



The taxonomy of species assigned to *Camptosaurus* (Dinosauria: Ornithopoda)

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Abstract

The taxonomic affinities of species assigned to *Camptosaurus* are reassessed in light of firsthand examination of the relevant specimens and a new phylogenetic analysis, the first to incorporate all putative species of *Camptosaurus*. “*Camptosaurus*” *valdensis* is found to be an indeterminate dryosaurid. The species *C. prestwichii*, *C. aphanoeetes*, and *C. depressus* differ in several important details from the type species, *C. dispar*, and are assigned to different genera as *Cumnoria prestwichii*, *Uteodon aphanoeetes* gen. et comb. nov., and *Osmakasaurus depressus* gen. et comb. nov. The recent assignment of *O. depressus* to the genus *Planicoxa* is considered unjustified.

Key words: *Camptosaurus dispar*, *Cumnoria prestwichii*, *Uteodon aphanoeetes* gen. et comb. nov., *Osmakasaurus depressus* gen. et comb. nov., “*Camptosaurus*” *valdensis*, *Planicoxa venenica*

Introduction

The type species of the genus *Camptosaurus*, *C. dispar*, was established by Marsh (1879) based upon material from Como Bluff Quarry 13 in the Upper Jurassic Salt Wash Member of the Morrison Formation (Foster 2003; Carpenter & Wilson 2008). Since then, numerous iguanodontian species and specimens from the Callovian to the Aptian, a span of approximately 40 million years, of the United States and England have been placed in *Camptosaurus*. Some, such as *Callovosaurus leedsi* (Lydekker 1889; Galton 1980; Ruiz-Omeñaca *et al.* 2007), *Owenodon hoggii* (Owen 1874; Norman & Barrett 2002; Galton 2009), and the holotype skull of *Theiophytalia kerri* (Brill & Carpenter 2007) have already been reassigned to other genera. *C. depressus* (Gilmore 1909) has also been reassigned, to the genus *Planicoxa* as *P. depressa* (Carpenter & Wilson 2008), though this assignment is not upheld herein. In contrast, *C. prestwichii* (Hulke 1880) is almost universally regarded by recent authors as referable to *Camptosaurus* (Galton & Powell 1980; Norman 2004; Carpenter & Wilson 2008; but see Naish & Martill 2008). The recently named species *C. aphanoeetes* (Carpenter & Wilson 2008) has not been extensively discussed elsewhere and its placement in *Camptosaurus* has not been tested.

To elucidate the relationships of the various species assigned to *Camptosaurus*, they were incorporated into a new phylogenetic analysis of basal iguanodont relationships. Apart from *C. dispar*, none of these species had ever been included in such an analysis. Determining the interrelationships of the putative species of *Camptosaurus* to each other and to other basal iguanodonts has implications for the taxonomy and the spatial and temporal distributions of the genus.

Note on Stratigraphy

The stratigraphic information for all specimens in this paper is given in the context of the current geological timescale developed by the International Commission on Stratigraphy (International Stratigraphic Chart 2009, available at <http://www.stratigraphy.org/upload/ISChart2009.pdf>). The designations and ages of the British rock units come from the searchable British Geological Survey Lexicon of Named Rock Units available at <http://www.bgs.ac.uk/lexicon/>.