

## 7. TÆNIDIESTES, Reich.

*Gen. Char.* Bill robust, varying in color with the sex, as also does the plumage; lower mandible deep, nail prominent, lamellæ not projecting. Feet robust, varying in color with the sex, tarsus shorter than middle toe with claw. Colors of female with metallic reflections on the speculum.

Species *Tænidiestes antarctica*, Gm. Southern extremity of S. America, and adjacent islands; Chili.

December 6th.

The President, DR. RUSCHENBERGER, in the Chair.

Thirty-three members present.

PROF. COPE made some observations on a number of species of reptiles from the Cretaceous beds of Kansas, which he had recently studied. He stated that the specimens included parts of *Elasmosaurus platyrus* Cope, *Polycotylus latipinnis* Cope, *Liodon proriger* Cope, and two new Liodons, which he named *L. ictericus* and *L. mudgei* respectively. They both belonged to the division with depressed vertebral centra, and the *L. ictericus* was near *L. validus* Cope, of New Jersey, but exhibited a less anterior, and less prominent proximal external angle of the quadratum, which Prof. Cope stated indicated a less extensive lateral flexibility of the ramus of the mandible.

In *L. Mudgei* the angle was still more posterior, and the pterygoid teeth were not pleurodont, as in *Platecarpus tympaniticus*. Remains of the cranium indicated a reptile of 30 feet in length, while those of the *L. ictericus* belonged to two individuals of 40 and 50 feet in length. A third new Mosasauroid of the size of the *L. Mudgei* was described under the name of *Clidastes cineriorum*. It was stated to be much the largest species of the genus, and to differ from the three now known in having the plane of the articular extremities at right angles to the long axis of the centra, and not oblique to it. From near Sheridan, Kansas; described by Prof. B. F. Mudge. He described a third new Liodon, of gigantic size, stating it to exceed by very much the Mæstricht reptile, and even the *Mosasaurus brumbzi* Gibbes, which was till now the largest known species. He pointed out the characters of the vertebrae, which were very much depressed as to the centrum, which measured  $5\frac{3}{4}$  inches in diameter. It was allied to the *M. brumbzi*, but differed in having a strong emargination of the articular faces to accommodate the neural canal. He named it *Liodon dyspeltor*.

PROF. COPE also exhibited the humeri and femora of *Polycotylus*, which were like those of *Plesiosaurus*, and measured 18 inches in length.

MR. THOMAS MEEHAN exhibited several specimens of the *Maclura aurantiaca*, the common osage orange, in which the plants were inarched together in pairs in a remarkable way. He said the osage orange was extensively grown as a hedge plant, and in digging up the one year plants, these united twins were usually found in the proportion of about one score in ten thousand. Double kernels were common occurrences in many seeds. There were double peaches, almonds, and double yolks in eggs. But these all had their separate seed coverings or membranes, and the yolks their own albuminous envelopes, consequently the separate embryos produced distinct plants. But these indicated that there had been two separate embryos under one seminal covering, and that the radicular portions of this double embryo, having no membrane to separate them, had inarched themselves together while passing to the ground. If this was the true explanation, he thought there was no such case recorded. That it was true seemed probable, from the fact that all the specimens were united in exactly the same manner, showing that time, place, and the circumstances of the union were uniformly the same. The scars showed

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that there were four cotyledons and two germs, and that the place of union was midway between the pairs of cotyledons. From the base of the cotyledons extending the whole length of the radicle, the union existed. The length of this united part was from half an inch to one inch, according to the vigor of the plant.

Another lesson he thought was afforded by these specimens. Dr. Asa Gray had recently remarked, in *Silliman's Journal*, that European botanists still believed what American botanists had learned to doubt, that the radicle was a true root, rather than a morphologized joint of stem. Here was, he believed, an illustration of the American view. These radicles, which had evidently united together under the seed coat, had elongated after protrusion, just as a young shoot with all its parts formed in the bud elongates after the bursting of the bud scales. They comprised the half inch, or inch united portions before referred to. If these radicular portions of the seed were of the nature of root rather than of stem, we might expect to see lateral fibres push from them, as we do see from the true roots, which start out below the union. But these parts are as free from rootlets as any portion of the true stems above the cotyledon points, indicating, as had been suggested, that their properties were rather of stem than of root.

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*December 13th.*

The President, DR. RUSCHENBERGER, in the Chair.

Thirty-five members present.

The following paper was presented for publication :

“Remarks on Dr. Asa Gray's Notes on Buckley's Rare Plants of Texas.” By Prof. S. B. Buckley.

PROF LEIDY exhibited a lower jaw of an aged man, recently obtained in his dissecting room. The teeth had all been lost except one, and the alveolar border had been absorbed so that the body of the bone was reduced as usual to half its original depth. The remaining tooth is a completely developed and full grown third molar of large size, which lies imbedded in the jaw horizontally, with the unworn triturating surface directed towards the position which had been occupied by the teeth in advance. The tooth is perfectly sound, and in this old jaw, in which all the other teeth had been lost and the alveoli obliterated, favors the view that the teeth are liable to caries only when exposed to exterior influences. Similar specimens of teeth remaining imbedded in the jaw are not unfrequent, but the one exhibited is the oldest which Prof. Leidy had seen.

PROF. LEIDY also exhibited a wood carving from St. Paul de Loando, Western Africa, presented to him by Dr. Charles L. Cassin, U. S. N. The carving, by a native African, represents two adult human figures, apparently of the two, united by an intervening plate, so as to remind one of the famous Siamese twins. The connection may have been merely intended for support, though Prof. Leidy thought the carving may have been intended to represent a pair of united twins, similar to those just named, and which existed in the locality in which the carving was made.

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*December 20th.*

MR. VAUX, Vice-President, in the Chair.

Twenty-two members present.

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