter. Saw no
^{filled} joints in the Alleghenie.



Cincinnati Sep. 17. Sunday.

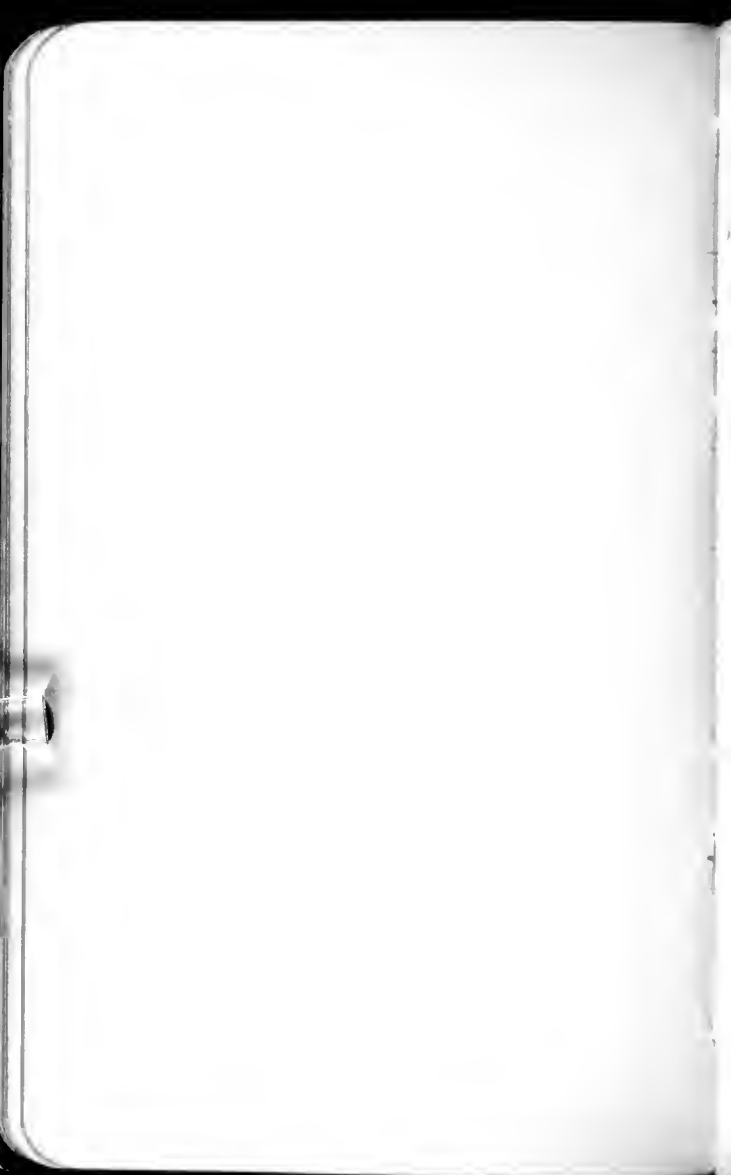
Got here at 7:15 A.M. Put up at the Sinton.
Spent the day with the entire Schuchert
family.

Cincinnati Sep. 18. Monday.

Spent the morning looking over the
rills formation between the Michigan and
Clifton Ave, no Cincinnati.

In the afternoon visited the West
Museum and then the Root and Pottery where
I took a blood test (see page 12) and a
Kron disk (3.12). Had the usual reception.

Spent the evening at Alberts in
and to see Emma's home.



Cincinnati Sep. 19. Tuesday.

In the morning visited the iron galleries
at Ludlow to see a new game iron and
mud crowd. This locality is played out.

Had lunch with Phil and Albert.

Lebanon, Ohio, Sep 20.

Collecting in the stream just north of
town. In the first night ^{east of the wagon bridge} ^{about ten} at a ^{point}
the stream occur the R. fracta beds ^{and the predomance of R. ponderosa.} Lot 1. Also seen Egyronchida, Stemica
lemisa, C. senaria, D. meeki, R. alternata etc.

In the association there is a bed of Mediolites,
Egyronchida and Leptoceras. All is being run by P.
long; these specimens are here rolled down from above
In going up the stream through these 10 feet and further
7 feet more one comes upon beds made up of R. pado
and not yet high of R. ponderosa. Almost nothing else
occurs with them, in the lower they are washed together in
minors by the shallow sea.

The ^(most from) R. ponderosa ^(great, are separate valves) ^(more and more common)
begin to appear along with
R. ponderosa and the all other fossils are almost absent
or ^{are} very rare and water worn as to be unrecognizable.

G. modesta ^{and sometimes in beds to 500} ^{large} on Le. sinuata. Egyron are
also rare. The same Leptoceras is here. Saw two large Egyronchida
with very coarse Stemica. All of these are from a zone not over
4 feet thick. Lot 2 has fossils from these 10 feet and the
7 feet below.

Besides what I collected saw many Zosongchia
(ten species, the com. one has coarse plications), Order-
lophis, C. serarin, Ed. meeki, L. sinuata? (all in
small fragment, none in retroscia), Z. modesta (like those
known)

There is no evidence of sea-cracking nor any
evidence of subaerial kinds. The nature of sedimentation
is the same throughout. The thick will in and into the
d.u.

At different levels - in the of size
ripples and in the lowest levels the small ripples $\frac{3}{8}$
inch apart

There is probably 16 or more of *Massosilla* in
which the *Papirouquia*s abound as before, but there are
no *P. long.* The *Massosilla* would terminate with the
four trick type of R. Andersoni.
Then about 15 feet of shale with less abundant
limstone bands, that I take to be Richmondian. There
is certainly no physical break here though the water
has been very shallow during late ^{Massosillian} and it would appear
that the water ^{is deeper} ^{in Richmondian time} becoming deeper with the
Richmondian fauna appearing. In these ten feet ^{today} saw no
direct evidence of Richmondian fossils that I know. The
lyozoa may show it. At the last visit I got the Rich.
beds.

These last 20 feet of ^{shale} seem to show
a shallowing of the water for most of the lyozoa and
other fossils vanish and the *Papirouquia*s take poss-
ession of the whole sea way. Then finally the *Platystrophia*
come in and almost kill off the *Papirouquia*s. Many are
of the form of half shells, and many of these are much
worn and etched; the ^{few} whole ones are in the business of
growth, untraced down. With the arrival of Richmondian
the sea deepens and a new ^{gradually} *fauna* ^{arrives}. There is
no break in sedimentation.

Section on farm about 1/2 mile
from ... of ... some ...
On edge of ... of Miami river.

Glacial drift 3' to 4 feet.

Impure ^{or mixed by} yellowish ... bedded li. 4"

Bluish nodular li. with some shale 12"

Impure ^{or mixed by} ... bedded li. 20"

Irregular bedded ^{or mixed by} ... li. with much shale.

... 3' 6"

Irregular bedded ...

...
No shale in ...

... 8' ...

Cent ... in the
quarry, with a little ...
of ...

The ... with ...

... points are

... all ...

The ...

... yellowish

...

Created on 10/14/14

Left Lebanon at 4 P.M. via trolley to Franklin
where I changed cars to Dayton. Arrived at about
6 P.M. Stopping at Beech Hotel on Third Street.

Dayton Ohio, Sep-21. Thursday.

Showed in the morning. Spent the morning
at the National Soldiers Home. The old quarry
here is so changed that I hardly could find it.

Got nothing.

In the afternoon went west ^{on the Richmond trolley line} five miles to a quarry
that proved to be in the W's area. Got a few Penta-
meus Almyus. Then walked south to the site.

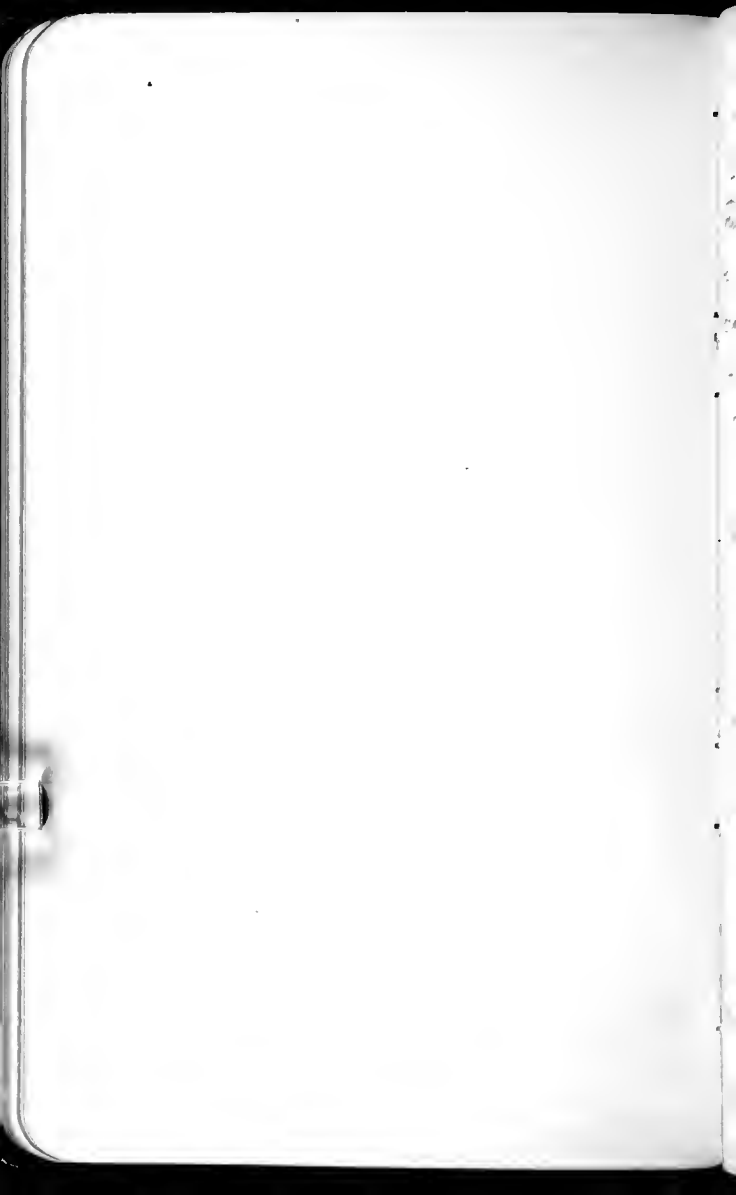
Soldiers Home ground to the south east side of it
and on the edge of ^(beside the steep outcrop field) Lilium crusta of the Miami
valley found a small road with a quarry in the
Grainfield and got a lot of fossils. Will go
back to it again tomorrow morning.

3426
37

C. E. Bratten R. F. D. 15

Dayton O.

Local Collector, Lives near this quarry.



Dayton O. Sep. 22. Friday

Collected all morning in the quarry found yesterday. At noon a boy (Bratten's son) told me of another quarry about $\frac{1}{2}$ mile south on same escarpment. This quarry is not so good but could have put in another half day here.

Shipped a large chip basket of fossils.

Left at 4:10 on the Valley Line for Columbus. Arrived at 6:30 P.M.

Columbus O. Sep. 23 - Saturday

At Ohio State Univ. In Eaton Hall.

A perfect white specimen of *Stenoceras incisus* from the ^{Stenoceras} ~~Stenoceras~~ at Eaton, Ohio.

"*Asaphus gigas*" from Eaton, Ohio, about 12" long.
From Prof. A.E. Volskel.

A fine slab of *Stenoceras* from bed of Flat Fork, Warren Co. Presented by O.T. Cooke.

A fine Ohio *Stenoceras* from 2 miles north of Catawba, Ohio. In form of *St. S.*
Cooke.



A fine collection of cephalopods from Columbus
and Delaware, C.

Have a fine series of large shells of various mollusks
and some corals. (Bluffton a Member of Ohio
Nat. Hist. Soc. and he is one to
lend.

The Museum shows little of Pilsbry's work.
Some of his types are here but most of the work
of the museum is by others. Saw some types
of the Otter Lurver. All in all the possibilities
are here but all seem to be gone or are
reluctant to come out. Students do
not.

Columbus Sunday Dec. 24

Left Columbus at 7.30 A.M. on a very
slow train. Got to Pottsville at 3.15 P.M.

Got to Carnegie Museum at 4 P.M.
and stayed there until 6 P.M.



Carréje Museum

The fly *Bombus curvus* (Hoodland) is larger and
lazier than *Diplocheilus*, but not or much so as I expect.

37 canals in that I. at Carréje, all of same
size.

36 canals with ^{loops} in Carréje.

all
united { 1 loose canal
4 united into sacrum.

12 in thorax - 10 have ribs.

12 in neck.

Stenomylus *ovatus* like ours. It is larger than
our *Stenog.* Have a little better canal in the
gut.

Left at 9:40 P. M. and got to New
York City at 5:08 P. M.

Met Bostonick and Mary at the N.Y.
Central Depot and talked with them about our
home. Have Bostonick \$35 on
account of the last Mendel Collection.

the side. I do not read in and there is no time.
The few habits are lived like in rest, the whole.

Browncker says they do not have the whole
collection. Braun got it many a time ago.





Transects of Kansas may be old granitic ridges in
Perm. pos. East of West Pitts & another La. now
covered by later strata. Break in Perm. series.
Troughs also troughs may actually be erosives in
late Perm time from the West to the south.

Carrizo Creek, Cal. has marine Pliocene corals of
Atlantic type. Open of Pacific with Atlantic at
Tehuacan type.

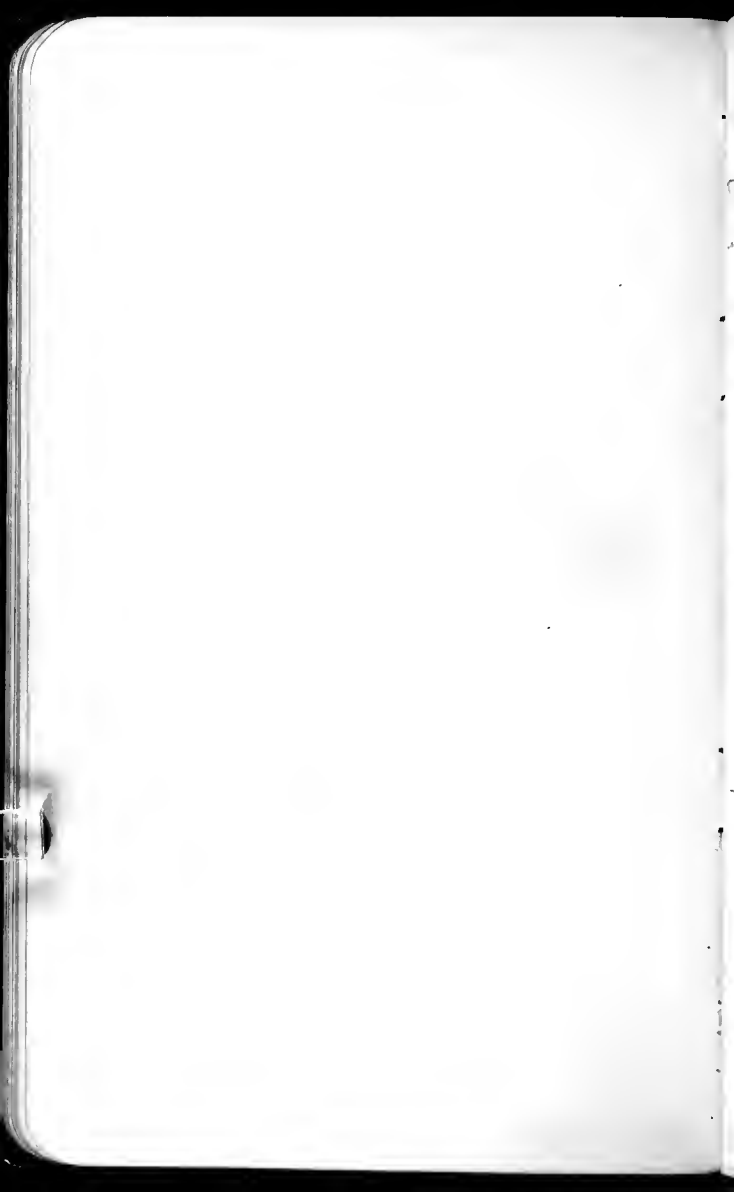
Antilles submerged in early Tertiary - Comanchian
and certain in Cret. Trough continued through
Eocene to close of Pliocene. Elevation in Pliocene
(some present) continues into Pliocene (little present).

Albany Museum Dec. 27-29 - 1916

Time spent in the ~~field~~ ^{from} ~~of~~ ^{at} ~~the~~ ^{the} ~~Spring~~ ^{Spring} ~~Road~~ ^{Road}
Lena and marks of ~~obtained~~ ^{obtained} ~~pieces~~ ^{pieces}. Shows faint
~~traces~~ ^{traces} and many ~~of~~ ^{of} ~~them~~ ^{them}. Set a ~~lot~~ ^{lot} of it for my
collection. Also 30 ~~of~~ ^{of} ~~them~~ ^{them}.

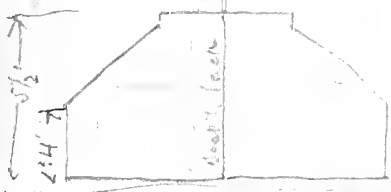
More like the tidal marks seen at Windsor N. J.
Under the beach markings. ^{Can't} ~~at~~ ^{at} ~~all~~ ^{all}. Are
these actually ~~under~~ ^{under} ~~the~~ ^{the} ~~beach~~ ^{beach} ~~markings~~ ^{markings}? Interesting. Set
a photo. Best example ~~of~~ ^{of} ~~them~~ ^{them}.

"Mud flow" markings. ~~Set~~ ^{Set} ~~a~~ ^a ~~photo~~ ^{photo}.
Set are there ~~at~~ ^{at} ~~all~~ ^{all} ~~at~~ ^{at} ~~all~~ ^{all}.



See photo of these cases in Museum Guide

Pyramidal ...



Also ...

Other table case
5' x 3' x same height.



Another table case

5' x 3' x 5'

All furniture ...

Floor ordinary cement.

Doors ...

No side windows. All sky light.

Center ... Party ...

needed





Model of a *Key* *Sea* *Mount*. A section through
the rocks. Could be used in Text Book or dict.
class. (See the photo and the arrangement
to help see the arrangement of *strata*, on the model

Fine, Sea-Shell = *Ammono clades* *Carboniferous*
Chemistry of *NaCl*. Fine in illustration,

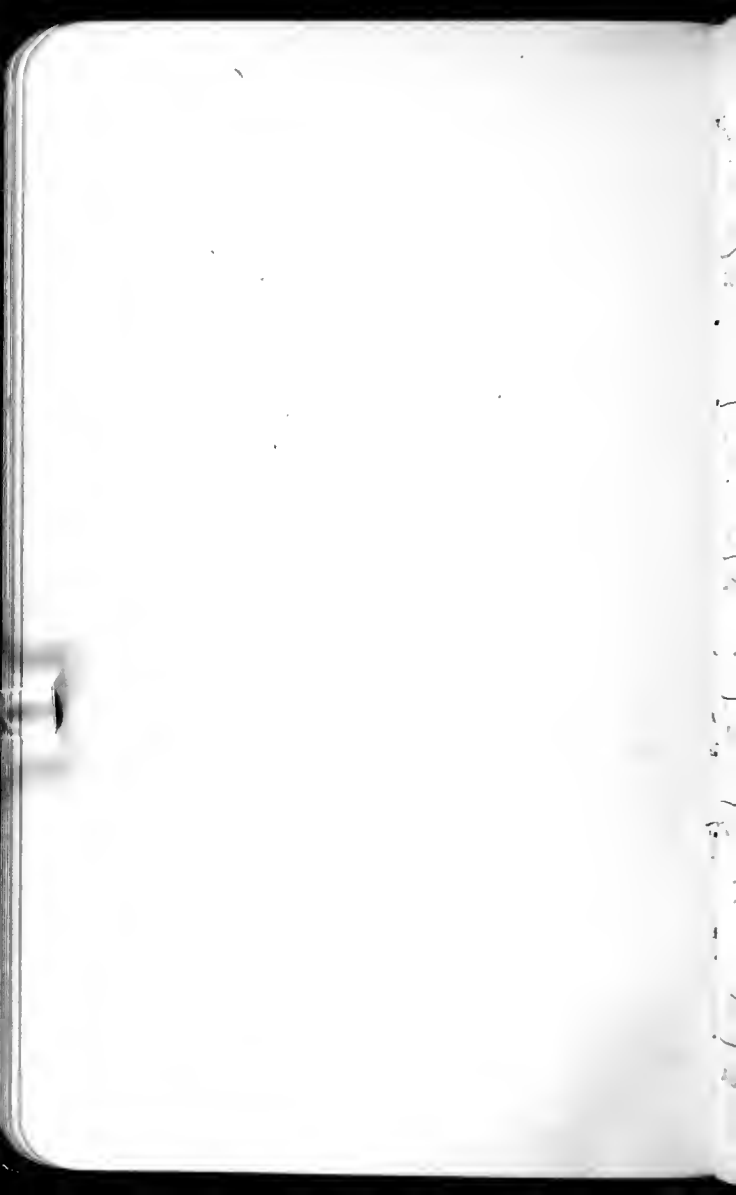
The "Noble Tree" *Tree* *Life*, *Known Tree* *with*
"Earth" *Geographical* *Ammonia* *minerals* (*Plants*)
Noble *NaCl*. *and* *think* *of* *carboniferous*, *also* *of* *tree*
itself *for* *text* - *book*.

Life and evolution of *Carboniferous* *strata*

Restoration *Ammonia* *with* *Carboniferous* *strata*
wood, *book*.

Charts, *restoration* *Carboniferous* *strata*. *Carboniferous* *life* *stage*.

- | | | |
|----------------------|----------------------|---------------------------------------------------------------|
| <i>Dryopithecus</i> | <i>Stegodon</i> | } Some of these
are from
American
not. <i>rest</i> , |
| <i>Palaeotherium</i> | <i>Pterodactylus</i> | |
| <i>Ammonia</i> | | |
| <i>Crocodylus</i> | | |
| <i>Palaeomys</i> | | |
| <i>Cephalaspis</i> | <i>Botriolepis</i> | |



{ Look up Bashe catalogue —
Alphabet Trenton



Amer. Museum, Dec 31-1916

Ornithomimus, Bell's River, Alberta, Canada.

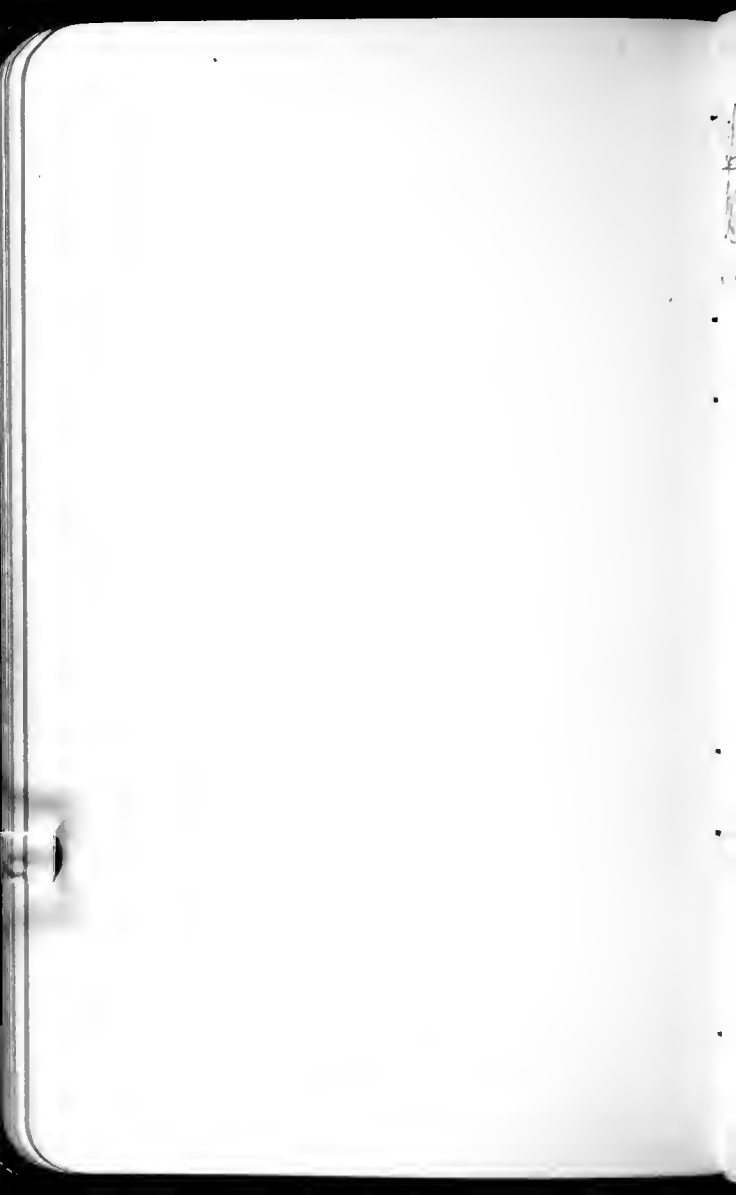
Skull not unlike that of Ornithomimus
dinosaurs, but the proportions are very different. The long
slim snout, small head, the jaws, and the device of
teeth, cannot be compared with any bird, and to the
likeness of birds is suggested by the beak, but
disclosed a different structure.
Marsh.

For color picture see Asaphus occidentalis

Martyr. All from a small area near Manjore
Reg. Andros Island, ... 1906.

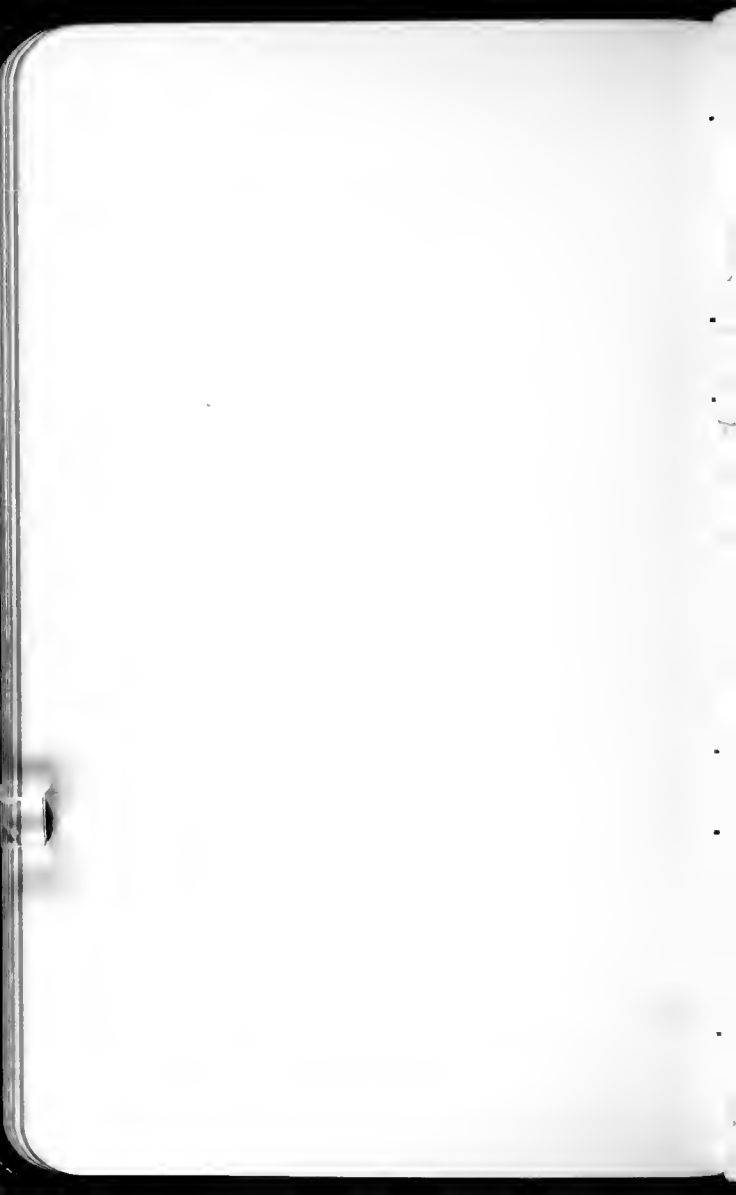
Blue, orange, yellow, white, spotted or striped
masses. Shape of ... Part ...
characteristic and the ... lines, even those
one of the ...

Helix alternata is ... 37 varieties. The
variation is so great that one can easily make several
genera (20 or 3 at the least).



Parchment mount, *Cl. optera* *nonipunctatus* (Rix)
 Bunn. - muddy sub. Tube first
 of parchment tube. Greatest diameter about
 one inch.





1917

August 4 - 1917, Saturday

Left New Haven at 8 AM for New York
to take the steamer for England, & vice.
Arriving at the steamer pier, I was told
that all passages had been sold out four
days ago. Then determined to go via
railway to Boston.

Left New York at 10 AM for Boston
via Springfield. Got to Boston at 6:15
and put up at the Lenox Hotel. Had
a good dinner here, walked around
a little and retired at 9:30.

August 5 - 7 Boston

Sunday at the City Museum

Monday at Cut Museum and then to
Maragansett

Tuesday to Provincetown at the tip of
Cap Cod. Here the ferry to Nauset is



sand dunes, some to about 100 feet. The topography is rugged of all kinds of rounded to rocky hills. No farming, all fishing herabouts.

August 8, Wednesday

Left in a fog at 9.45 for Portland where we are scheduled for 11 P.M. They won't make it. The steamer is densely crowded, mostly for Portland, but the boat goes on to Bangor. Arrived at about 5.30 P.M. Could not get in to the Queen Square Hotel so put up at the Little - in a first class room.

August 9, Thursday, Portland.

at 9.15 in a little steamer - the Tourist - started to see the islands of the Scilly Isles. A fog is on and I hoped it would clear away but it did not do so until late in the afternoon. Saw little of the bay.



At sunset had a shore dinner and then
by launch to New Meadows where I took
back to Portland via Brunswick and
Jarmouth. From Brunswick in the night is
fire all along the shore of the bay.

Then on to Cape Cottage = Cape
Elizabeth where I had dinner. A fine
place built by the trolley lines.

August 10. Portland. Friday
It is raining, and for all day.

Leaved at 4:30 afternoon. Went to Oak
Island Beach.

Aug. 11 Portland Saturday
Took another trip in Casco Bay. This time
to Deepwell Center. Fine day and
a beautiful ride on the water. Had
dinner again at Cape Cottage.

Living Room, Salem

Gallery about 15 feet wide. Room about 50' wide
East wall has floor. Mostly square, some to
left. Windows along gallery.

Use of dark iron with ... 45"
Cases not simple. Pater has site a with
a little
to
... ..

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Aug 12 - 1917 Sunday

Trolled from Portland to Portsmouth New Hampshire. Put up at the fine Kensington Hotel. York Beach is the first next to Oak Island.

Aug 13 - 1917 Monday

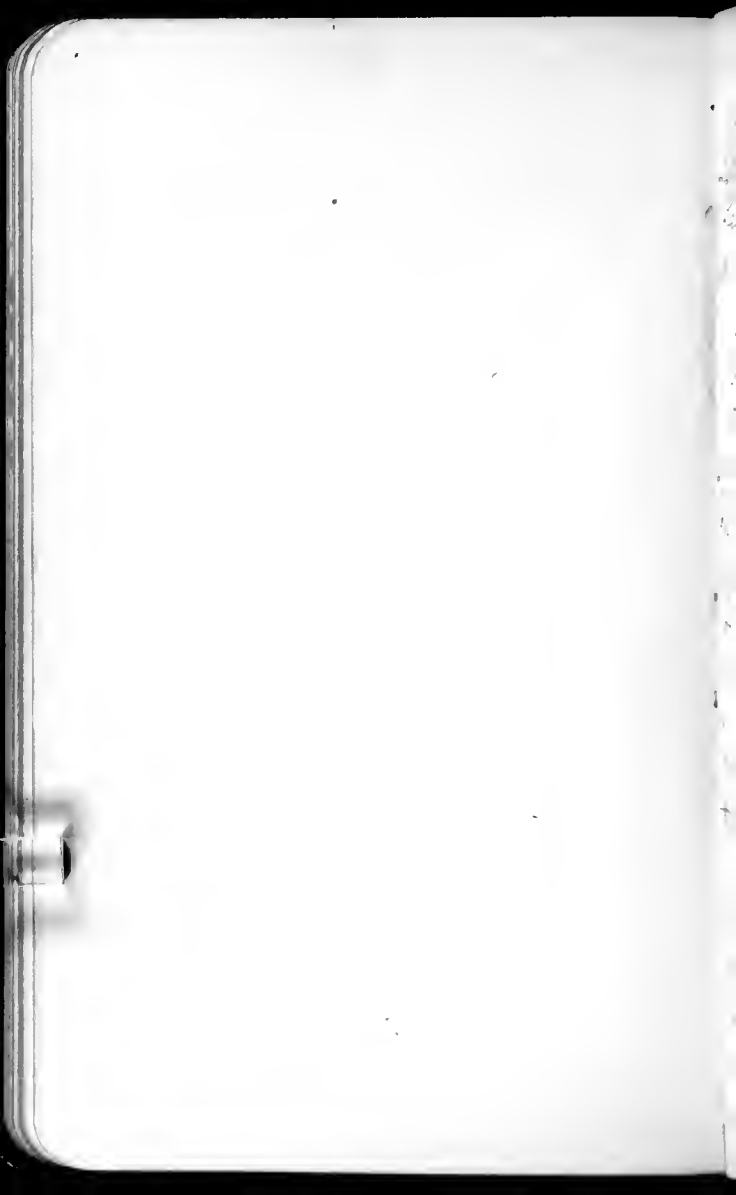
Trolled from Portsmouth to Salem via Hampton and Salisbury Beaches. All are small affairs and interesting about them. Back to Boston and Lenox Hotel

Aug 14 - 1917 Tuesday

Spent the day at Marble Head a very quaint place. Met the artist Betty at noon.

Aug. 15 - 1917 Wednesday

Spent the day at Stoncester. Little of interest here except the artist colony at East Stoncester.



August 7 1930

Left New Haven this morning and got to Lenox Hotel by 1 P.M. Professor Raymond called on us we had dinner together.

August 8 1930.

Raymond called with his machine and at 9.30 A.M. we are off to visit Plymouth. We went by way of Quincy, Marshfield, Kingston to Plymouth. The rock itself at Plymouth in which the Pilgrim Fathers are said to have landed is a small ^{granite} erratic and today probably weighs less than 5-Tons. In front of the rocks are the doors (2) also an old effigy. There is a tiny speck of stone at Plymouth. The monument to the Pilgrim Fathers is a cold monument at the city. A fine relief carving in a massive marble on the top of the monument which is of the Pilgrim Fathers. The monument stands on the high sand hill.

August 9 - 1920

Went on Raymond at Harvard early
9.30 am on our way to see the Rhynchonella
locality in the Newbury volcanic
complex. The place is on a side turnpike
and comes where the Newbury road truly line
crosses the best support hills as turn out.
The fossils are in a ^{thin} ^{bed} ^{of} ^{shale}, that
and is now much depressed and even somewhat
contorted. Is a member of the Rhynchonella
the locality is 3 miles west of Portage and
is described in Emersons Bull. U.S. G.S.
vol. 1, p. 163.

We then went to the ^{at 2 miles west of} ^{at Harvard} ^{locality}
locality some 3 miles ^{west of} ^{Harvard} ^{locality}
Here in some direction just a few ^{feet} ^{of} ^{bed} ^{is} ^{seen}
The ^{is} ^{seen} ^{near} ^{the} ^{alter}, at the
longer ^{is} ^{the} ^{type} ^{of} ^{the} ^{locality}. Some
the ^{is} ^{the} ^{type} ^{of} ^{the} ^{locality}. There is also much
local due ^{to} ^{the} ^{fact} ^{that} ^{the} ^{metamorphosed}
shale.

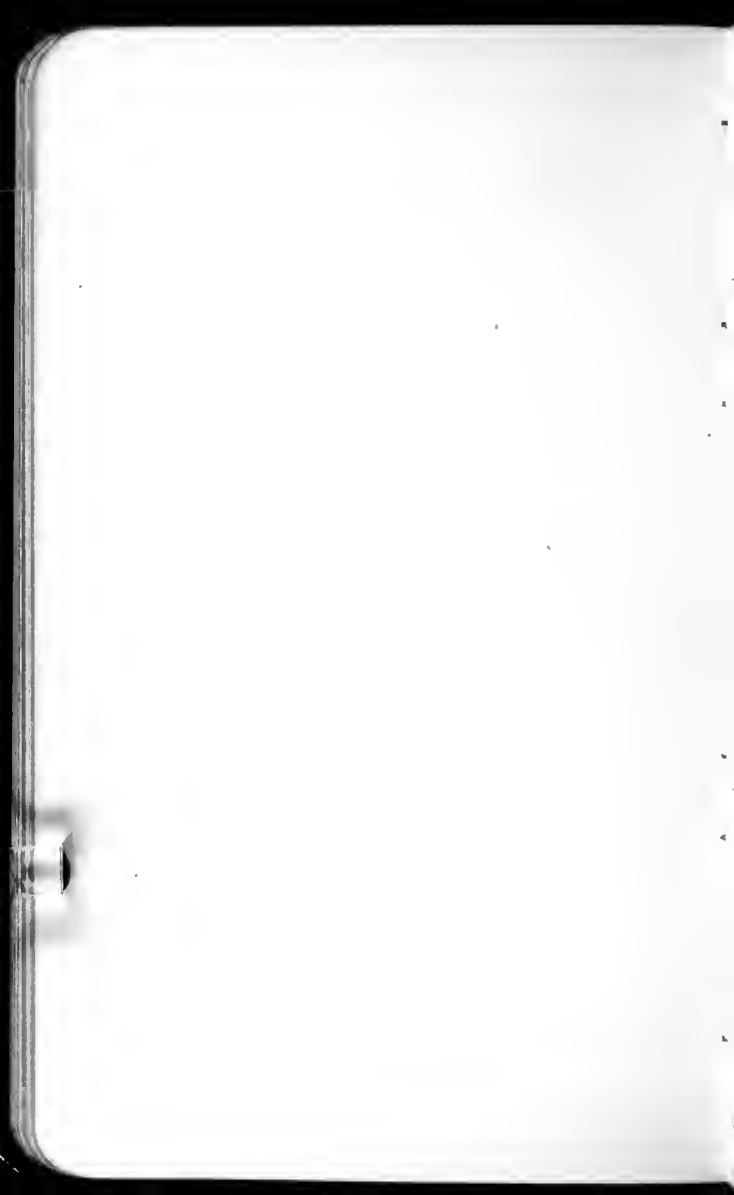
only 3 fragments of Calamites and no Lepidodermis.
Many are seen 10 species of plants. All in
all the locality is interesting because of what
it teaches us the much compressed region.

We then moved over to Tiroton where we
stayed up for the night at the Riverside Inn.

In the morning we go to Newport.

As we walk over or in the grounds of the U.S.
Hospital for consumptive soldiers find a few that
are very interesting. The first is a small tree with
the trunk very much compressed. Some of the
leaves are seen in here at first are acylone, then
shale, followed by sandstones and conglomerates. All
these are very interesting. All of these rocks
are highly siliceous and the sandstones are very
bedding in all these angles.

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Aug, west 13-1920 Friday.

A dark-foggy morning but before we get to Green-
port it clears, hard and dry. After seeing something of
the fine houses we visit the sandstone's see the
Purgatory Cliffs. Fine clean exposures along the
sea front. Here all the pebbles and boulders are sand-
drawn out, usually thick on the bottom, and the sides
drawn out and often into deep gorges. The boulders
stand one length of about a 1 foot thick. Some are
layers. The pebbles and boulders are ^{as a rule} of a
white quartzite and a ^{very} white shaly stone
probably also a quartzite. ^{There are also some}
greenish sandstone. At times there are much greenish
sandy shale and it draws out roots. All of the boul-
ders have some a low of slickensiding on the
then a much sandy cement the whole takes on the
appearance of a sandstone. There are also shales in
blue-black fine sandy shale pieces. Saw no granite
or schist. Second time I thought I saw Testolites
and one edge of marlstone blackish. Ray-
mond found two boulders with Lingulids, and these

Then through a strip in the blue hills we
so back to Boston.

August 17-1875. Middletown, Mass.

Called on Mrs Maria A. Winslow to
thank her for selling pale the Winslow
Collection. She is a very old maid but
of a refined and pleasing nature. She has
a fine of colonial furniture and things as she
is a direct descendant of Governor Winslow
who came to America with the Mayflower.

She presented me with a fine piece of
made in Samoa. She purchased it in Honolulu
in 1877 when she returned to visit the
islands. She was born there as Dr. Henslow lived
in Hawaii for about two years.

Fare Mrs. Lane to Bretton Woods	10.41
Lunch on way	1.80
Break at Mount Pleasant Hotel.	7.00

Monday

September 13-1930, White Mts.

Left New Haven for Bull Run Woods at 10:47
 A.M. and got there at 8 P.M. It was a warm
 sunny day at New Haven but as we approached
 the region of the White Mts it clouded up and
 was raining before we got to Bull Run Woods. We
 could not see any of the "dark" with no moun-
 tains visible. Put up at the Mount Pleasant
 with the rate \$8.00 per day. Even so I can
 not slip on it because the ground is so full.
 It is a fine place and will be a welcome
 for a university person.

Tuesday

September 14-1930, Bull Run Woods.

Very dull rainy day. The hills are
 the hills are covered with a dense growth of
 mostly low wooded hills, but a few
 are more open. The hills are very
 bare parts because the trees at the Mount
 Washington is the highest in the White Mts.

In the morning moved over to Crawford's 3/4
miles. Southwest. Will stay here one week. Rate
\$119 - @ 7.00

Worked in the morning about 2 1/2 miles south in road
down Crawford's 3/4. Mostly all the same as above
and is higher than 1500 feet. Saw some very
small, the granites are similar in texture
and color to the ones in the west.

In the afternoon walked south. The weather was
clear and the day had been clear & would
have had a fine view of the V shaped Crawford's
North valley. Will have a good view.

At the section I saw a lot of small
can be seen much to the south. It stands on
and several beds of them showed another like large
fragging and hard surfaces. There are no
evidence of due to water. These are not
well preserved and are very small. Some of the
beds are very thin and are very small.

The section is a good display of the
and the line of the section is a good
and the section is a good display of the

Sep. 15-1920 Wednesday.

In the morning walked over to Loretto & roads are
in a whole new way, much of the ground is now high-
way for hotel. High ground is still there, and about lux-
ury can be had here. They raise very few people and
no one less than eleven dollars a day. A new hotel

built it for the winter and a new one
is up a distance. There are some people of the
President of Range when it comes to the winter. It is
the morning. The view of the valley is very good and at the
middle we see the river and house. The view is
in the winter and is very good. The view is
in the winter and is very good.

After dinner we went to a Dup...
mist out... 3...
a view of the Presidential Range...
went to Brethel Woods...
and then a walk to the forest.

Sunday

September 16. Mt. Washington.

At seven this morning the sun is out, fine and there are but few clouds in the sky. I conclude to go to the top of Mt. Washington. At 8 A.M. clouds hang low to the south, but they melt away toward Mt. Washington. At 8.30 I begin to walk to Bretton Woods and by the time I get there an hour later there are considerable clouds. However I conclude to risk it since the clouds are thin and much broken. We start from Bretton Woods at 10.13 in an open ^{railroad} car with loose seat wood chairs. This part of the ascent is quite good and for seven miles we go to the "Base Station" at the base of the mountain. There we change cars to a tiny locomotive with six cars. The cars are on a cog, center axle. The ascent is a slow and gradual one. At 11.30 we are at the top of the mountain and we are in a large hall. The description of the ascent is given.

Reached the top at 12.15 and immediately set out on a walk. The wind is blowing hard. The wind is

interesting feature was to look down 5000 to 7000 feet
down upon the killing sea of silver sands. By
me retraced the top begins to come in crevices and
by time it rains.

The mountain is not made of granite but
rather of a highly micaceous gneiss. ^{Rather green and porphyritic mica.} Sandstone is
decided and shows itself in the northward exposures.
See the three rock samples.

Despite the snow we still have some. There were
plenty of sandwort (*Arenaria proterocaulica*) and a
few forms of moss which were common here. Some
of several species in the dominant vegetation. The
rocks are all green with a thin greenish growth.

Felt the altitude not high, but a little
of digressions but it did not have. ^{There is a lot of}
geop some for water.

Left the plateau early on 3.4. Here I decided
return for a train to Lawrence. ^{in the morning.}

If snow had kept on Mt Washington
today.

Sept. 17, Friday, Crawford Notch.

It has rained all the night and rained again this
morning at 9.30 the other were up late with snow. The
snow is a cold, mild and with heavy clouds.

9.30 in a light rain started on the mountain
(elevation 2986')
Crawford Notch and arrived at Mount Liberty.

Let time pass and I walked
with three other men. There had several fine views
of the Crawford Notch and the surrounding mountains.
Let my horse and pack animal rest on the mountain
side. It is now over the mountain. If all goes well
I will attempt to Crawford Notch 5 1/2 miles to the top
of the mountain.

The night is clear and cold. The wind is
now at dawn it is very cold. The snow is
on the mountain.

Mount Liberty.

At 6.00 and had my horse
and pack animal rest on the mountain. Let my

at 6.30 and was then still going on as at 7 and
after breakfast concluded to get on the Crampford trail to see
what I might see on the 1/2 of Mt. ...

At 8 A.M. I am at the ... Crampford trail 8 1/2
miles to the top of ... ^{The trail was built in 1819.} see no one for the
first half mile but before I get to the first mile sign I meet
four men of the ... well between 30 and 40 years of age.
As for the ... At 8.30 we are at the first mile sign.
The trail is ... steepers. He made the ... in a half
hour. The sign 1/2 mile was attained at 9 so that the 1/2
mile took no longer as the previous mile. Between ...

I saw some ... directly down the trail.
The ... 2 mile sign at 9.20 and the 3/4 mile one at 9.40. Got
to the summit of Mt. ... ^(about 11.30 AM) at 10.30 AM.
We are now out of the ... and on an Alpine meadow,
clear me the wind ... and the clouds
are but a few hundred feet above us. Mt. ... to the
north is ... but ... in the clouds. To the south was a ... distant view
as far as Mt. Chicocoma. As there was no more to do on

farther I turned down the trail at 10:15 and was at the
total of 11 A.M. It took me 1/2 hour to climb from
1900 feet to 4275 feet (=2375') not only 3/4 hour
to come down. Even this little climb made me feel that
I had best not go on to the top of Mt. Washington. Still
if I have a fine clear day ahead of me I will ascend the
trail once more.

At 4 P.M. it rains again. Of my six days in the White
Mts. it has rained on 5. No day has been a cloudless
one. Landing on the boat one, and that one was used in
going up Mt. Washington.

Sunday July 17 - 1880. Hill of France.
Walked 3 miles south to Willey house disaster.
No evidence on Aug. 28 - 1880 and to day one sees no
evidence of a slide still in plain view. All along the
western side of the Campeditch valley one sees
a narrow road a while and also the road
and the rocks that have been laid. All these
are of a hard blue or greenish color and are
of the same nature as the interesting features of the U-

gular banding. In most cases the bands are $\frac{1}{8}$ inch
thick but at times about $\frac{3}{8}$ to $\frac{1}{2}$ inch thick. It is
a coarse and fine band in alternation. These
are regular and look so much like the
Squamish banded slate. It is very apparent to
one to be also of the same origin. In fact,
however, it is a very different thing, and is
rather Devonian in origin. In places one also
sees the crumpling and melting of the banded
phyllite as at Squamish and elsewhere.

It is these ^{sampled} phyllites that hang in the western
side of the inlet valley and as they dip into
the valley they are ^{broken up and} ~~broken up and~~
200 and then. There can be ^{no} doubt as to why
the road between one and the other is
Cranford ditch.

See the small number in the margin.

Monday Sep. 20 - 1920 Mt Willard

Climbed Mt Willard at Cranford ditch. Started in at
1890 and at the top it is 2786 feet above sea. The day is
clear with but little wind. Had a fine view of the Presidential

Pange. All are now snow covered, even Mt Clinton is somewhat white. Made the climb easily in 45 minutes, and came down in 20 minutes.

In the afternoon walked on the road towards base to Bear Brook Bridge Trail about 2 miles north and then east on the trail to Mount Washington Hotel. Left at 2 P.M., entered the trail at 2.35 and came out on a road at 3.15. Then across the bridge to the hotel at 3.45; took the car back at 5.45.

Today was the first clear day, and it was pleasing to see the mountains. All stood out clear and sharp. At 5.45 the sun in setting broke through the clouds and illuminated the Presidential House. Finally only the snow covered summit of Mt Washington was illuminated against the blue sky. It was a fine sight and one never to be forgotten.

Could not get out for a day in a week around.

Mt. Washington 6296 feet. The highest of the White Mts.
Going south the peaks are

Mt. Monroe 5396' has 3 points

Mt. Franklin 5028' depressed rounded.

Mt. Pleasant 4775' Well rounded like a
hay stack. The pleasing form has given its name.

Mt. Clinton 4275' a long slope with a corbel rise

Mt. Jackson 4012'. Stands back of Presidential
Range. Sharp and pointed.

Mt. Webster 3876' Makes the ^{eastern} point to the Notch
Notch. Down it goes the Lacs.

Mt. Willard. On west side of Notch. 2786'

Mt. Willey 4261'. Makes the west side of Notch

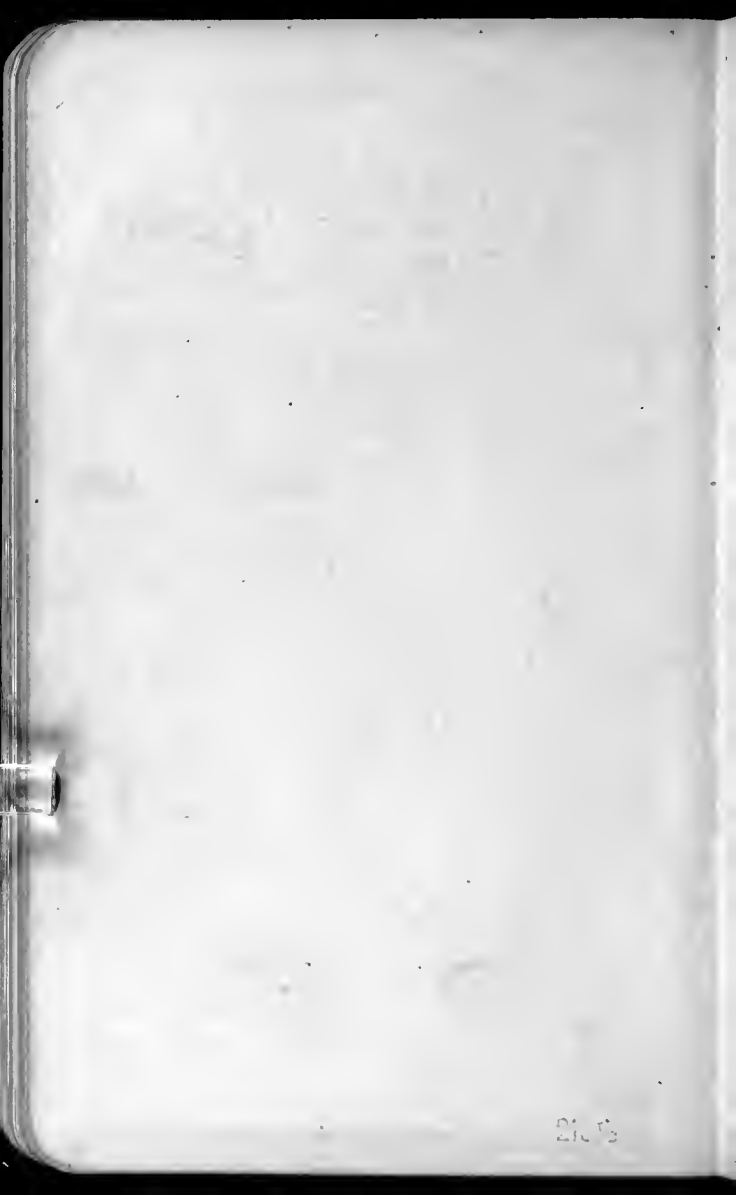
Mt. Tom 4300'

Mt. Echo 3020'

Mt. Stickney 2570'

Rae Brook 2950'. Near back of Mount
Pleasant Hotel.

1. Sep. 21-1920. See appended sheet.



Germanic Museum
Harvard.

Gift of Adolphus Busch

Under care.

v Es ist der Zeit zu sich
'den Körper kaut.'

- Du Kunst, denn du
sollest."

CRAWFORD HOUSE
CRAWFORD NOTCH
WHITE MTS.
NEW HAMPSHIRE

Tuesday, Sep. 21-1920

A perfect day; even more so than yesterday. Not a cloud in the sky. Concluded to climb and to go as far Mt. Pleasant.

Left the hotel at 8.10 A.M. to go over the Crawford trail first opened by Crawford in 1819. At 8.45 I am facing the one mile post, and 9.10 the 1/2 mile post. I find it easier going today than I did Saturday.

At 9.20 I leave behind me the trail to the Mizpah Camp, and 9.30 the two mile sign. Up the Steep Ladder at 9.45 and at Mt. Clinton at 10.05. I am now at an altitude of 4275 feet. During the last 500 feet I have several times seen ice.

Everywhere the mountains stand out clearly and in every direction for miles upon miles there is a sea of mountains and peaks.

At 10.00 I start for Mt. Pleasant and get to the top at 11.10. The altitude is 4775. On my way another climber overtakes me and he is evidently bound for Mt. Washington. This mountain now looms large to the north and the Summit House, the Appalachian House and the railway are all clearly to be seen. There is a little of snow and ice on the upper 500 feet of Mt. Washington.

There are no bushes or trees on Mt. Pleasant nor for several hundred feet down its upper side. Very little grass, but considerable alpine dicotyledons.

Left Mt. Pleasant at 11.30 and Mt. Clinton at 12.05. Back at the hotel at 1.10.

I now know that Jean Clint up to Mt. Washington. Next year after a little training I will try to this while the Summit House is still open and then stay over night so that I may see sunrise.

In about three hours time I climbed at least 2875 feet, but as one goes down hill nearly 500 between Mt. Clinton and Mt. Pleasant it is evident that I climbed over 3300 feet in this time and went about $4\frac{1}{2} = 9$ miles. In going to Mt. Washington one does not climb over Mt. Pleasant but goes to the east of it. There is a long and a less steady ascent all the way from near Mt. Clinton passed Mt. Franklin and Mt. Monroe. Then one is at the base of Mt. Washington or about 1200 feet, with a climb up to the highest point in the White Mts at 6296. This climb I will make next year.

I must also then make a collection of ^{the} Alpine flora. This will be interesting work.

Everywhere the rocks are various granites, with innumerable pegmatite dikes and here and there thin vein quartz veins. There is also some mica-schist and inclusions in the granite. The granite is by no means regular in grain and at times becomes almost wholly quartz. It is a very irregular granite and seemingly must be near the roof of its intrusion. I saw no evidence of sedimentaries.

(2)

CRAWFORD HOUSE
CRAWFORD NOTCH
WHITE MTS.
NEW HAMPSHIRE

September 21st 1920 (continued).

At 4.30 climbed Mt Willard in 45 minutes to see the last of the day. Stayed on top until 5.50 and then walked down the mountain in 22 minutes.

It is a wonderful sight from this elevation to see the night coming on and the fine change of colors as the sun rays ever climb higher into the skies leaving the south in darkened glow of red. The shadows between the mountains are a dark green-blue while above all the peaks there is a dark zone having a straight horizontal line. Above the latter come the tints of the rainbow gradually shading off into the blue of the sky. A few fleecy clouds are over head and these change from a brilliant silvery color to pink. High in the sky and almost over the center of the notch stands the half moon with its brilliant silvery face looking down upon the descending sun. Farther to the west is the evening star.

When I got to the hotel it was not yet dark and facing the mountains and fair Luna I

say my fare well to the White Mountains and
bid them good bye until September 1921.

22

... .. New Haven.

... .. Tross Mountain.

Bethlehem Junction is the place to change cars for
Bethlehem and Wolfe House.

Wolfe House is another junction for places to the
south and west of West. Brookington.

