1876
Wm Bamden
Goggins &c

Melbourne
, Niagara
Niles Sud

Francis Scott
Clifton
Sherwood
CVB

Richardson Rebel of 1858
Hon Delano Walapey
Reno Ga —

Sago of Meta
R. Belum
Falls 165 ft
Gaunas

Belum falls
Sound Sand
Pool – Sun
Sandy terrace
a few feet up
Next terrace
gravel &

Stay day & stay
a week 50 st

Charge upon
other churches
$38.50

85
6
570
21
531

Group Boat
Round Pt
Boulder cliff
very on Shelving
Surf & against
~~Heavy blue Edge~~
Very

Drute of Fan
CV LO°L

CV LO°L

OVL

Brush dry
by hand or
with some
Lumber or
Large slabs
of Dr. Some
Lumber or
Shingles Dry

The above
inclosed by
Bulchally
I found Song

~~thus / same~~
~~Bach~~

Steps are travelling
down this

on
Rushwood
Grove

At the Lower bar
of Cohen at Gr
Creek is the
N 70° E Mark
as of old Name

93 States

93 St Croix

103 Fortune

113 Sagabec

120 Cedar Hill

128 Onequit

141 Chesapeake

156 Assumeequaquam

166 Mill Stream

176 Machapedus

189 Campbellton

374 Minch

N of Mat Lake Dips
Sunset, Sm Glacier

Summit Peak

5 1/2 tenths
cloud
Mouse

Rocks here black
Volcanic Rock
Jointed lots
Summit high
dip to S W
Strike N W & S E

1st Cutting Short
Forks Shoulders
Beautiful Ones
Angles ap
Same Shoulders

2d Cutting Off
Neck & Center cut
Must Turn Shoulders
Observe heavy heavy
Quarter
Take Roll
also Cover pit

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

5th Dr

Delivery
Shoals

6th Same
Big Shoals
Stk Shoals
Road in
Stoke

7th Same

Stk
Mrs Smith Jeffers
Neal Shoals
Sl Station

9th Cutter
Steel shafes
as at Spring

Stater
Fortune
Pressure of
steel panel
6 h tenths
Aneroid above
Metis

1st Cutter
Sea shafes

2d Dr

Red & gray shades

Dress Brown

Plat

Chen Brown

Gray shade

Contrasted by

Red shade

Shade SW

3d Dr

Soft dark

[illegible]

4th Do
Black & Red
Shales like
Summit

5th Do
Soft Shales Rising
on at Summit
Surface Strength
of Some
Boulders

6th Do
Big Shells
again
Undue

SW, RC

7th Do
Brindle clay
Lerty on hand
Sing Short

8th Do
Red & Pea
Lifts

9th Dr
Aud by
Greenwood Sec =
Cedar & Main
Vol Shole
Dep 4h S. W.

Stroke observing
Op 4h W & S Σ

1/0 Mets
Sig Shole, again
S. W. Stroke

Deep & simple
rests in
Involuted
Surfaces

Stalker
Surgeon

Beyond this
Front plane
no work except
on small
exposure after
Lunch on Sunday
Check efforts
Steadily

Road runs
nearly due E.
a quite straight

Mole-speckled 2
white throated
Sparrow flying
up to NW
1. Lamprey,
Saw Helm.

Station
Cedar Hill

Fort Ar

Neotipedia L
what leans
Gen Jeffs
Division dep
Leaves left
Bell begin to
run to 8 M
A Road
Just cutting
down No rock
Only gravel
ridges

Shaly Lime-
stone dipping
to southwest
Cut angle
[illegible]
low ridge
& abutments
[illegible]
[illegible]

Still elevated
5/10ths

Statue
Conqui

Bodies of Melapulu
found buying Statue
flat lunettes
copper open
facing edge on
one side of Rim
& capped with
bronze deposit
Say cutting thus
stones be
off Dark trap
from the rock

Mean Inward
dark shoals
Lymestone
[illegible]
look like Cape
[illegible] Rocky

Weather Cully up
Fine
Shelter south
West angle
High

Men at lake
[illegible]
[illegible]
of [illegible]

Statue
Conspicuous

[illegible]
Hard slat
roads clipping
S E [illegible]
[illegible]

Hills [illegible]
[illegible] out of
[illegible] to
[illegible]

Going down the
Metropolitan

Rotten Mole
or Cross Section

Lumination high
depth of 18

Approach to
Cerebrospinal
Station
Cliff of Black

Shute depth
to South line
angle stag
shut nerf
Verbae
Lots like
Wormwoods
Smut

Platin

Cassumpsoe

Little Jesus
Jesus cotton

in Iowa
north as
Cedar

There are only four
Cow bells
in Keokuk
Boundary of Iowa

Stella Nelson
George Sauer
Stella

Neem Neater
Neelies R

These Slates
in shales
Cretaceous
long distance
Looking like
a natural Slate
with undulating
bands of
Shakespeartes

Then comes a
Granny Wet
? on beach

These rocks extend
all way to Appa
Met Station

Station
Chessometer

Part this mine
Slate Rocks
Course

Then mine
Good Slate

Great cutting
Blue
Slate

? 1 Source as
before
Mac State with
Colum gap
dipping from
Shale of clay
clearing permitted
crops growing
Dining high
Pleasantas County

Stains
Mill Stream

Same State
County

Approaching Wealth
Red Shale: Rapa
terraces & fine
beds of fine
gravel &
Coarser stuff
Rapidly

New Paper
two Juggers
at 20 feet
below 1 ft Coal

The 5 ft high
1 ft drain
Great Quantity
of water
Filled with
Clay

Chor Thus

Sundry
Lots Nec

Also Vi
Chine Shale
Sundry

Also 50 fee
They leg
Bol Sundry

27

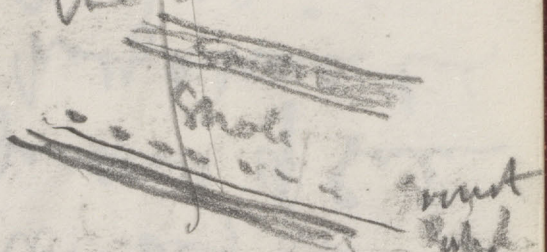
1876

Reef Bed at Jaggers

Contains many columns
but no significance this
year except are there
on the reef. Probably
200 feet exposed — Bed
& mine in reef —
Shows how rare they
are — This cliff must
cut into in last
ten years. Whole
coast shows great
erosion, & its features
considerably changed
since last visit.

Papa had gone
off to Port
Dunnet on
half way below
it & was
hauled in
on a boat
of red shale
4/19 am
abt 8 ft thick
under a sandy
ledge 18 ft thick

never better
of bad colour
1 ft 2 aby better
which is a 6 in smaller
and 4 in wide
a very improbable
The law is dark
in Cotton a
little harder than
the last



Not very far
from end of Scale
& half a mile beyond
Cumberd Mine

Sat —
Macum to Ath
Sandstone dip
to S in SE
Above Flutinh
dip S W

Beyond arthor
grows sandst
a nearly flat
dips S

Beyond Springville
Sandstone cliffs
D. N.

Leaving higher
& the North

Cameron Hill
at R. Phillips
is edge of the
Land 3 miles
from Springville

Post R. Phillips
[illegible] says
[illegible] to Mr.

Thursday 27
Greenville
Red Guards
& Red Cavalry
& Jeffery B Clay

Greenville Station
Up in Cavalry

Part Thus
Their Cavalry
Red Not come
There Red Guards

Slate grey
over all
Under and Shade
Hand works all
South
Hair shutters &
Curtains ?

Wentworth Sept 1/76

14 cut 30 posts to mow

hard gray pine

Ground Spruce

Bed of ash

Red Oak

Sand 4 ft

Dip SE 45°

Limestone 8 ft

Top ash 10 ft

Veins red feldspar

Veins varied

Dip to N 70° E

200 feet

Left Still op
Bruise but nearly
by Clay Marks
or other
Belt red
Square
Left Ear Entirely
Cut long ways
Stub S 23 R
Chest 22 inches
Second Stub
Fore
68 Inches end of Cut

Dat Ramu
NE 9 8W 160 ps

Small ridge
all 100 ps
Mc and Grant
8 ft 9 ps
Slate
DPPS SE
Indian change
Joseph here

Jerusalem
Year 1807
In Cotton Square
Burlington City

---

83 Pieces
Flat & Moulded
City Cutting
Starting Point

Crumb Stop
Shute

Stub S 60 E
Very new
Stub S

Fault 2
Sig Quartz
& Sig Slate
Dip SE
Pit 600
Sheet quartz
Dip under
hill just to
S & very Short
Men Dark
Green Slate

Sept to 8 night

Mend Oven

Slates Cut

Weatherstrip

Do

Mend Spreader

Gutter

Board

Send pen

Mend sail

E & K

Sept to 8 night

Black slates
seem to dat
to S after
last road to
all most
stop short

Fine clip at
one place as
left by Jones
SW by map

Of Platos Theory
works succeeded
by Boulder clay
& then by Recently
Rocks in part
with Speckles
Marks —

Then —
Great thickness
of Zeluta Pebbly
Speckles Red &
Green in
upper of Grad

All Need Clothing
under Need Funds
the Shared Quotas
4 Fellowships
Left the refuse
1 Fund 600
more allowed

As I go to
Deans letter
that this for
wch is Footed
up with the
others when

an of type of
and Rev. field
Series C Prof
Series Ia
also developed
R Series of type
manufacture Ia
age per cent
of children

Note in Southwestern

Gl Chas Lemin
Nanette

Tree of Blue Ribbon
Beauty of Lorn
Mary
Smith Tuck Murphers

Not her grandfather
Mrs York Parlor Ad
Zet Lizzy — My Son
I pen — grandfather
the usu, Bre
Cilly untweeded
Spulling
Melody
Hearts

Note how little hair
drawn as the years
older.

and deepen Infinitely
depth of sympathy in
heart in all that
time fathers intend
in running heart
& corrupted veins —
want no the cadence
as sea beyond a flow
or a dent as bird
of barren and —
Deep mine life myth
eternal life — alone
& around the soul

Rutland Day 1st

June — 1 Sunday
30 2d

Nav Branch
1st Army
Foot Plus

Flugzeugführer
u Beob 6

Rad u Gem Pr 5

Flugzeugführer 7

Gruppen Offz

At end of grey
grey and shale ~~to~~ 30

+ Coal 6 in

Underlay & Parting Pty 6 ft
Parting was grey shale

Coal 2 in

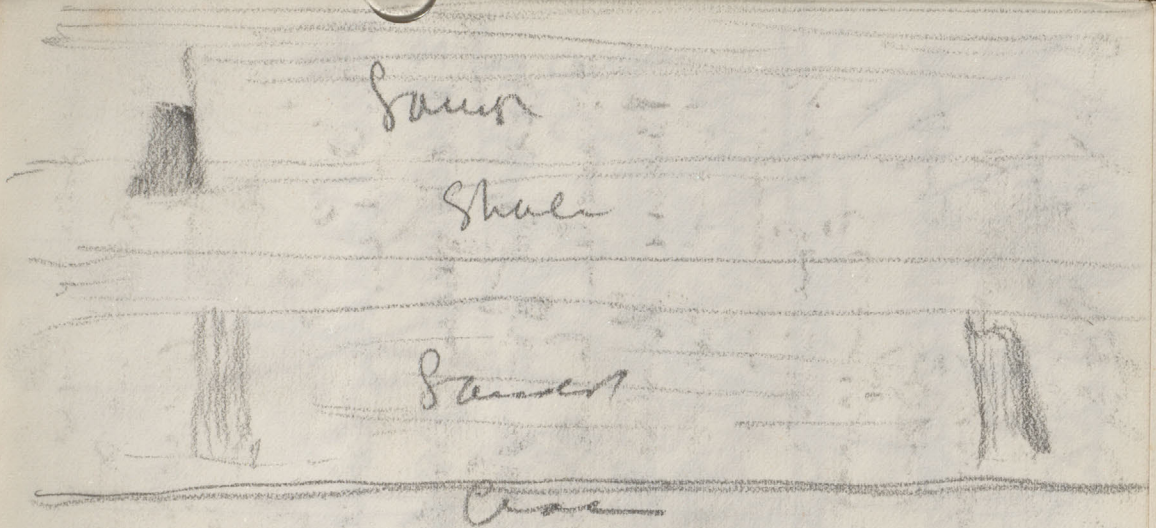
Grey underlay 10 ft

Northern underlay
of shale
Dip 20 N

+ Near top of
Sandstone been
represented the

New Brunswick Code
2 small Jars 2 8 oz
1 small — Pen
4 Gay Lake 9
Buckskin — Pen
Medicy Rubber
Gloves

Large quantity
Cleft V
New Brunswick


Sauce
Shade
Sauce

N J Lewis Dairy
Sanitation Inc to let
about and
under some hinds
day is 2 cer flagg
Sunday 8 p.m. all
pupils & green shades
all 30 ft off
Dinsmoor beds set
same thickness
need paint

Cord Sand blue
or Cinnamette
also. Coarse
brown Sandwich

Longest Curtains
84 x 13

W. Dunn

Clifton Springs

$14 per ton

At Mill above

Smith Rock

Auto Sandy

Big Cinch

Hauled from

2 to Lone Pine

to Mill

Deer & bear

Wally Bathurst

Pot plum – clay coffee
with sand shells at
Gunnum –
Hard to burn rock &
Black granites the
Seems to be pebbles
in central country
Greys in places
Gray shale & granite
All rock

Pebble Rock

Ridges of Hard dark
green & chocolate rock
Gray grain

Belledune

Some rocks of opal
& some red – opal in shale
green, some rocks &
some like blue slate

Stile [illegible] turning
Gap, steel curve stay
To the W S Est R
River close to Bay
Target R | Granite of purple
[illegible] in pebbles

Short, rocks in [illegible]
[illegible] [illegible]
Must [illegible] calling
Hard rock [illegible] as
before
Red hard rock
green hard do as below
New mill

Red bedded shale
[illegible]

Chalk

Dalhousie
[illegible] cut to
[illegible] the [illegible]

Conglut & Shale
Mylo [illegible] –
V Slag with
Amphibole

Trap & L Carb Sand
Rice & [illegible]

Keweenawan Rocks
[illegible] Slag depts
Iron – [illegible] Slag
Dark Rs [illegible]
Green Up [illegible]
[illegible] Cayoha

Silt & sand banks
Gay, steel course stony
Take W S Ent R
River close to Bay
Target R | Granite & purple
semi pebbles

Short work in sand
purple & red
Must travel adding
[illegible]
Black shingle & hope
hills & red of them
Broadly in the stony gut

Assault group

Some shale & sand
quartz bed
Sh heap flat — Shale of
West flat stone Crofty Rem

Carapace
Brown shaled as

Sifter dust beans
hulling over the
cook - see former
note —

Dev Sawtelle up
to cedar tree —
Red

Beyond Cedar Wall
between & Sagebrush
Gy Stone, 2 Pts —

Men up red stony
hill Sagebrush

Red alone
side & head
grey underneath
other than head
grey

All near
Bailey City
Lumberman
Sth N 50° E
& Nf to South
run near to
School House

3 Shelf Sections
& some tops

24 ~~Adjustable~~
~~Shelf Sect~~
Reduce to
201 but
retain these
Cupboards

Surplus to
hand say that
of course
the Black Shed

Dark Tule
Lake

Shine S 60 W
Grey Pine S E

1 Great Thermal
of Geyser Fel Path
Hot Springs

2 Mammoth
Sulphur
Springs

Board of Kingsley
in Dens Cottage
Nae school here
Nearest Duffy
S.E. — passing
between into Geddes
School — 8 Teachers
about 30 girls
Attendance
from one fourth
where of
Graphic School

outlet
outlet
Sun
Stay

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

of Scute &
Serpentine
into dip N 60E
at angle of 38°
Lynes thus
at right angles
which is vertical
but S. 70° W
to Scute &
general run of
Serpentine
Carling Mountains
Scute &

At Rockland
Lucas

Steep Road West of
Hill Summit
under of Stand
Big Sandstone Rock
Hand Branch Bay
Sandstone Ingrey
Lib so called
Silly
Tres appears
of Smith

Of the Entire
Book seems to
be incomplete
but with some
short chap to
S—

Mile on Sulu
Creek Road
Lemuel W Plumley
Slate dip
S 70° E
average of 40°
Thus at old Tunnel
on creek
Left there 2
Miles from R

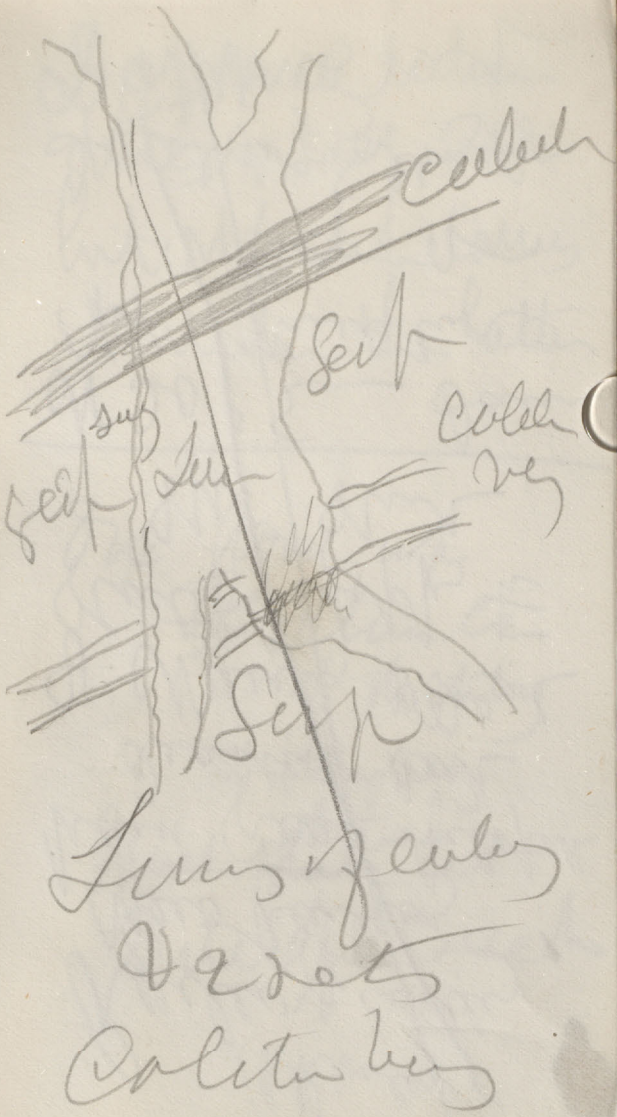
Deep valley below
they of Serpents
but the chief camp
it under the latter

On road up
~~to~~ Salmon
& Rockley
& Kingsley
Black ~~State~~ Cat
Side of Creek

(R Rolls)

Rocking & cutting
Neo Rocking
hard green feldspath
Quartz Rock
J Nunes & Blue
Flakes chipping to
Slit Shed

N 20° E — Same
as in Rock for
Implements
So called Sally's
Footmarks



In Deepest
Lethe

Wave of Lethe
What is that
of my Spring

as then

Junction

Stat Auction ap
Same as
heady of Slate

Slice pr Stanford
Will be Lens
4 in Rod Cutting
pms

?i of Stanford
Sketch here & Same
in Dreher Ring

Melbourne

Dynamo

Upper tunnel

Junction of Shale

V Section

S, 65-0 W

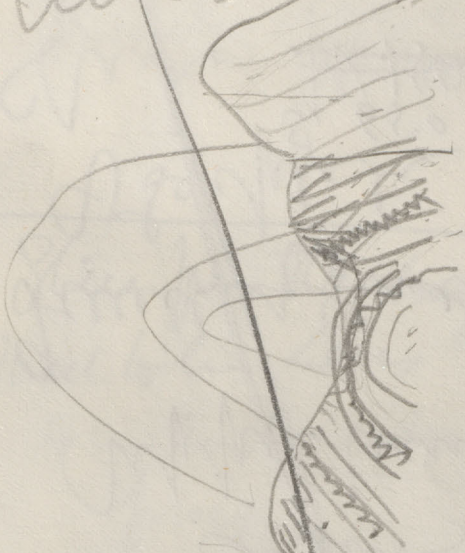
Shale ~~W 15 0 S~~

Near Lecture

Slate Same

Shale as

at base of three
slate with Sculpture
Inscription
a black slate drop
with veins

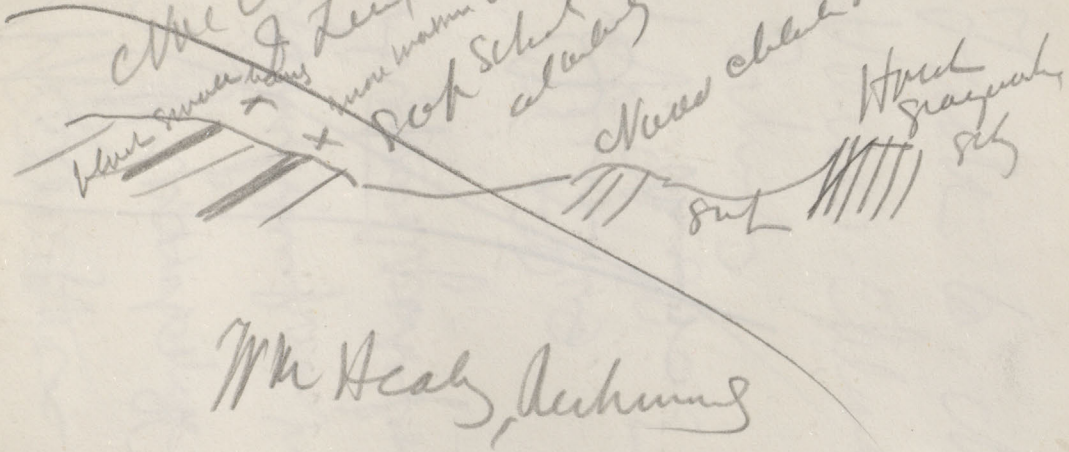


another slate pot
at South Side

Thickness from
at 300 feet
a mile

Cupro Vulcy
of Lucher Valley
Blue Slates
of Denver
& N of Sante
Nacos Chlorite
Slates
of Sanitas

These rocks
are all very
crystalline
and turning
by magnetic
needs —
Naturally the
crystals of Epidote
& some hornblende
Amphibolite


Clear sky
Light + warm sky
Light summer sky
Light clouds
Warm clear sky
Hard grayish sky
Sun
Mr Healy, Archmung

apparent in
2 bunds of
ceiling
[illegible]

Perhaps
[illegible]

Talk to Mr
Nance Clarke
Schools
dip N 90° E
at 400
In the large
Lenkin maps
J. Crowder
Lunetta

Spun in
cell 150 gpl
Narrow chlorides
Slates
Dry cr -
at 40°

Cut Corbitry

Mean Spline
Dome Dep Set

Gray Mottled
American Slate
with hand Nots
Cut N 20 D E
all by hand
angle
all 7 0 0

Monday June 19

Head Lice

Nanny Dust

Dizzy

Green Drinkers

Sunburn

Mufferg

Smoke

Sunset

Chapter V

Manual of Mar
Lighthouses
boundes —
Rev Dunch
CN 70 E
Crossed Sound
between depth
North Spar to Ship
Anchy to S W

Farther East
at gravy
Capital & Plenty
rock covered
with sand up
& down = hum
without shade

Also Further gravy
at Rockport
Cudge ~~length~~ more
Surface rock
Many shark

N 55° E Shaw

shouted NE

NE Shaw

Affew odd Shave
on upper surface
leaning to NE
and repeated on
NE side Shaw

Shaw

NE

Large Shaw
probably older

Farther East
Shore in Englewood
Surface VR
also on Edge
of Lawn to East
Level a foot high
On top of this
still better Stratum
& further Surface
VR 55-0 ft

Further E Line
Volcanic spring up
Good Water
CV 5-5-0 E

Well polished
surface

Further East same
spring same direction

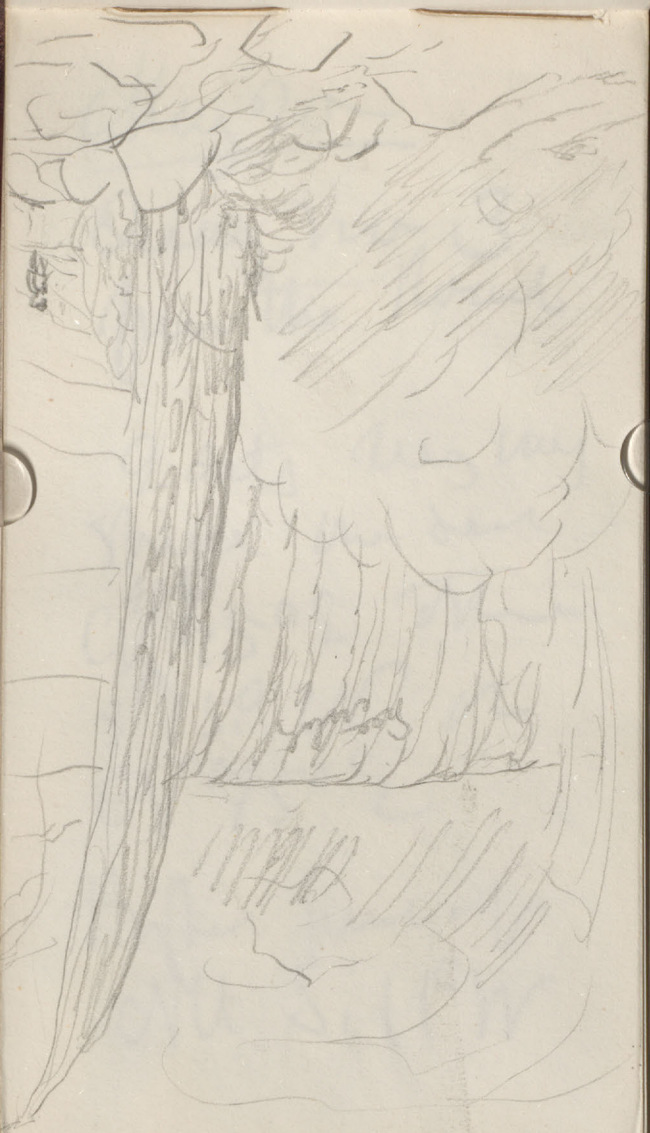
Little further this
Cupboard left crop
to big shoot
Line N 30 E

May 20

Decay no 3
from the Road

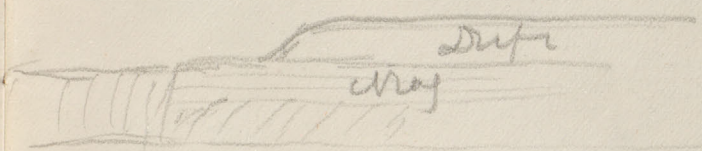
2 sets very very
Three on dead
40 to
W 25° S Three
S 75° W
W 75° S

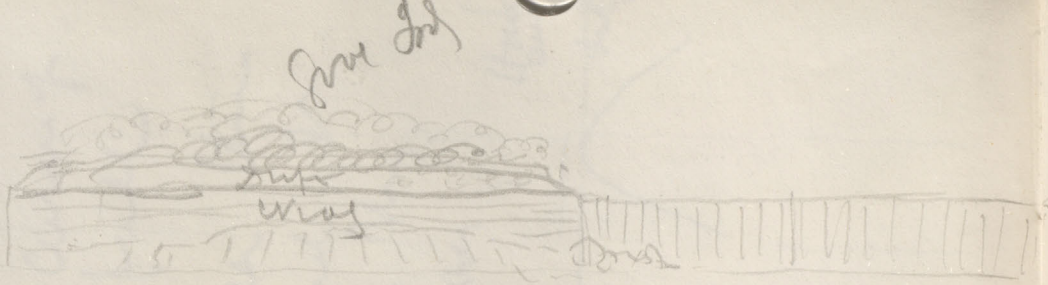
Higher peak
Mt S. 11° W

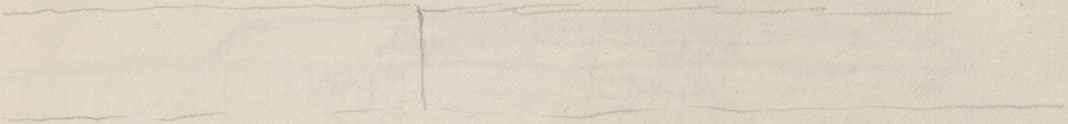


Carnarvon Shore

Clay Seals



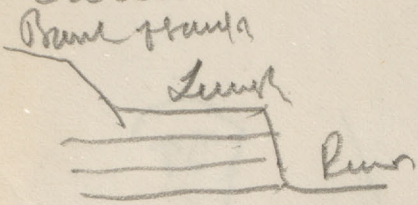




In line with
deepest curve of
great fault

Seal between the
same and as
posterior thy

Niagara
Canada Side



Goat Island
Grand Valley drive
Home Thanksgiving
Dinner Lunch

Seat on Goat
Island Bend
pine heavy on Home
on Sugar Bank

1
2
3 15
4
120

ALMANACK.
1864.

	S	M	T	W	T	F	S
Jan.	...	...	...	...	...	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	...	...	...	...	...	...
Feb.	...	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	...	...	...	...	...
Mar.	...	...	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	...	...
April	...	...	...	...	...	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
May	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	...	...	...	...
June	...	...	...	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	...	...
	...	...	...	...	...	...	...

	S	M	T	W	T	F	S
July	...	...	...	...	...	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	...	...	...	...	...	...
Aug.	...	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	...	...	...
Sep.	...	...	...	...	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	...
Oct.	...	...	...	...	...	...	1
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	...	...	...	...	...
Nov.	...	...	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	...	...	...
Dec.	...	...	...	...	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31

Glaciation
Indians &c. &c.
West Coast

1876

Mr. Peel of New Westminster tells me of existence of stone circles at Mc Neils Point near Victoria

Graves on Macaulay's plains opposite Mr Pooley's, near Victoria.

Square "fort" partly obliterated by agriculture near Clover Pt.

Says ~~that~~ near Government building New Westminster a sort of terrace above the river with many old indian shell heaps with mussels oysters &c which do not now inhabit the Fraser or its estuary. Seems to indicate former change of level. If Coast now sinking & indians remains of date prior to its rise, must be of very remote date.

Also tells me of graves of peculiar sort near Leech R. V.I. Built-up of flat-stones, very oppin like boxes on surface. No remains but very fragmentary bones found. Indians of the Coast afraid of the locality, & have a tradition of a race without joints in

their knees, who formerly inhabited it.
Told that similar story of fowlers legged
indians told by Indians of coast at
Nanaimo, of the interior.

Told by Mr Hughes that Squamish Indians
of Burrard Inlet will not kill
wolves. Say it spoils a musket to
shoot a wolf with it. One indian known
to have shot a wolf afterwards sold his
gun.

May Vancouvers account of fortified villages
on the coast to the north serve to account
for works at Findayson's Point & elsewhere?
See especially Vol VI. p. 46. Though often
mentioned elsewhere. Isolated flat topped rocks
filled with projecting flat stones, on which
meant work. Think Capt. Swan also mentions
palisades round coast villages of Cape Flattery
(Examine works in this regard)

Oak Bay Shell heaps from 6 to 8 + ten feet thick along the high water mark. Evidently indian throughout & from subsidence of coast probably, are now being cut away at high tides. Their base below highest water mark.

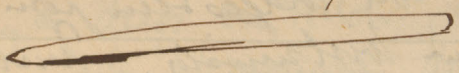
March 19 1876. at Mr Dodds' at the Gorge. Victoria. B.C. Saw some interesting Indian remains. Skulls & implements supposed to belong to an "extinct race". The persons to whom the bones had belonged were evidently buried, Mr D. thinks probably covered up by Material of shell heaps — which here largely developed — big piled on them, mound like. The area of this "mound" which not very well defined, in which remains found, very considerable say perhaps from description 20 feet. Remains about 6 feet below surface, & skeletons originally pretty good Many people, some at least of whom had been buried in sitting posture. Mr D. also

informs me that he found remains with skulls of the ordinary flat-head type above there now more particularly referred to, & as though turned subsequently. Also that over the remains trees some giving 18 feet in the circumference had grown since they were deposited. There appear to have been a number of individuals buried here all grown, none not yet been disinterred. Mr D' states that he noticed the difference between the flat-head & these older skulls, which is also apparent from the fact that while he returned the flat head skulls he preserved the most perfect of the others. The skulls are of a very low type. The forehead in profile retreats very rapidly, & viewed in front is very narrow, with the fore part of the head pinched upward into a ridge along the suture. The backs of the skulls (2 now remaining) have apparently been somewhat flattened & distorted, probably by the cradle board though not perhaps intentionally. The ridges

for muscular attachment about the occipital region are not specially prominent, & the skulls are not unusually thick. The profile of the face is markedly prognathous. There is no appearance of deformation of the skull unless it be at the back as above stated, & if this part has not been modified by pressure the heads have been distinctly brachycephalic

The tools found with the bones, so far as I could learn were as follows.

Bone pin or awl, or instrument used in weaving mats? about 9 inches long, stepped thus.



Bone implement pointed, & hollow on one side

Small agate & hard black slate arrow-heads. Some so small as to seem only suitable for shooting birds. stepped thus. —

Long stone spear-head.
Broken stone implement or net sinker,
shaped thus. perforated, & about 2" diameter

Head of stone hammer of ordinary shape

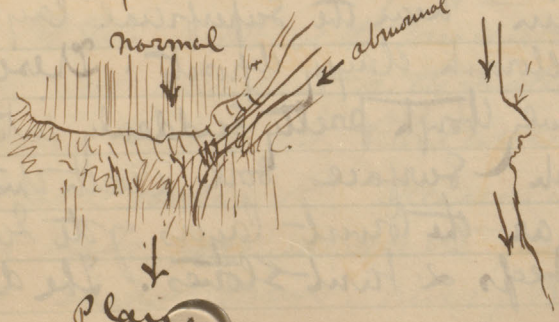
A number of polished stone wedges, or skin-scrapers, some of them made of greenish material like impure jade or serpentine, like wedges seen from excavations near New Westminster. Most of these here found too short & with too blunt edge to make good wedges, & nearly all more or less oblique. shaped somewhat thus: well polished.

sect. of edge

The teeth are much worn down in the skull still retaining a few. The posterior molar of the lower jaw has two fangs almost grown together, that next anterior to it has a single fang.

Glaciation. Normal direction of grooving at Finlayson Point. Beacon Hill S 5° E. The eastern side of the rocky point forms the western edge of a wide bay where a great mass of the most loose sand. This side shows grooving & deep ~~so~~ hollows, semicircular in outline with abnormal direction of S 35° W, showing departure from normal of 40°. The lateral ice has pressed in beneath the normal, where the latter descends a step

.. thus



Gl. Boulder of coarse grey granite near Cedar Hill church measured about 17' X ~~[illegible]~~ 9' 11" X 7' 1" & partly imbedded in the ground.

Gl. Glaciation visible at the top of Cedar Hill or Mt Douglas on the shore of Cordova bay. As near as the train would allow of measurement course S.S.E. Hight according to admiralty map 696 feet.
also ridges & lakes gravel & sand on lee side of Cedar Hill.

Last stage. Evidence seems to be that glacial or at least cool post pliocene conditions succeeded immediately by interbeds. And in some places sea shells, perfect & with both valves, & sometimes closed & still empty, & especially the characteristic Cardium, near the superficial layers of the yellowish clayey deposits. These pass imperceptibly though pretty suddenly into the blackish surface soil, & with this appear the lowest layers of the Indian shell heaps & burnt stones. The dark

Surface molecular no doubt indicates ~~that the~~ the advent of land plants giving vegetable mould. Thus the land occupied by Indians as soon as raised above the sea. Has the land been occupied before reaching its present level? Inland shell heaps might show this.
Almost certain that it has sunk a little since first occupation.

Interesting to know how the Northern Indians (Haidahs &c.) learned to work metals &c & if art practised before white occupation.

<u>Memorandum on Range of Buffalo</u>
from Arch^d McKinlay per Dr Tolmie.
Before the gun replaced the bow & arrow buffalo were abundant on the Snake River (or Lewis R.) & its tributaries as far South as Powder R. Occasionally small herds roamed over the prairies of the Shahaptans? River, Nez Percée

& Walla Walla. Probably between 1815 & 1825 a few buffaloes have been killed in the Grande Coulée — once the channel of the Columbia River — & north of the Blue Mountains, a spur of the Cascade Mountains extending eastward. I have seen quantities of buffalo bones on Powder River in 1840, & about 1833 when Ft Hall, a trading post on Lewis R, was established buffalo were numerous in its immediate vicinity.

The Indians of Eastern Oregon ascribe the early death of large game on their lands to the formation in severe winters of "ice crusts" on the snow. This I think happens oftener in Oregon than in British Columbia, but there also it has in the memory of white men caused great loss of horses.

For further facts see "Nat. Hist. Washington Territory" p. 138.

Glaciation. Rocks on Sooke R through hard & compact diorites show signs of very glaciation. Only in one place direction accurately noted & there corresponds closely with river valley & direction near Victoria. (see notes) Near Leach R the slabs when partly uncovered are smooth but do not show good striation from ice sheet character. The hard drift or "cement" of Leach R & through closely resembling the softer material about Victoria may perhaps be a sort of morainic profunde similar to the little hard masses sometimes found wedged into crevices of rocks near Victoria.

At the head of Cadboro Bay about 100 feet above the sea road shows in cutting strat. & false bedded sands & gravels. The false bedding very regular & indicating N & S. currents like those of the tides state running up the ~~[illegible]~~ of Georgia. The southward or ebb tide seems to have been the stronger & to have most frequently kept trade

Rocks of Victoria &c. Compare with those (of about same age?) described by J. A. Phillips Geol. Soc. Feb 23. 76. Nature March 9. p. 379.

Change of level of Coast. See Mel. Heil. Worthington Ter. p. 22. where J. G. Cooper writes. "On some of the tide-meadows about Stoolwater Bay, dead trees of the species (Th. fijaulia) only are standing sometimes in groves, whose age must increase, though impossible to tell accurately. They evidently lived & grew when the surface was above high water level, groves of this & other species still flourishing down to the very edge of inundation. But a gradual, slow sinking of the land (which seems in places to be still progressing, & is perhaps caused by the undermining of quicksands) has caused the overflow of the tides, & thus killed the forests, of which the only remains now left are these cedars. This wood is perfectly sound & so well seasoned as to be the very best of its kind. Continued & careful examination

of such trees may afford important information as to the changes slowly in these shores. That there have been numerous & great is partly shown by alternating beds of marine shells & glass & stumps, often in their natural position, which pierce the cliffs about Hobart to a height of 200 feet. But while these remains show that the changes took place in the latest periods of the Miocene tertiary epoch (?) there is no evidence in the gigantic forests still living on these cliffs, that any sudden or violent change has occurred since they began to grow — a period estimable rather by thousands than by hundreds of years."

Change of level of Coast of V.I.

Indian legends concerning Cape Flattery &c (Swan Indians of Cape Flattery. Smithsonian Contrib. 1869) pp. 2. 5-7

Long ago but not at very remote period, waters made island of point of C. Flattery. Water suddenly receded leaving Neah Bay perfectly dry. Four days reaching lowest ebb, then rose again without any waves or breakers like it had submerged the Cape, & whole country except tops of Mts at Clyoquot. Water on rise became very warm. As it came up to Tsoses people floated off in canoes, with the current, which set strongly to the north. When waters went down portion of tribe found themselves beyond Nootka, where their descendants now reside, & are known by the same name as the Makahs in Classet or Kwenait-chechat. Many canoes came down in trees & were destroyed. Water four days regaining accustomed level.

Lake back of Clyoquot V.I. where many Indians say that guantities gold bones of whales.