

ON THE GENUS *TRACHODON* OF LEIDY<sup>1</sup>.

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The generic term *Trachodon* first appeared in palæontological literature in 1856<sup>2</sup> when Dr. Joseph Leidy used it in describing teeth and tooth-fragments of herbivorous dinosaurs under the name *T. mirabilis*. These teeth were discovered by Dr. F. V. Hayden in the "bad lands" of Judith river, Montana (then included in Nebraska), U.S.A., in deposits which are now generally regarded as synchronous, or nearly so, with the Belly River formation of Alberta, Canada. This was the first descriptive reference to remains of the North American Cretaceous herbivorous dinosaurs which have since been usually referred to as constituting the family *Hadrosauridae* (*Trachodontidae*) related to the *Iguanodontidae* of Europe, the two families being classed under the suborder *Ornithopoda* of the *Pre-dentata*.

The identification of this genus is rendered uncertain by the paucity of material on which it was established.

Following the description of *Trachodon* in 1856, Leidy in the same year described two caudal vertebrae and a phalanx of a dinosaur from the "Lignite formation of Grand river, Nebraska," (Lance formation) under the name *Thespesius occidentalis*.

This genus rests on as unsatisfactory a basis as *Trachodon* as inferences drawn from the type material, which in this case as in *Trachodon* must be considered inadequate, have too great an element of conjecture.

The third genus, and the first to be founded on fairly comprehensive material was *Hadrosaurus*, established by Leidy in 1858 on remains from the Cretaceous marls near Haddonfield, New Jersey. That *Hadrosaurus*, of which many bones of the skeleton as well as teeth from both jaws, presumably of one individual, are known, is not generically the same as *Trachodon* is most probable when we compare the teeth of the former having papillated margins and a rounded apex, with the smooth margined, sharply pointed tooth of the latter.

In 1860<sup>3</sup> Leidy described the Judith river teeth at greater length with good illustrations. Of the six teeth figured, two are nearly complete, the other four are fragmentary. The tooth first mentioned in the description (figures 1—6) is that of a hadrosaur. The last one (figures 18—20) belongs to a ceratopsian, and three of the four fragmentary ones are probably assignable to the *Hadrosauridae*.

The close affinity of *Trachodon*, as represented by the meagre

<sup>1</sup>Communicated with the permission of the Deputy Minister of Mines.

<sup>2</sup>Proc. Acad. Nat. Sci. Phila., vol. VIII, p. 72.

<sup>3</sup>Trans. Am. Phil. Soc. vol. XI, pp. 140-143, pl. 9, figs. 1-20.