

shell much broader. From *Ancyloceras? aproximans*, Con. (Proceedings of the Phila. Acad. p. 266,) it differs in having broadly rounded, instead of acute costæ.

*Locality and position.* Mouth Cheyenne river. No. 4. of series.

*Notices of remains of extinct Reptiles and Fishes, discovered by Dr. F. V. Hayden in the Bad Lands of the Judith River, Nebraska Territory.*

By JOSEPH LEIDY, M. D.

1. *PALÆOSCINCUS COSTATUS*, Leidy.

The genus and species are founded on a single specimenu of a tooth of a lacertian, discovered by Dr. Hayden.

The crown of the tooth is palmate, with eight radiating costæ terminating at the margin in more or less developed points. The fang is flattened cylindrical, and is hollow; and it expands into a ridge surrounding the base of the crown. Breadth of the crown 4 lines, length  $2\frac{1}{2}$  lines; width of the fang 2 lines, thickness 1 line. Whole length of the specimen 4 lines.

2. *TRACHODON MIRABILIS*, Leidy.

The genus and species are founded upon specimens of teeth, generally very much worn and in a fragmentary condition, of a herbivorous lacertian reptile allied to the *Iguanodon*, discovered by Dr. Hayden.

One of the specimens of teeth is an unworn crown, about 14 lines long and 5 lines in diameter at its thickest part. It has the form of a slightly bent hexahedral column, bevelled off convexly from the summit of the tooth internally to the base externally. The outer surface is smooth, and has a prominent median ridge and prominent subacute lateral borders. The inner surface of the tooth, presenting the five smaller sides of the column, is quite roughened with irregular granulations. The base of the tooth is hollow, and its walls at the broken border of the specimen are  $1\frac{1}{2}$  lines thick.

In another and much worn specimen of a tooth, which had apparently been shed, and is now  $4\frac{1}{2}$  lines long; the triturating surface is slightly concave and pentahedral, with concave sides, and is 4 lines in diameter. The two portions of the outer surface incline much more from the median ridge than in the preceding specimen; and the base of the tooth is hollowed, apparently from the pressure of a successor.

3. *TROODON FORMOSUS*, Leidy.

The genus and species are founded on a single specimen of a tooth of a lacertian, discovered by Dr. Hayden.

The specimen consists of a compressed, curved, conical crown with trenchant edges. The outer side is more convex than the inner, which is worn off towards the apex from friction of the opposing tooth. The trenchant edges are coarsely denticulated; the denticulations themselves being compressed conical, with trenchant edges, and are bent in such a manner that their apices are directed towards the summit of the crown. The base of the tooth is hollow, and is 2 lines wide and  $1\frac{1}{2}$  lines transversely; and the length of the specimen is 3 lines.

4. *DEINODON HORRIDUS*, Leidy.

This genus and species are founded on a number of specimens, consisting of fragments of teeth of a saurian reptile, discovered by Dr. Hayden.

Nine of the specimens referred to consist of crowns of teeth or of their summits, which resemble those of *Megalosaurus*, being compressed conical and curved, and having trenchant, dentated borders. They are generally thicker in relation to their breadth than in *Megalosaurus*, which might only be a specific distinction, were it not that there are several other teeth in the same collection apparently of the same animal, but quite peculiar in form.

One of the specimens is a curved conical crown, nearly circular in transverse section, having a prominent dentated ridge on each side. A second specimen is a crown, demi-elliptical in transverse section, with the posterior borders dentated. A third specimenu is a small fragment of a very large tooth, apparently

with nearly the same form as the latter; and a fourth specimen is a portion of the crown of a tooth, demi-elliptical in transverse section, with the posterior borders elevated but not dentated.

If had the different forms of teeth above indicated been obtained from different localities, they might have been referred to at least four distinct genera, but having been discovered together, and possessing the same structural appearances, I suspect them to have belonged to one and the same species.

The largest specimen resembling the teeth of *Megalosaurus* in its present condition, is  $1\frac{1}{2}$  inches long from the apex,  $\frac{3}{4}$  of an inch broad at base, and 5 lines thick. One of the specimens, which is demi-elliptical in section, is over an inch in length from the apex, 8 lines broad at base, and  $3\frac{1}{4}$  lines wide at the posterior surface. Another specimen, apparently with the same form as that just indicated, in its perfect condition appears to have had the crown over two inches in length, nearly an inch in breadth, and about half an inch in width posteriorly.

#### 5. *CROCODYLUS HUMILIS*, Leidy.

The species is founded on ten specimens of shed crowns of teeth, apparently of a small species of crocodile. The largest specimen is  $7\frac{1}{2}$  lines long and  $3\frac{1}{2}$  lines in diameter at base, which is nearly circular. Another specimen is 7 lines long and  $2\frac{1}{2}$  lines in diameter at base; and a third specimen is 6 lines long and  $3\frac{1}{2}$  lines in diameter at base. These are all moderately curved conical, nearly circular in transverse section, with the two usual internal acute ridges, and with the intervening surfaces slightly striate or nearly smooth. The crown of a posterior tooth is compressed, mammillary in form,  $2\frac{1}{2}$  lines long and  $2\frac{1}{2}$  wide at base, with the summit obtuse, and the sides finely and longitudinally rugose.

#### 6. *TRIONYX FOVEATUS*, Leidy.

The species is founded on fragments of several costal and sternal plates. The exterior surface of the costal plates is covered with pits, excepting close to the margin; and the pits are small and round at the vertebral extremity, and gradually increase in size outwardly and become antero-posteriorly oblong oval and reniform. A vertebral fragment of a third or fourth costal plate, a little over an inch in length, is 11 lines wide and 2 lines thick. Small fragments of the sternal plates present an exterior surface covered with broken vernicular ridges and tubercles separated by wide intervals. Fragments of a hyposternal plate are 3 lines in thickness.

#### 7. *LEPIDOTUS OCCIDENTALIS*, Leidy.

A species proposed on five specimens of thick lozenge-shaped scales, with the root prolonged in the direction of the long diameter. The enamelled surface of the scales is smooth and shining. The largest one has its sides about 4 lines long, the smallest one about  $2\frac{1}{2}$  lines long.

#### 8. *LEPIDOTUS HAYDENI*, Leidy.

A species proposed on a single specimen of a thick oblong square scale, the long sides of which measure 5 lines, and the short sides  $3\frac{1}{2}$  lines. The root projects forward from one of the long sides, and the enamelled surface of the scales is covered with parallel square lines.

This species is named in honor of Dr. Hayden, who collected the remains characterized in this paper; and which remains, I suspect, indicate the existence of a formation like that of the Wealden of Europe.

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*Notice of a new Fossil Genus belonging to the Family BLASTOIDEA, from the Devonian strata near Louisville, Kentucky.*

By B. F. SHUMARD, M. D., and L. P. YANDELL, M. D.

The remarkable Crinoid, now for the first time brought to the notice of Palæontologists, was discovered by us as early as 1847, in a gray sub-crystalline limestone on Bear Grass Creek, near Louisville, Kentucky, associated with characteristic fossils of the Devonian system. At that time we had observed only detached plates of the genus, which did not permit us to recognize its most