

All inverts implies a previously felt want, & great inventors get home better than who must only find most strongly as they do these wants, Review of what can literature do for us.

Read or write a paper not in common use and tell why it will do much to you.

Abandon the current events for the best short story.

Retain current events only for unusual occurrences.

ideas are what people think, I deal with what they strive for.

The Henry Martineau Museum specimens.

Literature is a study of human nature.

School & in efficiency.

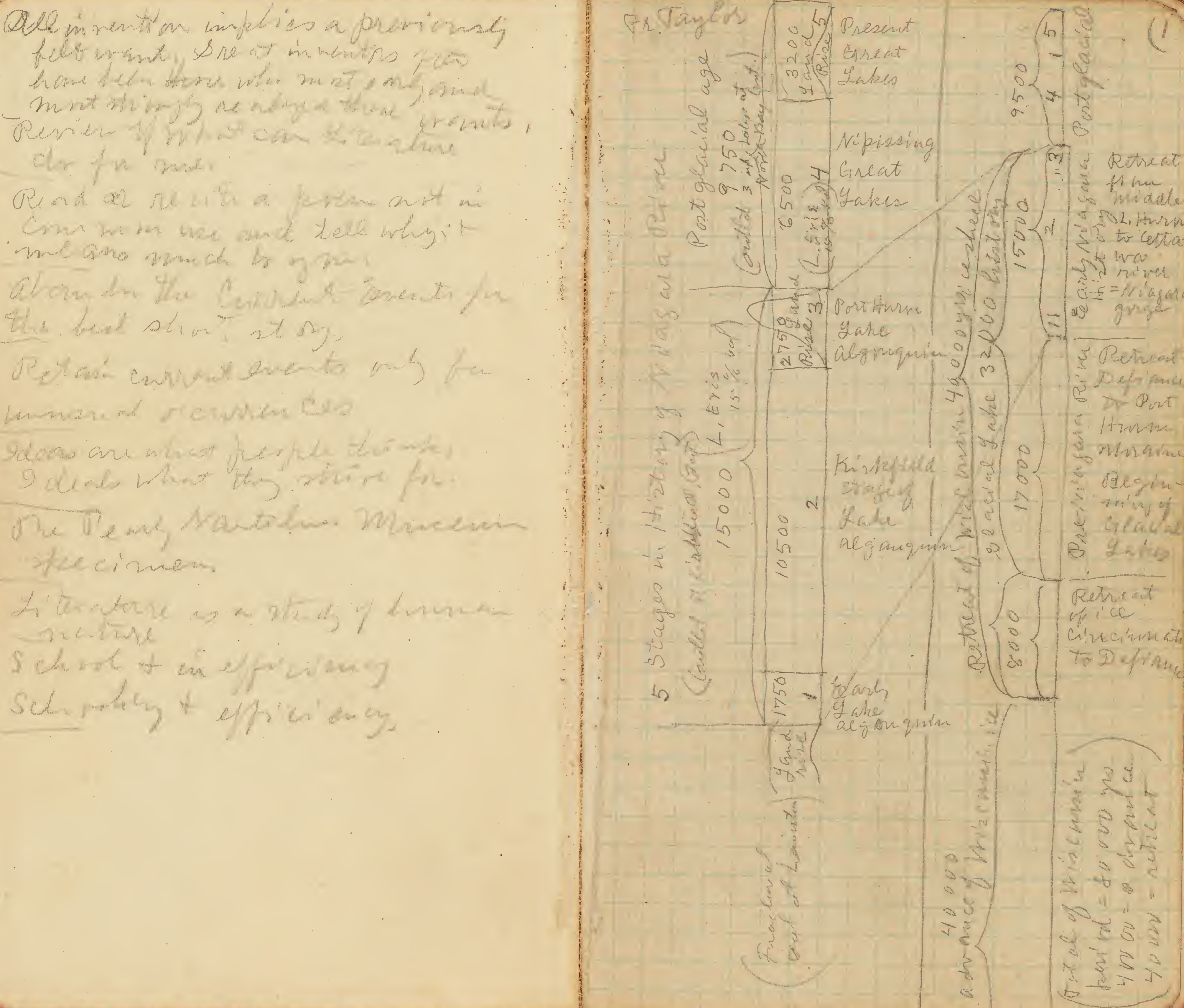
Scholarship & efficiency.

Fr. Taylor

5 Stages in History of Niagara Retra

(Laid off at 15,000 ft. level)

Post glacial age (could 3 in. below of North Bay level)



Mellen + Ulrich

About 1 mi from Paris in road to Miller's bog. Between fence + railroad. On east side of fence. In river quarry can be seen from road, just a little across fence.

Regular Perryville, Salina shale, 10 ft. thick. Down in branch, east, is quarter of a mile stuff.

Ulrich

From Miller's bog go 1 mi S into to where overhead bridge crosses RR. A hundred ft. S of bridge a path goes down into the cut. Opposite the point where this path down the gully reaches the cut, there is a small cut coming in from the east side. Here, on E side, a layer of rock projects a little and under this projecting rock comes in the new branch road.

Allonychia locality - 1/2 mi N of

Salina locality

Paris 1 mi

Allonychia 1/2 mi

2 mi

Miller's bog 2 mi

Callinectes 3 1/2 mi

Western Williams

Seneca

Lockport

{ Lockport upper + middle
Gasport - basal Lockport 9-30 ft
Decatur Limestone (4 mi from
= hydraulic limestone)

Rochester

Clinton

formation

{ Iron de quait limestone
Williams shale
Walcott limestone
Sodus shale

Oriskany

formation

Cataract formation

{ Thorold sandstone 7 ft
Merritt sandstone (1 mi from Thorold)
Cabot Head shale
Merrittville dolomite
Whirlpool sandstone

Monograph 41,

Blair's Farming Circle +

Ulrich - Basins,

Genesee, 1902.

Fairchild.

735 ft reaches above sea level at
Canadian boundary
363 ft reaches at Hamilton
0 ft reaches at Sandy Hook
Land depressed northward
during glacial times, now
raised above sea level.



		Bottom of section	
Pleistocene	Siing, glacial stage	1	Rentian
	Siing-Mindel Interglacial stage	1	St Prestian
Pleistocene	Mindel, glacial	2	{ Rentian Mafflean Mehnerian
	Mindel-Riss Interglacial	2	Stepyan
	Riss, Glacial	3	{ Challeen ^{Orde *} Achaonian
	Riss-Würm Interglacial	3	Middle + Lower Moustrian *
Pleistocene	Würm Glacial	4	{ Upper Moustrian Aurignacian Solutrian Magdalenian
	Post glacial	4	Various Neolithic cultures of which Robertsonian is the latest

Cultures in *

Reaches in Moustrian

Amphicelina sedum (Mason)
Type at Princeton Clayville
Cedarville Ohio

Lingula quadrata Eschwald
Trenton Lewis Co. N.Y.
Manual P 507, fig 662

Outer shell layer black, concentric
striae.
Inner shell layer white, + numerous
radiating striae, especially
in middle part, probably do not
show in outer shells.

Strong median suture, good
central scars. Constrictions
convexly curved as in cross-
sections.

Anterior margin convex as in Hollett
Clark's figures

Principles of Stratigraphy
Ed. Aborn # 6120
A. G. Sailer + Co. N.Y.

North American Index Fossils
1250

Hyolithes is a true Pteropod.
Slide shown with Walcott.
"wings"

Wright.

Red Jasper conglomerate +
Lake Superior Jasper carried
as far east as eastern Ohio.
Keweenaw glacial.

Keweenaw glaciation preceded
Labrador glaciation.

Verretts (+ Chamberlain)

Keweenaw + Labrador ice sheets came
down Cretaceous and were not
from Keweenaw first.

L. S. Burling Victoria Memorial
Museum Ottawa Ont.

Parker Fountain Pen.

Coleman

Don Valley

Groundhog in Don Valley Arctomys

Cervulus borealis

Bison

Ursus large bear than now living

Deer - 2 horns Caribou

Red Deer Edocollus

Mammals

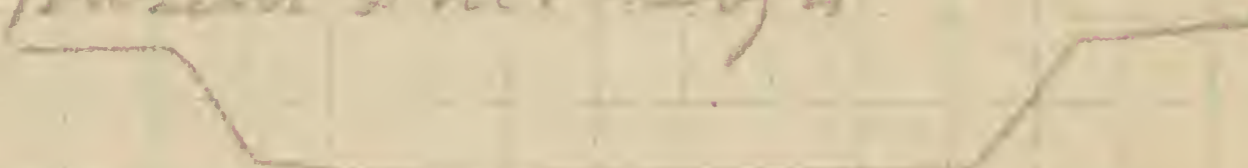
Moose

Maples & birches possibly 3.

One part of old age of Don Valley deposits
in the ice being covered by 4. will de-
posit with interglacial interglacial
deposits. Correlating these with inter-
mediate deposits with those worked
out in US, the Don Valley deposits
would go back to the Aftonian age.

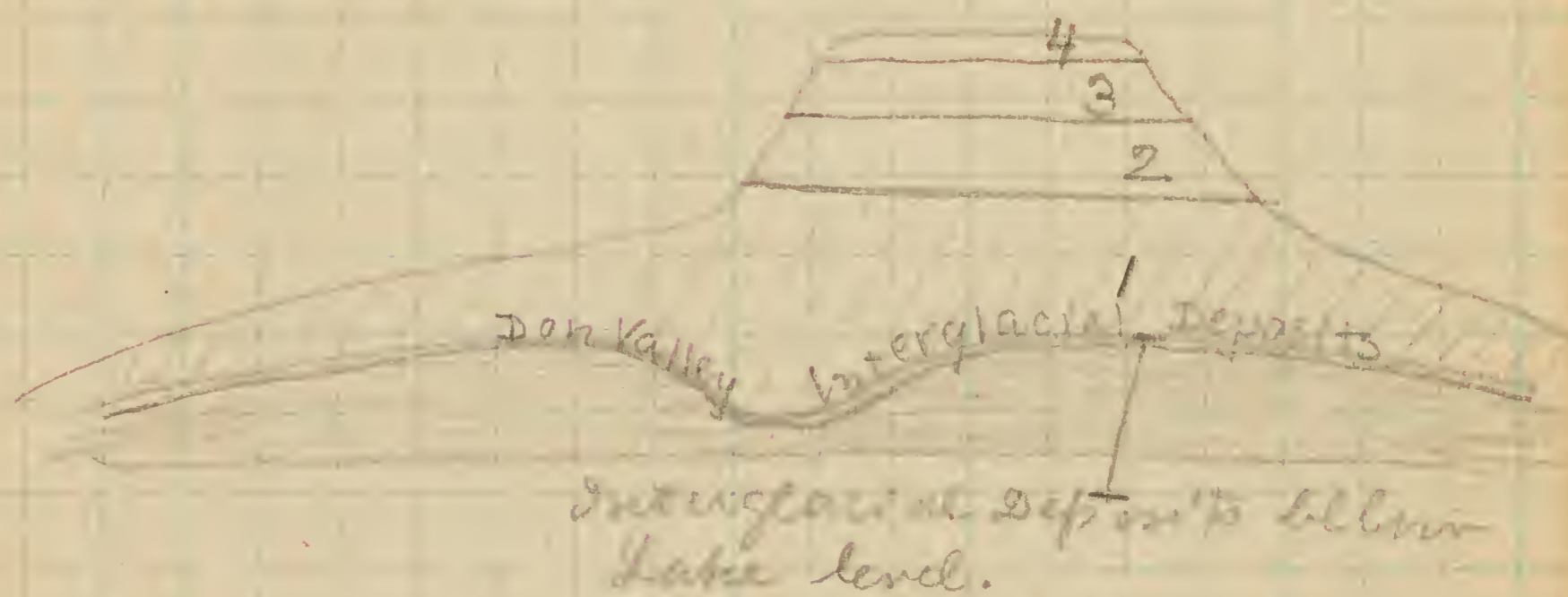
More over the Don Valley interglacial
deposits were deposited in a valley
with low gradient

while present Don Valley is



We have some idea of time necessary to
form present Don Valley. The former
valley is much nearer old age, and it
required to have taken much more
time, enough for Aftonian age.

Coleman



The Glacial Succession in Ohio
Journal of Geology. Vol 1 - pp 129-146
Vol 11 - p 613.

Canadian Ice Ages J W Dawson '93

Elvira Wood.

New features introduced along
medial line of alar (buccal)
Cactocranium

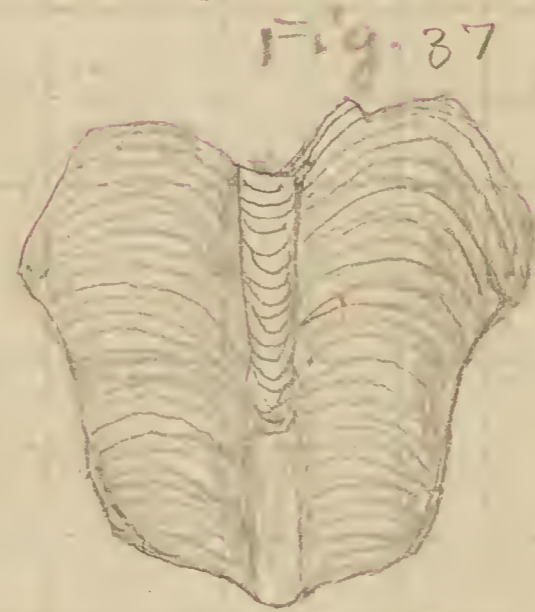
Taleocranium developed from Cacto-
cranium.

Emmons
American Geology, 1855,
p. 153.
Among Cephalopoda

Melia, diphan large; ventral
shell large, section elliptical,
M. cancellatus (n.s.)
Shells large, elongated; sides
only slightly divergent; siphon
large; surface marked by longi-
tudinal and transverse striae,
giving it a pitted appearance.
Foraine shales.

(13)
Emmons
American Geology, 1855
p. 166

P. rugosus (n.s.)
Volutas about three, larger
angulated and the larger
part covered with striae,
sharply cutted upon the
dorsal, growth band at the
curve, both the striae and band
are discontinuous and
replaced by a rather distant
wavy line; aperture
undetermined. (Rare)
Foraine shales and sandstone
Foraine, Jefferson county, NY.



Enlarged

Pleurostoma subcuvica Hall.
--- Trenton limestone, extending up into the
Foraine shales, where it is the most
common.

Cyrtolites (Pantmarthia) bilobatus d'Orb.
Trenton limestone, Foraine shales

Ermenas, p. 199,
Strophomena sinuata (p. 2.)

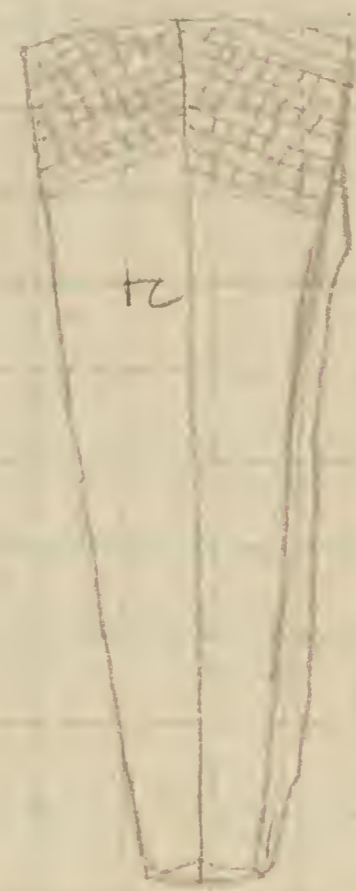
Fig. 61.

This shell = *Stroph. sulcata*.
New name for *sinuata* desired.

15
p. 208
Cumularia lindsonia (n. 2.)

Pyramid elongated, or disagonal
or subequal; transverse furrows
meet in the middle of a face at
an angle of 130° . The edges of a
side diverge at an angle of
about 25° . Both the transverse
and longitudinal striae are
stronger than those of the *C.*
trentonensis; there being more
than twice as many in the
latter as in the species under
consideration. The markings
have a general resemblance to
the *C. trentonensis*, excepting
that they are much coarser
and the front is much larger.
Lorraine shales, Lorraine, Jeffers-
on county. Cabinet of W. Williams
College.

Fig. 65.

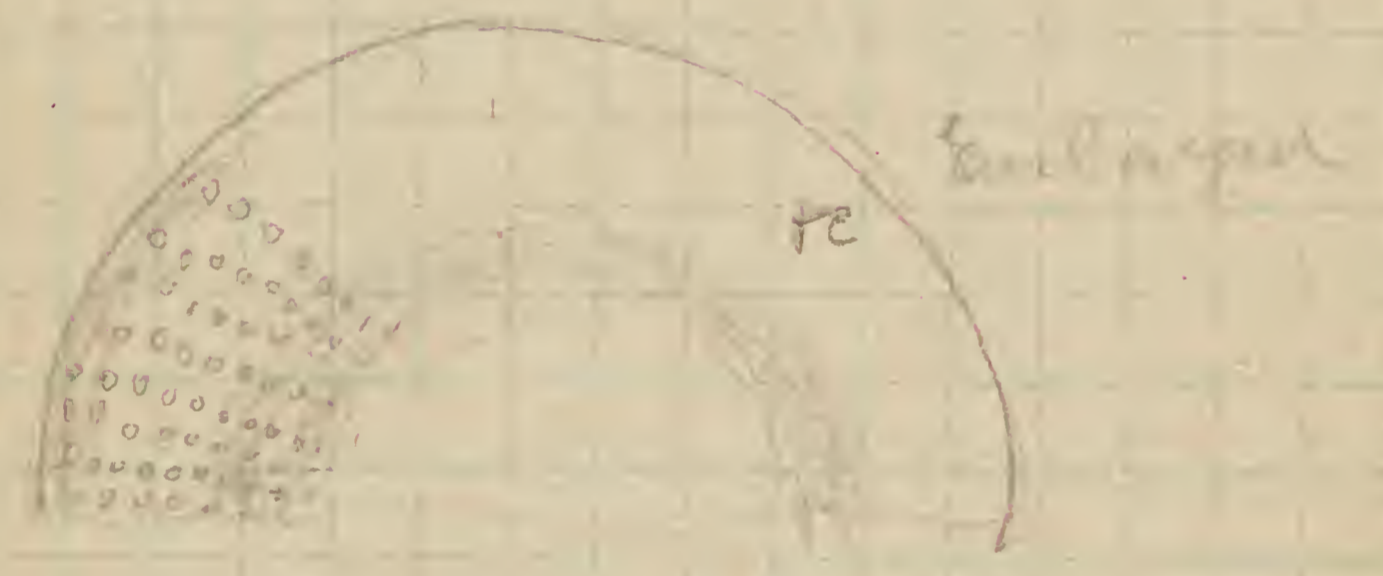


enlarged

Common p. 230
Receptaculites circularis (n. 2)

This coral is in the form of a
thick, flattened ring, studded
with circular cells, arranged in
regular lines traversing it
rather obliquely. It belongs to
the Forams shales.

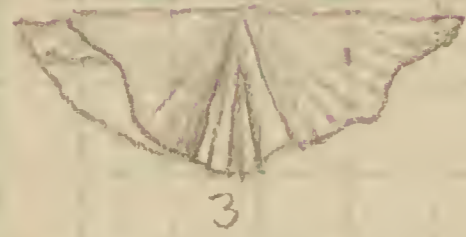
Fig. 82



(17)
p. 236
Calymene Conradi (n. 2)
Forams shales

Spirifer trentonensis

Plate XV
Fig. 20



Same figure as in
text of vol. 1 No.
14, p. 235, Emmons,

Page 235,

The *Spirifer* occurs in the upper
or gray portion of the Trenton
limestone, at Watertown,

(Shelton belonged to same zone
referred to *Orthis* *lyonsi*)

Same as fig 108 page 396 of Emmons
Report on Second district
limestone of Watertown

Vermont

Dalmanites equisetata (P. *alaska*
alaska) French Am. Rept. 1840,

Woodruff quarry, SE of Rome
Vermont
P. *alaska* (Emmons)

Planorbis *planorbis*, compressed, ...
marginally rounded; basal
margin regularly arched; not
oblique. Greatly ...
in ... county. Hall's ...

Lysidorsus *planorbis*, subtransverse
compressed; position basal
margin nearly linear, extremity
rounded.

I was fortunate enough to obtain
two fine casts of the hinge of this
bivalve, on the teeth remarkably
well represented. Occurs in a ...
stone of Salem in ... series, near
Rome, Oneida Co.

Fifth Annual Report p. 52

Cyprid (adult) Anomura form,
C. apical, basal and dorsal
margins parallel; anterior side
narrowed, somewhat produced;
and margin angulated above
rounded inferiorly; posterior margin
truncated, nearly direct; posterior
margin nearly straight, slightly
contracted; posterior margin angu-
lated, slightly. - Near Rome, An. 4
Cr. 1846

p. 52 23

Cyprid (adult) Anomura, the same
subelliptical; but more acute
retrograde, acute; posterior
margin very slightly truncated
freely. - Some with posteriorly

C. (yponocardia) ovata. Length
 oblong. Posterior side dorsal
 the posterior dorsal and
 posterior margin regularly
 rounded or arched, the curve
 more abrupt when it joins the
 base; basal margin slightly
 contracted anteriorly; hinge
 margin much elevated.
 Locality - Polaski, Carnegie
 Lab. No. 6.

Rome localities, South of canal.
 2 mi. } Polaski x } In thicker and
 3 mi. } Woodruff } more irregular
 Rome } Conestoga } layers of a light
 contain fossils } grayish green.
 upper or newest
 part of Schuylkill
 section.

See page 2
 later

Whitell's quarry near Rome - shale.
Trematis delphinus *logchelus*
Pentamerus hamptoni

Hampton village is in shale
 quarries.

Polaski } 2 mi S of Rome
 Conestoga } *Bygonia* *calamita*
Cyprina *ovata* *all*
Spirifer *alt* *small*
Cyrtolites *small*

Woodruff - Sandstone. SW of Rome
 No fossils.

C. (yponocardia) curta. Suborbicular
 C compressed; hinge margin eleva-
 ted; posterior margin obtusely
 rounded. Localities - Near
 Rome, Ananda Co. Richmond,
 Indiana, Vol. No. 6.

Location of Mexicoville,
 Little River Ananda Co
 NW by Square Park's mill on
 thence over to Anthony Center
 by slightly by curved line to
 Mexicoville
 Brothers P. D.
 by E + W line to Carnegie

3 miles below Mexicoville, on
 Salmon creek.

Red shales on both sides of
 river at Fulton.

Gray Sandstones and shales
of Salmon River.

Type localities: 1 Pulaski
2 Falls in
Covell.

Rome. See 2 pages earlier.

Frankfort slate, Whitalls quarry near
Pulmonia cephalobus Rome.

Sandstone shale of Pulaski Talcott
Crestock.

= SE of Rome + 1 mi S of Whitalls,
Many fossils.

Gray sandstone, Wordruff
= SW of Talcott + Crestock
4 mi from Rome
No fossils

Furnishes grindstones.

- 1838 Leptomena alternata L. Wood in *Smithsonian*
- 39 Strophomena " " "
- 40 Strophomena alternata " " "
- 41 Strophomena " " "

Strophomena brentensis Hall p. 102.

That was Hall = *Tolmanella testudinaria*!

Chenod.

Cardinia depressa

p. 272



Fig. 3.

Near Rome
Catawba County
N.C.

Lower Silurian in *Sylvestria*

Atrypa capax

p. 269



Fig. 21

Richmond
Indiana
in *Sylvestria*
shell

Chenod.

(29) p. 260

Strophomena nasuta

Triangular, larger than wide, slightly winged; inferior valve with the suture and a disk flattened towards the base, suddenly and concentrically bent towards the upper valve; concentrically wrinkled, radial distinct, rather obsolete with three or four approximate or intermediate lines; low projecting and angular in the middle. Locality: Near Rome, Catawba County, N.C.

This species resembles *S. culta* and *S. Delaplacei* in having one or two of the central lines larger than the rest, but it is a much flatter and proportionally larger shell.

Canada

Singula tentaculata P. 26 A

Adams Falls, NY
in Trenton limestone

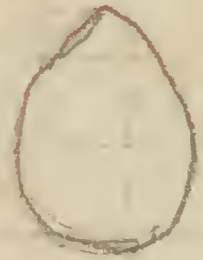


fig. 11

Singula curta

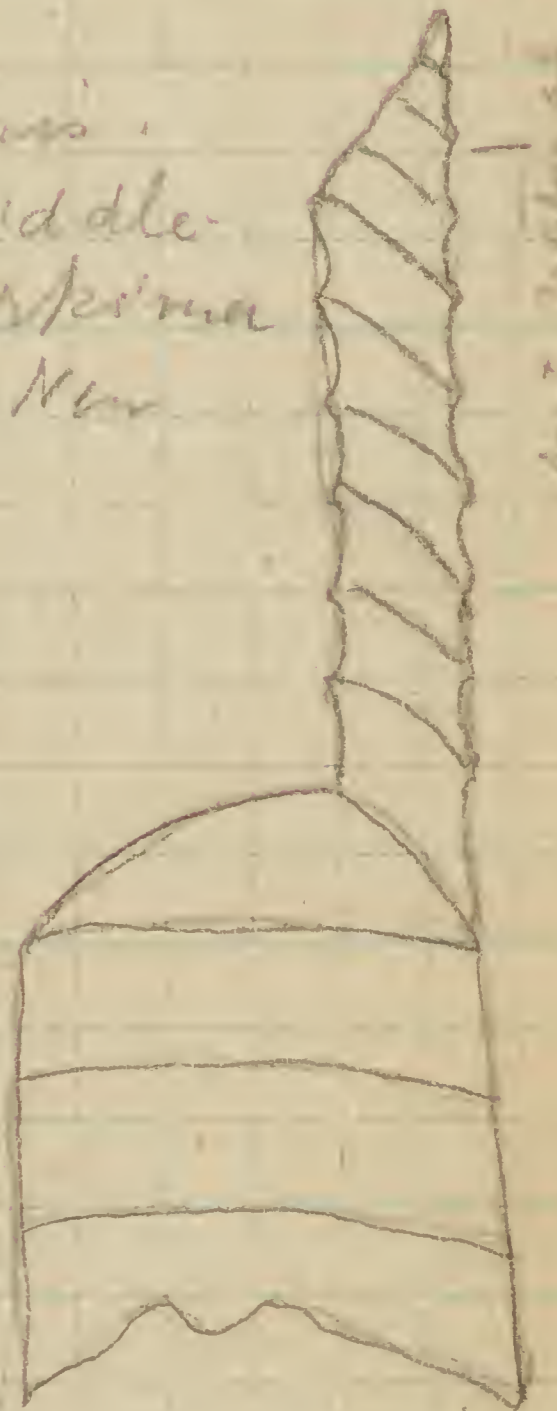
Carlisle Pa.
East Canada Co. NY
Whelan L.S. shale



fig. 12

Cameroeras,
tentaculata

near Middleville, Herkimer County, New York



Whelan L.S. shale
fig. 13

Plectambonites *trilobis* Conrad,

p. 271

1847 a conical type.

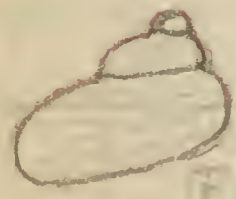


Fig. 10,

Re. Richmond Ind. in
in limestone of age
of the rocks of Sal-
mon river series,
New York.

Certhis striatula (Conrad Wms.)

According to Hall, *Certhis*
gives an illustration of this
form on page 394, Pl. 105,
fig 3, of Pt II. Sed. of New York,
1842, but *Certhis* uses
the term *Certhis testudinaria*,
here.



Pinna striae
Narrow form.

Certhis leptacnoides, *Certhis* 250/07

Fig. 11 Page 396, Sed. of NY. Pt II,
striae in bundles.



Terebratulites planorbiformis.

Near Esopus, Upper
Canada, Salmon River
series det me.
In a bundle.

Platystrophia *virgata*

Fossils described by Conrad from
Manual Pl. New York.

Certhis dispersa

pinna

truncata

helleri

integrata

Cyathophylloides profundum,
Strophomena deflexa
recta.

Leptaena zinnwaldi Conrad -
series according to Hall.

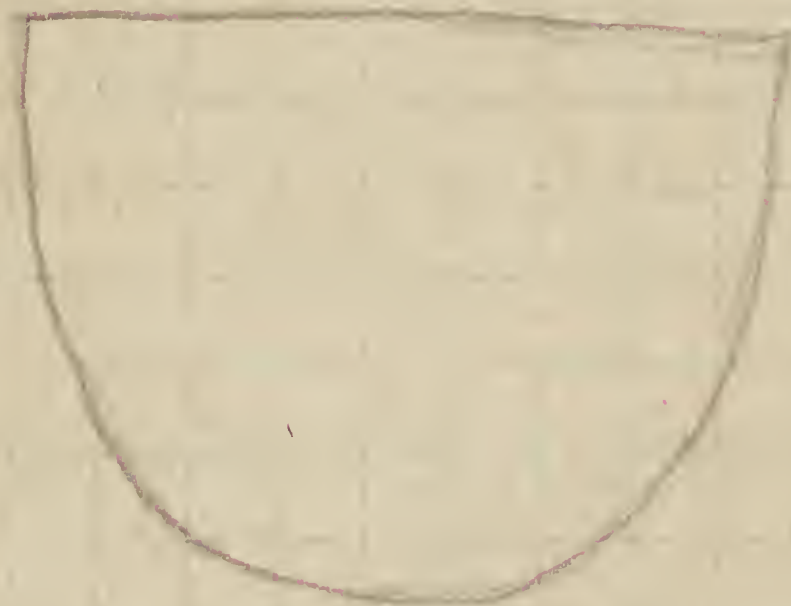
Washingtonville

W. part of Orange Co.
Deer and Little Sandy creeks,

On Little Sandy creek = ^{cut} Washingtonville
+ above village

(sericea =) *Strophomena sericea*
(trentonensis =) *Certhis tortoise*

Rafinesquina alternata
= (trentonensis Hall) *Commons* 1842
fig. 3, *Commons* 1842 - p. 395 (cut 325)
Characteristic of Trenton limestone
Corresponds to fig 1a pl. 31 of Hall
but is larger.



cut
106
fig 3.
p. 395

Lynxella frontalis *Sturton* p. 100
among Utica fossils to some
associated with *Triarthrus*.
Commons Sed. N.Y., Pt II, p. 395
ret 110, Fig. 4.
Lynxella rests cut in a line

Utica fossils
Jefferson Cr. Dept.

Triarthrus beckeri
Murchisonia scitula, extremely common
in middle, below but more shaded
or in upper part of Utica shale.
Murchisonia frontalis *Murchison*
found in Jefferson.
Amplexus *moneta* = *Murchison* valley
Lynxella *reticulata*, associated
with *Triarthrus*.

Trentonella occurs with all fossils
listed above, according to *Commons*

Murchisonia patula (*Conrad*) *Commons*
1842, p. 395, fig. 5,
Very abundant at Trenton, in
black, irregular bedded limestone

figure 6 a pl. 35 of Hall presents
figure of same size & shape as
Commons figure.

(= *moneta*) *Conrad* p. 403,
Commons 112

Pt II,
Sed. N.Y.



4

H.R.
1191-1 *Heterodactylus concinnatus* Quoy

1190-a
Heterodactylus stellatus H.R.

679-2
Griechen + crinus crateriformis

Tr. *P. guineensis quadrata*

1121
+R *Glyptothorax rectus* Ant. Quoy

1120-1
Phryganella subtruncata

707-1
Tr. *Phryganella inaequalis*

P.H.C. 442
Syntrophus lateralis

1124-3
Amphimyza carinata
Lake Ant. Quoy H.R.

1126-1
Amphimyza pulchella

747-2
Gyrogonia portulacae

947-2 *Gyrogonia* type
Gyrogonia

1123-3
Meloboris curta

Camarella circulus Tr. 696

Cyclopsia bisulcata Tr. 713-1

Heterella antyriata (320-1) 1342-1

Paratrypa hemifloca Tr. 710-1

Paratrypa exigua Lewis Cr. 714
large. West. Ant. Quoy

Syntrophus lateralis H.R. 442

Meloboris truncata
Meloboris feta 736-2
Pulaski 736-4

Meloboris meridionalis Pulaski 1130

Meloboris pleurodiformis 1365

Ortholema parallelum 1134-1
2 Pulaski forms

Ocellomyia pulchella 1064
West. Ant. Quoy, Utica

(*Gyrogonia plana*)

Bryomyia carinata 928-2

Carinaria patelloformis 780-3
Pulverata

Cyclonema porcinatum 752

var. crinum 1380-1

Fusospira terebriformis 967-3

Murchisonia belliscripta 769-2,
like Purgos from form

Hilopea

Lophospira abbreviata 1136-3

Pleurostoma subcausa 757-11

Cumulana gracilis 789

gracilata 791

papillata 790

reptans 788

Cameroeras benxense 815

Cystoceras lamellatum 823
hallanum

Endoceras subcentrale 603

longicolum
multitubulatum

Cameroeras crebri septum 1141-1

bilineatum 808-39

Orthoceras lamellatum 1142

Cratiferum 1065
1065-2

Conchidictites flexura 831
*

Dartelus gigas

Hemidictus delphinus
cephalus (P. murex
green)

Atrypa recurvata 705-3

Leptaena tenuistriata 698-6

Lingula obtusa 678

Trochotoma planorbis 1144-2

Proetus undulata 842-2

Cumulana gracilis - somewhat like
7 b inverted. Two faces
shown in fig 7a. Transverse
lines not bent at middle but
there is a faint median line.

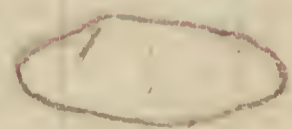
Cumulana papillata practically as
in fig 6 b. One face except
part on right of strongest groove
however some meeting at that
angle in middle.

Arumal vesians in curvus low long
 arm segments & long arms

Cystaster, very apt to have some more
 narrow and nearly of equal width to
 very and or enlarging slightly toward end.
 The inter spaces are wider in some species
 and thin in others especially in the
 angles between the arms. And in the
 anal inter lateral space.

Hemicystites stellatus sea interstitial
 scales very small. Arm very elliptical
 oblong. Type examined.

Cleodiphoria plumulata Pulchra

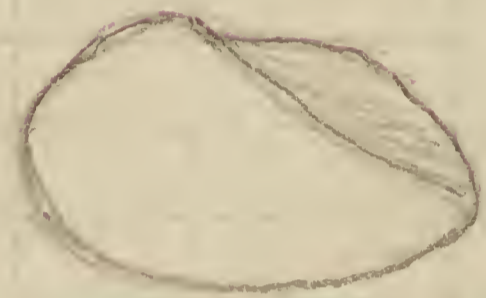


Longer than broad
 very thin both ends
 lower. Clavicle

similar to *Arumal*, but
 enlarging toward end
 but depresses surface of
 center. Compared with
Arumal & *Arumal* forms

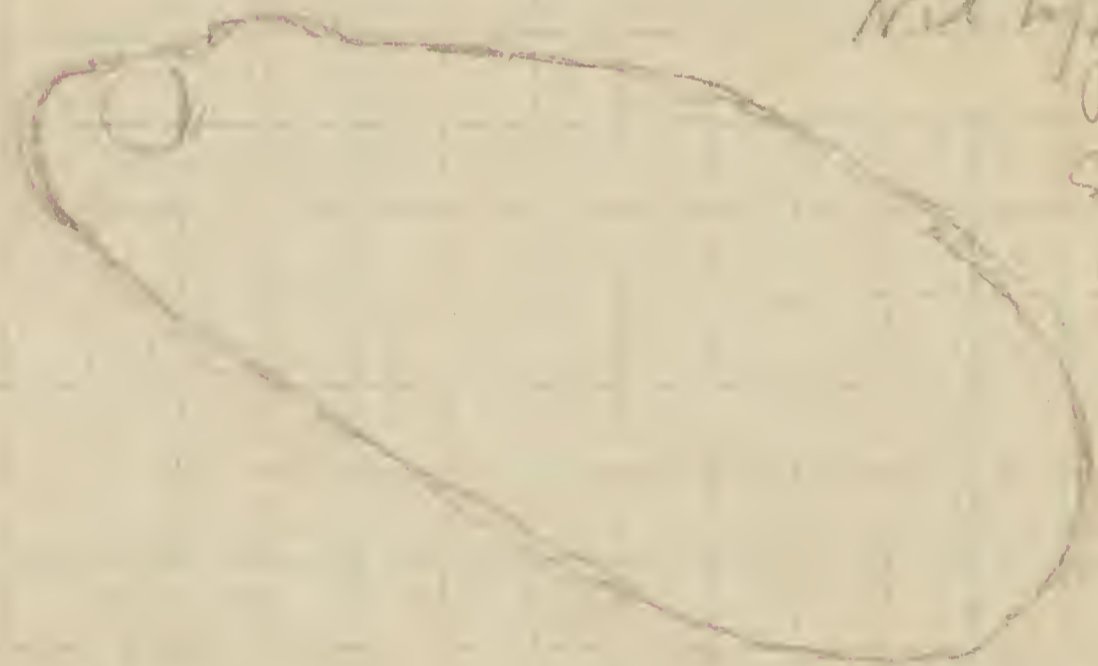
Synedon post the return 747.2
 Pulchra

Specimen attached as type come from
 same rock with *Plectambonites*
 apparently with 4 simple pleurae
 followed by four series of finer striae.
 Not properly cleaned at least. Requires
 republication.



Mordilopsis curvata

Not type
 Pulchra
 Strongly
 appressed
 form.



1130-1. *Mordilopsis curvata*
 West Tennes Lewis Co. N.Y.
 - Blight ridge

Cleodiphoria plumulata 1826-27



Note much more vertical
 clavicle. Lewis Co.



98 cert. form. steep clavicle
 Lewis



98 Lewis

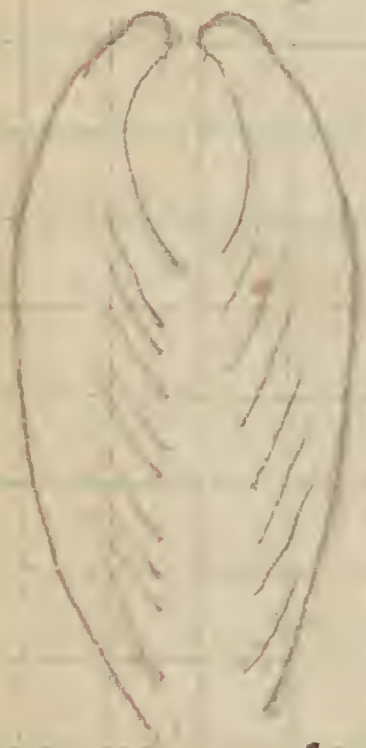
Bygonia radicata

928-2.

Manual p 511

Fig 713

Podiceps 112



Bygonia radicata Pl. 85. fig 4 f
has 50 plications - certain

Bygonia carnata *subcordata*
37 plications

33(+3) plications

at right angle

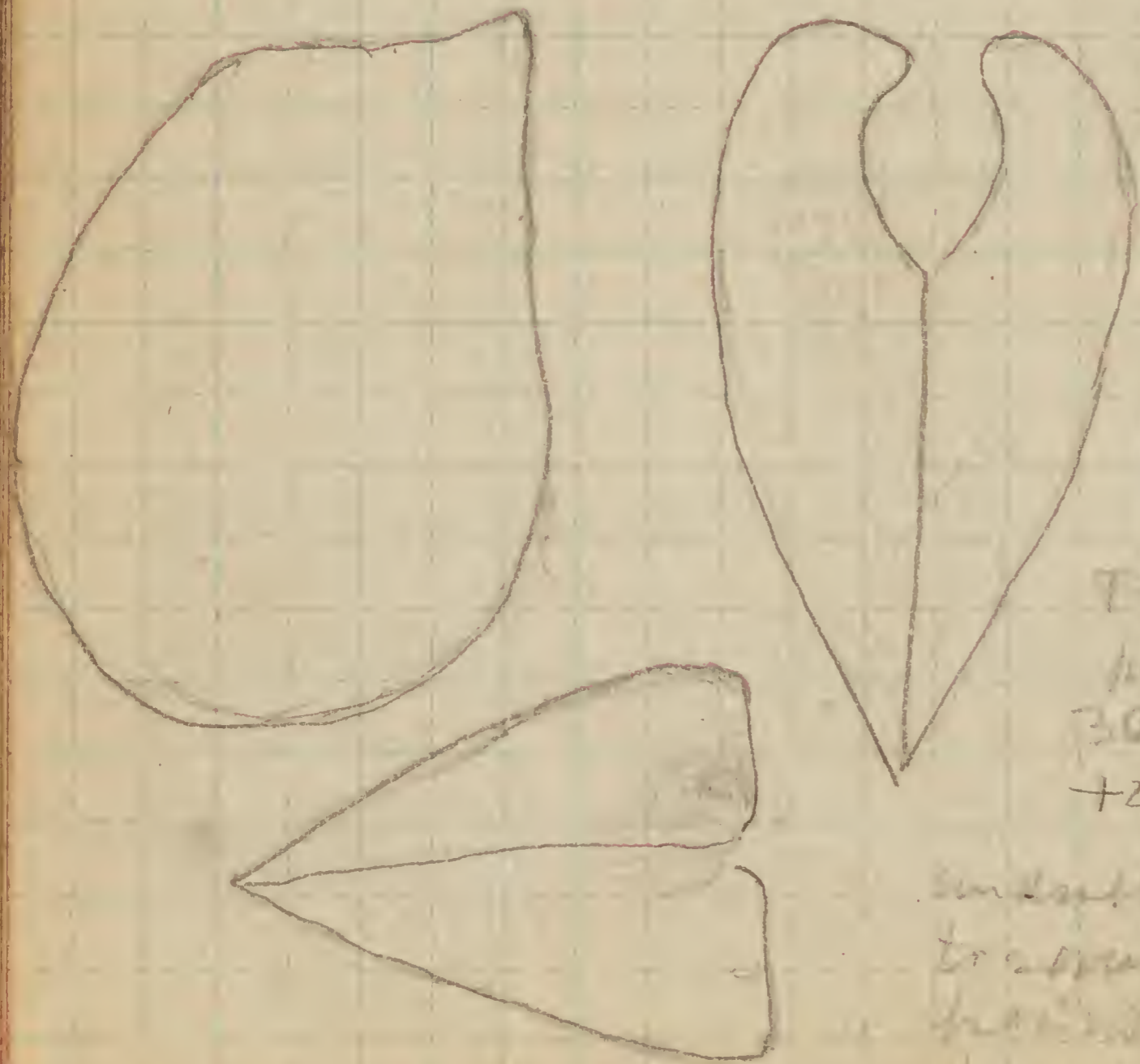


Fig. 5a b
Pl. 86 has
30 plications
+ 2 more at
base

undoubtedly belong
to same species
found at will
preserved

Bygonia radicata

42 radicles on fig 4 b,
+ about 6.

Tellinaria pulchella

not identified
not used

Pl. 82 fig 2
12 ed.

Gyrodonta tenuitarsis
not used

698-5

50 mm diam

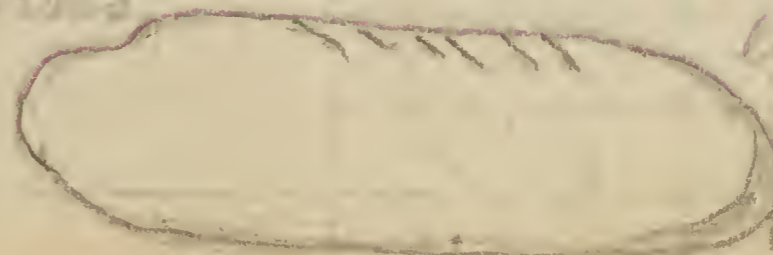
Bygonia rectilobata Pl. 79, fig 1a,
Manual 119.

Probably same species as *Bygonia*
radicata. Radicle of
middle part of middle part
right + left of middle part
apparently with strong middle
septum and a few faint
centrals but these parts appear to
have been cut off in the very thin
shell.

Bygonia subtruncata Degree
of truncation variable even in
specimens some glabrous
Pl. 79, fig 7. *Truncata*

Gyrodonta parallelata
all the marks
diminished

Has relative
height length
suggested in
figure except
that lower



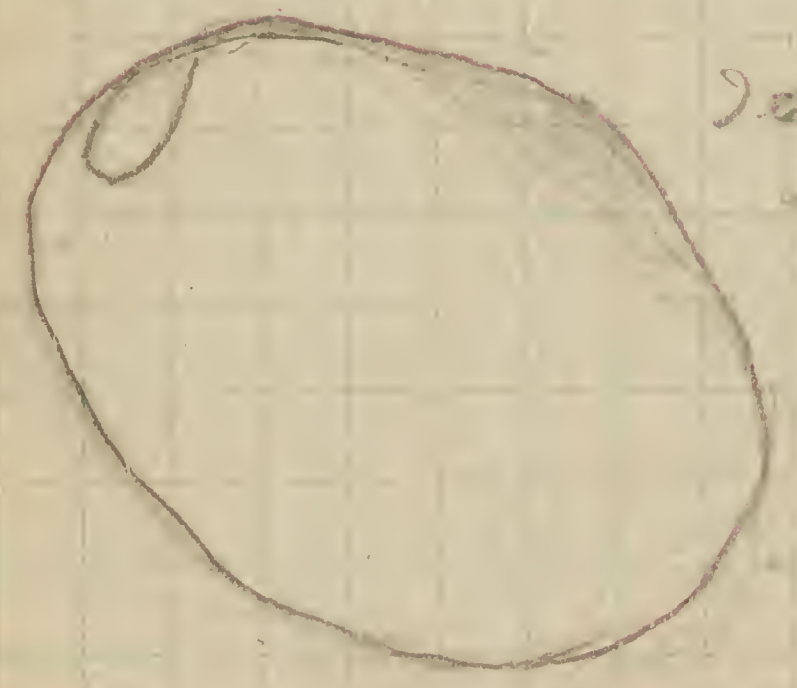
part on part should be part of

Orthis clausa parallelum Rance,
 M. annual. p. 511. P. y. 712,
 May be same thing as my
 large *Lymnata*. and as
 parallelum of Bull. of. mineral waters
 + must not be made due to
 crumpling, shows tendency toward
 oblique folds

Pl. 82 fig. 74, parallelum is
 a much better specimen than
 figure suggests. *Lymnata*
 crushed with it, so as to be narrow
 seen sideways. Palaukas

Murchisonia aculeata Rance
 Pl. 82 fig. 3c. *Rodman*
 like my *Cumanya* from
 Cheshire. No sharp umbonal
 ridge.

Murchisonia curta, G. Murchison,
 Pl. 81 fig. 4,



Dalmanella
 like those I
 collected.
 No umbonal ridge

Murchisonia curta, Pl. 82. fig. 2a

G. Murchison = Small *P. aculeata* de. Murchison
 probably.

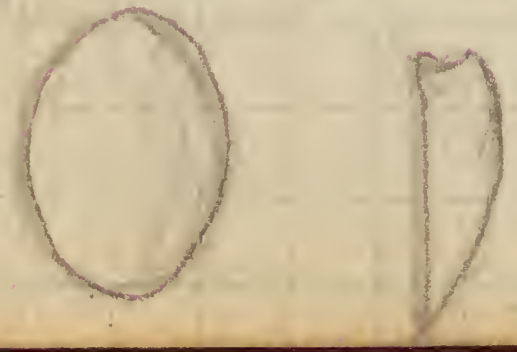
at my note at L. of. b. b. of *Orthis*
 to me at bank, slope, and as much
 of structure as one left.
 Craters to back the trace of obliquely
 forward as well as upward, and
 position to umbonal ridge & by so
 vertical, upright.

Lophospira alberta, sharply angulated
 rotations but no detail in fig 2d.
 Pl. 82. Murchison Valley.

Dalmanella (*Orthis*) *intermedia*,
 Pl. 83, fig. 3d = genuine

fig 3c, with inferior angula-
 tion + with slit band on lower side of
 greatest lateral extension of shell &
 probably genuine but small &
 such. Notice angulation half
 way down lower slope of last whorl.

Cumanya *parallelum* Good
 like mine with median angula-
 tion. Palaukas. *Bygonia*
Murchisonia made from *Orthis*
 & also smaller. Sky, etc. etc.



Lophospira abbreviata, Hall
spiral slope faintly indicated in
figure 2a. pl. 83. Striae turn
back as in form long V shown
as in drawing 2c, but may be here

angulate {
with 2 narrow lateral striae,

< My fossils looked up 2nd
to a form of 2nd shelf down,

Lophospira abbreviata

Ulrich, Vol. III. Minn.

Cypronychia carinata Cymatospira

Ischyrodonta uniooides

Ulrich, Ohio Vol. VII

Hemicyclites Hall

Vol. 24. State Geol. Paper

Glacial Striae reported from
Dayton by Focht in 1838.

Beaverdam quarries, Levee.

uncon-
formity
Till
Bell in till - 5-10 ft.
Gravel & sand
This bed } 20 ft.

Dayton view, Levee.

Capping of hill thickly set with boulders,
many gravel.

Well perforated about 240 ft
Frost & Family St. Dayton
many till.

Beaverdam Striae S 27 E.

Pre-glacial Valley from Levee
southward. Levee.
Journal of Geology, Vol. 10, 1882.

Prod. Annul Rept Ch. Cambrian,
U.S.G.S. Two other mentions
of Late Wisconsin. 334-335.

Outer member of Late Wisconsin
= Bluffs at Dayton, South in
Franklin + S of Government run,
Middle member, large bones,
West Charleston, S to just above
Dayton, 3 mi N of Government run
East, New Paris

Glacial Man Full, or S
Central Asia,

1) Heidelberg, Sand of Main river, trib.
of Neckar, 1907, 6 mi SE Heidelberg,
69 ft down jaw, along with straight
tusked elephant + Cetomys rhin-
oceros, primitive horse, crude
flint implements,

Neanderthal 1856, skull up-
per part, upper arm + thigh bones,
shoulder blades + collar bone,
No fossils in Düsseldorf,
in central,

First advent in 3rd glacial period,
exists far into following interglacial period
Similar skeletal remains within
Moustérien + Vézère Périgordian
deposits.

3) France, Near Mont perand
(Perigord)
In third interglacial epoch,
Belongs to Old world type of man,
Thames England belongs to
same type.

Sivaldian man, near Mont perand,
negroid traits, Cuvierian
times.

1) No chin prominence as in man,
but teeth as in man.

2) Implements crude + unpolished,
Short of stature, powerful,
must have walked with head
at knees, Long depressed
skulls with strong brow ridges,
No chin prominence,
Rhinoceros man with cave bear,

3) Crude temporary with 2
More perfectly wrought Paleol-
ithic implements, 3rd inter-
glacial period, Cuvierian
Remarkably long skull,
Resides only in Europe, covered
175 feet below top of gravels of
Ormes valley.

→ Pratt Institute
215 Ryerson Brooklyn.
from 254 Flushing Ave
S. to Lafayette Ave.

Board of Education
Park + E 59th

De Witt Clinton High. 10th Ave + W 59.

High School of Commerce W 65 on B'dm

→ Vocational for boys, W 138 + 5th Ave

→ Washington Irving School, Municipal
34 E - 12th Ave

McAllister 49 Nassau
20 Wall St + 12th Park Pl.

Charles J. Byrne Elect. Co.,
513 W 29th St,
Stewart Elect. Supply Co.,

Wiley + Sons

→ Central Sci. Co. 147 Waverly Place
729 Broadway, west

→ S. L. Youngman 345 E 15th
Fuller + Brownlee
I was effect

Axel Born

Frankfurt a M.
Review of Bassler's paper,
Centralblatt. 15 Nov. 1913,
with notes.

Untermainische Literatur bei
Trenton Falls. F. Felix Wasm,
3 3 New York
Gosseton,
27 Main, Central Hall

E. J. Barnwood.

Calcarius algae,
Dec. 1913. Serb. Mag.

1 Jerseyan
Nebraska
Allegheny

Silby

Aftonian

Silby Mendell

2 Kansas

Mendell

3 Formosa
Woodsport
Kans.

Mendell Ross

3 Illinois

Ross

San Juan
Capitan
prim. zone

Ros-Marian

Misc. Texas

Wärsen

Mendell Ross
Wärsen
Magde
Vest.

Lophospira abbreviata. Hall, pl. 23, p. 29
Size + Apical angle about as in *L. medialis*.
Striae forming annula strong recurrent
angle. No carina on upper slope.
No carina on lower slope of last whorl.
Periplasal band apparently triline-
ate in type fig 2a. here the middle
line is rather acute } and is
nearer the upper bordering line
of the band, than near the lower
bordering line. Periph. band not prominent
In a second specimen in the same
lot, which may belong to a dis-
tinct species, the band is dis-
tinctly trilineate, with the middle
line scarcely more prominent than
the other 2, the intermediate spaces
concave. Periph. band rounded slightly
inward as in *L. montana* =



Pulaski is solid blue l. with *Cyrtolites*
ovatus, *Dominella*, *Calymene*
pyramidalis, *Orthis* with transverse striae
+ *Homotrypa gracilis* La according to
Cotter, but if so, Hall's figure is abor-
gated wrong, since the open ⁴valve & the
apertures do not terminate anywhere
near the top.

Rhipidogona *varicosa*, 697-17
 Fig 2a Looks more like Rome
 Rock but is marked *Pulchra*.
 It is most like with middle of *varicosa*.
 Fig 2f* is middle of *varicosa*, arch of
Pulchra type but conchoidal angles
 are too extended.

Murchisonia *pacifica* *Fig 1a* *Traverse*
 Village type of rock

Ischyrodonta *minimoides*
 Excellent in *varicosa*, 1136-2,
 all over *Co.* drift boulders,

Archimedes *fratelliformis*
Murchisonia *modiolana*
Trilobites *slight* *varicosa* *drum*
Submurchisonia *varicosa* *Pulchra*

Murchisonia *curta* Hall, Pl. 81, Fig 9,
varicosa = *Ischyrodonta* *minimoides*
varicosa like
 Falls rock.



Murchisonia *curta* Hall pl 82 fig 29
 = small *varicosa* in *Traverse*,
 Like *Traverse* village

Cyprina *curta* *parallel*. Fig 29
varicosa *Traverse* *varicosa*. Pl 82 fig 70,
Pulchra

Cyprina *curta* *parallel* Fig 29 pl. 82,
varicosa *Traverse* *varicosa* *Traverse*
varicosa + sandy, *Pulchra*

Murchisonia *curta* *varicosa*
 pl 82 fig 30. *Traverse*
Pulchra *varicosa* = very *varicosa* & *Traverse*
varicosa in rock slab.

Murchisonia *curta* pl. 82, Fig 49,
Pulchra. *Traverse* *varicosa* *Traverse*
varicosa fossils - like *Traverse* *Traverse*
varicosa *Traverse*

Ischyrodonta *curta* pl 83, fig 2d,
varicosa *Traverse* *varicosa*, *Traverse*
 different *varicosa* in *Traverse*
 acute apex angle

Murchisonia *curta* *varicosa* pl. 81-19,
Pulchra *Sandy* *Traverse*
 pl 81-1d. *Sandy* *Traverse*,

Hemicryptus stellatus, pl. 6. Fig. 5, 24th Day
Concinnate. Arms elliptical, long,
My specimens branch more so in
Fig 1 on same plate but have
interbranchial plate. Postopercular
fin is accentuated in Ballo drawings.

Arthrocara *crispum* type + *crispum* type.
Can not tell much about my plates,

Arthrocara praecurva,
32 plates visible total probably
equalled 42. 1024-1 Pulchra

32 plates visible on pl. 80 5 ab.
Cinnate = praecurva probably praecurva,
1024-2. Fine 5 rays of Gills contain

much deposit. Most of stem from center
type compared with *Arthrocara*
Pl. 81. Fig. 3 ab. Fig. 4 ab.
Much more like *Arthrocara* type

Arthrocara *terminalis* Pl. 33* = type
Cinnate, Fig. 5 a. b. May have
been a *Rhyaciona* with long
- pl. 81. Fig. 5 ab. black.
May have been different genus
Arthrocara?

Arthrocara *lamellosum* pl. 86. Fig. 2 d.
Pulchra in lamellosum type.
No surface structure when seen.

Arthrocara *crispum* *crispum* probably
something as lamellosum.

Arthrocara *crispum* *crispum*, pl. 87 Fig. 2 b
lamellosum. Pulchra vertical since
as figured in partly exposed shell,
On small surface not known.
Fine 5 plates visible of distinctly trilaminar
type with complete or as in plates
but not upper 2 plates, and a trace of
above and very much lower than in
plates. Probably products nearest relation
had. Spine looks steep because the
upper slope of plate owing to absence of
upper corner.

Arthrocara *crispum* *crispum* pl. 87. Fig. 2 c,
Pulchra. On case of very faint with all
structure in form of exposed shell.
Surface unknown.

Arthrocara *retrosectum* pl. 86 Fig. 2 a
upper end exposed. Surface
transversely striated. Exposed
interior with 4 or 5 vertical lines
as in *retrosectum* - branches
shorter & more rapidly enlarging than
in lamellosum type Fig. 2 d.

Orthoceras crotaphitum pl 87 fig 2e
Palustris. Annularis type

pl 87-2a traces of Transverse
surface striae

pl 86-1d, cralloform

Probably same species as pl 87-2a

→ *Murchisonia fida* pl 35 fig 6 f
is similar to one looks like 6a,
strongly curved marginal ribs like
Cylindropora but ornament not
beads.

Cylindropora percarinata is more
distinctly granular, = type

Murchisonia bellidicta is more
rapidly spirals than Rogers Group.

Murchisonia fida ^{type} looks like
→ *Gemma* form but has ribs
more vertical.

Conularia 4th form, ^{granular} 2 faces.

Zygospira recurvata = ^{type} one
type but narrower

→ *Orthoceras aequale*

→ *Plectambonites* 1130-1 West of
as *Murchisonia* *moderata*

Protogygia

Cylindropora

Camarilla

Zygospira

Murchisonia bellidicta of Rogers
Group type but larger apical angle

Conularia granulata

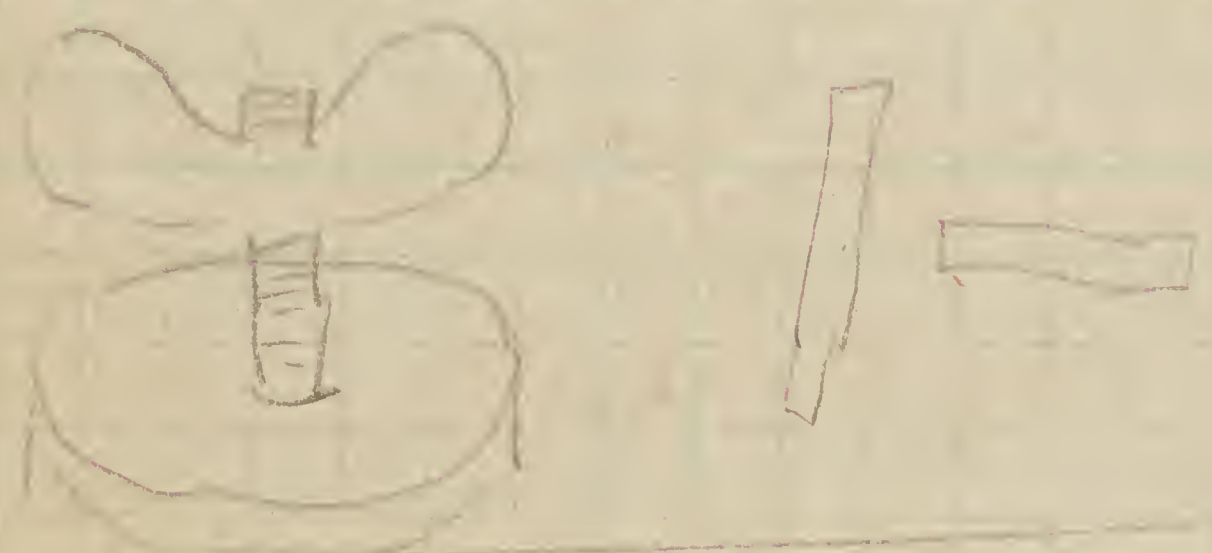
Orthoceras contracta H + W
Orthoceras contracta = Bell pl. 86 fig 8a
Archimedes

Of these 8b shows strong oblique
wrinkles of *Cymatoceras* type, why up to
beak. These oblique wrinkles of 8a
are nearly obsolete, or at least are very
weak. Nearest to *C. contracta*
of Murch except in size, unless it
be a true *Orthoceras*, which it
resembles more in form. Post in
outline apparently cylindrical in shell
1373-1

Chattillon Co. balances
Cliff Street, New York

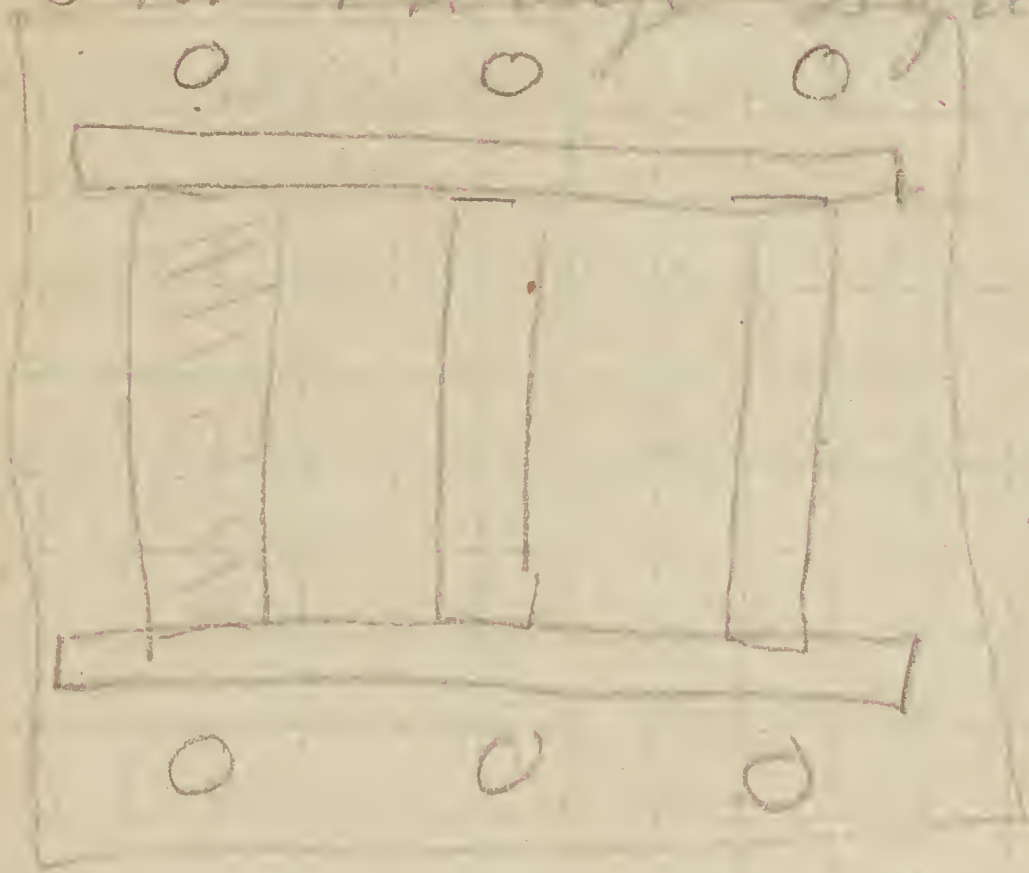
Hydramatic Ram, for work put in
& taken out

Standard Scientific Co.



Chas J. Byrne, Elect. Engr
513 W 29th St, NY

Two Voltage Dynamos

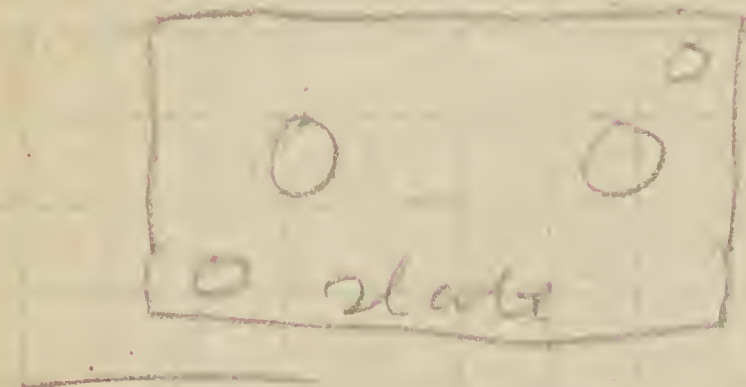


Series +
Parallel

Ammeter +
Volt meter
drill

5 Ampere meter,
Standard Scientific Co. NY

Berman's Bra - Calorite wire
Leads are Cu wire



Carbon plate resistor at
very variable resistance.
But good in connection with
storage batteries

Stewart Elect. Supply Co.


Electrical Measurement
Exercises in Mechanics
John Wiley & Sons

Elements of Elect. for Technical
Students, W H Timmer,
Wiley & Sons

Heat J. R. andell Wiley Sons

Elem. Pract. Mechanics
J. M. Jameson
Lugmans

Cyclonema varicatum Lyth
= much more varicose even
in sections of smaller gages
Dumoussie. Tend to be flatter
or annular

Cyrtoceras lamellosum Hallam
Coarsely, very lines bent down
at back, about as coarse as in
fig 2b.  enlarged for
detail.

Rafinesquina alternata pl 31 - 1A.
Grey ls. full of fossils, with Dolu-
tostrodium cc. And a few Scythia
Mediana striation striking up to very
dark, 697-2, Watertown, N.Y.

Chondria granulata
In exceedingly fine to moderate shells,
Two faces, with median longitudinal
depression, + fine longitudinal lines,
+ Schizophoria filiformis some
slab, + a second specimen of
Chondria granulata in same side
of slab, also 2 sides. Very thin shell
unmistakable rocks.

Chondria tremmani practically
no trace of granulae on trans-
verse ridges, but very strong longitudinal
ridges between transverse lines.

Camonella subcentralis No radial
striae. Two valves subequally
convex.

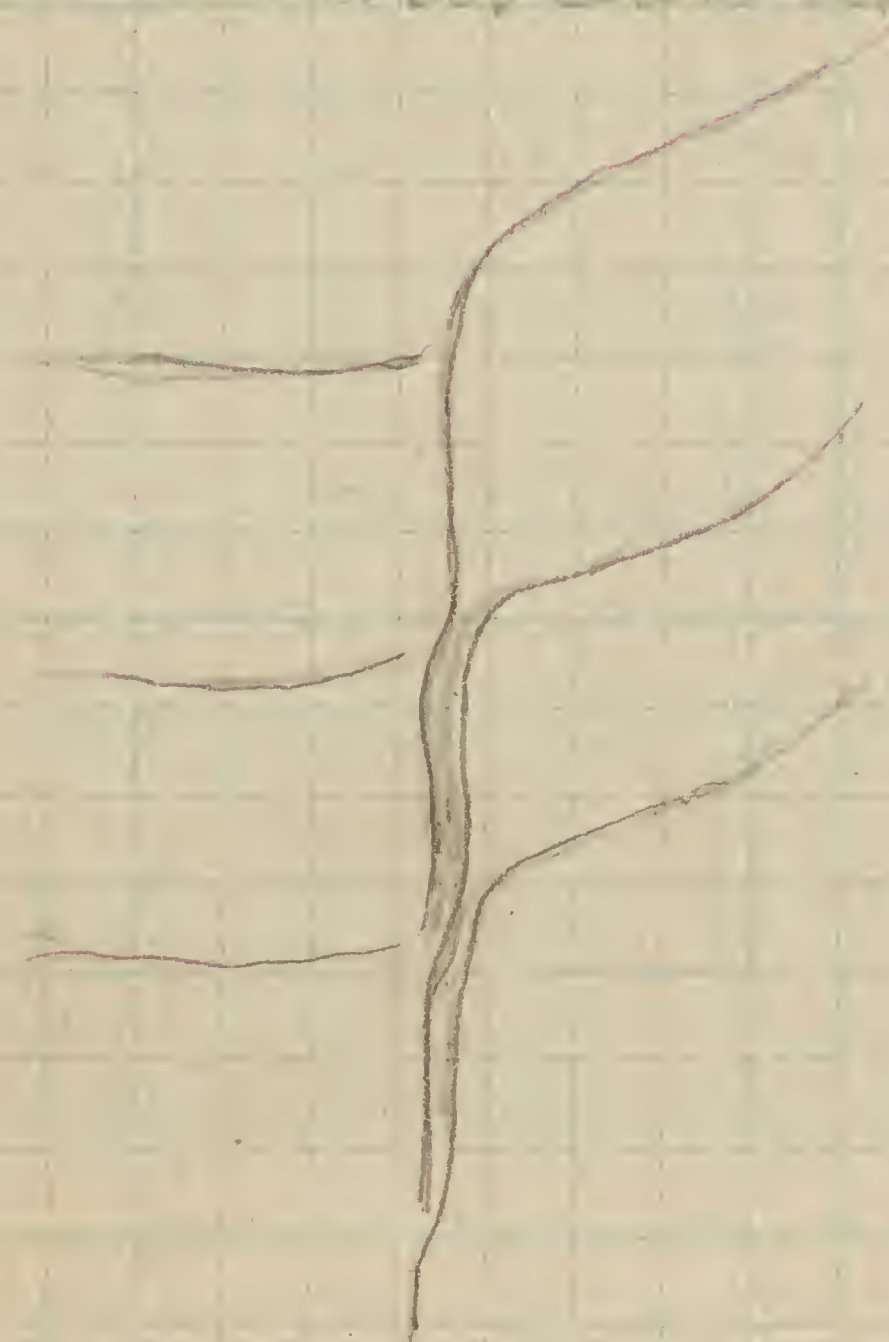
Cyrtoceras bivalve at a ventral surface
to lateral valve with medial ridge
bordered by 2 lateral folds, one
on each side, = narrow

Pentazyga spigna. Type shell no
radial striae wings of any kind,
One specimen with a fold showing
on the side, Interior of expanded
shell. Could this be Zyg. recur-
vata pretty confidently?

Murchisonia billicornuta is a
Hornet form. Rogers Sup form?

Endoceras subcentralis. Pl. 17 fig 4.
Type of Gervais.
Specimen figured upside
down and only the middle half
figured, both upper and lower
parts omitted. It is a made
up figure. It shows the endo-
zipherosthe with as in drawing.
Specimen shows enveloping
striae as in my drawing
cut to at or there.

Endoceras subcentrale



Stage Orbits & Plugs
11488 — A 10.00 with plug
11492 — 2.00 extra plug
Mathewson Electric Supply Co.

J & Woodland
Rochester
Mechanics Institute
Course in Science for Girls

US Nat Mus,
Cat. of Separates

Ectenocrinus narrow + new

Anomalocrinus new

Techuiphonus Ulrich

Yoncastu Bather

Lingula of ovate form Ulrich

Murchisonia concentrica small sh. etc.

Certhodesma concentrica Dall (Constr. etc.)

Murchisonia tenuis + also = one shell length

Strophodontia minor etc.

Lophospira striatella (striata Mich.)

Bygonia planicosta Ulrich fig. 42
42 duplication in Ulrich type

Rhytidia setacea

Murchisonia Almyra is quite strong
and body covered with or
well marked ventral ridge

Orthoceras contracta may be slightly more
smaller than 40592 of last time
but the cones have the specimen
with sharp folds quite distinct
on top and side. Anterior end diff.
going down a bit over head. I think right
part that I considered might be
a middle form, and this is
possible but I remember specimens
more compressed at base.

Ammonites and *Cephalopods*
a small layer species with some
segments not so much compressed
at middle. Some of these speci-
mens have distinctly sharper
cones segments, the top sharper
than the base, white, thus
have larger cone segments. In the
first the calyx is larger in the
second smaller. In the first there
is little constriction, cone of plates.
In the second there is more, but
not so much as in any specimens.

Ectenoceras simplex - very small
one. Newberry beds.

M. de la Rochei - Newberry beds

Agnostus - might be
parallels. I am not sure.

Psilocrinus - interval. I am not
sure might be *Zonitoides* *Canadensis*
form.

→ *Ammonites* - might be *Chonetes* form.
Rather than previous beds.

Eden { *Jurassic*
Newberry beds

Mac Millan & Co,
Paleontology of 2000s 1913,

Orthoceras *Caradocianum* which
Richmond. Newberry beds. This
looks like *Ammonites* form, and
like my very large *Sop* form.

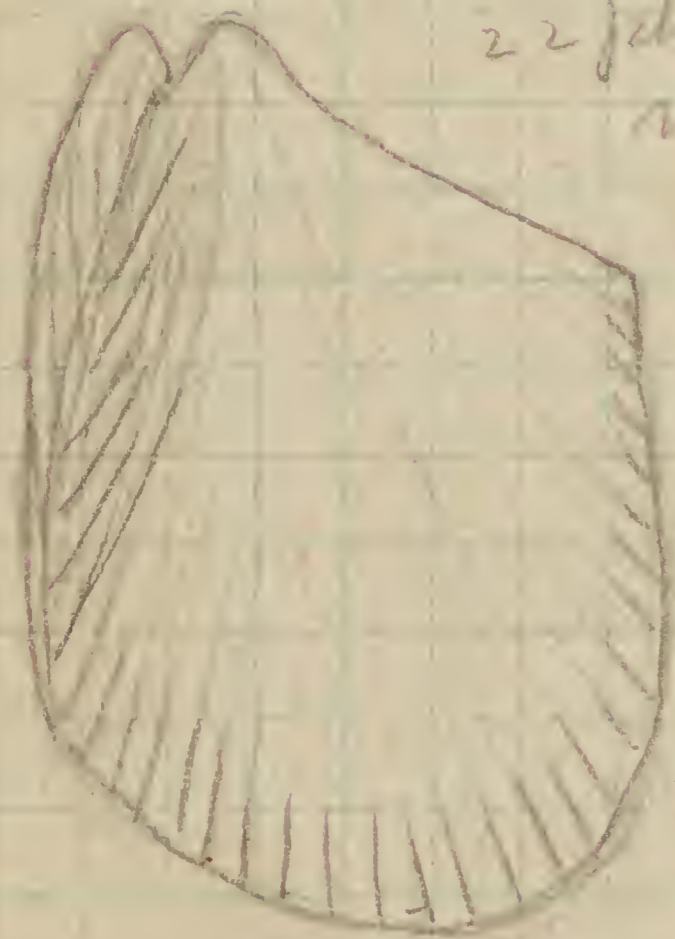
Lingule *irvini* probably is a Rich-
mond (*Mauroletta*) form, in
which collection from Clearmont
Dura. of red. lat. base yellow,
shell not black but pearly
bluish.

Lingule *whitfieldi* has my Rogers
Sop note form, the some speci-
mens are rather large of types here
was shot, and was all the way

Lyngbya peritoni, Long narrow
slightly curved in front
with a middle black ca

Lyngbya edent, narrow line

Pygomycha carduata, Goldfuss
plate 119. fig. 8.



22 plications to submarginal
ridge and probably
5 more in anterior
part,

Volume dia-
gnally from
front to
show plicae
on face.
Plications clearly
too few for *carduata*

neither *drifa* nor *carduata*

Pterinea testa ovata subovata
obliqua antice abrupta postice
delevi, marginibus cardinalibus
brevi, et a plicata truncata,
Costis radiantibus regularibus
convexis, interstitiis latioribus
plano-convexis.

Accurata in Pennsylvania America
septembris et Perseida
in antea, Sep. B.

Steinkere. Ober Ort
kommen bei Leinster
in Canada-Country und
im Bergischen in der
Braunwache vor. Sie sind
eyförmig, vom hochgewölbt
und steil abgeschritten, nach
hinten abschüssig, in den
Seiten stumpf wie halben
Flügel in der Hand. Die
Seiten beschreibung macht
mit der Achse einen
spitzigen Winkel, und vom
Winkel strahlen starke,
convexe Rippen aus, welche
nach hinten allmählig
schmäler werden. Ihre
Zwischenräume sind eben
oder leicht und flach-convex.
Bei einem Exemplare
sieht man vor dem Winkel
zwei keilförmige Zähne,
und bei einem anderen sind
Spuren zahlreicher con-
vexer Streifen bemerklich.

Pterinea welche Seite folgende
to Brossler.

Recherches zoologiques, Adrien +
Chas Brossier, Pt III, Echinor-
denne Batha, Brentano
in Fistrac, Washington.

Brossier

Lower Devonian, Middle Devonian, Falls
Trematoceras specimens Bill
with disk in cylindrical Bill
cylindrical
Dundas, Callaway

Self-Transport - Northern
Walden shale = Gulf of Mexico distribution

Late Clinton in Rochester Chief of Mexico
Middle Clinton Atlantic

Lower Clinton Atlantic
Late upper Medina Rhinopora ^{Bill} ^{Callaway}

Ohio { Richmond
McWilliam
Pulaski equivalent

Summit of { Gulf of Mexico } West of present
typical Ohio - Atlantic } East of present

Ohio
Nearby Martinsburg } Atlantic
Mays }
Monsieur Hill } in western

Call's Bay formation regarded
by Ulrich as first of Anti-costi
group = upper Medina = Silurian

Ordovician of Lapworth (1879)
Lower Glenora
{ all between as in de' alba
{ Lower Glenora

Ordovician of Ulrich
Lower Glenora

{ Glenora & Glenora St. Peter

Lower Glenora

Bala upper ^{atypically in} ^{Strickland in the} ^{West?}
Bala middle, Appalachia, Black River
Bala lower = upper Chazy? Belmont?

In lower part of Cawego sand-
stone

Whiteavenia corrugata
Cithrodium varium
Delyrodium univittosum
found at Concordia
only in Belleme.

Primeval zone of Pulaski
falls in between top of Eden and
base of Maysville at Concordia.

Fairview may be recognized
as far east as Toronto.

115. Mayville or Richmond
Canadian - Bala = { Eden
 { Merketon

Base of Grouse Landing, Not older than
Medina of Ohio
Probably younger than lower
or Richmond half.

Many shells + greater part of Rich-
mond absent in St. Britain.

Barkhill = Richmond
Hartford

Surviving Canadian genera found
also in Richmond

- | | |
|---------------|------------|
| Pygospio | Cyrtoceras |
| Murchisonia | Campoplex |
| Trochodonta | |
| Whitella | |
| Artedonta | |
| Artedonia | |
| Cymatoceras | |
| Protoceras | |
| Trochodonta | |
| Aspirinella | |
| Pleuroceras | |
| Salpingostoma | |
| Cyrtoceras | |

Characteristic Richmond

- Strophomena rusticum
- Columnaria vacua
- Protoceras richmondensis
- Tetradium minus (N.H. only)
- Beudanticeras undulatum
- Rhynchotrema gradat
- Rhynchotrema capax
- Rh. = southern forms also

S of Millersburg,

Smooth brachiopod, above Columnaria
in a horizon about 3 miles S of
Millersburg. South of overhead
bridge across RR about 300 ft.
rather low in cut so that
standing in ditch on side of
RR track the fossils are below
eye level = in soft clay staff
above Columnaria and below
a limestone layer which pro-
jects out into the cut.

at New Forest, 3 mi N of Paris,
Columnaria (few) and Star-
matoceras (abundant) occur
in the unspotted material
apparently coming from big
RR cut immediately N of sta-
tion.

In first cut S of station at New
Forest, (= 1/3 mi) *Alonychia*
flouagencensis is common
a few ft above RR level.

Myall Station = 1 mi S of New
Forest + 1/2 mi S of Myall is the
quarry with supposed Sabrosa
= fine grained with wavy
bedding - No fossils. This
quarry is E of Paris like,
but over mile + RR about

1 mi N of Paris. The underly-
ing granular limestone
has very few fossils until a
level about 20 or 30 ft lower
reached where *Rhynchonella*
microcarina becomes common.

Troplocarina Greek

Trinucleus concentricus,
St Bruno Mountain, Co. Chamby, Que.,
J. A. Dresser, 1905. Sta. 9.

This agrees with the heads in loose blocks
W. of Turin N.S. Margin 2 rows with
pits in front of one another and covered
into a shallow common oblong de-
pression. Two additional rows in
front of middle lobe. A fifth row
begins in front of lateral lobe, and a
sixth row begins at side of lateral lobes.

Cryptolites tessellatus, used by Can-
rad, 1838 Ann Rept II, dated
Feb. 3, 1838.

Pterinea modesta. - Shell
ovate oblong, compressed; surface
with coarse concentric lines,
obsolete on the posterior side; pos-
terior extremity obliquely truncate.
Length, nearly 3 inches. Locality,
Pulaski, Oswego county, with
the preceding.

Cryptolites ornatus. - Shell with
transverse rounded ribs and
fine striae; periphery acutely
carinate. Length, 1 inch.
Locality, Washingtonville,
Oswego county.

5. *Clonella* sandstone and slate, cut
through by Salmon River, in
Oswego county.

Cornularia quadrilobata, Sewall

Cryptolites ornatus, Conrad 1838

Pterinea carinata, Goldfuss 1841

planulata, Conrad

parvula, Conrad 1838

modesta, Conrad 1838

Leptæna planulata, Conrad

Deltopyris strictula, Goldfuss

strictula (Eifel)

Preston

1838 Conrad.

- 6. *Deltopyris striatula* (Edwards)
- pectinoides* (Conrad)
- Leptaena alternata*, Conrad
- semivoluta*, Conrad
- Cryptobolus tessellatus*, Green.

1839. Conrad III Penn Report
Cryptobolus tessellatus,

- 3. *Salmon river sandstone*, (above)
- Pterinea carinata*, Gold.
- P. plumbeolata*
- P. muricoides*
- Cystobolus ornatus*,

2. Trenton limestone and slate
includes also the Utica
with *Cryptobolus* + *Trinucleus*

Use *Trematoceras ornatus*, see
vol 1 of *Conrad's Journal*,

1840 Conrad IV Penn Ann.

Cryptobolus tessellatus, Green,
= *Trinucleus carinata*, (Murchison)

Does not accept *Trinucleus*
therefore.

Salmon river sandstone
shales.

411 Arch Street,

p. 67 58, 55,

basaltite
1) Chipped pebble of black chert found
by Dr. C. L. Metz, Oct. 1885 at
Madisonville, 0.5 mi. in gravel 8 ft
from surface under clay, his term
excavation.

2) Another found by Metz at Loveland.

Madisonville = 8 mi. N.W. of Cincinnati
Just below gravel, surface, under
8 ft of clay.

2) Another found across from
Loveland, 1/2 mi. N.W.
30 ft below the surface.

Depths of Ocean, John Murray,
Macmillan, 1912,

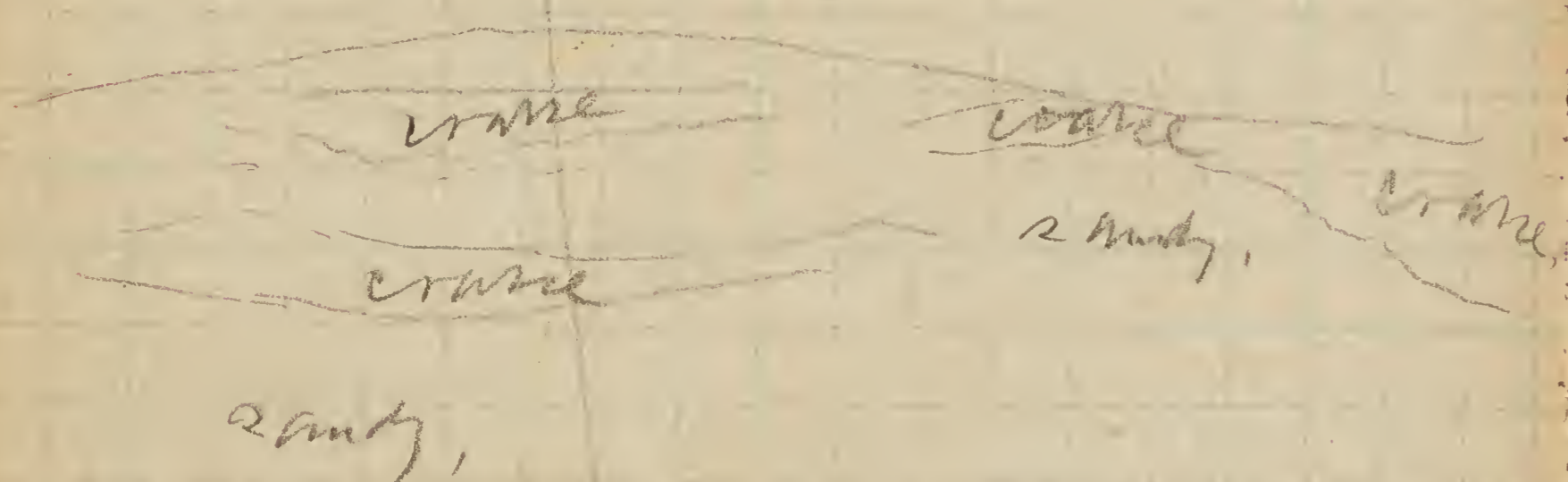
Vol. VII, No. 2 contained fossils

{ Wind direction Duca instruments
{ S machine & rain fall
{ Wind velocity

Barograph, { 30
 { 30
 { 29
 { 28

Rain gauge
Snow gauge

30 ft Chaped gravel pits
 Coarsest pebbles at 15 ft down
 Less numerous above & below



Lithman ridge

Terminates on high knoll
 NW of chapel

W of knoll & fork of road is a hollow
 Also deep hollow at edge of C. sandstone

W of hollow is another high ridge
 followed by Indian sandstone

W of first ridge is another hollow
 Workshop at Sand of Cemetery
 Also hollow on high bank with

W of this is high ridge with
 Calvary monuments

65 120 ft SW of Calvary is
 22 beginning of Indian ridge
 130 following edge of woods
 12 and then cutting woods
 12) 1430
 120 ft earth work 3 ft high

Calvary ridge terminates
 northward at Indian road
 N of cemetery grounds

Remarkably fine of pebbles
 coarse pebbles at edge of Calvary
 on this ridge 8 ft section

West of Calvary ridge is
 valley
 West of valley is sand or ridge

West is shallow hollow
 Then another ridge at edge of
 woods N + S.

~~At S angle of edge of road is
 Indian sandstone~~

West is deep hollow

West is another ridge

West is hollow

West is another ridge with
 road on E side of foot.

Washed gravel & sand Co.
Building & roadway.

185 ft top of ridge at edge of gravel
pit

Course sands at top.

76 ft → clay layer may be
one down, with a thin glacial
at bottom for the gravels on
Down sands and 87 sands

57-62 more hill + some gravel.

52-57 very coarse rounded gravel

50-52 — ~~the~~ sand.

40-50 gravel + till in layers.

40 ft pit rail road

22-25 ft. thin clay glacial.

22 ft interval.

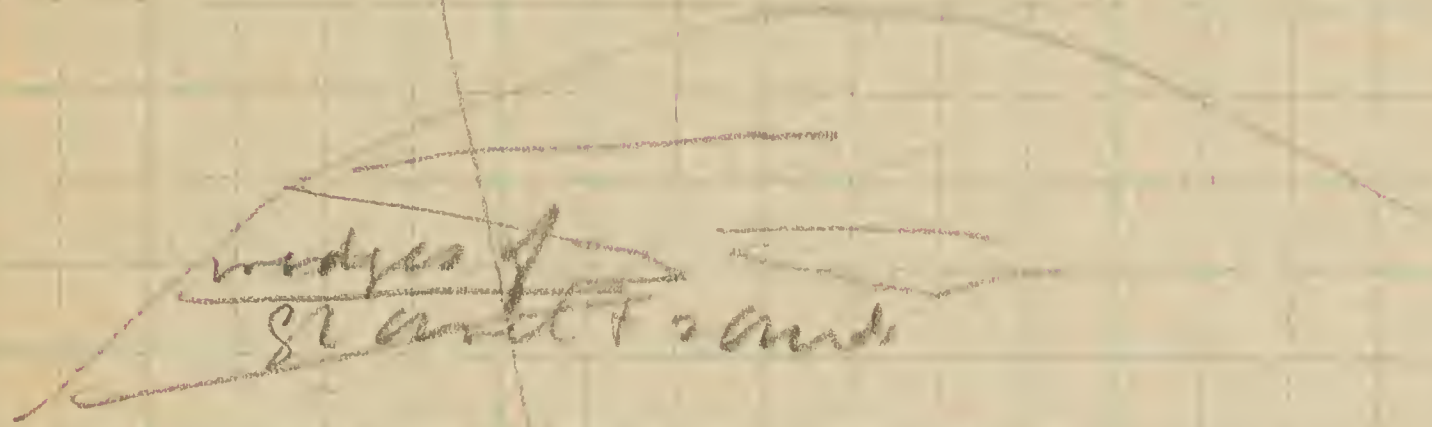
0 Canal.

Sumner Bridge Co

Gravel pit at Post Office Sta.
Coarse pebbles. Common
in upper 20-25 ft, some
nearly 2 ft long. Many
1 foot long.

Sand correlated to one
of pebbles at 5 ends
55 ft height of gravel pit.

Cox farm gravel pits



Rethoray Stables. E side

Very coarse sand 4-6 ft below
top of wedges.

Most large pebbles about 8-9
inches, a few more than 12 in.

Leeds farm gravel pit

None of sands very coarse.

Finer sands interbedded toward
lower part of pit.

Purple hill at 19-20 ft on E side
of pit. Purple hill rises to 22 1/2
ft above road on Nth anticline

part of pit. rises to 26 ft on
W side of pit. Still more or less
under side of sand. Very irregu-
lar. Only 1-2 ft thick.

65 ft = height of top of hill

Down - 1/2 ft from top
R Well deposit to the left of the ^{rock} ^{cinema} st ^{is} ^{to} ^{be}

Well deposit 20 ft or more
thick gravel & sand deposits
possibly sand, however, finely
interbedded. Well the well is
15 ft in diameter NW and
bracket, was placed
against a wall of 3' gravel
& sand in a local block.

Several feet 4 ft thick, on
sand & gravel directly to
continuation of Carlisle, about
1/2 mile NW of quarry.

Coxington Ave

Well down Coxington Ave, under
dark at top, as though formerly
a well about 12 inches thick
overlaid by 12 inches of fine gravel
white clay with out pebbles,
directly N of St Anthony church.

RR to Carlisle + Tacoma sits
about 1/2 way S of Tacoma
pulled up S side of right way
lowest one at 20 ft, is 5 ft above
base of hill at least 1/2 mile

R
Well placed worked, thin layers, irregular.

Placed $\frac{1}{2}$ mile SE wall of
the monument,
N of Lake St, + $\frac{1}{2}$ mi W of Purcell
(the next street west of Allen Ave)

School about 200 ft E of turn of highway
at car line at Allen

Many large replacement boulders
S of Dayton Street and boulders
S of

+ Lorraine Ave - Dayton street along

Large boulder at Phoenix Ave

Dover St, school across St.

Large Hoffman hill boulder

Lambert boulder

Cin. Co. l. exposure

Bank
Crown
Caldwell
Tower

Hills & Dunes

Next bridge S is 11 ft above A.

A bridge ^{855 ft} NE of D above for fossils, 13 1/2 ft interval

<i>Pentamerus papillata</i>	X						
<i>D. oblonga</i> for fossils		8 1/2 ft					
<i>Strophomena reticulata</i>	X				X		X
<i>subcostata</i>	CC	X					
<i>Dinantia subquadrata</i>	X		X		C		X
<i>Schuchertella obliquata</i>			X				X
<i>Platystrophia acuta</i>	X		X		X		X
<i>S. acuta</i>	X		X		X		X
<i>P. quinqueflata</i>	X		X		X		X

Base = 841 1/2 ft USGS

Base of all exposures about 831 USGS

930
960
70

N. 1/2 sec. 6.

0 - 7 1/2 ft above A.

up to base of Penn 11 ft above A

Penn 11 ft above A, but covered with alluvium

Penn 16 1/2 to 18 1/2 ft above A

Penn 18 1/2 to 20 ft level at
base of A, but alluvium covered

Schuchertella typical

Pentamerus
obliquata
(Bryson collected)

8875 ft USGS

Shipp,

901 >

Blue clay

876 >

843 USES >

Top of Blue clay, mostly composed of
small pebbles, rounded by glacial
action.

R >

Lower Schuylkill + Co. P. Me. at
end of Main St.

811 >

850 = top of Exposure. W. in C.

Blue clay 25 ft above R.

- *Centronia papulata*
- *Plat. aculeata*
- *Lev. mutigera*
- *Raf. p. p.*
- *Stroph. vetusta*
- *Stroph. sulcata*
- *Heterella subumbellata*
- *Stroph. aculeata*
- *Stroph. aculeata*

Schuylkill + Co. P. Me. at
end of Main St.

880 USES

44 ft

32 ft

Schuylkill + Co. P. Me. at
end of Main St.

75

814

Huffman

Side of Huffman
9 1/2 x 9 ft, x 4 ft
at road
granite & mica

Hled Coast

Layman Ave. 1922

Plumchis school

Plumchis school

52 1/2 ft up to Plumchis school
Heterotella in calcareous bed

45 + 740 = 785 VS 35

+ 45 ft up to Plumchis school
33 ft up = Sept. conc. (Bly, part small)

28 1/2 ft up = top of second bed of conc.

16 1/2 to 17 1/2 = all 4 of these just below neglected

14 1/2 ft up to 15 1/2 ft up = Str. neglecta

Str. montana cc

Stript. dispersum

Daly's agave form

943
168
110
58

110

Huffman road

Pl

847 VS 35 surface school Str. neglecta

15 ft interval Bly, cupax Str. neglecta

Interval in bridge

5 1/2 ft interval well bedded, clay, lime

2 ft. Di. subquadrata, Stript. place

4 ft interval 820-2 VS 35

2 ft. Stript. dispersum base cc

13 ft interval well bedded

Stript. dispersum, Stript. place

Bly cupax Di. subquadrata

33 ft interval fine bedded

Monty, Di. subquadrata

	950	820.5
	950	48
	820	
	130	772.5

Pratt & Whitney

Sullivan & Co

Procter & Gamble

100 ft

100 ft

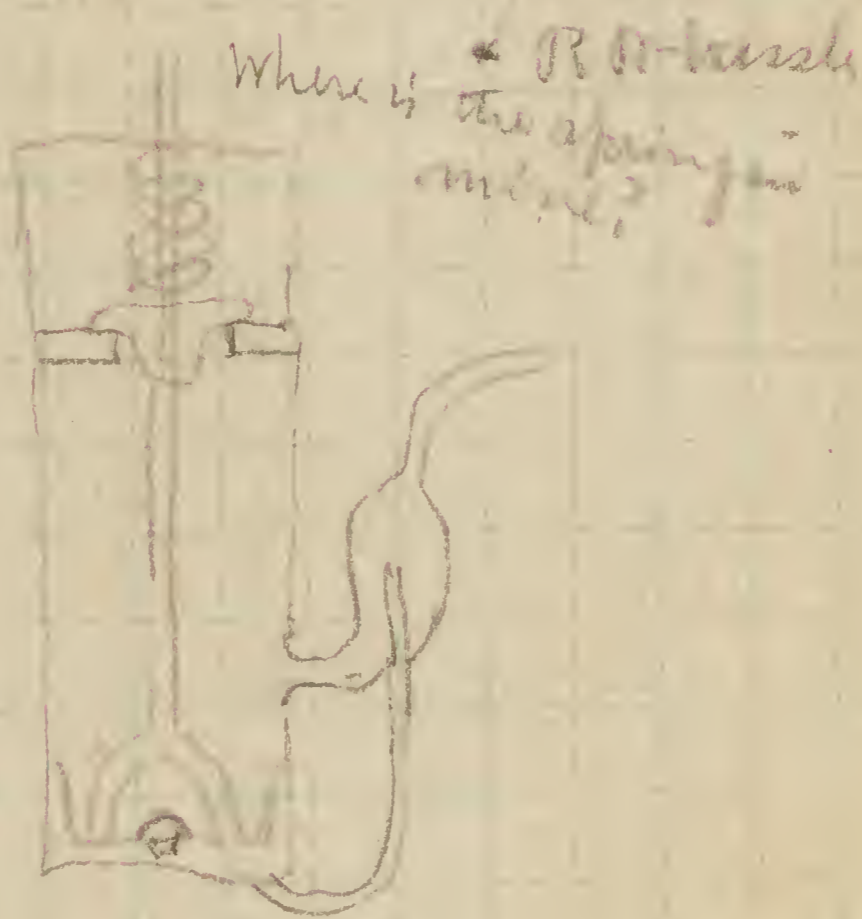
100 ft

100 sec

100 ft

100 feet

100 ft



Hill & Dalrymple

Bluff & Co

100 ft

100 ft

100 ft

100 ft

100 ft

Lead Electric Co
Rivley & Britton Co

Machinery
Hansen & Co

Electricity

Wiley

Next work 70%
and 80%

Boat
Sade Rotary Pump
Leibold firm
K. H. - Rhein

Physics. Name wanted
this

8 Wittenberg Ave.
Springfield, Ohio

Banks
ville, O. Practical

Russell

3
L. C. O. Practical

Liams
mills, O. Practical

Principles

Stetson's

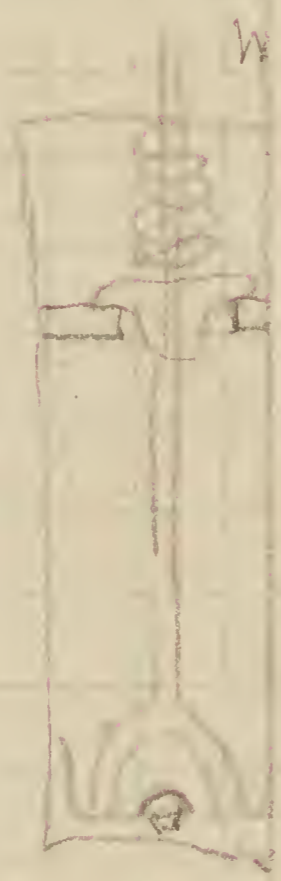
1

1

12 sec

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12 sec



Chas. Wright on
Adams

Prentiss
Man

Practical Applied Electricity
Moreton, Reilly + Bricker Co.
Chicago

Dynamer Elec Machinery
Sheldon + Hansman
Van Nostrand Co.

Elements of Electricity
Timbie
John Wiley

Watson Physics, ^{Part 1 book 100} larger work
Ginn + Co's Screen

Duff's Physics. ^{Box} Sa de Rotary Pump
Leibold firm
Klein - Scher

Practical Physics. Name wanted

P. W. Fatig
837 S Withenborg Ave.
Springfield, Ohio

Russell S Banks
Marysville, O. ^{Practical}

Walter C Russell
Box 83
Chillicothe, O. ^{Practical}

M. M. Williams
Miami Springs, O. ^{Practical}

Turn buckle

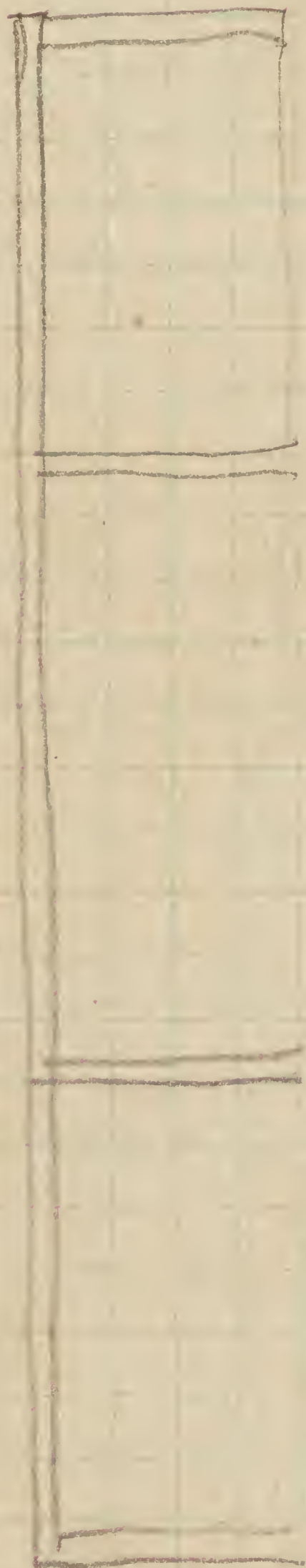


Paste

Seeds.

China closed
Niagara Falls
Lectures at Cornell
Camey.

Address for Jim Myers,
Schroth + Pitten, Grant St. Columbus,
Ohio
Cincinnati - 1880
Steel Springs - 1880
Cincinnati - 1880



Birkensunder paste



N York over land,
and coral reefs
exist in Pal. times

Wiscansin *
Schul of Jom,

Columbus
Public school of
Jominichism.

Univ of Wisconsin
elder

Univ of Ohio State
just started

Bellogobus
Central plant,
D. K. Reichbach,
Berlin,

Prof. E. J. Barwood: Calcareous algae
Streptochetusa
Cyanella
Solenopora
Birmingham?

Biological Magazine,
Ed. 13, 13, 13
Killing Hill London W.

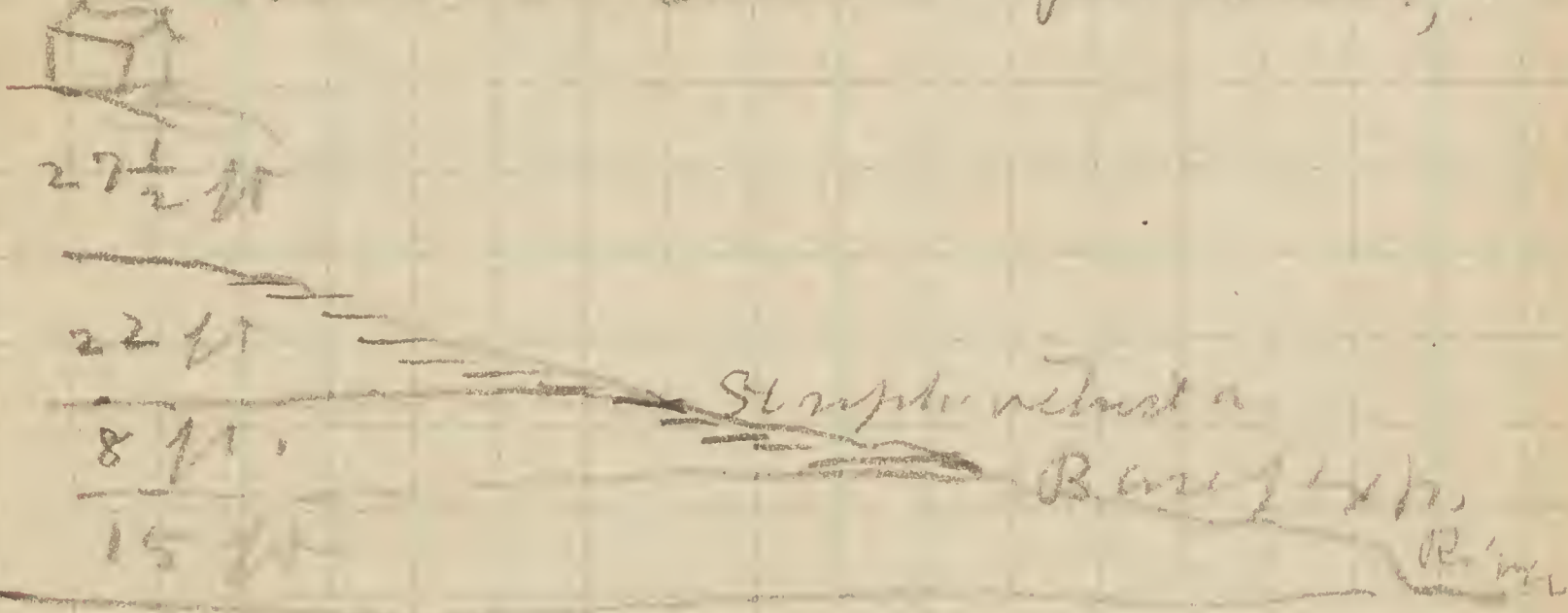
Halcyon Hall W.D. W. W.,

27 1/2 ft below Wiles' bungalow = top of exposure of rock in stream immediately north of bungalow.

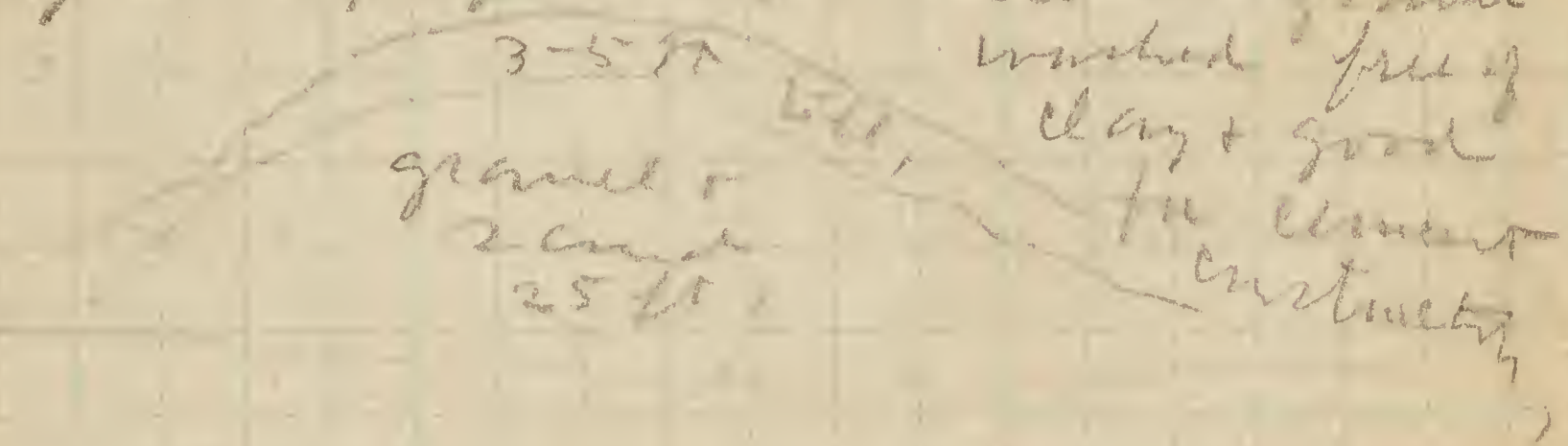
Strophomena retusta + *ent. cat.*, *Physic. sp.*

Strophomena, *Dis. subquadra*, occur eastward down stream about 22 ft lower down.

Rock exposures continue down stream for 8 ft, and the latter are 15 ft above river level as per sketch.



Immediately S of mouth of stream is exposure of sand and gravel about 25 ft thick, surface marked by 3-5 ft of till.



Westward, top of stream toward angle wood, gravel only at base of section as far as bungalow with

marking point chiefly rock till + next to Clinton slope the talus is very rocky.

Boulders 2-4 ft in diameter common near + on surface of till.

Further south is a dry hollow extending from base E of bungalow (Wiles) eastward toward river. Only gravel exposed, overlain by till of course. No rock.

Further southward is another hollow N of which a uprooted tree trunk exposes several feet of rocky till.

Further S is a fence line E of which are various summer cottages or sheds.

S of fence is ravine + further S is a second ravine, both among the cottages + neither with so pronounced.

Further S there are more summer cottages + more shallow ravines without exposures.

S of these cottages blue Whitewater limestone is exposed along the river edge for about 2 ft above water level, but of course in the hill itself it rises higher but is covered over.

at this point the river turns rather sharply eastward for a short distance & then southward, at the S end of a small island.

22 ft above the river up a gully crossed by a good graded road is rock exposure

15 1/2 ft further up side is exposed W of foot bridge leading S from house about 8 ft higher than base of gully.

Immediately W of this house at foot bridge a recent cut exposes

11 more feet of White water with evidently in this neighborhood only about 3-5 ft of till under the rocks after less locally.

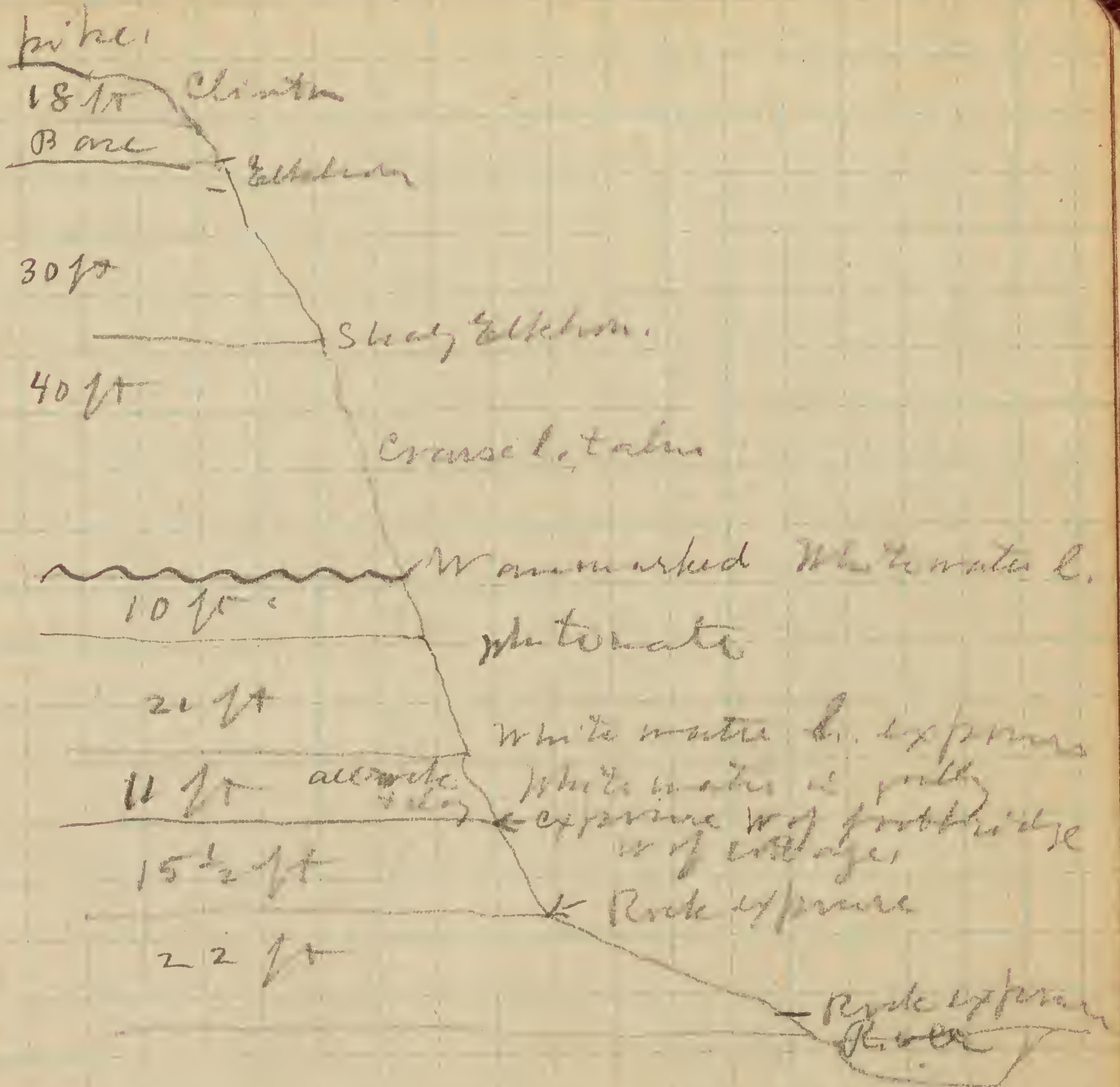
21 ft higher, West of the western fence crossing stream or far followed is another White water l. exposure. The intermediate territory is full of flat ls. slabs 3-4 in chas thick & 8-10 inches wide.

10 ft higher is a wave marked layer with waves N 30 E, 18 in chas from crest to crest & 2 1/2 inches high.

40 ft higher is no exposure but plenty of an unconformable rock.

The Elkhorn shaly shuff exposure 30 ft with clayey Elkhorn exposure about upper 5 ft.

Clinton, 18 ft to the level of the road.



Very little till here over rock. At this point the pike makes a strong bend, immediately N of stop 16.

South of this ravine above foot bridge in beside gully is a fine 5 ft & very gravelly till. W of cement terminal court. There is rock in little gully NE of cement court.

a shallow gully south of a former
 fence line and some S of the most
 western cottage exposed 3-5 ft
 of blue clay rock till for a
 long distance. Further N on same
 hill side the surface till is
 very gravelly.

SE of this most southern cottage
 near the river there is an old
 gravel pit of which the bottom
 consists of a very gravelly till.
 There may have been washed
 gravel & sand beneath but
 no exposures occur here
 now. The thickness of the
 till & hence can be measured over
 the rock does not appear to
 have exceeded 30 ft. as far
 as can be judged by surface
 exposures.

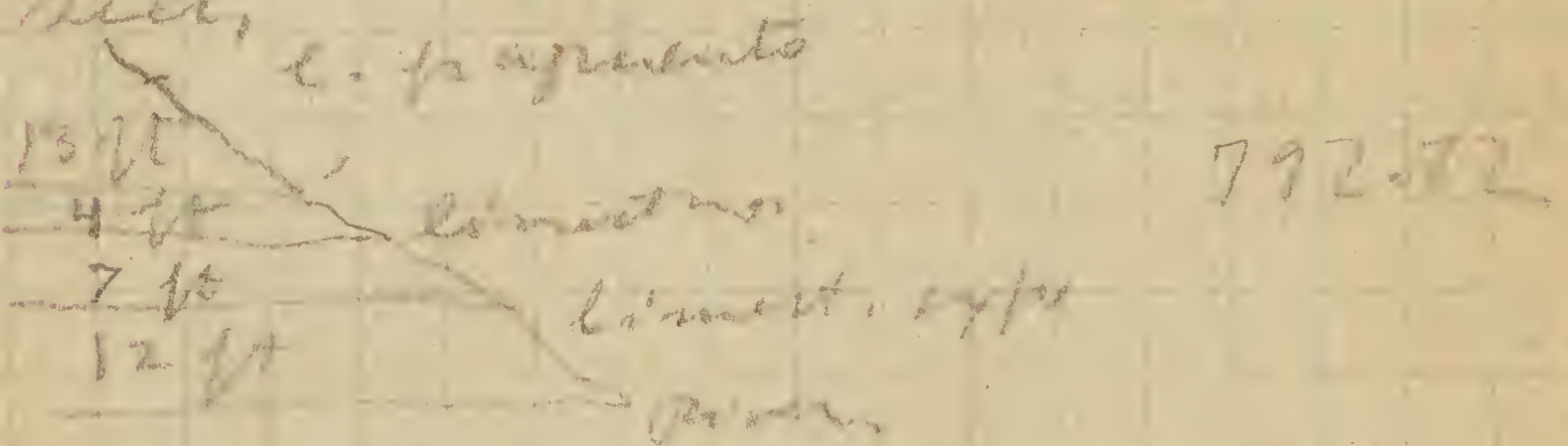
A road here leads to the
 W end of Cemented. - St. 15
 Seven miles N of Albert Vanger
 N of point where road turns off S. side
 from pit.

Spring from July 15 east to bend of
 Lane & then E in same direction
 to river, then S along river to
 first big gully. White water hole
 exposed to 22 ft above river. Above
 this level up the gully is limestone
 rubble with slabs 1 ft wide present.
 Further S is another gully with l.
 at river end.

Limestone evidently forms the bluff
 along the river for considerable distance.
 Further south is gully N of isolated
 cottage. 12 ft above river is base of
 l. exposure.

7 ft higher is river rock which is
 exposed for 4 ft.

13 ft up are large l. fragments
 suggesting rock below soil in gully
 above this level only gravelly till is
 seen.



Gully ends N of Lane N of barn roof
 barn house isolated.
 This isolated barn house lies
 about due E of farm at S end of
 Clinton outcrop - W of fence.

Langiolutite of gravel base of pit

11 ft l. long exposures, l.

5 1/2 ft covered. (10-15 cover of well)

16 1/2 ft l. to point SE of barn of yellowish isolated farm house

(20-25 ft of well comes to rock)

810

2 ft l. rock.

10 ft typical white to white exposure

above part area structure

above *Debrakella alveolata*

Strophomena robusta

5 1/2 ft. *Strophomena*

above *Debrakella alveolata*

Strophomena sulcata

Strophomena retorta

5 1/2 ft exp. more of whitewater l.

Pider

7 ft. *Strophomena*

Whitewater l. exposures

good W of pit

11 ft not exposed

60 ft base of Clinton exp.

20 ft Clinton

5 ft up to side level

Clinton was probably very thin & covered

farm house SE where it

crossed.

95 ft below Clinton's base edge of

partially white l. base of Clinton

is probably

Clinton is probably 2 ft of

Clinton is probably 2 ft of

The west road along river follows west edge of 1st bottom on land

The middle road follows W margin of second bottom.

Only traces of the 1st bottom seen on W side of river.

But second bottom lands form East margin on W shore and are original shapes of glacial deposits.

Directly S of isolated farm house at S end of middle road is 3 ft of

over 9 ft of stratified sand & gravel. There is more of this sand & gravel below.

Probably at least 5 ft more & possibly more than that.

Southward from this gravel pit there is a low kame ridge or esker.

Traversing southward along the north edge of the second bottom the hill

crosses the gravel as far as a wire fence. Further south the gravel shows at the

surface where ever it occurs. Here the upper rises 20 ft above 1st bottom.

The gravel is coarse & several pits have been exposed in it. The

base of Clinton water of a 20 yard wire fence. At another gravel pit

with numerous pits 8-12 in in diameter. The sand of pit is directly W of driveway

to be left by isolated farm house at down side.

S of S end of kame the gravel comes to mass along 2nd bottom on land & is evidently not covered by till.

S of S end of kame the gravel comes to mass along 2nd bottom on land & is

evidently not covered by till.

only by very thin till as far as
 from house in field SW of isolated
 farm house S of drumlin hill,

The drumlin hill has a small
 deposit of a rare gravel with pebbles
 8-12 in in diam. common. The
 drumlin rises about 40 ft above
 level of surrounding same plain.

Opposite S end of east side
 of hill (pebbles) is small mound
 composed of till on N side of hill.

From the drumlin a fine line
 of gravel extends N along W side of
 field through the woods for several
 hundred yards terminating at
 about 20 ft above the same plain
 northwards in woods.

This line is a 2nd terrace
 and extends N along W side of
 field as far as isolated farm
 house at S end of middle lot. Beyond
 further N the land rises and
 toward the National Park probably
 to home.

16 ft of National Park
 6 1/2 ft soft till
 3 ft Hard till
 2 ft Hard lumps 2 ft wide
 1/2 ft
 32 ft
 954

The Clinton is exposed in the National Park
 + S in the woods. A thickness of 16 1/2
 ft Clinton is exposed at dry water
 fall NW of house, in the woods.
 Contact with top of till about 0-5 ft
 of nearly drift ^{to 100 ft} ~~probably~~

Clinton continues S past house
 along west base of Clinton escarp-
 ment is shallow ditch out of which
 weathered tillstone has been
 thrown as though in situ. Drift
 evidently thin here. Ditch - 35 ft
 below base of Clinton.

SW of the farm house the top
 of the Hard tillstone, about 6 ft below
 the Clinton is exposed. Talcum
 is common 1/2 ft above that surface
 top at base of study section.

Clinton base
 5 1/2 ft
 10 ft
 1 1/2 ft
 Hard tillstone

Clinton escarpment continues
 S to remains of old hill.
 Here weathered tillstone shows up
 in gully. Analyzing soil 0-5 ft below
 Clinton is 1/2 ft thick blacial stones
 S 22 E.

Clinton escarpment is continuous to
 end of wooded land. SW of end of es-
 carpment NW of farm house is weathered
 tillstone in plowed field. Drift
 evidently very thin here & all the
 way from National Park

SE of woods at S end of Clinton
escarpment *Stromatococcus* is
common for hard *Elkhorn*, at
one level in soil, & further up
vertical Clinton is common but
not in situ.

Further N, on E side of Clinton
escarpment ridge, there is a
wire fence at N edge of woods.
Here land slopes gradually E
and there is no Clinton outcrop.
8 north of this fence, east of
the escarpment ridge, *Stromato-*
occus + *Tetradium* are com-
mon above hard *Elkhorn* appar-
ently. Drop of hard *Elkhorn*
is 4 ft (S 15 E) in length of 45 ft
Covered by drift (clay or till) is
thin, 2-5 ft.

N of wire fence, along W bank of
creek E of escarpment ridge is
wide till deposit 20-25 ft thick.
This is first till seen E of river
with *Stromatococcus*. This till
deposit evidently is quite local
since N the Clinton shows up
on both sides of creek everywhere
Elkhorn. Here *Stromatococcus* comes
in about 9 ft below Clinton base.
Measured thickness of Clinton = 25
ft at N end of stream but this
does not take into account the
southward dip. Most of that is
wrong.

On E side of creek is poor *Stromato-*
occus exposure.
According to look level, the Clinton
top is 60 ft below road corner
Church & school house.

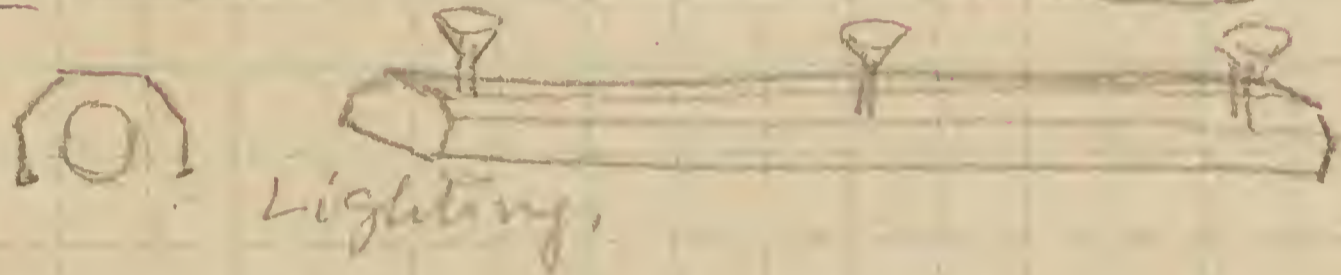
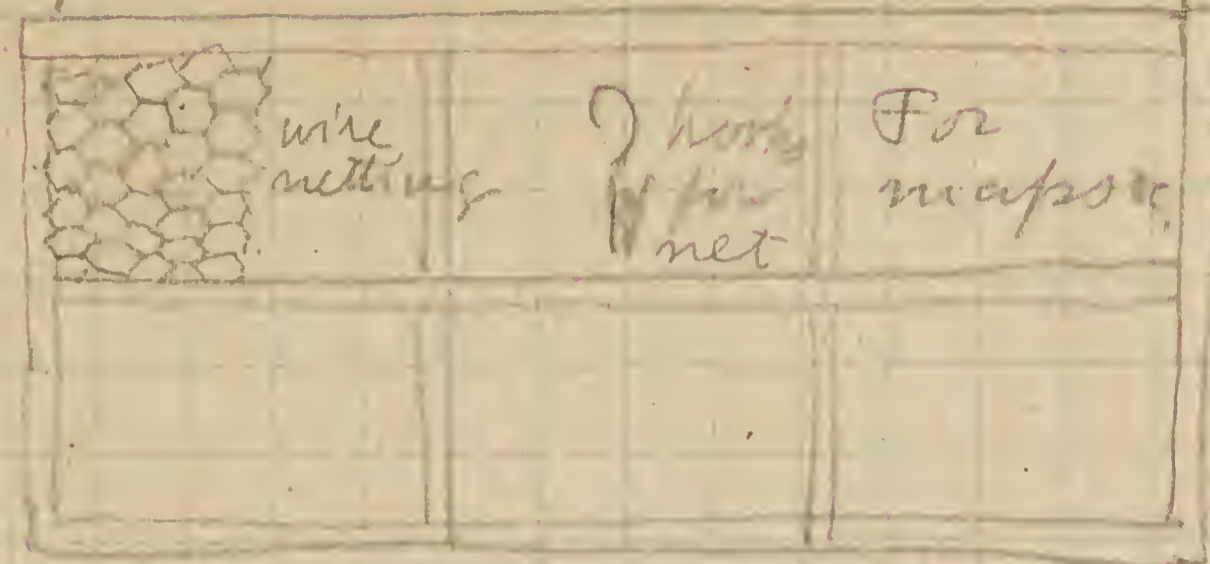
On National Pike rock like Dayton
occurs at 947 VS 68, and thence
about 3 ft up.

at 921 is top of highest Clinton in area.
8 ft above Clinton woods along
escarpment southward.
+ 16 1/2 ft = 24 1/2 ft Clinton here.

6 ft
4 ft *Elkhorn* Dayton & *Stromatococcus*
28 ft Clinton
Quite uneven base of Clinton
6 ft spray *Elkhorn*
12 in *Stromatococcus*
8 ft drift (clay) *Elkhorn*
6 ft hard (clay) *Elkhorn*

Very is

Physics.



Imperial Blackboard Map
 (Outline) N Am.
 A. S. Nyström & Co.
 Publishers Chicago

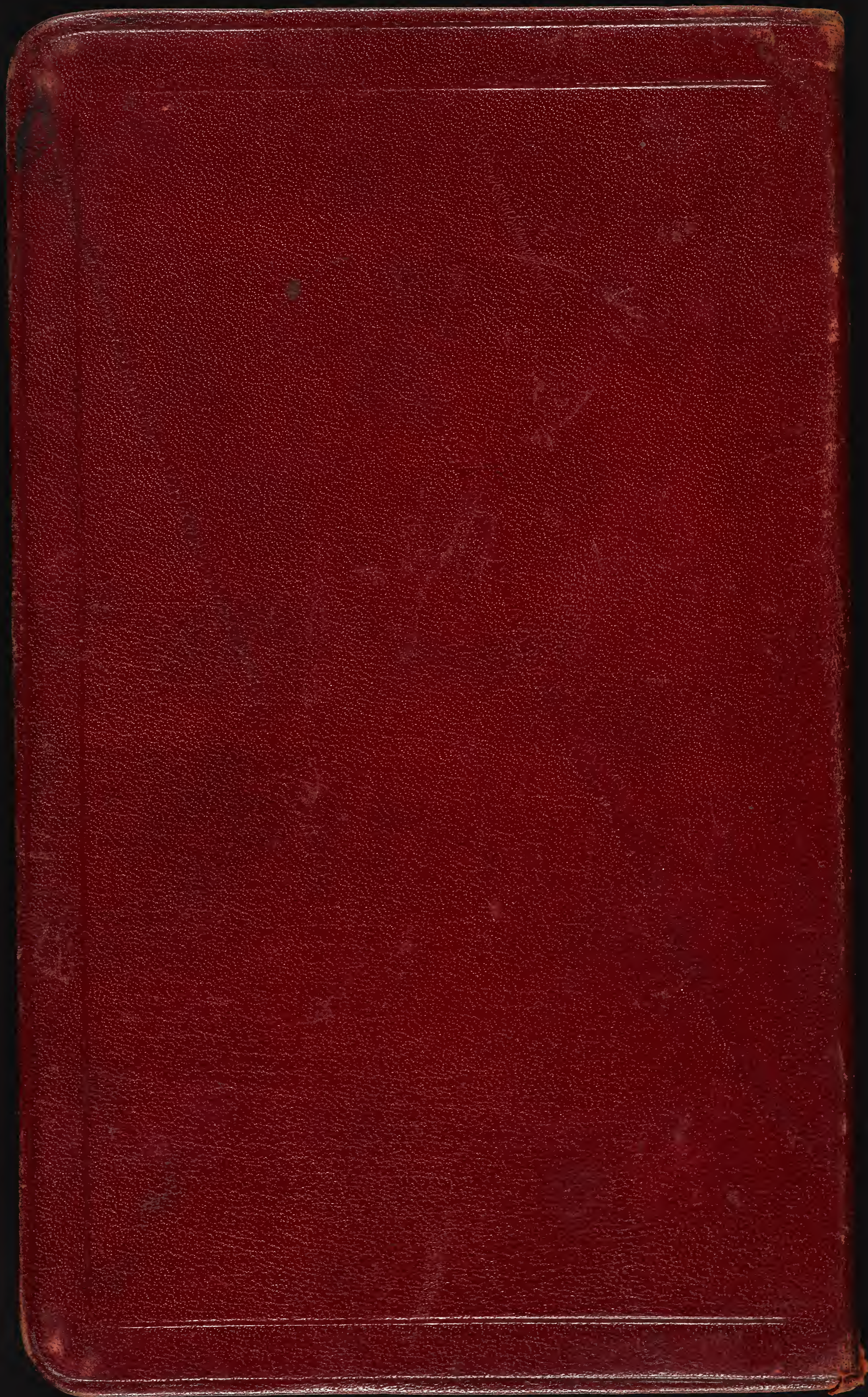
220 Volt connections needed,

Not copied page 40, 41, 44, 58, 62, 66, 67.

Lacking Vol I all
 II - 3
 III - 2
 VII - 2 Nothing geologic
 VI all of this
 X and all above

Mead - 175 July

1399 ¼



U. S. GEOLOGICAL SURVEY
TRAVERSE BOOK

9-904

Faint handwritten notes on the left page.

Handwritten notes in the center of the left page, including the name 'D. W. Coe' and other illegible text.





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[Faint handwritten notes on page 2, possibly bleed-through from the reverse side.]

[Faint handwritten notes on page 3, including a list of numbers and a diagram.]

12	13	14	15	16
17	18	19	20	21

[A diagram consisting of several connected lines forming a path or structure.]

1. 1941 55 2. 1942 74
 3. 1943 65 4. 1944 71
 5. 1945 65 6. 1946 85
 7. 1947 71 8. 1948 65
 9. 1949 71 10. 1950 85

1951 49 1952 58
 1953 68 1954 71
 1955 71 1956 85
 1957 71 1958 85
 1959 71 1960 85

1961 71 1962 85
 1963 71 1964 85
 1965 71 1966 85
 1967 71 1968 85
 1969 71 1970 85

1. 1941 55 2. 1942 74
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 1959 71 1960 85

1961 71 1962 85
 1963 71 1964 85
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 12.22 S. 38 W
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 12.46 S. 24 W
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NOE S
 4.30 W
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 5.58
 6.07

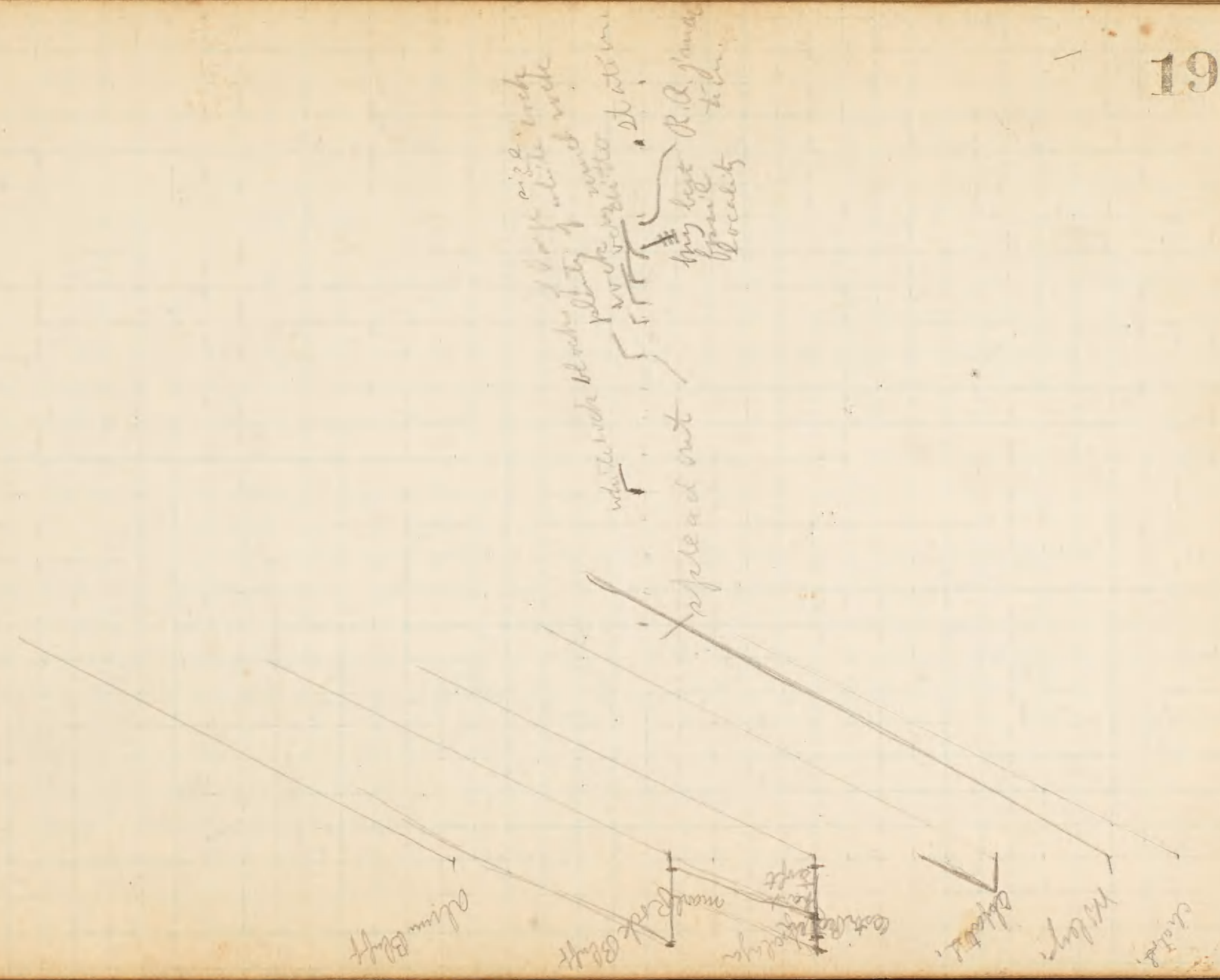


6.14
 6.24
 6.34
 6.44
 6.54
 7.04

9.17
 9.20
 9.25
 9.35
 9.48
 9.58
 10.04
 10.13
 10.17
 4.00
 4.14
 4.28
 4.44
 4.53
 5.05
 5.10
 9.58
 10.14
 10.17
 10.38
 10.48
 10.50
 11.07
 11.10
 11.21
 11.23
 11.32
 11.45
 2.31
 2.46
 3.25
 3.41
 4.16
 4.36
 4.39
 4.44
 4.50

S 30 W
 S 10 W
 S 7 W
 S 20 E
 S 7 E
 S 25 W
 S 40 W
 S 50 W
 S 15 W
 S 40 W
 S 10 W
 S 40 W
 S 70 W
 S 53 W
 S 35 W
 S 60 W
 S 15 W
 S 5 E
 Due W.
 N 65 W
 SIDE
 SIDE
 S 30 W.
 S 25 W
 due S
 S 30 W
 S 70 E
 due E
 S 70 E
 arrived at Alum Bluff.

Mouth of Chapaloguee river. SIDE
 Childers Landing.
 River junction Sanding. Bridge
 S 40 W
 S 50 W
 S 15 W
 S 40 W
 S 10 W
 S 40 W
 Appalaga.
 Cat 2 minutes
 to Acheena
 arrived at Rock Bluff.





Bluff

25
Cherokee

Considering the uppermost exposures at Aspalaga 105 feet above the river and the dipping from Aspalaga to the 1 1/2 miles the thickness of the dip southward is at Bluff least 10 feet to the mile. Considering the dip only 5 feet thick in clay on earth. At 10' a mile the minimum thickness of the Chattanooga is 160 feet. In passing the Cherokee to be extend to 20 feet below the water level, the dip of the Chattanooga becomes on only 12 feet a mile.

At 12 feet a mile and with a 16 mile width of exposure the thickness of the Chattanooga becomes 192 feet.

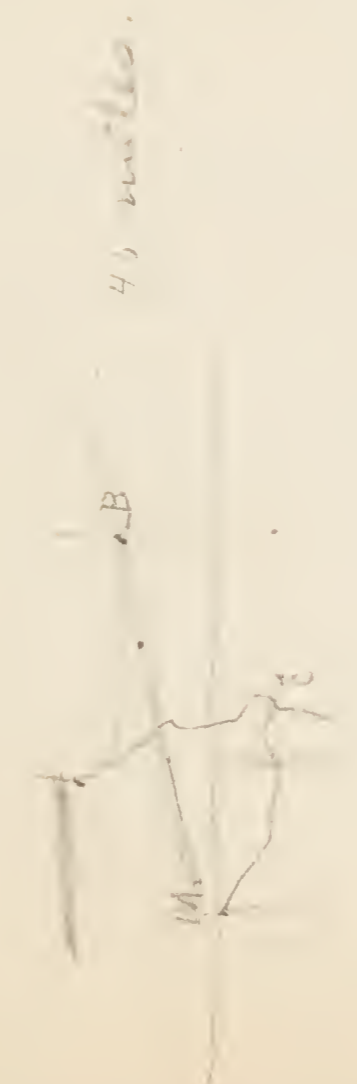
Rock Bluff being 1 1/2 miles with a dip of 20 feet below the top, but 20 feet must be deducted 7 50 feet below top at Aspalaga, = 50 above river at Aspalaga.





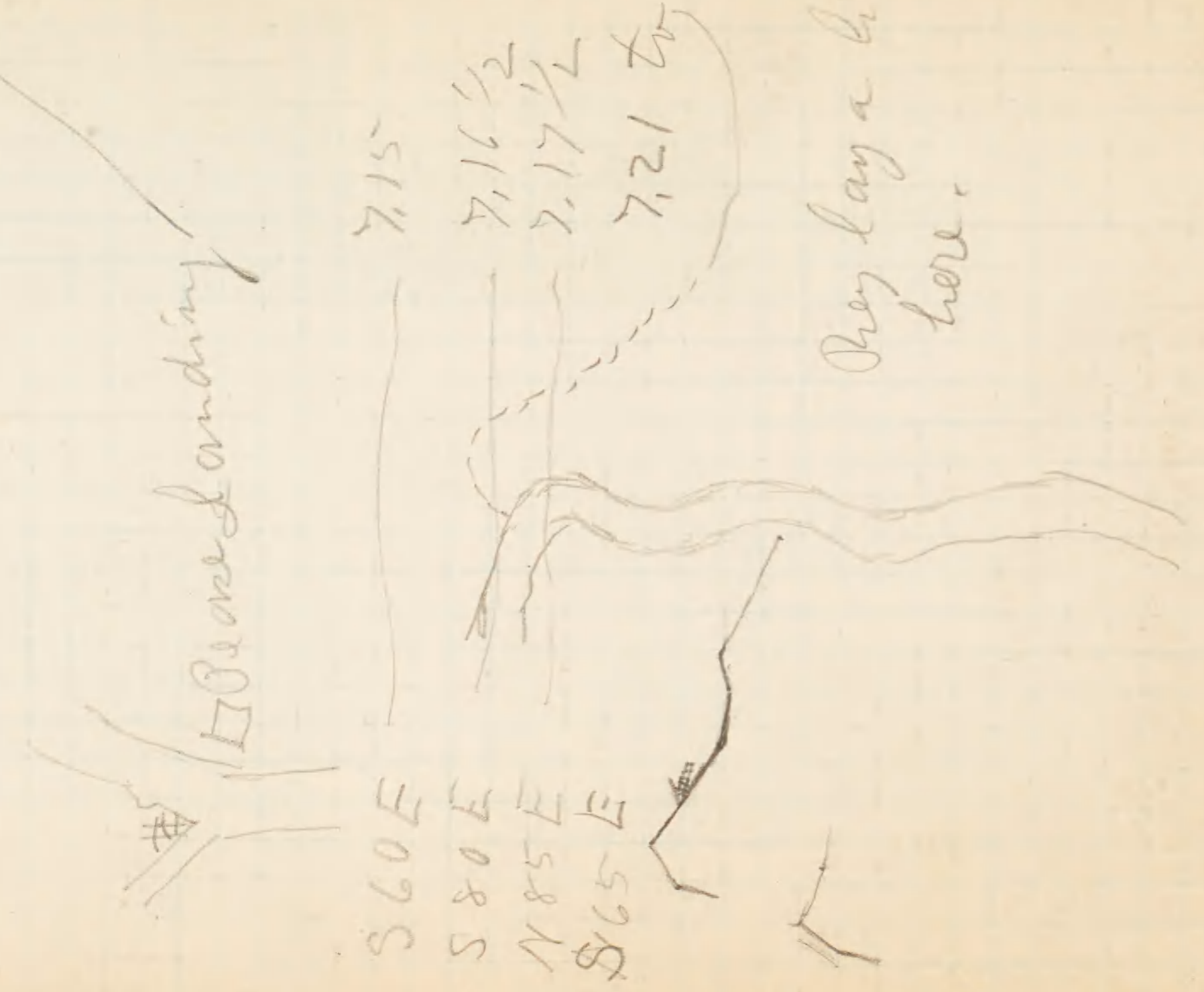
2 1/2

3 1/2
4
R-1



N10E 7.11 end 20
 N30E 7.12 1/4 20

old railroad med to cross at 7.13 1/2



N10W start 7.25 end 7.25 1/2

S45W start 7.30 1/2 end 7.32
 North start 7.36 1/2 end 7.39

S45E start 7.42 1/2 end 7.44

N45E after a long curve 7.45
 end of this curve 7.46

N10E 7.49 1/2
 after a big curve

S20E 7.52
 a barn on W side to run
 up to Sula, end of curve at 7.52 1/2 20

S 20 E end 7,55



start N 70 E at 7,577 end 7,58
at junction with Appalachicola

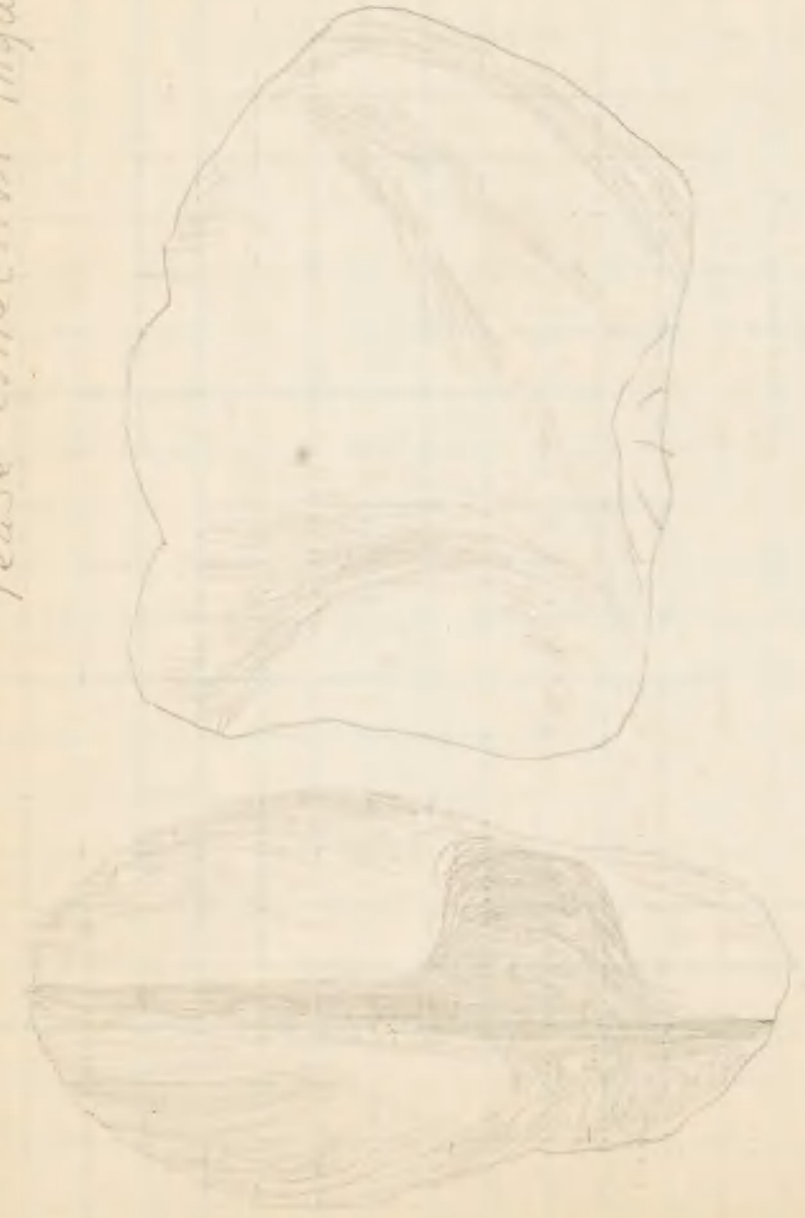
Cut left Sanding.

8,022 N 50 E

44

45

Pease Collection Mya



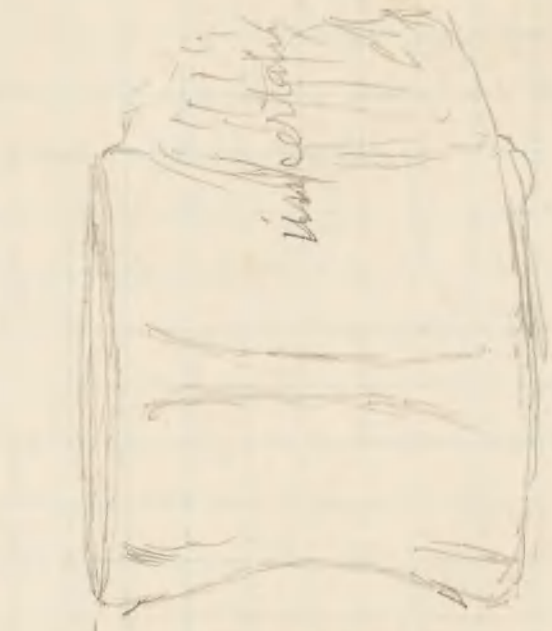
Sadira red



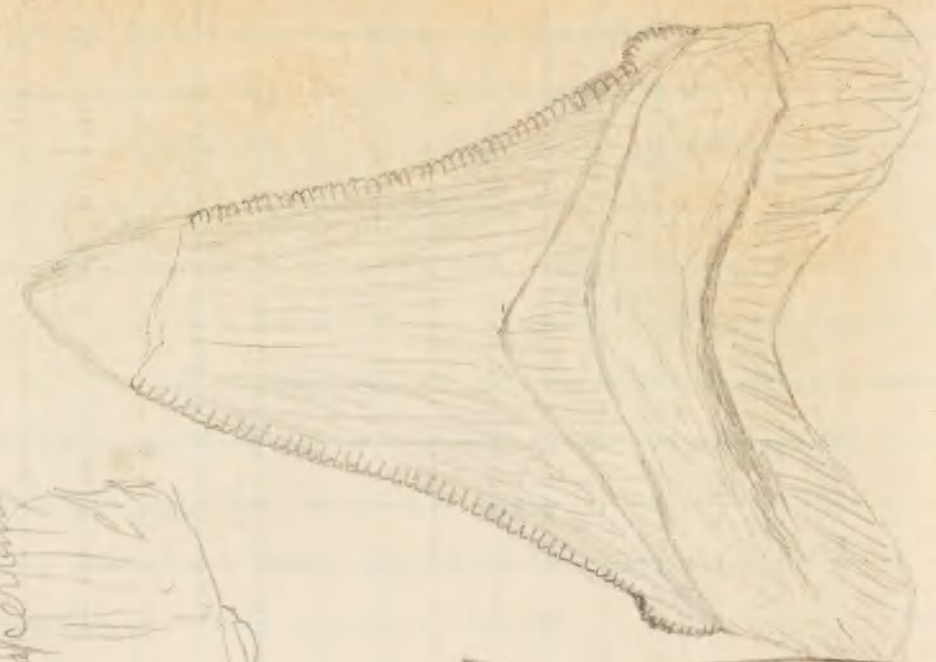
Chachaidan ostrea



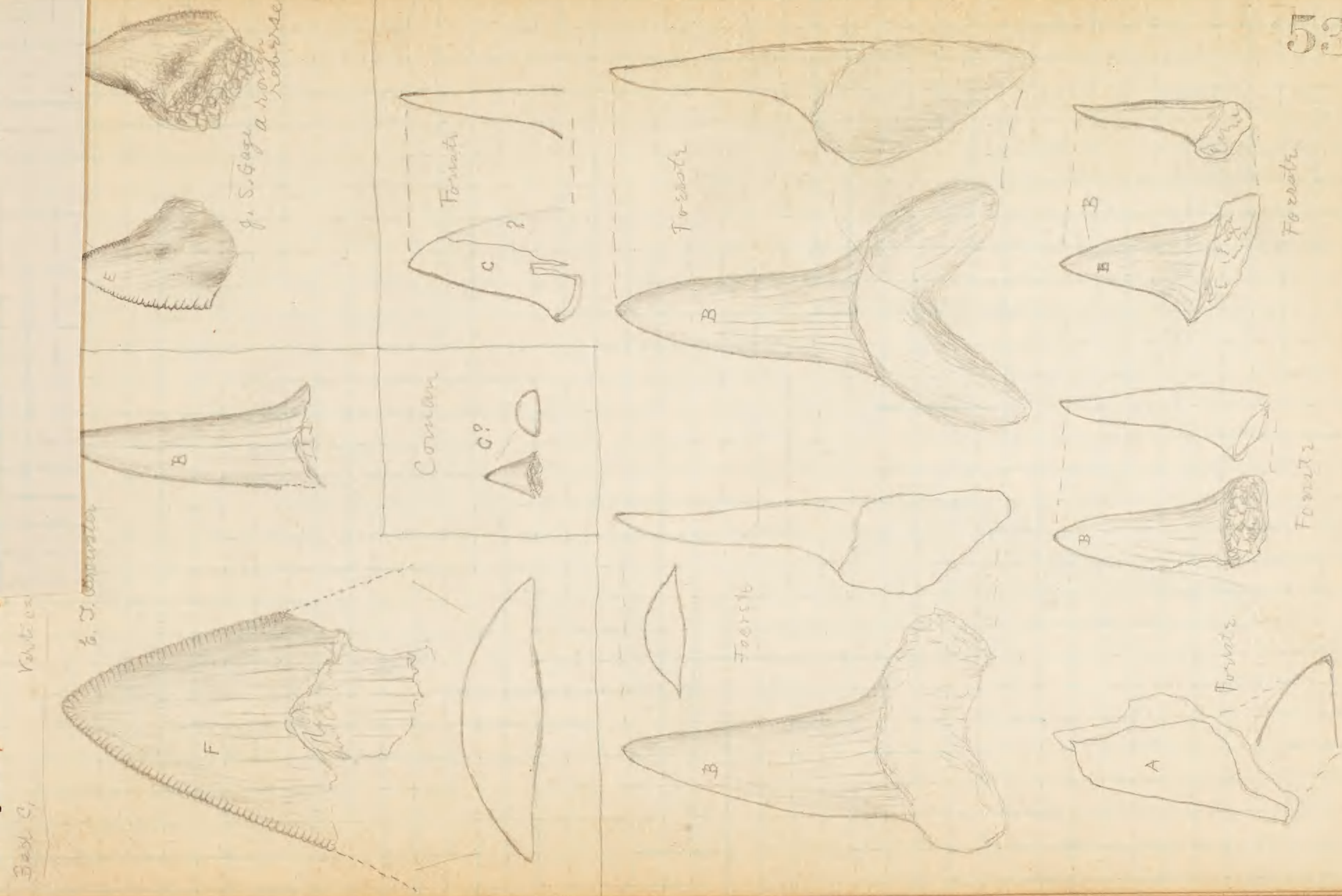
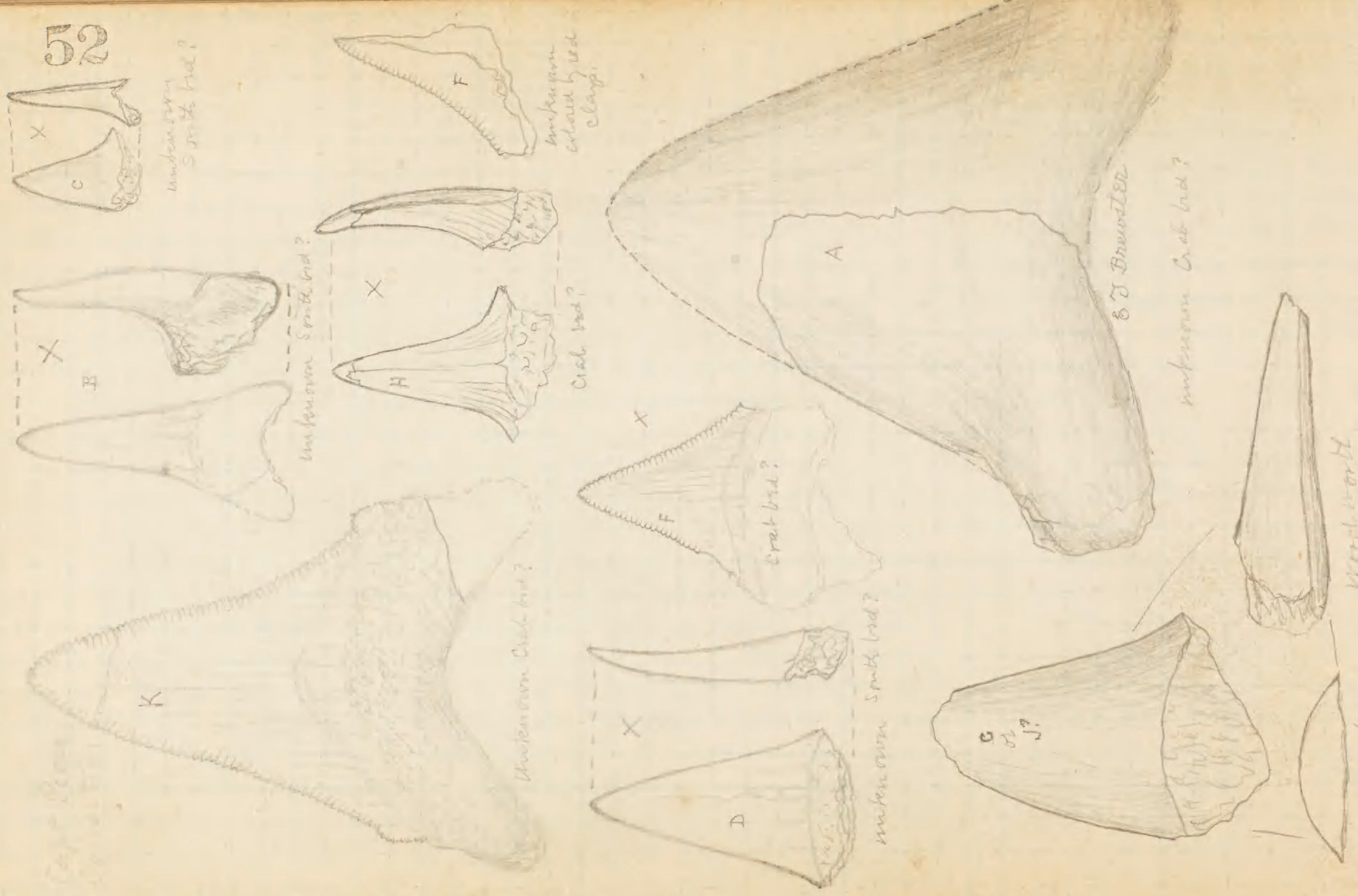
Extrema interna



Uncertain



? Cradace ans of Martha's Vineyard at 8, 10, 11, 12, 13







Another specimen
from the last bed...
the same as the above...
the same as the above...
the same as the above...
the same as the above...

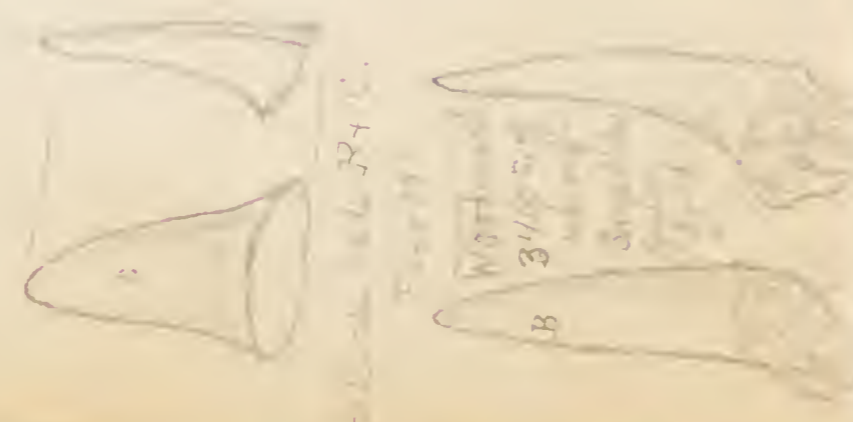
of the...
the same as the above...
the same as the above...

(part of shell...)
the same as the above...
the same as the above...
the same as the above...
the same as the above...

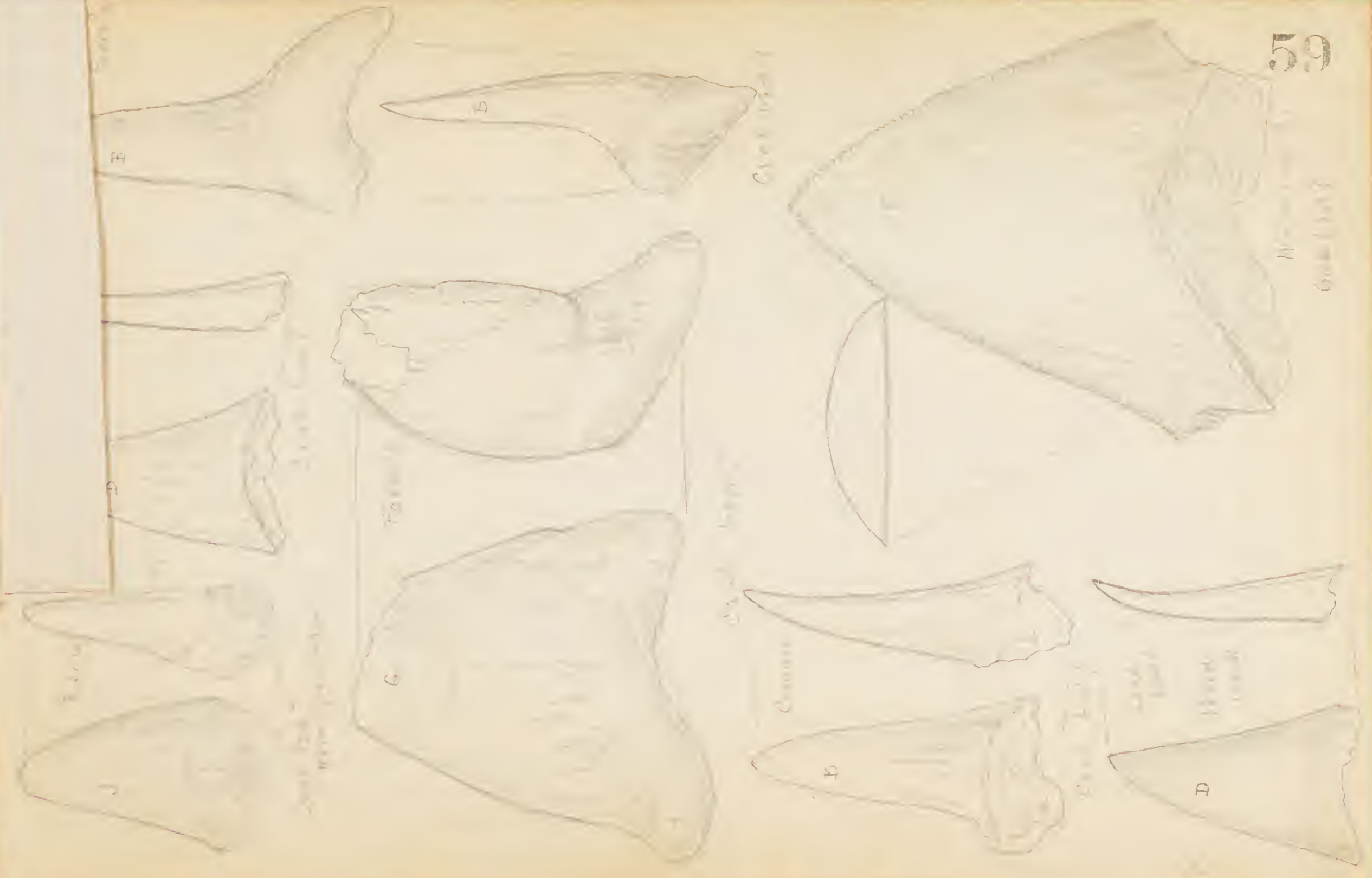


Capitulum

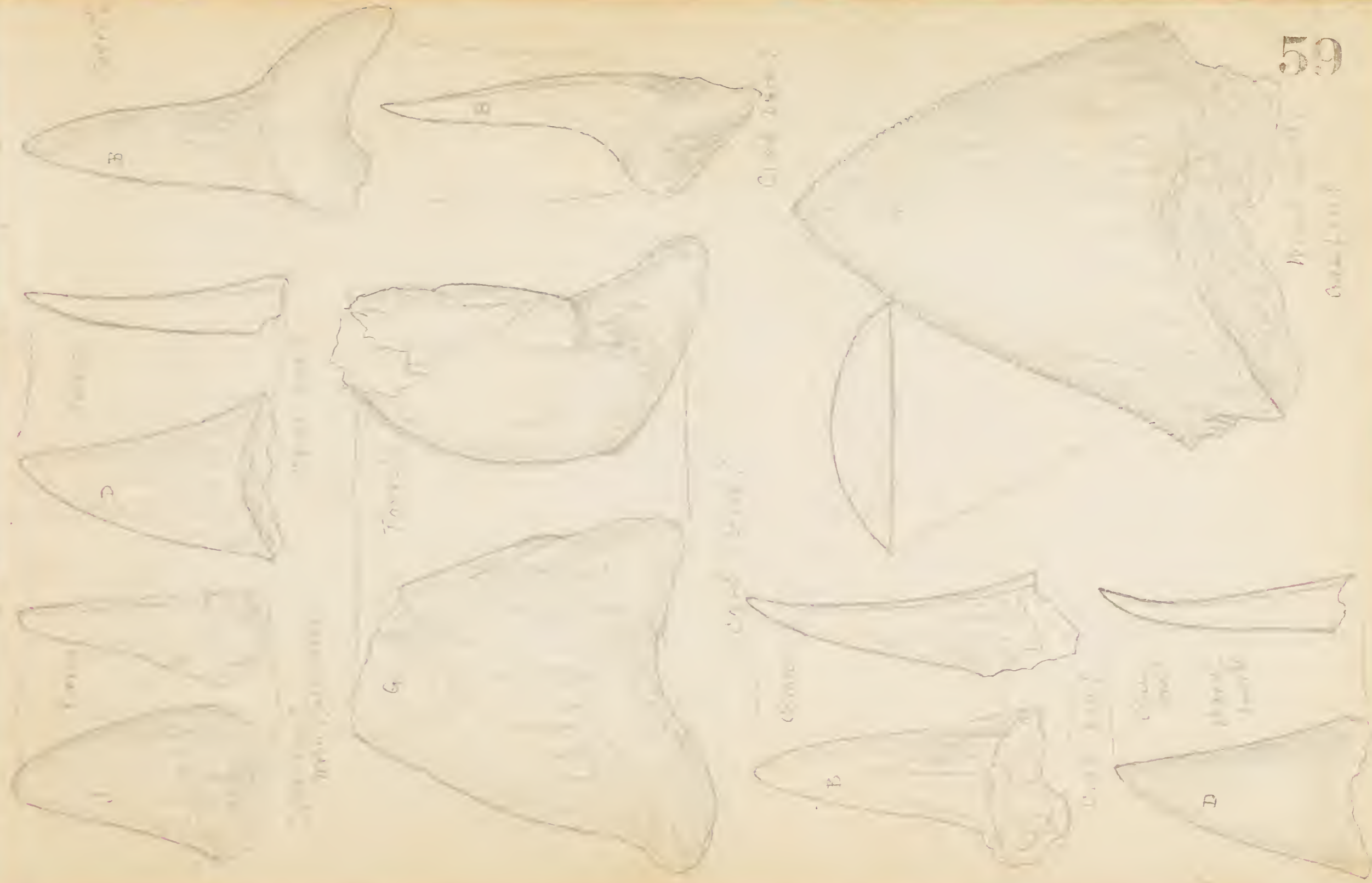
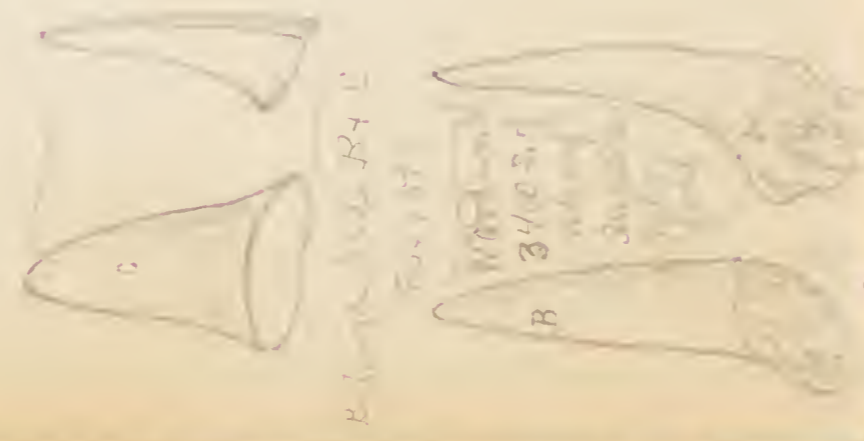
Clavus



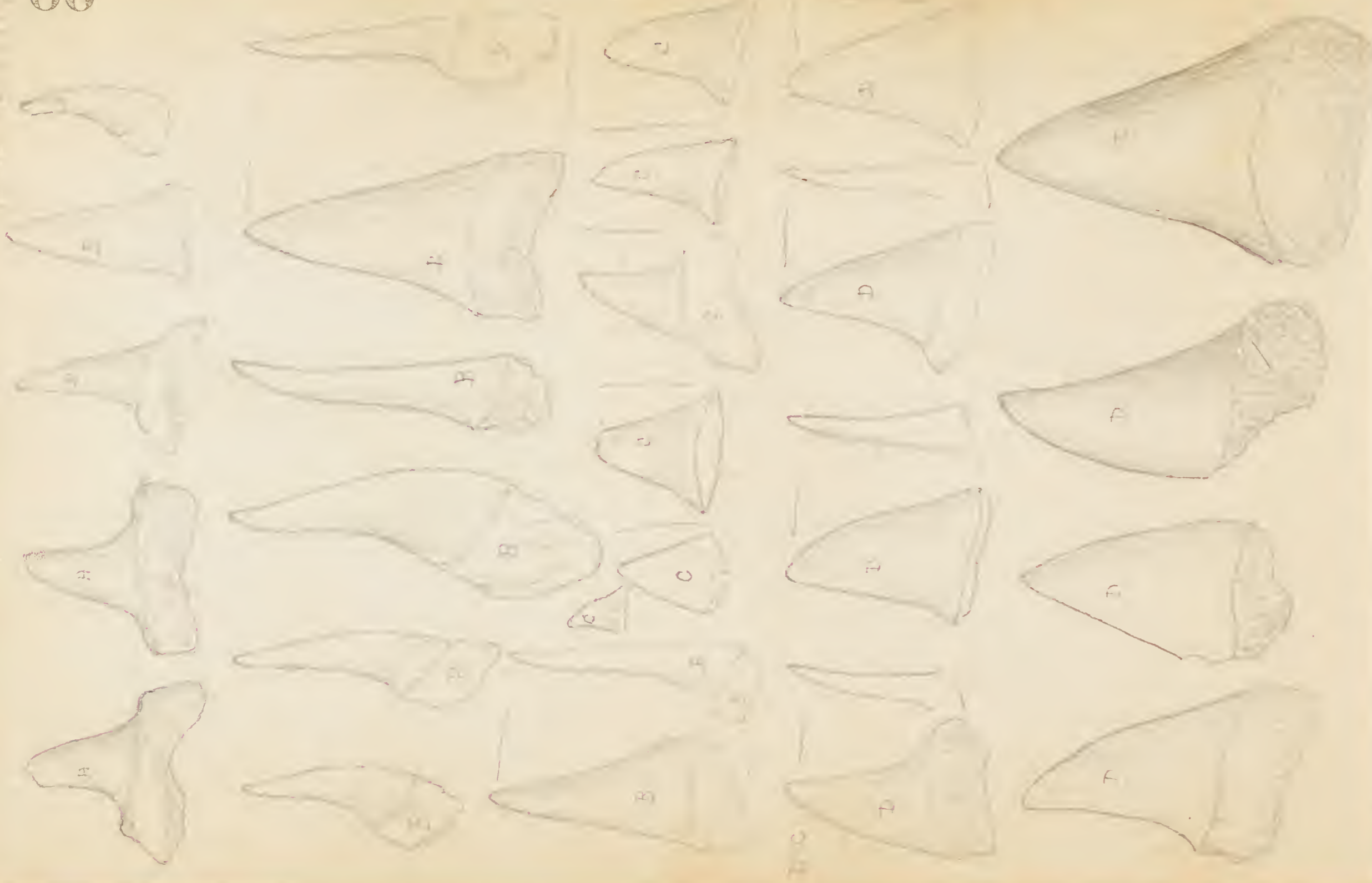
NOT
3/18/54
3/18/54
3/18/54



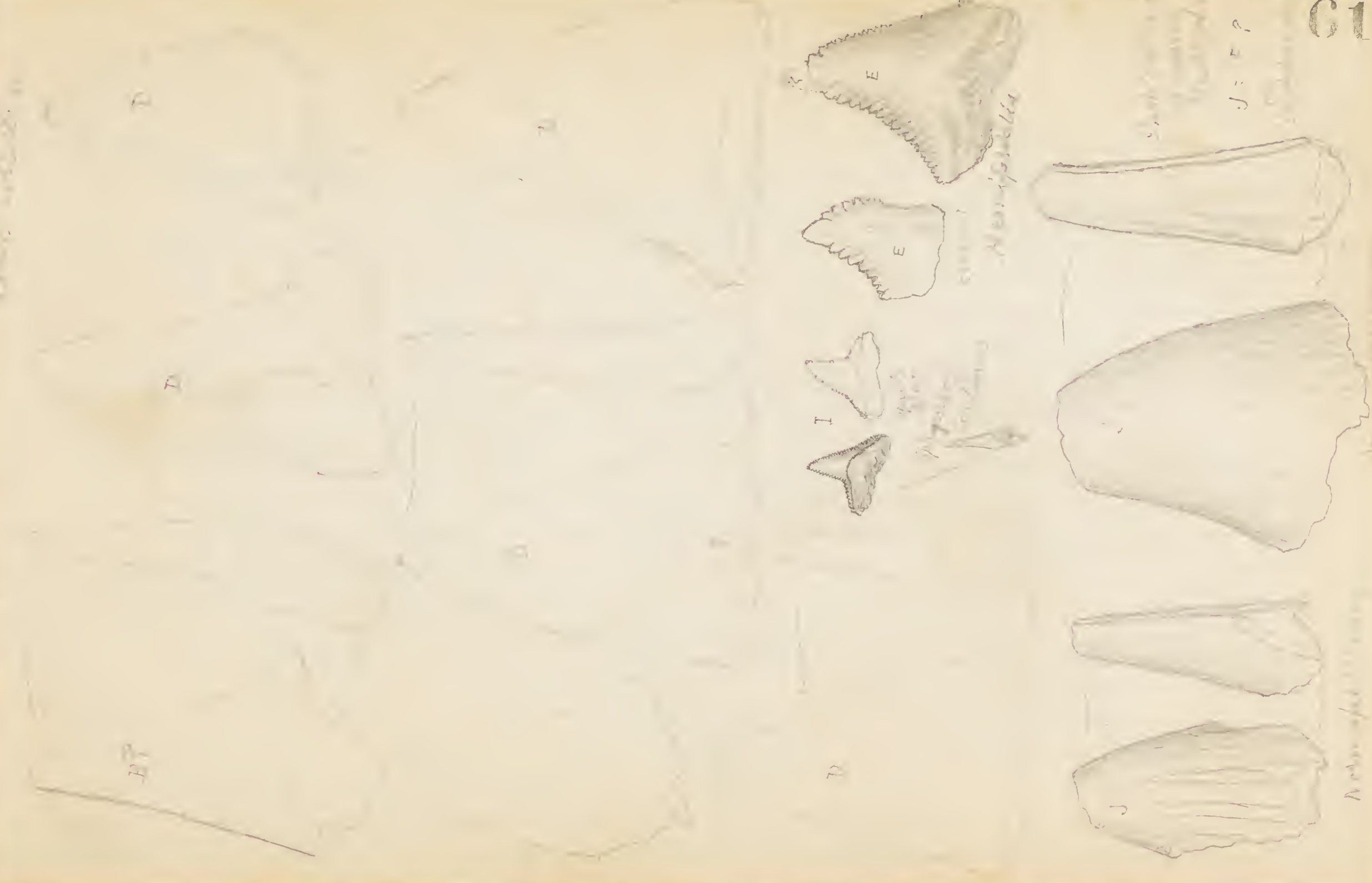
NOT
3/18/54
3/18/54
3/18/54



Pinnaculites



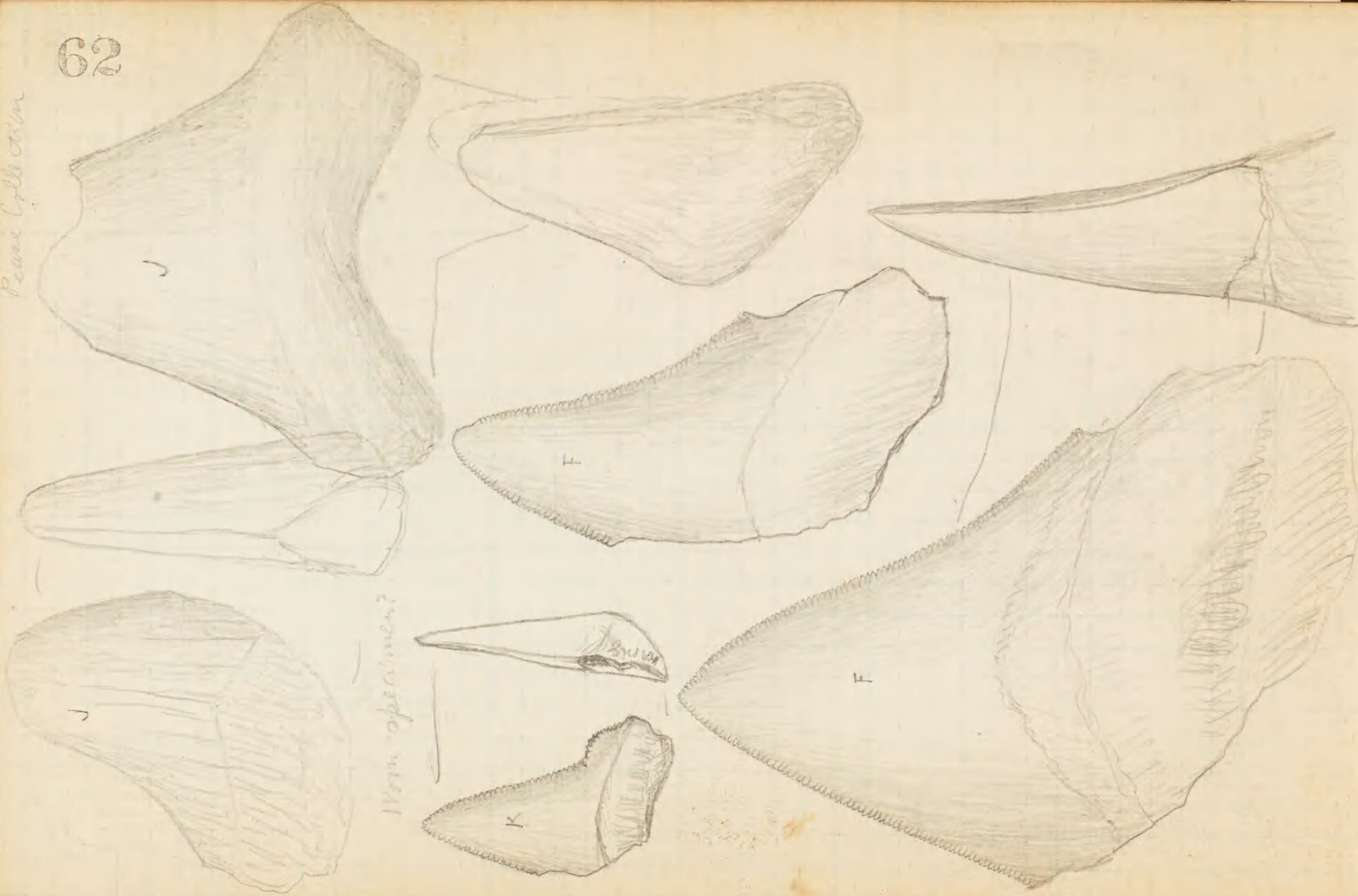
Conus



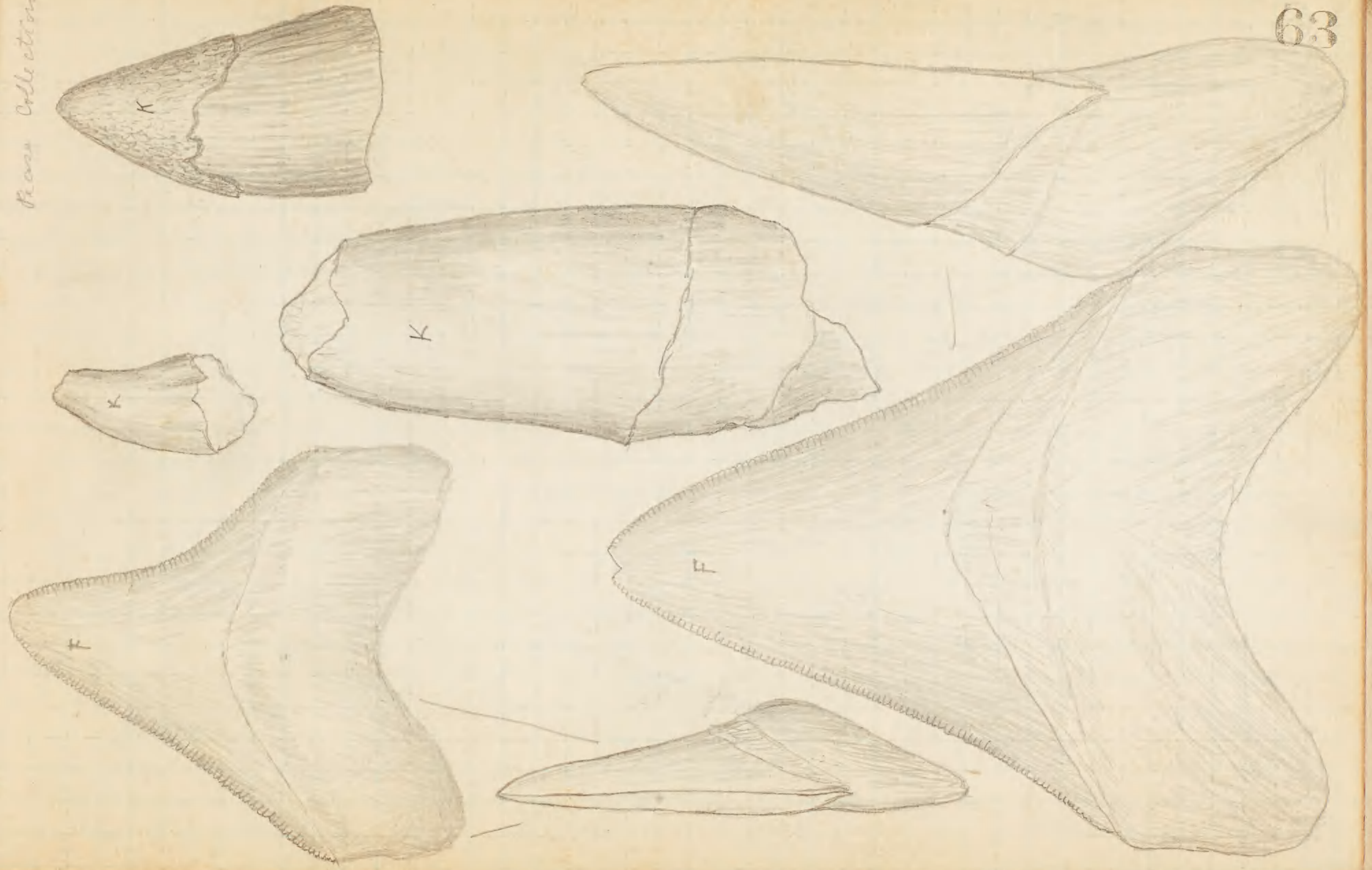
J: F P

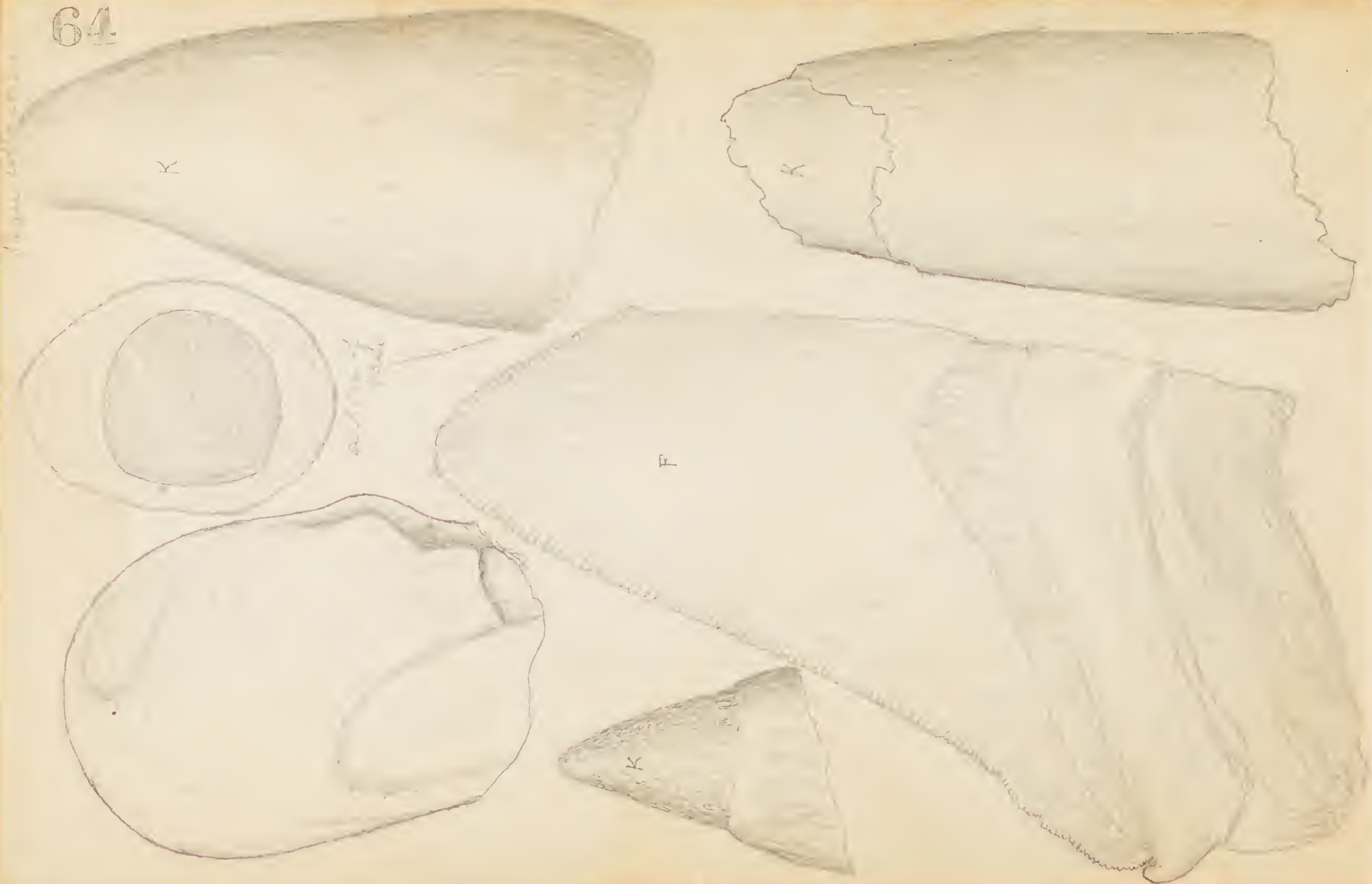
Archeoglyptus

Pearse Collection



Pearse Collection







Strombus

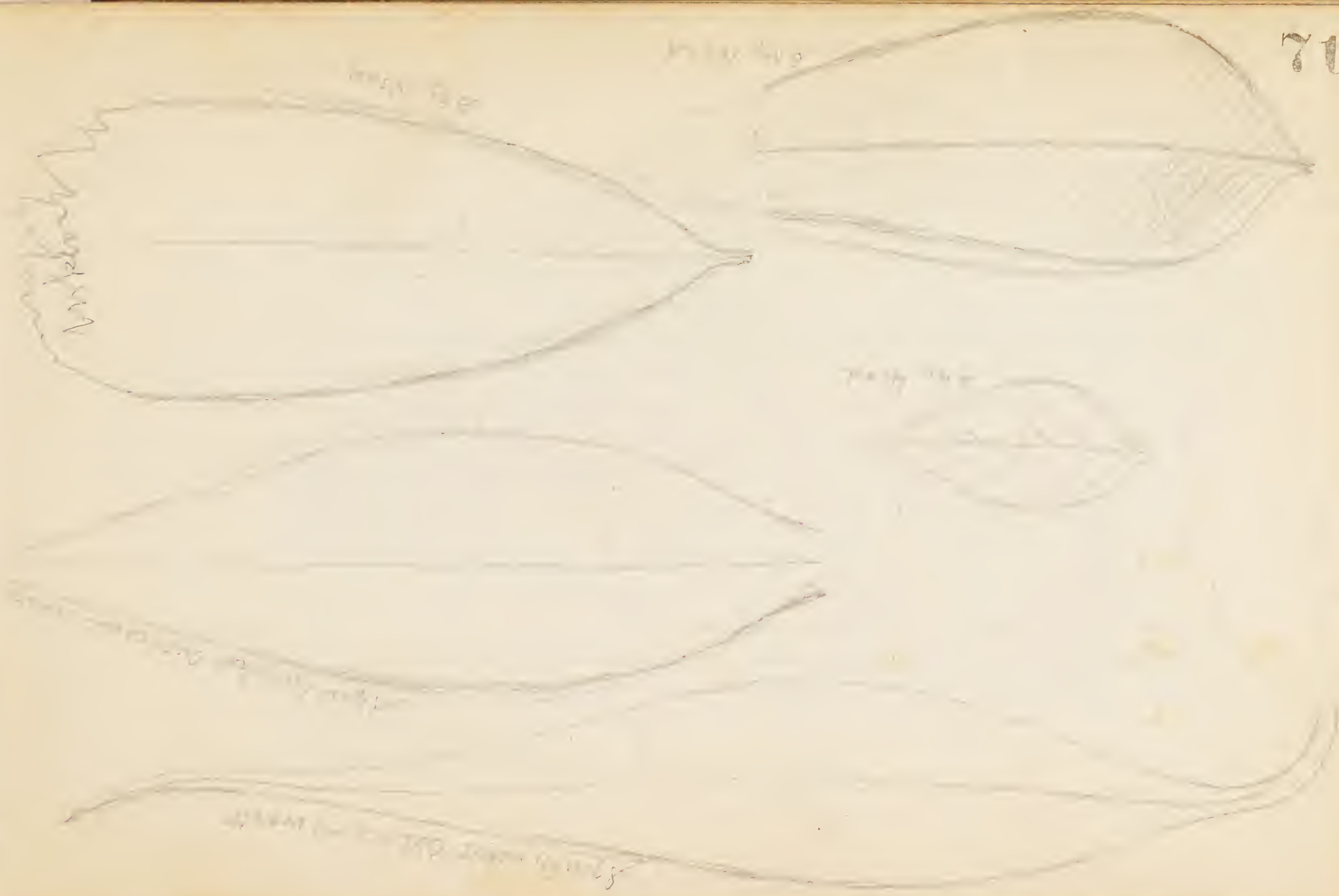


Paralichthys oblongus
Paralichthys



Handwritten notes and a small sketch of a plant or seed structure.

Handwritten notes and a small sketch of a plant or seed structure.



Buccinum (Ostrea alpinum) longicauda, Conrad.
Munich, 1844. Determined by S. J. G. M.

Some not accurately determined, but this is the
first not infrequently cited from the 18th cen-
tury. Most probably given, a more recent form.
Alum Bluff, Cheapeaks, 11-13 with the same
or last shell.

Some given as type apparently, 8-9 vertical center,
1 mm; below Bluff, Pa., Bu. also de-
scribed as all. (A single specimen of
11 vertical center, more slightly defined)
At Alum Bluff in Clippings.
To me the relative size of Bluff seems nearer
Buccinum in shape of the shell canal.

A genus near Buccinum or Verruciformis.
A species at
East Oxford & Nelly,

Another species very similar but an Alum
Bluff Clippings.

Triton (Ostrea) M. W. H. for recent species.

Antenna, near similar generic reference. John. Like my
first mentioned as new species but in the all. species
bits likely to be more abundant, the others more
open slightly slender.
East Oxford & Nelly.
W. H. E. of Bluff, a triangle not specimens
taken as type of this form, apt to have the
air my described situation.

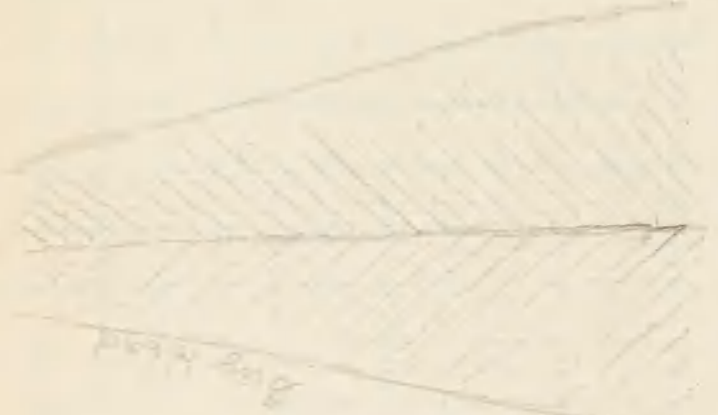
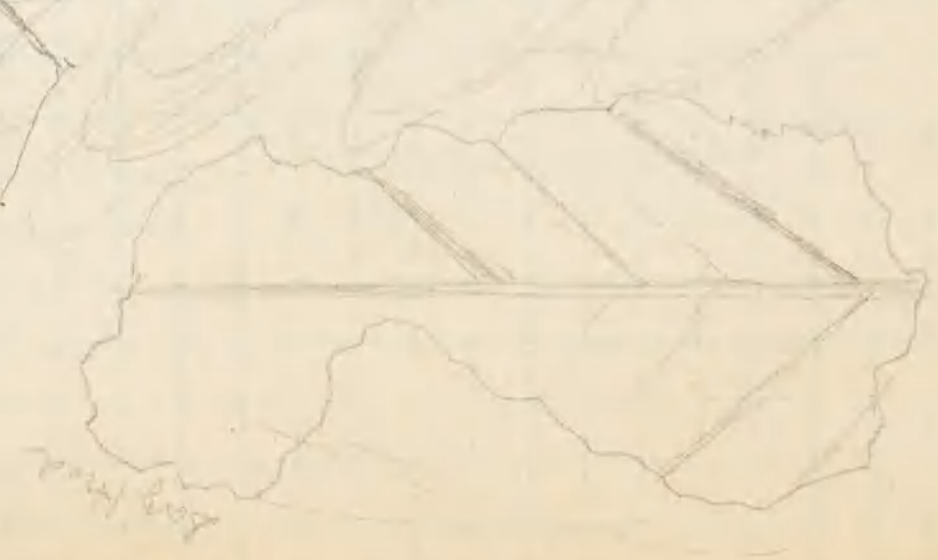
Helix adamus Dall.
Baltimore & Nelly,

Buller's? see Helix minima, Dall.
East Oxford & Nelly.

in (Bryozoa)
page 49



of this leaf from middle of the top of
margin is an oak leaf



Baccharium (*Physocarpus*) *laevigatum* Turcz.
Album (Ruff) *Chrysophyllum*,
Wangh, *leucum* by Johnson.

Some not accurate by det. *laevigatum*, but this is the
fruit not infrequently cited from the *Wittgen*
see *Wittgen*, *Wittgen*, & *Wittgen* *Wittgen*,
Album (Ruff) *Chrysophyllum*. 11-13 *Wittgen* & *Wittgen*
not *Wittgen*.

Some *Wittgen* as *Wittgen* 8-9 *Wittgen* *Wittgen*.
1 *Wittgen*: *Wittgen* (*Wittgen*) *Wittgen*, *Wittgen* *Wittgen*
are *Wittgen* as all, (*Wittgen*) *Wittgen* (*Wittgen*)
11 *Wittgen* *Wittgen* *Wittgen* (*Wittgen*)
But *Wittgen* (Ruff) is *Wittgen*.
To me the *Wittgen* *Wittgen*, both *Wittgen* *Wittgen*
Baccharium is *Wittgen* of *Wittgen* *Wittgen*.

A genus near *Baccharium* or *Wittgen*.
A species at
Wittgen & *Wittgen*, *Wittgen*,

Another species very *Wittgen* but *Wittgen*
Wittgen *Wittgen* *Wittgen*.

Wittgen (*Wittgen*) *Wittgen* for *Wittgen* species,
Wittgen, *Wittgen* *Wittgen* *Wittgen*. *Wittgen* like *Wittgen*
fruit *Wittgen* as *Wittgen* *Wittgen* but *Wittgen* *Wittgen*
fruit *Wittgen* to be *Wittgen* *Wittgen*, *Wittgen* *Wittgen*
open *Wittgen* *Wittgen*.
Wittgen *Wittgen* *Wittgen*,
WILLIE of *Wittgen* *Wittgen* a *Wittgen* *Wittgen*
Wittgen as *Wittgen* *Wittgen* *Wittgen* *Wittgen* *Wittgen*
at *Wittgen* *Wittgen* *Wittgen*.

Helix adamensis *Wittgen*,
Wittgen *Wittgen* *Wittgen*,

Baccharium *Wittgen*, *Wittgen*,
see *Wittgen* *Wittgen*, *Wittgen*,
Wittgen *Wittgen* *Wittgen*,
Some *Wittgen* *Wittgen* see *Wittgen* *Wittgen* (*Wittgen*)
Wittgen *Wittgen* *Wittgen*?
see page 49



of this leaf given under the top of
might be an oak leaf.



1 Naum

Chipsa at Oldman Bluff.

2 Naum are subcapitellum *Heilprinii*.
differs in the presence of a moderate ridge below the row
of small spines.
Chipsa 1 mi. below Barley's Ferry.

3 Naum

Historford Bluff common.

4 *Plectostoma* (*Spirula*) — aspect of Naum,
1 mi. below Barley's Ferry, 2 spec.

Acidobola — n. sp.

~~Chipsa~~
1 mi. below Barley's Ferry, common.

***** genus?

Two species of *unifurcata* genus occur in the Chipsa
but they seem to belong to *unifurcata* near *Priscianum*.
* *unifurcata* Bluff. Larger species, 1 spec
* *unifurcata* Bluff. Smaller and more
slender species. 1 spec.

Leptostoma —

* *Leptostoma* Bluff. common.
Chipsa at Oldman Bluff 1 spec.

Bulla —

* *Magnum* Bluff. 1 spec.
* *Magnum* Bluff in Chipsa 1 spec. identical to form
" " " " 1 spec. doubtful but
partly " " " " " " " "
but it has an ridge along the lower third of the
inner lip owing to the reflexed margin being more
fully developed and pointing up the depression
behind this ridge. + the neighboring *obovata* are
more numerous. yet they all probably be
same species or at least close varieties of the
same species.

Delatella Aldrich! Doe,

Chipsa at Oldman Bluff. *Emmema*
near middle of Bluff, but no place
but too soft to make out well.

Conus diluvianus, described from *Chaeopetes* Whiting
of Naves + Cape San River, North Carolina. Common.

Cypraea —

a form apparently between *distans* between
Willcoxii and *Heilprinii*, differing from
Willcoxii in the wider on the *distans* with be-
ing about an *ac* covered ~~to~~ *distans* in *distans*
and not straight at any the middle, and in the
inner lip strongly overcast the very extremely
of the upper end of the shell but slightly
greened. From *Heilprinii* it differs by the
less attenuated form of the lower extremity
of the shell. The *distans* is just about 4
and nearer *Heilprinii* than *Willcoxii*.
Chipsa of Oldman Bluff.
Chipsa of Oldman Bluff.
(The *distans* is *distans* in *distans* in *distans*
but *distans* is *distans* in *distans* in *distans*
tests at T.ampa.)

Conus planiceps. Heilprin. 21st.

Typical. *Magnum* Bluff. This species from which *distans*
absolutely the acute apex, and broader around the outer
side of the upper angle of the shell. *distans* showing
obscure on flat and upper side of shell.
1 mi. below Barley's Ferry, the same.

Variety of *distans* from *Willcoxii* of *Magnum* Bluff.
12 mi. N of *Willcoxii* Bluff. with a single flattened apex,
a single latitudinal ridge in the middle of the flat top of
each whorl. As for *distans* *distans* at the outer
side of the upper angle of the shell, varying in *distans*
distans Bluff and 1 mi. below Barley's Ferry.
intermediate form: has dorsal spine on flat upper side,
an intermediate spine and an angular angle at top of
shell with a very faint *distans*. This is nearest *distans* from
distans Bluff. *distans* Bluff. *distans* Bluff.



1 *Platanus alberta* Parry, with the usual variety *Platanus alberta* Parry, 1913, W. Pa. (Missouri, West Pa.)
 x *Platanus alberta* Parry, in. 1913
 x 1 var. *Platanus alberta* Parry, 1913, C. 1913

Platanus ———
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913

2 *Platanus* ———
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913

Platanus ———
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913

3 *Platanus* ———
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913

4 *Platanus* ———
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913

5 *Platanus* ———
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913

6 *Platanus* ———
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913
 # 1 var. *Platanus alberta* Parry, 1913, C. 1913

151 Farm 10 mi. Creek.

150 yds.

to bridge.

Chattahoochee on W side at Perry
and on both sides to bridge, 15 feet above water
exposed. Brit. sh. to, common; soft light
brown rock with a siliceous layer & l. sp.

250 yds

2

at end of course I collected
good Chattahoochee fossils.

100 yds

South

Chattahoochee makes exposure along E bank,
at 100 yds layers further down the river.

3

S 55 E The Chipicola begins about 100 yds
north of the beginning of this course
and extends for 100 or 500 yds down the
river. The first exposure of the west
side: One fair one on the east further
down stream.

4

About 900 yds E on the stream on W side
of stream was a bed of almost light brown
porphyrous spring to sea along margin of
substance of the porphyrous fossils.
It is a shale of Chipicola. Only *Orpites*
not in form of casts. Detail 100 yds

South

Orpites + *Turbidula* towards 200 yds.
at 100 yds on east bank.

5

S 30 W continuation of last locality 250 yds.
all along west bank; a light brown
soft rock about 2 feet above water.

South

600

S 15 W at end of exposure on W side is 800
a *Chipicola* exposure, chiefly under
water

S 55 E

At end of this is Magnesian
shale with a magnesian place for
Chipicola fossils.

250

Section

30 feet reddish clay & sand.

15 feet clay between light brown and white according
to depth & weathering, full of flat pieces of
1/4 in cm. extremely characteristic brown
color.

30 feet whitish sand very calcareous full of calc.
as in the grayish shales; the fossils - in case
not by the distribution as to form, fossils
chiefly towards bottom; general angle of
strike about 45° or 60° at *Orpites* level; only *Orpites*
& fossils so far as known *Chipicola* but for *Orpites* in
No good fossils found certainly no *Orpites* are,
Orpites found. Do not look like *Orpites* sp-
ies.

7

Shore of position *Orpites* good fossils at
15' above river. *Chipicola* fossils, *Orpites* fossils
very distinct & they are all *Chipicola* fossils
not *Orpites* but *Chipicola* shales are
thinly laminated by *Orpites* level of *Orpites*
are fossils that are *Orpites* in the river.
2 feet above water and 3 feet below land
Chipicola rocks.

8

S 35 W rock exposure on E side about 800 yds
the way about 2 feet above water line.
The first part after the cliff was outcrop.

S 10 E

20 Dismantle the wheel 4 ft 4 in dia.
 S. W. side's depth 550 yds west

N 40° W	50	100	242
N 50° W	70	242	339
N 80° W	80	387	387
N 50° W	86	416	416
N 40° W	80	387	387
West	50	242	242
N 70° W	80	387	387
N 70° W	35	169	169
N 60° W	40	193	193
N 70° W	195	943	943
N 55° W	63	305	305
N 70° W	60	290	290
N 45° W	100	484	484
N 40° W	48	218	218
N 50° W	50	242	242
N 60° W	50	242	242
N 45° W	50	242	242
N 60° W	33	169	169
N 80° W	92	444	444
N 50° W	40	191	191
W	42	208	208
S 80° W	50	242	242
N 85° W	75	363	363
N 65° W	35	169	169
N 75° W	60	290	290
N 80° W	55	266	266
N 80° W	95	430	430
N 75° W	45	218	218
S 70° W	30	145	145
N 50° W	35	169	169
N 60° W	40	191	191
N 70° W	25	121	121
N 70° W	140	677	677
N 30° W	20	97	97

to Durham's house in life

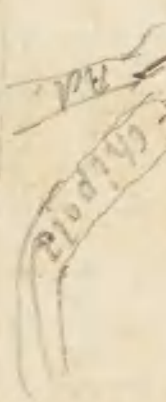
to Durham's house in life

to Durham's house in life

a little steeply bottom -
 to red oak church on life

to Durham's house in life

N 80° W	45	218
S 80° W	35	169
At junction To road		
1/4 To Bazley Ferry	20	133
S 60° W	133	653
W	65	314
N 73° W	75	363
S 60° W	180	870
S 40° W	50	194



S 80° W	63	305
S 100° W	18	72

494
 $\frac{484}{193}$
 679
 292
 $\frac{484}{193}$
 306
 0
 339
 44
 29
 242
 $\frac{484}{193}$
 29
 241.50
 $\frac{484}{193}$
 338.52
 125

2.8 pt. 1 day
 2.8 | 5280.0 | 1886 slope to 1 mile
 28 | 248 | 390 rev. to 1 mi.
 224 | 224 | 390 = 1886
 249 | 249 |
 1 mi = 4836 slope
 5 " = 24180
 10 " = 48360
 20 " = 96720
 30 " = 145080
 40 " = 193440
 50 " = 241800



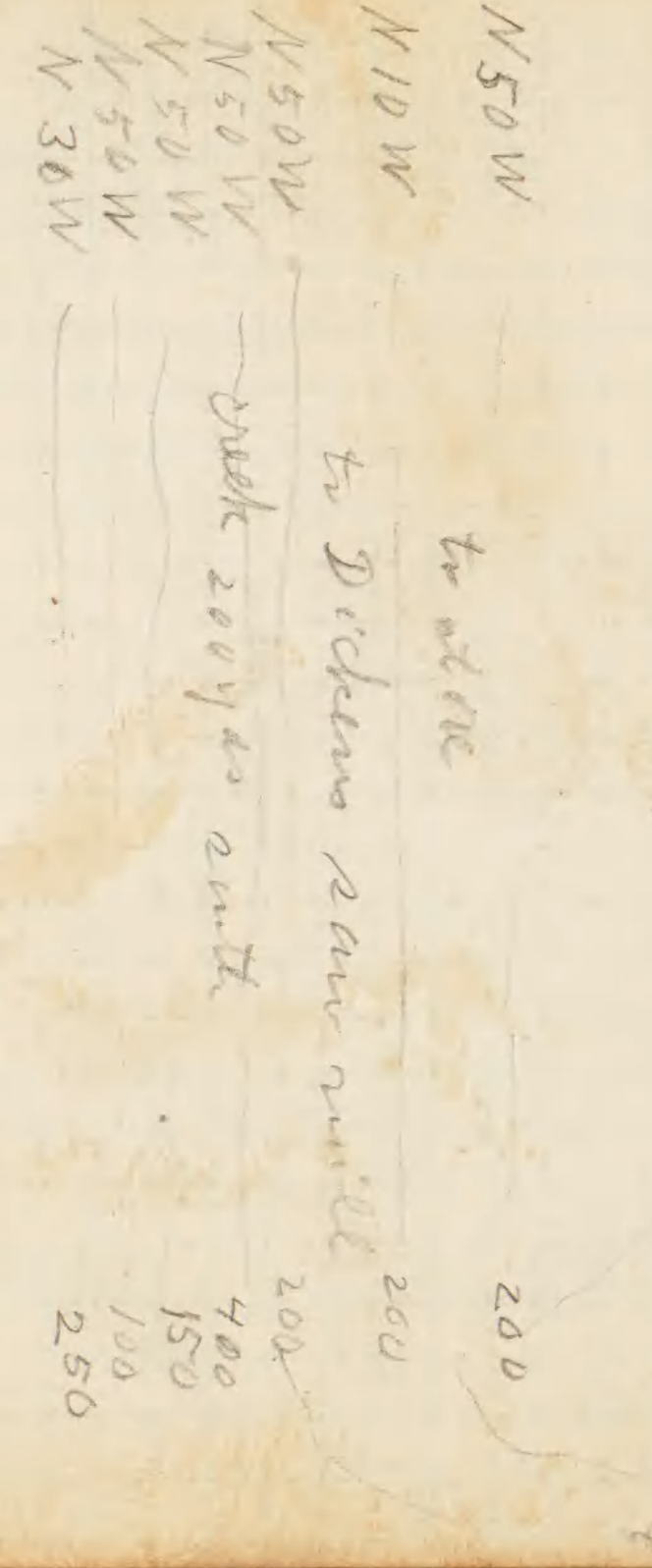
31416
 $\frac{425}{94248}$
 $\frac{24248}{125664}$
 $\frac{1303128}{1303128}$

13.6 | 5280.0 | (388
 $\frac{408}{1206}$
 $\frac{1088}{1088}$
 $\frac{1120}{1120}$
 32

395 New for 1 mi.

N 20 W. Blounts town, | 70 = 170 (206)
 road fork, take right road at 1 mile 320
 N 8 W
 N 10 W
 N 25 W
 wood road to right.
 50
 400
 800
 240

N 80 W
 S 70 W
 make east turn left side of road
 Run into Apalachicola
 take d. 1 mi. d.
 State
 Sutton's Coade
 Blounts town
 into cut off.
 Take d. 1 mi. d.
 to stone
 to Dickens run mill
 creek 200 yds south
 200
 200
 200
 400
 150
 100
 250



Solen ensis.	Litorina ruolis	Physalia
Mya arenaria	Litorina lotorea	Aretbuse
Mya truncata	Litorina palliata	layia
Mactra solidissima	Lunatia heros	roskola
Petricola pholadiformis	Lunatia triseriata	Aurelia
Tellina tenera	Neverita duplicata	flavidula
Lucina dentata	Columbella avara	
Astarte castanea	Purpura lapillus	
Cyprina Islandica	Nassa obsoleta	
Cytherea convexa?	Nassa trivittata	
Venus mercenaria	Buccinum cinereum	
Hiocardium Mortoni	Busyon canaliculatum	
Cardita borealis	Busyon carica	
Arca pexata	Ranella caudata	
Arca transversa	Melampus bidentatus	
Mytilus edulis	Helix albolabris	
var. pellucidus		Serpula
Modiola modiolus	Platycarcinus irroratus	vermicularis
Modiola plicatula	Lupa dicantha	Anatifa
Pecten irradians	Littinia canaliculata	?
Ostrea Virginiana	Belasimus vocans	Balanus
Ostrea borealis	Pagurus pollicaris	eburneus
Anomia electrica	Pagurus longicarpus	Balanus
	Homarus Americanus	iriser
	Limulus polyphemus	Balanus
Tectura testudinalis	Orchestia longicornis	fistulosus
Tectura alveus	Orchestia gryllus	Balanus
Crepidula fornicata	Idotea caeca	rugosus?
Crepidula convexa		

Buccinum undatum.
 Spirula fragilis
 Spirorbis
 Solecurtus gibbus
 Pholas truncata
 Omnastrepes sagittatus
 Crepidula plana
 Terebra Norvegica?

