# THE TYPE OF *CLAOSAURUS* (?) *AFFINIS* WIELAND.

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IN 1903 Dr. G. R. Wieland gave the name *Claosaurus* (?) *affinis* sp. nov. to fragmentary remains of a dinosaur from the Pierre shale of South Dakota. These bones are of particular interest as remains of a land animal found in marine strata and in association with the giant sea turtle, *Archelon ischyros* Wieland. They constitute the only occurrence of a hadrosaurian dinosaur in the Pierre Shale. Lull and Wright in their monograph, "Hadrosaurian Dinosaurs of North America," pp. 137-138, state that only one toe bone of the type material could be found, and comment that it agrees closely in size with *Claosaurus agilis* (Marsh) rather than with *Anatosaurus annectens* (Marsh), to which Wieland had compared it. Comparison of this specimen with the type material of *Claosaurus agilis* reveals that it is in fact part of the latter specimen which had been misplaced and incorrectly numbered. The color, calcite-crystal permineralization, and characteristic crushing of the bone all indicate a specimen from the Kansas Chalk. Moreover the corresponding phalanx is missing from the mounted skeleton of *C. agilis* and has been restored. In the same museum tray with this specimen and manuscript labels in Wieland's hand, are three toe bones from the right foot of a large hadrosaur. These are much darker in color, differently mineralized from the Niobrara specimens, and similar in preservation to the Pierre Shale turtle remains. There can be little doubt that they constitute the true type of *Claosaurus* (?) *affinis* Wieland.

Measurements of *Claosaurus* (?) *affinis* compared with those of *Anatosaurus annectens*.

| | Claosaurus (?) affinis Type. Y.P.M. 3219 Length, mm. | Anatosaurus annectens Y.P.M. 2182 Length, mm. |
|---|---|---|
| Proximal phalanx, digit II ..... | 140 | 142 |
| Proximal phalanx, digit IV ..... | 112 | 114 |
| Third phalanx, digit IV ..... | 30 | 27 |

Status of the species *Claosaurus affinis* Wieland.

*Claosaurus* was originally founded (Marsh, 1890, p. 423) upon *Hadrosaurus agilis* Marsh from the Niobrara Chalk; later Marsh (1892, p. 453) referred the Lance species to this genus. Wieland was thus justified in provisionally identifying the Pierre shale specimens with *Claosaurus*. Subsequent discoveries have shown the Hadrosauridae to be a large and diverse group of dinosaurs which cannot in general be distinguished by postcranial elements alone. *Claosaurus* is now restricted to the typical species from the Niobrara formation. Although the toe bones of "*Claosaurus*" *affinis* agree remarkably in size with those of the Lance *Anatosaurus annectens*, it is probable from their occurrence in the Pierre Shale that they belonged to one of the numerous Judith River or Belly River genera rather than to the Lance genus *Anatosaurus*. In the absence of critical skull parts, it is impossible to assign these fossils to their proper genus, and the name *Claosaurus* (*?*) *affinis* Wieland remains a nomen nudum.

## References.

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