



U.S. Geol. Survey
Tallahassee, Fla.



30.

Dec. 1914 - Jan. 1915.

5-13-14

referred to page 62.

56.481

Brookline, Mass.

Send Taylor cord.
" C. J. Sorle, full set fossil.
St. Lawrence Univ.
Canton, N. Y.

~~Hotel Endicott~~

~~21st & Columbus
July 6th am El to 81st St.~~

~~Fowler, Sec. Acad. Nat. Sci. Phila.~~

~~14th & Dim. 1st Gladstone.~~

Chlorocephalus as compared to recent
Amphipoda, ranges of fossil insects
feathered more

afternoon Nov. 31 at 18th & Montgomery
from Rothermel in charge. Examined specimens of Wagner Tree Trunk
The turtle Enys. Cryptotriton & Ludy has
very much coarser sculpture than
has No. 3735. The neural plate also
is pointed as figured.
The collection contains bison teeth
from Pease Creek & from 12 mi creek.
& a bison leg bone from Stump Pass.

December 31. 1914.

Examined fossil fishes in
the collection of the Plaid
Academy of Sciences, 19th + Rae Sts.
Chiefly rays and sharks.

The ray teeth were mostly so
preserved as to show plainly
the comb like structure of
the ~~teeth~~ roots.
Among the specimens seen
were 1. Raja dux. scales with roots & enamel
gone.

2. Myliobatis gigas. and some others.

afternoon Dec. 31. 1914.
(Mr. Rothermill in charge) at 18th + Montgomery
Examined specimens of Wagners Tree Toad
the turtle Emys. Cryptota of Lundy has
very much coarser sculpturing than
has No. 3735. The nuchal plate also
is pointed as figured.

The collection contains fison turtle
from Pease Creek & from 12 mi creek.
& a bison leg bone from Stump Pass.

A small box contains 3 specimens
apparently all different under the one
name *Riodon Vetus*. One of these
specimens is some as no.

The Collection contains
Chlamadotherium from Humboldt
from both Pease Creek & White River.
The scale (no other yet found)
is identical with those from
Vero.

A single plate labelled
Glyptodon septentrionalis is
much like if not same as
Chlamadotherium.

A whale vertebra labelled
~~*Gorydon*~~ *serratus* from Acala
is much like some vertebrae of 2287

The Indian Rhinoceros, *R. unicornis*, 3
has $9\frac{1}{2}$, $C\frac{1}{2}$, $Pm\frac{1}{3}$ & $m\frac{1}{3}$. The two
tusks are procumbent. Between
these are two very small incisors.
The jaw does not show the notch in
front seen in the Florida rhinoceros.

The Indian elephant, *Elephas
maximus* seen & read at Phila
has 4 functional teeth, one in each
jaw.

Jan. 1, 1915. - Left Philadelphia for
New York. at N.Y. from the Pa. Sta walk
out on 32 Ave block to the 6th Ave El.
Take 6th Ave El to 81st St. the
Endicott Hotel. 81st & Columbia,
at the Amer. Museum -

skeleton of a recent armadillo, not
named. Its rostrum & jaw is seen to
be inclined backwards not so much
as that of *Chlamadotherium*.

Compare the jaw from George
River with that of the recent Bison,
from which it differs entirely.

Recent rhinoceros, not
named. The tooth sockets of the
tusks flattened transversely
and measuring about 50
by 35 mm. Two small incisors
are found between the tusks,
and the front of the jaw is not
notched.

Full length of the jaw 51 cm.
length of the symphysis $14\frac{1}{2}$ cm.
In this jaw is seen 3 m & 3 p.m.

Tuskeros fonsiger has two
small teeth between the tusks
and has no notch in the front
of the jaw. From this skeleton
it would seem that this species
has only rudimentary upper incisors,
the sockets of which are nearly round
and of about this size ○ ○
or a little larger.

Aphelops megalodus
has incisor teeth between
the tusks and no notch.

Notes on the Elephantidae.
Mastodons.

The ashley skull of *M. americanus*
shows the upper molars in use
of which the last is about 18 cm
long by 9 cm wide. It has
four oblique cross valleys &
5 cross ridges, the back ridge
running ~~being not~~ entirely across. No
obstruction in the valleys.

The Warren mastodon the
most complete skeleton known
of the species, shows two teeth
in use in the fore the lower &
upper jaws. 8 teeth in all.
This specimen shows also

rudiments of teeth in ⁶
tusks in the lower jaws.
The two tusk rudiments, only one
preserved, are almost together
and are about 8 in long by
 $1\frac{1}{4}$ in in diameter.

Elephants.

a skull of *E. columbi* on
exhibition shows one functional
tooth in each jaw, the plates are
narrower than those of some
Florida elephants. also a single
tooth separately mounted &
labeled *E. columbi* has fewer
plates than the Florida specimens.
However, one of the specimens
labeled *E. columbi* shows
plates about as coarse as those
of ~~*E. columbi*~~ the Florida specimens.

In a skull of *E. imperator* the
tooth plates are seen to be
about as in some of the
Florida specimens. a lower
tooth nearly however but only
about $4\frac{1}{2}$ or 100 cm. this
being worse than in any Fla.
specimen. This tooth was well
worn.

The calcaneum photographed
does not seem to be that of
E. columbi or *M. americanum*.
Some bone in *E. imperator* not seen.

Recent elephants.
a recent elephant, not named, has two
functional teeth in each jaw. 8 in all.
it is on elephants with large tusks.
Elephas indicus has only rudiments
of tusks possibly 1 ft long. it has
two functional teeth in each jaw.

another has tusks 4 ft long
2 inches

Sharks teeth.

Examined with Mr. Hasselhoff,
of my plate of photographs of
small teeth he identifies the
following.

1st Line. Figs. 1, 2 & 4 are
Isurus (or yrhina) desorii (Agassiz).

1st line, no. 3, (is smooth on the edge) is
and 2nd line #3, and 3rd line, no. 1
probably also no 3. One

Odontaspis (somus) carpidate

2nd line, no. 2. Corchorodon
auriculatus (Blainville).

3rd line, no. 4 is Hemipristis serrata
from near the front of the jaw.

4th line, no. 4 is Galeocerdo
aduncus.

4th line, no. 5 is H. serrata with
fore incomplete.

4th line, nos. 2 & 3. Corchorodon
collata Eastw. See my report
more on Pitt. plate. pl. 32. fig. 5.

2nd?

2nd line, nos. 4; 3rd line no. 2 & 3

~~3rd line, no. 4~~ 4th line, no. 1. One
Otodus obliquus.

In the case down stairs
specimens labeled Rhodon vetus
are none of the plates in Fla. coll.

Three species of corchorodon
as follows. Very large edge
almost smooth. C. megalodon;
medium sized, edges serrate, C. arcuatus.
Somewhat smaller & sharper C. acutidens.

C. angustidens is restored
showing about 80 teeth in the
upper jaw arranged in 4 rows,
the largest near the middle &
smaller toward the ends. In the
lower jaw about prob 60 in
about 3 rows. This ~~white~~ ^{white}
shark which was about 80 ft long
is said to be much like the
modern shark white shark or

mon eatr which works a
length of 28 ft. (10)

Turtles.

Trochynus petroli Ray has
a very pointed nuchal plate. not
unlike only seen from Florida.

Cetaceans.

Curved bone is cor bone of cetacean.
Black vertebra is of some group.

Rhinoceros.

No rhinoceros found in the Amer.
mus. shows a notched lower
jaw as in No. 3637. Also no
rhinoceros shows the cingulum
on the outer side of the teeth as in
No. 3500.

11

T. fossiger, No. 2604. Mounted
skeleton.

Distance between tusks about $5\frac{1}{2}$ cm. (55 mm)
Sockets of tusks about 80×25 mm
Incisors between the tusks small +
one about 25 mm apart.

No cingulum inside or out. Teeth
very large. Pm 2 is wanting. Teeth
large especially the upper ones.
Lower border of the jaw more rounded.
Incisors for molar not so powerful
as in No. 3643. Such as $2\frac{3}{4} \times 2\frac{1}{2}$ $2\frac{1}{2} \times 2\frac{1}{2}$ P_3

T. fossiger, ♂ # 8393, long fork.
Large tusks, well apart. no notch.
Pm 2 wanting. No cingulum on
any teeth, at least not on outside.

Rhinoceros, no. no. (Prob. *T. fossiger* ♂)
Symphysis 15 cm. Tusk 11 cm.
width of jaw at constriction 13 cm.
Incisors between the tusks dropped out.
Jaw not notched. Tusk 35×40 mm.
Pm. 2 wanting. Distance from tusk to
Pm 3, 40 mm.

2606 + 2605 *T. fonsiger* ♀ from K.S.
Symphysis 13 cm. width of crest 9 cm
space incisor to 2nd Pm 35 mm.

2nd Pm very small. Turb 6 cm by
sockets of Turb 30 x 25 mm.

Incisors between the Turb small
& far apart. Jaw not notched.
Inside of jaw does not show
some rugosities for mussels.
no cingulum on any of the teeth

2623 *T. fonsiger* ♀ from Fab K.S.
Symphysis 14 cm. width of crest 9 cm.
width crest to crest 6 cm

" across the turb 14 cm.
distance turb to 2nd Pm 4 cm (worm)
2nd Pm very small
Rugosities on inside of the jaw north side
No cingulum on either upper & lower
teeth. (see 2623 cont)

8393 *T. fonsiger* ♀ Figs.

Incisors very small and lying
almost against the turb sloping toward
them. There is a slight suggestion of
a notch also. Sculpturing of the
lower jaw not the same.

Symph. 12 cm, width of crest 9 cm
space from incisor to Pm 50 mm
width across the incisors 85 mm.

No. 2623 cont.

width of turb sockets 35 x 30 mm.
molar-Pm series 25 cm, molar ser. 15 1/2 cm.
3rd molar. 59 mm, 2nd, 57 mm, 1st 45 mm.
4th Pm, 43 mm, 3rd 28 mm, 2nd 16 mm.
Length of turb 40 mm. Worm.

No cingulum on any tooth.

8393 cont. - width of sockets 30 x 25 mm.
crest to crest 52 mm;
m. Pm series 26 cm; molar series 14 cm.
Ramus 15 cm wide; Bas to Op 23 cm.
No cingulum on any tooth.

8419 *T. fonsiger* from Fab. Small
turb close together, but no notch.

2501. no notch.

Aphelops megalodus Type of Jn.
8292. On the lower jaw is seen
incisors between the tusks, small and
joined close together. Tusk not large
& closer together than in *Teleosaurus*.

Space from incisor & Pm 2 about 50 mm
width across incisors 92 mm.

" 8 incisor sockets 30 x 30 mm.
Length of tusk 8 cm
width cost to cost 30 mm

No cingulum above or below.

Teeth about the size of no 3636.
Sculpturing not the same. no notch

9082, *Aphelops propectum* type
sculpturing on inside of jaw much the
same as No. 3643. Lower border
similarly notched in front of the angle
pressure of two incisors between the tusks
shown by the sockets. No cingulum on
the teeth. Jaw smaller than the
Fla Nos. 3637.

(15)

Peraceras superciliosus.

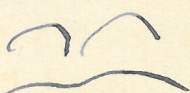
10878 from S. Habota.

Symphysis $14\frac{1}{2}$ cm. Pm 2 wanting.
width across the incisors 10 cm.
no notch at front of the jaw.

10878? *Peraceras superciliosus*
lower jaw very large. Pm 2 wanting.
no cingulum, jaw not notched in fact.
sculpturing on the inside of the jaw not
the same.

2634

a young specimen, tusk just emerging.

Form of 2nd Pm thus 

" " 2nd " " 

no cingulum.

8292. - *Acrotherium megalodus*.
no notch in large jaw. no cingulum.

1081. *Metamynodon planiceps*.
large form. jaw not notched. no cing.

1084. 4 grinds. jaw not notched.

Miscellaneous.

E. imparator tooth #12852 has 6 plates to 100 mm on the grinding surface & about 7 plate across the tooth.

#3658 *H.* coll is not *B. antiquus* which has a wave under jaw.

Set. Osborn's paper. New marine Rhinoceroses with Review of known species. Bull. am. mus. vol. 20, at 270x.

Set. Sidley's. Revision of Miocene + Pliocene Hares of N. A. Bull. vol 23, 1907. pp 865-932.

Sunday Jan. 3. attended all angels church with B. Brown. in forenoon & in afternoon the Zoo.

Elephants - the Zoo has four elephants two each of the Indian & the Soudan African elephant. The female of the Indian elephant has no tusks, but the male has. The Soudan African elephant has much larger ears than the Indian.

The Indian elephant is *E. indicus* 17
The Soudan is labeled *E. oxycotis*.

Topis. the Zoo has at least two. The Malayan topi *T. indicus* & the South American topi *T. americanus*.

~~Hippopotamus~~
Hippopotamus - two: the pygmy *H. liberiensis* and the usual *H.*

Also two rhinoceroses. the African *R. ficornis*; and the Indian *R. indicus*.

The Zoo has the Gornial *Gornialis gigantica* and the crocodile & alligator. a Gornial & alligator has a jaw about 1 ft long.

List. Hay C.P. 1907. Descript. of seven new species of Turtles etc.
C. humboldtii & turtles from Abofia River.

The Great outbreak of S.A. is in the Zoo.

List. Hay. C.P. 1906, Descript. of Two new genera etc. One st. from Fla.
List. Mottlem & Camb. p. 368.

Rhinoceros # 2608.

18

Young individual. No notch
Syngonium pretty well worked on
the inside, but not more than
a suggestion of it on the outside.

Literature.

Lund, P.W. 1839. - from Am. Mus. Hist. p. 22.

C. represents on a good scale Eupho-
tus. ~~size of an~~ Two species, one
C. humboldti size of a tipu; one size of
a large rhinoceros. C. giganteum.
Connects other armadillos & also Bradylod.
No allentobous.

Same in Comp. Rendus. No illustrations.
Amesbury. 1883, p. 33. Chlamydotherium

Talla comparable of Glyptodon-
This genus too seems as transitional
from the glyptobas to the armadillos
Chlamydotherium humboldti

Gervais & Ameghino. 1880.

19

Rev. by W. Brown, 1883. a new
list. Chlamydotherium

Lund. 1839. p 217 Am. Mus. Hist.
Chlamydotherium

Teeth

1^{re} par. Gervais. a genus including
directors of dental families.

2^{re} par. Compared with Euphoctes
galvipes except extremes which reach
the caracacones. & digits

Le système dentaire se rapproche
encore le plus de celui de l'Emoubr,
en ce qu'il est muni de dents
incisives (quatre en haut, six en
bas), mais les molaires s'é-
cartent beaucoup, par leur forme,
de celles de tous Tatous vivants,
et en ce qu'elles sont très grandes
très comprimées sur les côtes
et offrent une large surface plate
ou enfoncée dans son milieu

pour la trituration; cette structure les rapproche des dents des Poreux, et particulièrement de celle du genre Megalonyx. no illustration

20

Lund, 1838. Euryodon etc, x7
og som afviger fra de mulevende Bæltedyr ved en langt større Moverestemelse og talrigeste Lemninger af Forverdens Totu-arten, og som have siner Leilighed til en fuldstændig Sammenligning tilhøre den art af den nye Slægt Chlamytherium, som Forfatteren kalder Humboldtii. Denne Slægt udmærkes sig ved to Valseformige tynde Fortænder i Overbjaeren og tre soadanne i underbjaeren.

Lund, 1841. Blik Paa etc. 21
Anden afhandling: Pattedyrene.

Logoa Santa D 16^{de} Novbr. 1837
pp. 61-144. Pls. 1-XIII

p 68. mention of Chlamydothorium

Tredie afhandling:

Fortsættelse af pattedyrene

Logoa Santa D 12^{de} Septbr. 1838

p. 227. Chlamydothorium
humboldtii XIV. Fig 1. left C. Jan.

A compared with C. humboldtii

as figured by Lund, 1841. Pl. XIV. Fig. 1.

Brachythrium shows the following diff.

The ascending ramus of C. is much more abrupt than of B. as seen by the accompanying sketches. The difference is not very marked. The form of C. from the outer view obstructs the view of the last + probt $\frac{1}{3}$ of the rest to

the last molar, which in B is 22
 obstructs the last $\frac{1}{2}$ of the rest of the
 last molar. The proportions of the
 jaws likewise differ. Measured from
 the symphysis to the back of the 4th jaw
 in B is 134 : 34 while for C it
 is 100 to 26. A line from back
 end of symphysis to the jaw in B ~~does~~
 to the back end does not touch the molar
 while in C this line cuts the last
 molar. There are also differences
 in the sculptures for the molar
 as C has a lower row of tubercles
 seen in B. The notch in the lower
 border of C opposite the open buccal
 last + rest of last molar is more
 marked than in B. The row of
 C are less clearly fused than in
 B. Back of the symphysis to the jaw B
 shows $5\frac{1}{2}$ teeth while in C the
 same line cuts between the 4th & 5th
 molar.

23
 The ratio of width of rostrum ~~between~~
~~for~~ as compared with length is for
 B. 60 ~~mm~~ : 75, while for C is
 47 : 59 mm.

with jaw of C, one sees 6 teeth
 & prints a scale for the seventh.

Similarities - The conical dentition
 by amphipods is seen in both & as
 near the same place in B $\frac{20}{33}$ from
 the top $\frac{13}{33}$ from the bottom in C.
 $\frac{13}{22}$ from the top $\frac{22}{22}$ from the bottom.

The teeth of C. as seen in Pl. II
 Figs 1, 2 & 3 of the same number
 are broader in proportion to their
 length, thus the molar of C has the
 proportions .25 mm to 8 mm at various
 places while B is 18 : 6 mm.
 From the broken tooth. Fig 3 the
 internal structure would seem

to be much the same. Show the
 count of the root extends about
 a little less up the tooth & the
 median line thence to the top. The
 granular surface falls & then the
 median line is C.

In the dorsal plates we
 find again close similarity
 with some differences. There
 no median ridge is shown
 in Lindb Figs 7-10 + 12 + 13
 of Pl. I nor in figs 6 & 7 of
 Pl. X II. The plates of the
 movable ring show stronger
 sculpturing on the posterior
 border & also in the furrow
 than that shown in fig 7 of Pl. XII
 The plate itself also is more deeply
 pitted than that of C. but the
 the size however is essentially the
 same.

Comparison between an

C. from Pl. XI & Fig. 1 (1/2 of same plate)

width of center 21 mm. x 2 = 42 mm
 feet 5 molar 60 mm. x 2 = 120 mm
 bare 6 " 75 mm. x 2 = 150 mm
 Symphysis to notch 50 mm. x 2 = 100 mm
 width of rostrum 41 mm. x 2 = 82 mm
 Height of rostrum 55 mm. x 2 = 110 mm
 Head of joint symphysis 100 mm. x 2 = 200 mm
 Molar of C is 25 x 8 mm
 " of B is 22 x 6 mm.
 Six molars of C = 150 mm
 " " of B = 135 mm.

Pictet 1853. p 274. C. Sud (now Sigm)
 Atlas Pl. VIII F. 12. Top view of jaw
 showing 6 lower & 3 small teeth. The
 symphysis of the jaw begins opposite the
 middle of the 4th molar from the back.
 Fig. said to be not size. The full
 length over 73 mm. (Eura ^{could only 77} not full size)
 specimen from ^{meridional} Orissa (orig in
 Lindb 1842. Pl. 34. Fig. 9.

on the nr. mss took for 26
No. 159. Also Owen. Descriptive Cat.
of the Royal College of Surgeons, Fossil mam-
malia, 1845
Returning to Lund. 1841. Pl. II

Fig 1. Viser den fra den gde Side
og noget forfra nr. size.
tooth about 21×12 mm. in
a finger & jaw.

Fig. 3. Tag. of jaw. Tooth in longi-
section 55 mm. 8 mm wide.

Lund, P.W. Blik paa
Brasiliens ~~dyr~~ Dyreverden
för sidste Jordomvæltning

Fjerde afhandling:

Fortsættelse af Pottedyrene

Logoa Senta den 30^{de} Janr. 1841
K. Housk. Vidensk. Selskabs afhandl.
IX. pp 137-208. Pls. XXVIII-
XXXVIII. 1842.

p. 142 now c moxus.
On Plate 34. Figs. 1-8 + Fig 9
the jaw of Chelonic. Furcata.
The jaw is figured as $\frac{10}{17}$ th size.
The nearest as figures are
ant. condyle & tip of jaw 44 cm
Back of condyle to beginning of
symphysis 9 cm.
Six molars 8 cm
(or not size 6 molar = 136 mm)

The symphysis of the jaw begins opposite
the 4th molar from the back.

The teeth all ~~show~~ increase in size
from the first to the 6th. then
decrease to the ninth.

The teeth shown not size are as follows
1st 5×8 mm in face (Foster) 16.
2nd 10×6 " " (Owen) Fig. 26
3rd (Fjerde) 17×6 mm --- Fig. 36.
4th (Femte) 22×6 mm --- Fig. 46.
5th (Sjette) 24×7 mm Fig. 56.

Attenale

- 7th (Syrrenale) 19 X 6 mm. Fig. 86.
 8th (Attenale) 20 X 6 mm. Fig. 76.
 9th (niende) 14 X 4 mm. Fig. 76.
 (Fig. 7.)

The eighth tooth (Attenale) as seen from one side shows two furrows & three ridges. Seen on the crown shows the median line as in the Plutei specimen. This is the only tooth in which this line is seen.

Fig. 4. the 5th Fente tooth shows the two furrows not so deep as in Fig 7.

Fig 6 the 2th mense tooth shows the two furrows.

Fig. 8. the Syrrenale tooth i overgrown. shows 3 shallow furrows close together.

Lund 1841 Pl. II

Fig 1. visera^{div}fra the ydre side
 of noget færfra

" 2.

12 Flour & Lydeker. no illot.

p. 201. Chlamydothorium combs
 with zeyphoton.

49 Zittel p 151. no illot.
 chlamydothorium Plut. of Brozis & agt.
 c. giganteus. howlatta tylos. pronounced
 said by Ouglin & a fund in Fortin & Bot.
 nptw & hnd for the

19 Gray 1869. Col. of m. of B. m.
 no chlamydothorium

146. Huxley. 1872, vert. on.
 Not noticed. no. C.

70. P. Lydekker. p 133.

C. nine lower teeth, several movable but
 engine absent. no. inadequate,
 c. giganteus. incl c sigas & mapus. S.A.

C. limitaria B. & G. at Repub. 30
No illust. date of Genus given as 1839.
An. Sci Nat. 1838. Vol XI p 217.

43 Trouessart. 1904. p 812.

C. septentrionalis L. as young ♂

C. humilata + C. floridus spec.

27 Sydehite. Sh. 1 illustrated
Vol. II p. 1292. C. the name

Periclypterus.

p. O. Amphibia Jovado Zol. p 527,
Vol. 5 hors only 483 to + was pub. in 1876

6 Brown p. 280 on ornithology
by Turner. Preface.

9 - Pl. 1. Fl. circuli of the
proportion of the grand journal.

20 - p. 523. Gen. no illst.

35 - p. General with four
no illst. of C.

36 - p. 107-108. no illst.

51 - p. 426 Linn. C. not
listed. No illst. of any bird.

79 - p 227 list. C. parent &
extinct
no illst. in the vol.

p. 202 C. described

Repos to Bol. de la Acad. Mex. de
Cienc TV p 114. Y 300 1893
Ord TVII p 137 - 1895 - no illst.

127. p. Notes on C

139. General no illst.

41 p 443-462 relates
entire to recent Genus.

Dr. Mathers:

Tooth from Lurey is magnificent
on upper lower m or Pm.

about three sp. of Hippocampus small.

H. plicatilis + N. 3666 very large.
series also no 3520.

1626 & 1627. *Canis* fur nor
wolf.

afternoon of Jan. 5, 1915.

called on Phos. co. leaving office in N.Y.

The Phos. co. 55 Johns St. has a collection
which includes. Mortodon fine large teeth. See
tracing of tooth $7 \frac{3}{4}$ in. (19 cm) long
not quite complete by 10 cm wide,
also a few sharks teeth, the

largest of which is 112×102 mm.

~~The coronet Phos. co. 99 Johns St.~~

has also a string of a half dozen
or more vertebrae possibly of the rhinoceros.
and a few holding 3 or 4
much worn teeth not determined.

The Coronet Phos. co. 99 Johns
St. has one tooth suggesting camel
altho evidently not that. also some
shark, rays, etc. One vertebra
supposed to be *Leuglodon* but not,

The Prairie People & Florida Mining
Co. have a job lot of bones among
which is seen a section showing
upper and lower jaws of a
dolphin like whale with teeth
preserved. also two bones
like those of rhinoceros leg feet
small. also one *osteogaster* —
many vertebrae etc.

Pierce Phos. co. 2 Beator St.
no samples at all.

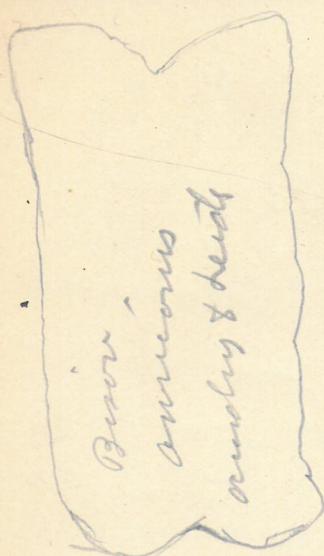
Jan. 6. Left N.Y. at 7 A.M. or
Punition at 9 A.M. Found Prof. Sinclair at
the museum. no *Chomysobothrium*.
Rhinoceros believed to be *Teleoceros*
shows m³ 60 mm; m² 58 mm
m¹ abt 50 mm, Pm 4 abt 45 mm.
also shows the cingulum well
developed.

on isolated tooth of the
collection also shows the
cingulum.

34
 Sow Scott S. A. Santa Cruz
 material. Sow also Snake
 Creek material showing
 alticamelus, also a camel
 like animal, differing from
 the camel in that it has
 the ridges on the outer side of
 the teeth strongly developed &
 has a cusp on the inner side
 of the tooth, also a number of
 other animals some of which
 may occur in Florida

2.3 plates in Rogers Tru Inst.

35



elephas

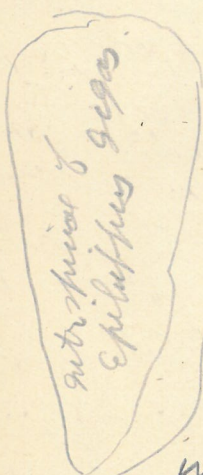
38 cm x 24 cm

Gravel size 20 cm

Plots $\frac{1}{2}$ pr

100 mm.

crinkly edged



No 1767 of the Fle
 coll. accords entirely
 with the original of

Fig. 5 of P.B. IV of Linds., except that
 Leidy's specimen is $1\frac{1}{2}$ mm thick
 while no 1767 is only 10 mm.
 that with this bone of the same
 they are the same. (and is a little less)

39 x 37 mm. Lw spec
41 x 40 mm. The sculpt-
uring is identical & equally
coarse. The depressed border of
each is the same and about the same
width. The elevation area raised
by the center is the same. The
raised line bordering the central
area is the same except that on
study specimen it rises when
on the 1767 it is depressed this
accounting for the difference in
thickness. The median ridge is
the same. The under surface
is the same. The articulating
surface is the same.

The lot includes no photo
matches Fig 4. of Pl. IV
Leidy spec. 1767 1768
water worn reducing its original

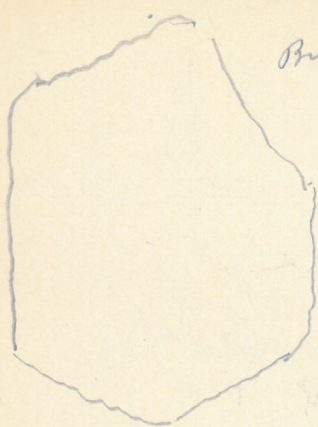
roughness.

37

no photo 7th Florida lot
exactly matches Fig. 6 Pl. 4.
This plate has lost much of its
rough sculpture by being water
worn it is 8 mm thick.

Fig 3 of plate 4 finds no
exact counterparts among the
Florida specimens, alth some are
much the same. This specimen is
14 mm thick. It is but little
water worn & has sculpturing
about equally coarse as the
other specimens.

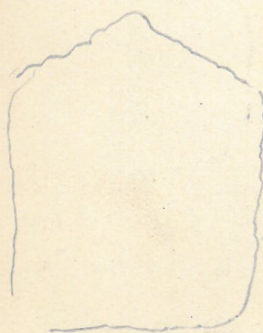
Among the unfigured specimens
no plates from the movable
border. The one plate
marked *Glyptoceros septem-
trivialis* is slightly water worn
but aside from this shows
sculpturing as in the Florida specimens.
It is 39 x 49 x 10 mm thick



Protrusion of the center

(38)

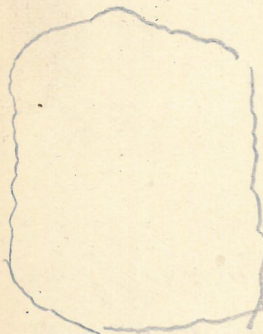
It shows the depressed rough border of some size, marginal ridge within but as in the spines. Altho larger it corresponds closely with no 1778, being a little more concave than that specimen.



This one, not fig. shows but slight development of the median bulb. slightly more worn.



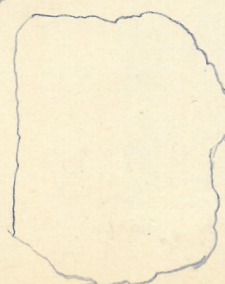
This one, not Fig. is unusually depressed at the center with but slight median bulb.



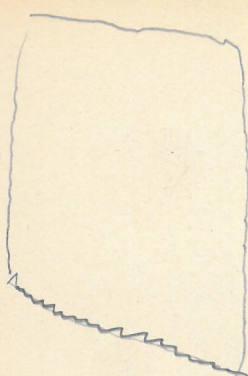
This one has the usual rough border of the usual width but only a mere suggestion of a median bulb & but slightly depressed center. It is also concave below.



This one has the usual rough superficial border & a light median bulb.



This is another of the plates with much depressed center & but slight median bulb.



while this broken plate
very far from the mov-
able. more probably it
is one corresponding to
a little larger than
the shown by Lundy.
Fig. 4. Pl. 14. The

beaks & heel are the same.

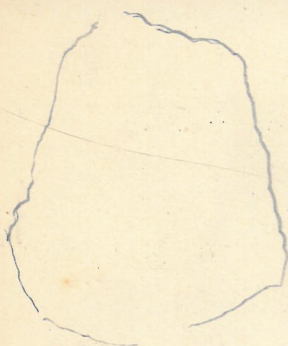


This is another of
those with center
mildly depressed &
median ridge not
prominent.



This one comes near to being
the watch for no 1780.
except that this one narrower
at the top & wider at the
bottom. It has the the
same beak & the marginal
rough area above altho

no 1780 is more thickened below.
1780 is also more concave



comes close to
1769 reversed.
alth 1769 is more
thickened below.



This one has the same
rough margin, but
the beak is fairly
perceptible & the
surface nearly flat.



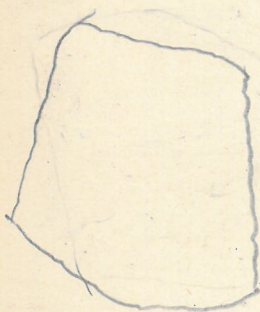
This one is unusual
in that the beak runs
across obliquely.
Rather common below.



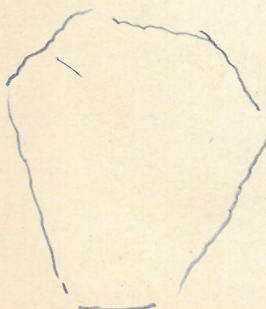
This one is 1/2 inch thick
The heel is this
one lies as
indicated.



This one is equally coarse in sculpture but the raised border & heel are far fully developed.



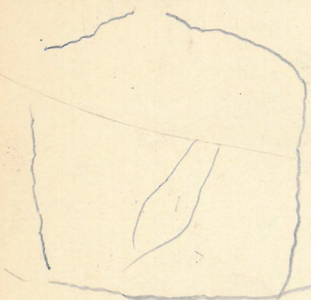
This one aside from the margin area, is almost flat on top, only the merest suggestion of a heel.



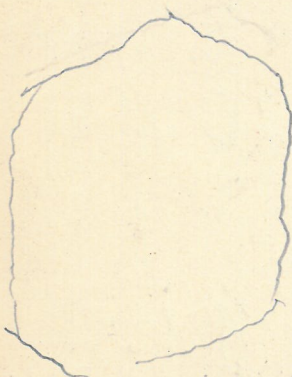
This one has a heel about as usual & border also.



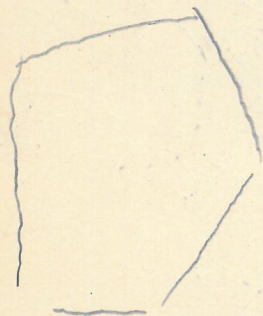
This one is water worn & entirely smooth except the depressed margin no heel.



This one has a slight heel which is oblique.



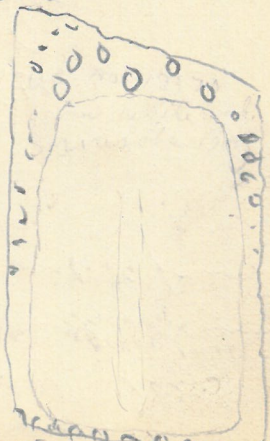
This one has scarcely more than the suggestion of a heel. almost flat on top.



This one somewhat water worn is practically flat and from the depressed border.

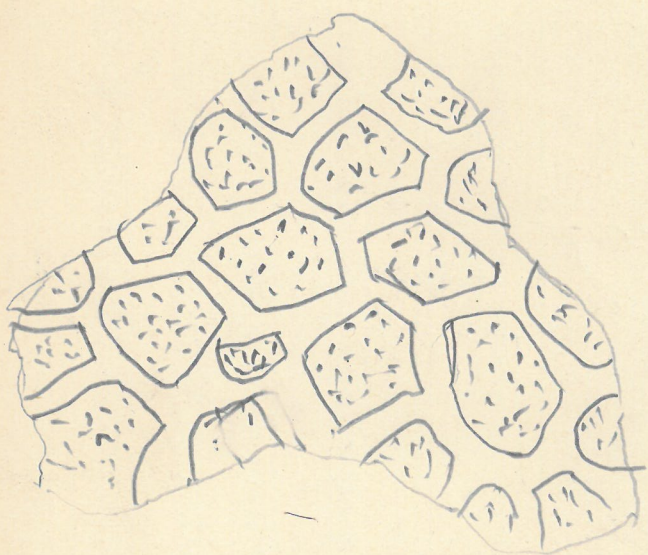
This one, taken above is from the movable ford. It is a little water worn but agrees substantially with nos. 1766, 1773, 1774. Below it

is less concave. above margin, border & heel the same



ac. no. 12,570. from a little beach. Sarawak Bay

conc. while there is everywhere much
variation in the scales. The very (54)
Peece Creek & Sycamore Bend specimens
are without both the bone spines.



Glyptodon clavipes Owen
Peece Creek S.A. Thickness 24
mm

Horse teeth. Wagner 9th. 85

4086 E, no excess count
part. by involut cups +

4086 E 2nd spec like 1st E

4086 A - Identical with 201
in every particular

4086 D. no or just like in.

4086 H.

Ocod Not Sci

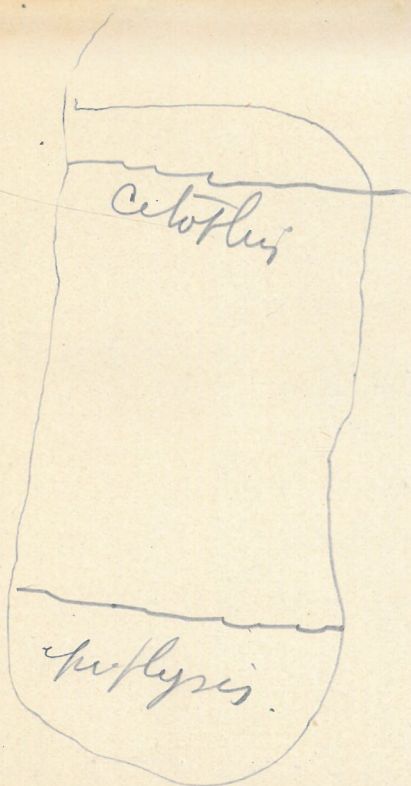
much crocodler Crocodilus annectans
Some no. 8 teeth in front of the mouth
Specimen 8 H. long. distinct in fold
of mouth 6 cm. no 8 teeth 5, 4th
longest, Back of mouth teeth 5th
tooth largest, 7 cm from mouth
8 1/2 cm. to back of 6th tooth from mouth

Tylo & Pseudodelphinus
atropicus
var. *Flot or*
molt

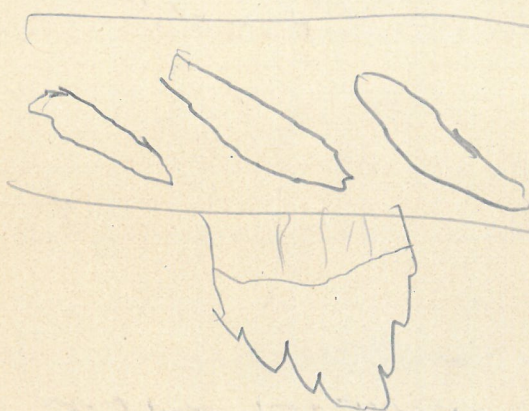


conc. *S. caelephus*
 var. *S. caelephus*
 pr. *S. caelephus*

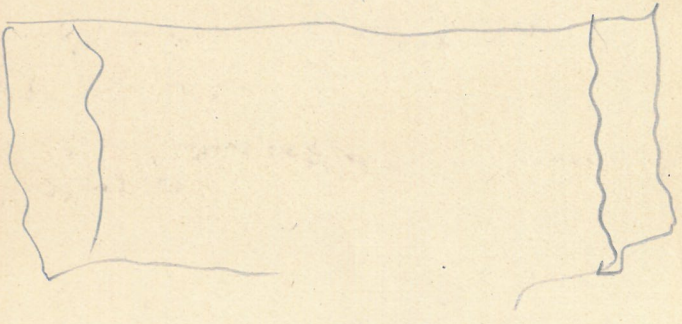
47



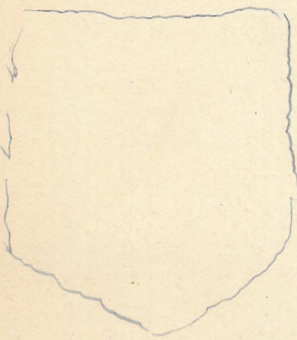
S Evaluation of the



A cerberus flagellate corp
 also just 7 skull



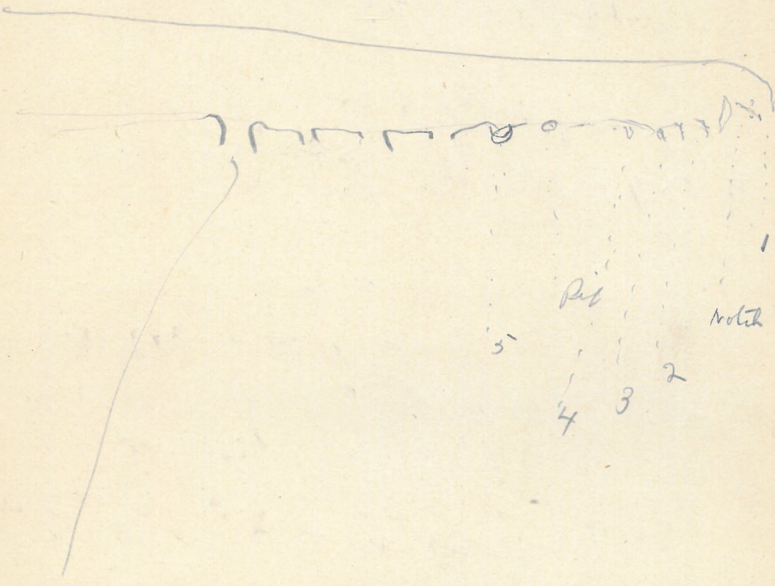
Phobosobus lotradis way
 like the skins. from
 clarkite not.



Not. Mus. #872.
 From Peace Creek Fla.
 This specimen is nearly flat
 on top with a very slight
 median keel.

T. fongis, molar from Peru River co.
 plimias with cingulum probably a athelus
 like rhinoceros teeth not athelus.
 Bone valley rhinoceros must be new.

✓ A descriptive catalogue of the
 Tertiary vertebrates of the Fayum, Egypt
 by Chas. William Andrews 1906.
 p270 Tomistoma africanum And.
 Text Figs. 86.



Strong tooth no. 9. 5th tooth 7 notches

- 1st strong tooth
- 2nd notch for first tooth of lower jaw.
- 2nd 3rd true strong
- 4th weak followed by construction
- 5th 6th 7th 8th molar
- 9th very strong for notch in lower jaw
- 10th 12 equal size teeth of this

lower jaw
 1st & 2nd long.
 2 + 3 weak
 4th strong for notch
 5, 6, + 7 median
 notch for -
 8th & 9th medium.

Tomistoma schlegelii
 Sorowah River Borneo.

No 3657 compared with *Tomistoma schlegelii* from Borneo.

Five teeth in front of the construction, which in T. there are only 4. (that is in the Pm)

No pits in the jaw for the reception of the lower teeth, which must have passed up interlocking.

First five teeth but 7 construction regularly spaced in 3657. In T. only 4 teeth are regularly spaced.

5th & 6th teeth but 7 the construction equally enlarged. in T. the 5th is much enlarged. In T. 2nd Tooth is

Pelodius natus in T.

51

Skull 2 or 3 in long.

Construction 10 1/2 cm from tip,

Enlarged tooth 9th 2 1/2 cm from tip

" " 17 1/2 in from base of skull.

Width of front of the construction 45 mm.

" " " 3657 72 "

Infraorbital constriction 105 "

Same in 3657 162 "

Length of Premaxilla sub 15 1/2 cm.

" " " 15 cm back of nose

Snout in front of nose 35 mm.

Cuvoolilus intermedius Borneo.

5 Teeth in front of the construction.

9 tooth much enlarged.

18 teeth in all.

A second slight constriction between 11th & 12 teeth.

3657 lacks the holes for reception of 1st & 2nd lower teeth as well as the pits in the jaw between the teeth. Jaw narrower than some. Lower jaw 1, 2, + 3 large. 4th very large. 11th & 12 also large.

Crocodylus americanus.

nude broad snout.

Generally speaking mandible lost.

1st upper story + fangs in front of jaw

1st to 10th lower teeth all pass outside or
partly outside being accommodated by pits.

The 9th back of this are accommodated by pits.

Lower jaw, 1st of the lower.

2 + 3 into pits, 4 into construction

All but 7 of this 11 in number into pits.

Broad snouted crocodile from
Borneo. none not given # 29512.
Teeth entirely as in last.

Crocodylus porosus # 2940,
perhaps same as 29512 but on
the left side has lost 2nd tooth.
4 + 5th back of construction very
large fangs back of jaw.
Very deep pits in the upper jaw
for receiving the lower teeth, not so
deep in the lower jaw.

Tomistoma
For *Charialax* ✓

See Kober. *Thoracosaurus macrohynchus* Ab. Zeit. Deutsche
Gesell. V. 40. p 754. 1880.

For Lower miocene forms See
Toulou and Kail,

Monkschr. d. b. Akad. Wiss. Math,
naturw. Cl. Vol I, p 299, Pls I-III. 1885

Lydekker. Quart. Journ. Geol. Soc,
Vol XLII, p 20, 1886

of *T. africanus* Quoy, fine Pm
teeth, the 2nd very small & close in front of
the third. 1st, 3rd + 4th are large, 5th is
small. diastema, almost prominent.
4th & 5th teeth not equal, teeth
directed forward, snout from
5th. Pm teeth, much like the rest.

No. 2377 occipital & fully in *Crocodylus*.
" 3522 " " "

Hipparion pleistocenicum is larger than *H. ingens*

Nos. 3524 + 3525 occ. & molars are *Crocodylus*.

See Cope's *Crocodyls, Lizards & Snakes*
of N. A. ~~Smith~~ Smith Inst. for 1898 U.S.
Nat. Mus. pt II, pp 153-190.

Lydekker, 1888 B. p

Woodward, A.S. Vertebrate Paleont.
Ipswich Co. N.Y.

p. 223. *Tomistoma* in Miocene of Austria
and Malta. *Somalis* in Pliocene of
Sivalik Hills, India.

See *Diplocynodon*.

See *Rhombosuchus crossidani* from
Pliocene of Sivalik Hills, 15 meters long - 25 ft.

Nicholson & Lydekker, 1889 A. p 1185.
Wm Blackwell & Sons. London.

Crocodylus includes all Post-Tertiary
crocodyles. Not only genus illustrated with vol.
Crocodylus, *Crocodylus palustris*.

Diplocynodon.

See A. T. T. *Tomistoma*. not natural

Lydekker, Cat. of Fishes, ~~Artistic~~ ~~Reptiles~~.

Quart. Journ. Geol. Soc. 1842, pt 20-22

pt II. *Tomistoma thomasi* 1st tooth.

Sub-oral constriction very large and opens
not least shaped; 1st & 4th mandibles

teeth large + (from *Melosaurus*)

Thiodon too large. 4th very small
3 *Pseudocetus* teeth, includes also
Somaliocetus from ~~India~~ Miocene
of Maltese Islands & Malta.

Two to six 8 & Schlegel.

Crocodylus Gaudensis relict
to T.

20 21 - 1888 B.
Lydekker, Cat. Fishes, V. 1

p. 21, short rostrum *Crocodylus* which
Diplocynodon

Long rostrum, *Tomistoma*.

Somalis, 1st & 4th lower united in
notches in the cranium. teeth interlocking.
Interdental pits in cranium present &
not present.

Rhombosuchus, Presm. up from the records.
Pits in the cranium.

Index Generum mammalium.

Palmer. last our. T. *Tomistoma* # 23, 1904

Cheloniochelys, *Cheloniochelys* *Cheloniochelys*
with book,

Sarialis canirostris Syd. var
gagensis

Pilgrim, G. E. 1912 - The Vert. fauna
of the Sag. Series in the Bugti Hills
and the Punjab. p. 80.

cranium round apiculate. Pits present in
the rostral rostrum, 5-Pm teeth.
1st 3 + 4 largest. 2nd + 5th small.
wide distance between nostrils + Pm
place the genus as *Sarialis*.
in *Tomistoma* nostrils in contact
with Pm.

192. Lydekker, R. - 1886 &

Paleont. Indica⁽¹⁰⁾. III, pt 7. p. 224.

A. alligatoroid group. 1st + 4th mandible
teeth received into pits or perforations in the cranium,
max. teeth biting on the outside of the mandible teeth.
alligator caninon & *facere*

B. suchoid group. 1st mand. tooth
received into a pit or perforation. the fourth
into a lateral notch in the cranium.
nostrils out with premaxillae. Teeth
interlocking. one genus *crocodilus*.

C. shariaioid group.

57

Posthum

1. 1st + 4th mandible teeth received into
notches in the cranium. teeth interlocking
a *Tomistoma*. Premax. badly
expended + out with nostrils.

+ *sharialis*. Premax + ext of
mandible much expended, nostrils
widely separated from premaxillas.

2. 1st mandible tooth received into
lateral notch. 4th into a pit in
the cranium. max teeth biting
outside the mandibles.

To suit a *diplocynodon*. Both
soars. *Pterodon*

C. includes *Thoracosaurus*
Holaps. *Thecachampsa*
~~*sharialis*~~

Holaps & N. A. included in *sharialis*
facial profile curved.

not *Bohreria* *Souzei*
 " *Bohreria* *lyda* *lysudra*
 " *B. leptodus*
 " *B. pocherghensis*.

very like *B. constrictus*.
 differs in conformation & rostrum?
 " " pits for most of the mand. teeth?

From lower Sivaliks of the Lohi
 Hill, Sind.

~~Flazium~~
 Profundus more elongate in front of notch
 of snout heavily, 5th lower
 space between 8 & 4 smaller. 1st mand. bone
 well developed.

9th tooth smaller with suggestion of
 a constriction.

Pir maxilla not exposed.

Phanopsuchus not notched for
 the 4th mandibular tooth.

~~Thor~~

Thoracosaurus

Leich, Smith cont to Knott V. XII

Oct 6, p. 12 1865.

Snout not preserved, could tell as to offshoot

#185 -
 Cope, Trans. Am. Phil. Soc Vol XII
 Oct 1 p 62 1870.

Figs. 7 & 8

Holts. very small outer teeth.
 Teeth very pointed. 4 & 5 present & 7 small due

Hes force for mandibular teeth
 Hardly parallel. The 4th is Holts.

Both Holts & Thoracosaurus differ
 from *Bohreria*.

Bohreria has large
 canine like teeth. not this

In the alligator the nasals extend
 forwards & divide the nose.

In the crocodile the projects into the
 nose. the nasals

In Tomistoma the nasals + prenasals
 back up 6 & 7th max.

Holops.

H. brevispinus.

Cope 1869 M. p. 68.

Based on vertebrae.

List of sk. & fossils near the A. B. B. 12028
July 27, 1898

Cariacus ✓ Seen in 1891.

Procamelus medius ✓

Tupia brevipes ✓

Equus ferus ✓

major ✓

Elephas columbi

Neotoma americana ✓

Arctocetes quadratidens white

Hydrochoerus Asopi ✓

Tooth from a new genus of
rodents resembling the Capybara

myodon. not m. borlani ✓

Chlamyphorus humboldti

Septomus petaliferus ✓

Chrysemys serrata

61

Emys elegans

Thuria unidentified ✓

Cucullia. Prob. C. americana ✓

Aligator

Alouatta

Oxyrhina ✓

Hemipristis ✓

Salocera aduncus ✓

Lomna cuspidata

Trygon

Rhynchobatus

Aelotus, this ray, teeth ✓

Lepisosteus, spine ✓

For pike ✓

Progygnodon

Ephippus gigas, from base

& dorsal fin of spade fish.

Pogonias, drum

Pineodus dorsal fin of cat fish

Bison latifrons not relevant

Letter 7 July 27 1898.

Somali's Genypterus

Strong teeth, notch. small teeth
 large teeth, sharp + slight teeth
 strong teeth, 3rd two smaller. slight
 notch & pit, 23 other teeth
 undifferentiated, with pits for
 the lower teeth,

Indexed to here June 18, 1915

64

22

65

1081. metam ynoclon plani-
frons. 5 glands tubular
lenticles, in line. Jaws
not noted.

1084. - 16 glands. Jaws
noted.

Alaskan Brown Bear
Mus mus merriami (Allen)
very large

1.24 + 1.17 = 2.41

1091. metam ynocton plani-
 frons. 5 quads. trees last
 butyrous, in in. - 200
 not noted.

1084. - 4 quads. 200
 not noted.

Alaskan Brown Bear
 N. S. M. Merriam (Allen)
 very large

1.24 + 1.17

Exp. June 6 Ticks 5. Phil.	2.25
Slaves of Phil.	1.50
Ticks Phil. to Washington	3.50
Supplies only	1.50
June 7. B. H. 45 in. 100 yd	1.50
" 8. B. H. 45 in	1.25
Beavers in 200 (A)	2.00
Mulege foot (A)	20.00
Puller & 200	4.75
" 9. B. + 100 45 in. 200	1.75
Puller & 200	1.75
Hut & 200	1.25

38.36
 399.04

78.26

1081. metam yroclon plani-
frons. 5 quids thick last
lignous, in. in. - Jaws
not noted.

1084. - 4 quids. Jaws
noted.

Alaskan Brown Bear
Ursus merriami (Allen)
very large

Ursus californicus (Merriam)

Ursus dalli (Merriam)

Soudan African Elephant
Elephas xyotis. Small teeth etc.
Elephas indicus.

Maylayan Tofii

Tofius indicus

Pigmy Hippopotamus

Hippopotamus liberiensis

Hippopotamus oryctolites

Indian Rhin. R. indicus

African Rhin. R. ficinus

much: set to 86 lb

5 lb in. to 10 lb

only later

gorillias gigantius

8 lb long 11 lb

set to 10 lb

A. semeyanus

Lower zone in Not. Mus.

A. fuscus = *T. fuscus*

A. malochromus. #8381

#8439, beak relative size of
previous series, some of long
beaks not established

R. White

Acrothrinus acutus

Yale museum.

T. naga skull

a. ceratorhinus Hughes.

New York, from within Am. Cas.

Mus. II No. 2 1903.

#8745

a. profectum.

* *Teleoceros malicornutus*
#832 + #374 pm 2 with this
ser. Vol III

