

Lea
1858
March 16.

Vice-President BRIDGES in the Chair.

Thirty-two members present.

The following papers were presented for publication in the Proceedings: "Descriptions of New Species of Coleoptera, chiefly collected by the U. S. and Mexican Boundary Commission, under Major W. H. Emory, by John L. LeConte, M. D."
"Descriptions of New Species of Neuropterous Insects, collected by the North Pacific Exploring Expedition under Captain J. Rodgers, by P. R. Uhler."

Dr. Leidy called the attention of the members to a cast of a Mastodon tooth from the collection of Dr. Harlan, which collection had for many years been stowed away in a ware-house in this city, and had recently been presented to the Academy by the son of Dr. Harlan. The cast is labelled in the hand-writing of the latter, "*Mastodon longirostris* Miocene, Maryland." The original specimen is said to have been found in a miocene deposit, near Greensburgh, Caroline county, Md. For some time it was in the possession of Dr. Ducatel, of Baltimore, and subsequently was deposited in the Museum of that city. Mr. Charlesworth, Sir Charles Lyell, Dr. Harlan and Dr. Hays, who had seen the specimen, considered it as having belonged to the *M. longirostris* or *M. augustidens*. When Dr. Warren was preparing his book on the American Mastodon, he was desirous of inspecting this tooth, but learned that it was lost. Subsequently, a tooth, in the cabinet of the Academy, which had been purchased in London as an American fossil, was suspected to be the missing Baltimore specimen, and as such is described and figured in Dr. Warren's work, (*The Mastodon giganteus of North America*, p. 92, pl. xxvi.) This tooth, now on the table, by comparison with the cast, proves not to be the so-called Baltimore tooth, though approaching it in a remarkable manner, in size, general form, and in being fractured at the anterior extremity.

Dr. Leidy next exhibited a tooth from the collection of Dr. Harlan, which Dr. Hays says is the original specimen on which the *Tapirus mastodontoides* was founded. The specimen corresponds in size and form very nearly with the description given by Dr. Harlan in his account of *T. mastodontoides* (*Fauna Americana*, p. 224; *Medical and Physical Researches*, p. 265.) Dr. L. added, he confirmed the views of Mr. Cooper (*American Monthly Journal of Geology*, p. 163.) and Dr. Hays, that the specimen was a first milk molar of the Mastodon.

March 23d, 1858.

Vice-President BRIDGES in the Chair.

Forty-eight members present.

The Rev. Dr. Morris, on the part of the local committee of the American Association for the advancement of Science, extended to all the members of the Academy, an invitation to be present at the next meeting about to be held in Baltimore, to which he added the promise of the cordial hospitality of the citizens.

The following papers were presented for publication in the Proceedings:

Descriptions of a New *Helix* and two new *Planorbis*, by Isaac Lea."
"Descriptions of eight new species of *Unio*, by Isaac Lea."

Which were referred to committees.

[March

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Attention of the members to a cast of a Mastodon tooth from Dr. Harlan, which collection had for many years been in his house in this city, and had recently been presented to him by Dr. Harlan. The cast is labelled in the hand-writing of Dr. Harlan. "The cast is labelled in the hand-writing of Dr. Harlan. The original specimen was found in a miocene deposit, near Greensburgh, Caroline County, Maryland." The original specimen was deposited in the possession of Dr. Ducatel, of Baltimore, at the time it was in the possession of that city. Mr. Charles C. Dr. Harlan and Dr. Hays, who had seen the specimen, belonged to the *M. longirostris* or *M. augustidens*. When Dr. Harlan was writing his book on the American Mastodon, he was desirous to find a tooth which had been purchased in London as an American specimen, but learned that it was lost. Subsequently, a tooth, in which had been purchased in London as an American specimen, which had been purchased in London as an American specimen, to be the missing Baltimore specimen, and as such is mentioned in Dr. Warren's work, (The Mastodon giganteus of North America). This tooth, now on the table, by comparison with the so-called Baltimore tooth, though approaching it in a general form, and in being fractured at the anterior

end of a tooth from the collection of Dr. Harlan, which Dr. LeConte has a specimen on which the *Tapirus mastodontoides* was described, corresponds in size and form very nearly with that of Dr. Harlan in his account of *T. mastodontoides* (Fauna of the United States, p. 265.) Dr. L. added, that Mr. Cooper (American Monthly Journal of Geology, vol. 1, p. 10) had a specimen which was a first milk molar of the Mastodon.

March 23d, 1858.

President BRIDGES in the Chair.
 Members present.

Read, on the part of the local committee of the American Association for the Advancement of Science, extended to all the members, an invitation to be present at the next meeting of the Association, to be held in Baltimore, to which he added the promise of the citizens.

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[March

Mr. Lea remarked, that he had received from Dr. Hayden, so well known for his interesting discoveries of the fossil Fauna, of Nebraska Territory, &c., all the fresh water molluscs which he had procured during his journey into those distant and little known Indian countries. Mr. R. Kennicott, a young and ardent student of Natural History, whose letter Mr. Lea read, had also submitted to him a collection of molluscs made by him for the Northwestern University of Evanston, Illinois, from a part of North America rarely visited by the investigator of Natural History, the Red River of the North, which having its source near the head waters of the Mississippi, runs due north into Lake Winnepeg, which Lake discharges its waters through Nelson's River into Hudson's Bay.

It is not to be understood that either of these collections, made under many adverse circumstances, and at times, of great personal danger, should be full representations of this branch of the Fauna of these countries. But they are sufficient to prove that zoological life, so far as represented by Molluscs, is nearly, if not quite the same, as that of the Ohio River Basin, as well as that of the Missouri River, and a part of that of the Lower Mississippi and Red River of the South. The knowledge of a part of the species from these remote districts, proves to us the wide-spread distribution of the same species, as we find every one of them in the Ohio River at Cincinnati, Marietta and Pittsburg, and this is the more remarkable, as the waters of the Red River of the North are embraced in a different system of drainage, flowing as they do into Hudson's Bay at about 52° North lat. Thus is seen an immense area of country producing in its waters nearly the same life, as regards the Molluscs; a fact highly interesting to the Zoologist.

The following species were brought by Dr. Hayden from the mouths of the Rivers Big Sioux and James' River, 43° north, and 97° west,

Unio asperimus, Lea. *U. elegans*, Lea. *U. alatus*, Say. *U. lacrimosus*, Lea. *U. lævissimus*, Lea. *U. luteolus*, Lam. *U. rectus*, Lam. *U. anodontoides*, Lea. *Margaritana complanata*, Lea.

And from the Upper Missouri at Fort Clark, *Unio luteolus*, Lam., and *Margaritana complanata*, Lea.

From the Red River of the North, 50° north, Mr. Kennicott procured the following:

Unio asperimus, Lea. *U. alatus*, Say. *U. luteolus*, Lam. *U. fectus*, Lam. *U. rubiginosus*, Lea. *U. occidentis*, Lea. *U. undulatus*, Bar. *Anodonta Ferrussaciana*, Lea. *A. decora*, Lea.

Every species from these two habitats is found in the vicinity of Cincinnati, and several of them, viz: *Unio asperimus*, *anodontoides*, *rubiginosus*, and *Anodonta Ferrussaciana* are found in the waters of Louisiana. Even in Georgia there are two of them, viz: *Unio anodontoides* and *Unio alatus*.

Mr. Lea did not wish to be understood that he believed all the species of the *Unionida*, which were common in one part of this great area, were the same which inhabited the waters of other parts. On the contrary, they differed much in the lower Mississippi, but still there are some species which are common in the Ohio, as high up as Pittsburg, which are found in Moose River, of Hudson's Bay, 52° North, in Red River of the north, 50° North, in Upper Missouri, 47° North, and in the Big Sioux, 43° North. There are also some others which are common at Pittsburg, which are found as far south as Louisiana, 30° North, and in Georgia, 34° North.

These facts Mr. Lea believed to be important in regard to the geographical distribution of the species, some of which are found to be so extensively distributed, while it is well known that some few are restricted, so far as our present knowledge extends, to points embraced within very short distances in a single river. As an illustration of this, the *Unio spinosus*, *Unio Shepardianus*, *Margaritana arcuata*, &c., may be cited.

1858.]

	Moose River, Hud- son's Bay, 52° N.	Red River of the North, 50° N.	St. Lawrence River and Genesee River.	Bad Lands in Ne- braska.	James' River, and Big Sioux, 43° N.	Up. Missouri, Fort Clark, 41° N.	Cincinnati, 39° N.	Georgia, 34° N.	Alexandria or New Orleans, La., 30° N.	Florence or Tennes- see River, Ala.
<i>Unio rubiginosus</i> , Lea.		1					1			
" <i>intecolus</i> , Lam.	1	1	1		1	1	1		1	
" <i>lavissimus</i> , Lea.					1		1			
" <i>occidens</i> , Lea.		1					1			
" <i>anodontoides</i> , Lea.					1		1	1	1	
" <i>asperrimus</i> , Lea.		1		1	1		1		1	
" <i>elegans</i> , Lea.				1	1		1			
" <i>rectus</i> , Lam.		1	1		1		1			1
" <i>zig-zag</i> , Lea.				1	1		1			
" <i>alatus</i> , Say.		1	1		1		1	1	1	1
" <i>undulatus</i> , Bar.		1			1		1			
<i>Anodonta Ferrussaciana</i> , Lea.		1		1			1			
" <i>decora</i> , Lea.		1					1			
<i>Margaritana complanata</i> , Lea.		1					1			

Dr. Leidy read the following letter :

Saint Louis, March 16, 1858.

MY DEAR SIR,—I have the pleasure of announcing to you, that I have just completed an examination of some fossils, collected by Dr. G. S. Shumard from the White Limestone of the Guadalupe Mountains, New Mexico, while he was connected with the expedition of Capt. John Page, and I am fully convinced that these fossils are Permian. The collection contains about forty species, a number of which are identical with species of the Permian system of Russia and England.

We have specimens which agree perfectly with Verneuil's descriptions and figures of *Camaraphoria Schlotheimi* and *C. Geinitziana* from the Permian System of Russia. We have also an *Aulosteges* which resembles *A. Wangenheimi* (Verneuil,) though it is doubtless a distinct species. This genus has not, I believe, been found lower than the Permian.

The *Productus Leplayi* is represented, and there is another *Productus* which is very analogous to *P. cancrini*, (Vern.) The *Spirigera pectinifera*, (Vern. sp.) *Terebratula superstes*, (Verneuil,) *Spirifer cristata* and *S. permiana*, of King, are undoubtedly in our collection, and also *Acanthocladia anceps*, (King) and *Synocladia virgulacea*, (King,) all of which are species of the Permian of Russia and England. Besides, there is a *Monotis* which resembles *M. speluncaria*. We also recognized several species that are in Professor Swallow's collection from the Permian Rocks of Kansas. According to measurements made by my brother, these Permian Rocks attain a thickness of more than a thousand feet in the Guadalupe Mountains. The rock is a remarkably pure white limestone, and portions of the mass abounds in fossils. It is underlaid by sandstones and limestones of the coal measures, containing the same fossils as characterized this formation in Missouri, Iowa and Illinois, but in New Mexico scarcely a single species ranges from the Coal Measures into the Permian.

I am now engaged in preparing descriptions of the new Permian Fossils. Will you be kind enough to announce this discovery at the next meeting of the Philadelphia Academy.

Sincerely yours,

B. F. SHUMARD.

Mr. Lesley exhibited a specimen of lignite from the Upper Wachita River, Louisiana, received through Mr. Perry, of New Orleans. It is remarkable for containing rosin in quite visible masses. Sometimes the

1858.]