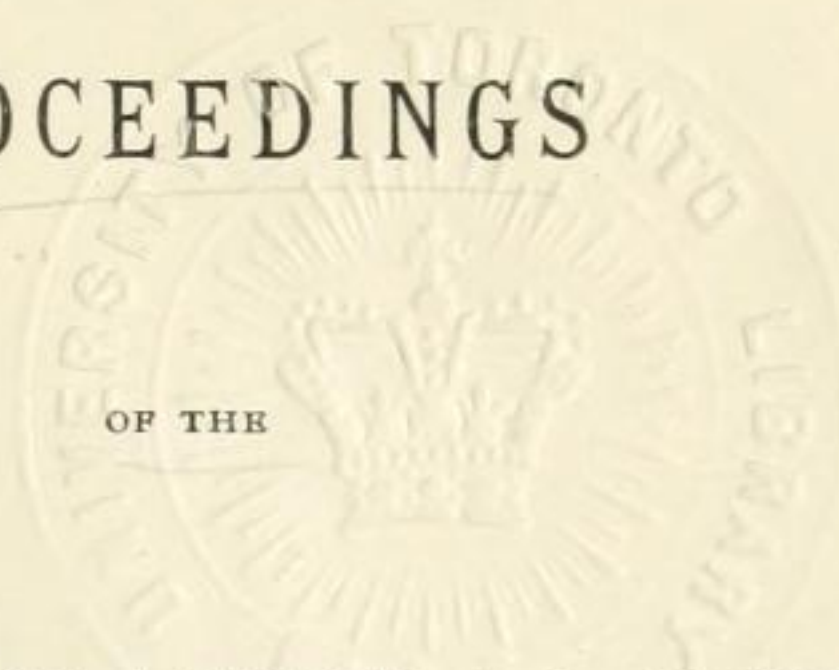


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PROCEEDINGS



ACADEMY OF NATURAL SCIENCES

OF

PHILADELPHIA.

1890.

COMMITTEE OF PUBLICATION:

JOSEPH LEIDY, M. D.,

GEO. H. HORN, M. D.,

EDW. J. NOLAN, M. D.,

THOMAS MEEHAN,

JOHN H. REDFIELD.

EDITOR: EDWARD J. NOLAN, M. D.

PHILADELPHIA:
ACADEMY OF NATURAL SCIENCES,
LOGAN SQUARE.
1891.

species *B. Schiedeanus* and *B. dealbatus*. He stated that the new form while belonging to the same group, is slenderer than *B. Schiedeanus*, and is *strongly longitudinally striate*, differing in this character from all other known United States *Bulimuli*. This character will also separate it from Mexican forms of the genus. The speaker proposed to call it *Bulimulus Ragsdalei*.

MARCH 18.

Mr. HAROLD WINGATE in the chair.

Fifteen persons present.

A paper entitled "Contributions to a further knowledge of the North American Hesperidæ." By Eugene M. Aaron, was presented for publication.

MARCH 25.

The President, Dr. JOSEPH LEIDY, in the chair.

Sixteen persons present.

A paper entitled "Synopsis of the American Carbonic Calyptræidæ." By Charles R. Keyes, was presented for publication.

Fossil Vertebrates from Florida.—PROF. LEIDY stated that he had recently received from Archer, Florida, seven boxes of fossil bones and teeth, collected by Mr. J. B. Hatcher, under the direction of Prof. Marsh, by whom they had been submitted to him for examination on account of the United States Geological Survey. The collection was from the same locality from which others had been formerly sent to him through the Survey. It contains many specimens of interest but none adding to the species already announced. For the most part they consist of remains of *Mastodon floridanus*, *Rhinoceros proterus* and *Auchenia major*. Of the first there are a number of well preserved molar teeth and among them specimens confirming the observation of H. von Meyer, that in this genus two premolars succeeded the series of deciduous molars.

According to Mr. Wm. H. Dall, who visited the bone beds, the fossils are found in a tenacious clay, without pebbles, occupying depressions of the oligocene limestone of the country.

The fossils consist of isolated bones, fragments of others, and teeth, mostly of the larger and firmer kind, well preserved and neither water-rolled nor weather-worn. Portions of skulls and the hollows of Mastodon molars are usually filled with comminuted bones min-

gled with clay. A specimen of the skull of a Rhinoceros, with all the molar teeth of both sides retained in position, carefully removed together, in a mass of clay by Mr. Hatcher, was crushed into a multitude of fragments, which fell apart on the drying of the specimen. It would appear that the more delicate fossils were crushed while embedded in the clay ; by what means was not obvious.

Thomas H. Dudley was elected a member.

The following were ordered to be printed :—

MAY 6.

Dr. D. G. BRINTON in the chair.

Twenty-nine persons present.

A paper entitled "New Myxomycetes in Century xxv of Ellis and Everhart's North American Fungi." By Geo. A. Rex.

The death of George S. Pepper, a member, was announced.

MAY 13.

Mr. CHARLES MORRIS in the chair.

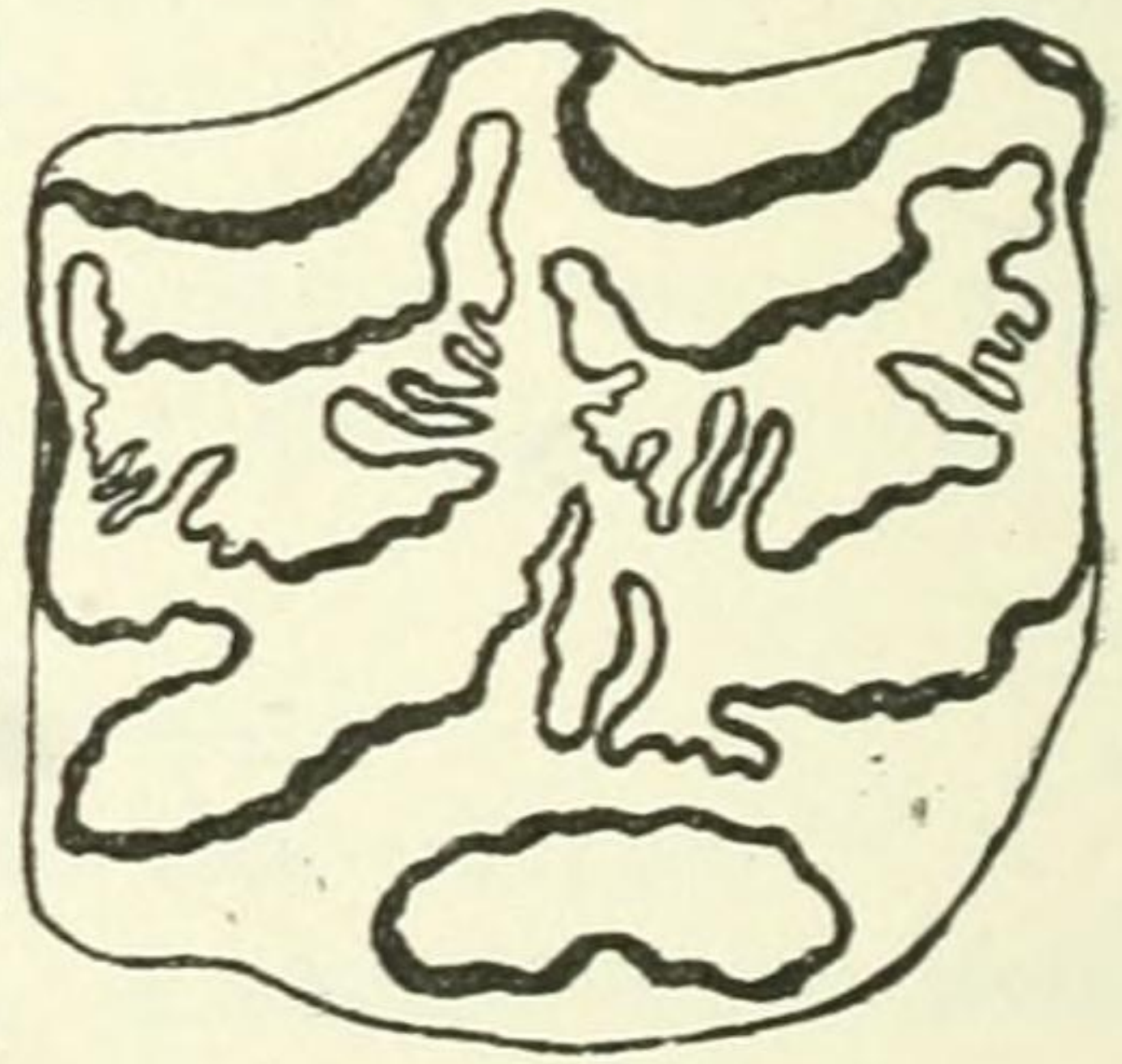
Twenty-eight persons present.

MAY 20.

The President, Dr. JOSEPH LEIDY, in the chair.

Thirty-two persons present.

Hippotherium and Rhinoceros from Florida.—PROF. LEIDY remarked that with other fossils, which had been the subject of former communications, collected by Joseph Willcox and Wm. M. Meigs at the phosphate bed of T. S. Morehead in Peace Creek, Florida, there were a number of Horse teeth. These were regarded as having pertained to the extinct indigenous species *Equus major* and *E. fraternus*. Among them was one, which from its general resemblance was included with the former, but since has been noticed by the quickly observant eye of Prof. Cope to belong to a *Hippotherium*. The size of the tooth indicates the species to have been as large as the ordinary domestic Horse and therefore the largest species of the genus yet discovered. The specimen also represents the third species found in Florida; the others being the *H. ingenuum* and *H. plicatile* (Proc. 1885, 33; 1887, 310). The tooth, a second or third upper molar, is three inches long in its outer curvature and the worn triturating surface, represented in the accompanying wood-cut, measures 15 lines fore and aft and 14 lines transversely. The arrangement of the enamel most nearly approximates the condition observed in *H. occidentale* from our western tertiary formation. The inner column, of uniform breadth the entire length of the crown, measures half an inch fore and aft, and in section is horizontally reniform. The species was a third larger than the *H. gracile*, the largest European form. From its size it may be distinguished with the name of HIPPO-
 RIUM PRINCEPS.



Hippotherium princeps.

Comparative measurements of the teeth of:

	H. ingenum.	H. plicatile.	H. princeps.
Fore and aft diameter	19mm.	20mm.	32mm.
Transverse do	17mm.	24mm.	31mm.

The fossil bones from near Archer, Florida, which have been the subjects of former brief communications (Proc. 1884, 118; 1885, 32; 1886, 11; 1887, 309) consist in greater part of the remains of a species of Rhinoceros, distinguished as *R. proterus*. It was an animal approximating in size the living *R. indicus*, but had comparatively short, robust limbs and was probably hornless. The remains consist of teeth and bones, with fragments of others, mostly isolated, of many individuals. Thus as an indication of the latter the collection contains 28 astragali and nearly a hundred complete metapodials. The bones of the feet are remarkable for their short, robust character. Among the fossils are a few bones and teeth of a second species of Rhinoceros, a little larger than the former and with feet of the same proportions as in the recent Indian Rhinoceros. Of this species the collection contains but a single imperfect astragalus. A pair of metacarpals, the second and fourth, though of less breadth than those of *R. proterus*, approximate double the length. The comparative measurements of the specimens are as follows:

Second metacarpal:	<i>R. longipes.</i>	<i>R. proterus.</i>
Length, in front, at middle	157mm.	92mm.
Breadth of upper extremity	45mm.	50mm.
Breadth of lower articulation	39mm.	40mm.
Fourth metacarpal:		
Length, in front, at middle	144mm.	81mm.
Breadth of upper extremity	40mm.	44mm.
Breadth of lower articulation	35mm.	41mm.

A carpal scaphoid in comparison with one of *R. proterus* presents the following measurements.

Extreme breadth	84mm.	85mm.
Extreme height	60mm.	40mm.

A pair of tusks, lower incisors, much worn, which have been about 8 inches long, are supposed to belong to *R. proterus*. They are strongly curved much compressed fore and aft, and measure 47mm. wide by 33mm. thick at the base of the crown. Another tusk, about a foot long, is supposed to have belonged to the other species of Rhinoceros. It is less curved and more cylindrical than the former, and at the base of the worn crown is 51mm. wide and 45mm. thick.

For the second species the name of RHINOCEROS LONGIPES was proposed.

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MAY 27.

The President, Dr. JOSEPH LEIDY, in the chair.

Twenty-eight persons present.