

the broad sternum which these reptiles possessed. The existence of the large toe in company with the small one is in favor of a jumping animal."—From the Memoir of Prof. Cope on Extinct Reptilia and Aves, Amer. Phil. Soc., unpublished volume.

2. On the *Elasmosaurus platyurus* of Cope; by Dr. J. LEIDY. (Communicated by the Author).—At a meeting of the Academy of Natural Sciences of Philadelphia, March 8th, Prof. Leidy stated that after an examination of the remains of the great marine saurian, from the Cretaceous formation of Kansas, presented to the Academy by Dr. T. H. Turner, U. S. A., and described by Prof. Cope under the name of *Elasmosaurus platyurus*, he had arrived at the conclusion that the animal belonged to the Enaliosaurians. It was closely allied to *Plesiosaurus*; the peculiar characteristics of the different regions of the vertebral column, together with those of the shoulder and pelvic girdles, and the fragments of the skull and teeth, are decidedly Plesiosaurian.

Prof. Cope has fallen into the error of describing the skeleton in a reversed position to the true one, and in that view has represented it in a restored condition in his recent "Synopsis of the Extinct Batrachia, Reptilia, and Aves," published in the Transactions of the American Philosophical Society. To explain the apparently anomalous and reversed condition of the articular processes, (zygapophyses) of the vertebræ, he considers that those ordinarily existing in animals are substituted by the second set (zygosphene and zygantrum) of serpents and iguanians.

The discovery of a portion of the skull, as reported by Dr. Turner, in the vicinity of what Prof. Cope regards as the anterior extremity of the skeleton, and which he considers as confirmatory of the view he has taken of the latter, Prof. Leidy remarked, independently of the many anatomical characteristics, is more than compensated by the opposite end of the vertebral column terminating in a coossified axis and atlas, this latter still retaining in its cup the occipital condyle.

A comparison of caudal vertebræ of the Kansas saurian with isolated specimens from the Cretaceous formations of Alabama, Mississippi, and New Jersey, referred by Prof. Leidy to a Plesiosaurian, under the name of *Discosaurus*, leads him to view *Elasmosaurus* as identical with it. Such also appears originally to have been the view of Prof. Cope, in relation to a part of the same skeleton which he referred to a species with the name of *Discosaurus carinatus*.

The restored *Discosaurus* or *Elasmosaurus*, would repeat the form usually given of *Plesiosaurus*, but the neck was of more remarkable length than in the latter. It comprised the almost incredible number of *seventy-two cervicals*, and measured almost twenty-two feet in length, independent of the head. The imperfection of the rest of the vertebral column does not permit anything like a positive estimate to be made of the comparative extent of the trunk and tail.

In the true view of *Discosaurus* or *Elasmosaurus*, Prof. Cope's order of Streptosauridæ fails to maintain its ground.