

A P P E N D I X .

ART. LII.—*A New Order of Extinct Reptilia (Stegosauria) from the Jurassic of the Rocky Mountains*; by Prof. O. C. MARSH.

THE Museum of Yale College has recently received the greater portion of the skeleton of a huge reptile, which proves to be one of the most remarkable animals yet discovered. It was found on the eastern flank of the Rocky Mountains, in beds which I have regarded as corresponding nearly to the Wealden of Europe, and which may be classed as upper Jurassic. The remains are well preserved, but are embedded in so hard a matrix that considerable time and labor will be required to prepare them for a full description. The characters already determined point to affinities with the Dinosaurs, Plesiosaurs, and more remotely with the Chelonians, and indicate a new order, which may be termed *Stegosauria*, from the typical genus here described.

Stegosaurus armatus, gen. et sp. nov.

In this specimen, some of the teeth preserved have compressed crowns, and are inserted in sockets. Others are cylindrical, and were placed in rows, either in thin plates of imperfect bone or in cartilage. The latter are especially numerous, and may possibly prove to be dermal spines, having all the essential characters of teeth, as in some fishes. The vertebræ are biconcave, their neural arches being coossified with the centra, and the chevrons articulated. The limb bones indicate an aquatic life. The body was long, and protected by large bony dermal plates, somewhat like those of *Atlantochelys (Protostega)*. These plates appear to have been in part supported by the elongated neural spines of the vertebræ.

The length of one of the compressed teeth of this species is 112 mm., and the greatest diameter of the crown 24 mm. One of the cylindrical teeth is 75 mm. in length, and 7.5 in diameter. Seven of these teeth in position occupy a space of 63 mm. A trunk vertebra measures 450 mm. from base of centrum to top of neural spine, and 170 mm. to the floor of the neural canal. The extent of seven posterior caudal vertebræ is 660 mm. One of the large dermal plates was over three feet (one meter) in length.

The present species was probably thirty feet long, and moved mainly by swimming. For its discovery science is

indebted to Prof. A. Lakes and Engineer H. C. Beckwith of the U. S. Navy, who found the first remains in Colorado near the locality of the gigantic *Atlantosaurus montanus*, and in essentially the same horizon.

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