

**Comments on the proposed designation of *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species of *Iguanodon* Mantell, 1825, and proposed designation of a lectotype (Reptilia, Ornithischia)**

(Case 3037; see BZN 55: 99–104)

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The name *Iguanodon* occupies an important position in the history of the Dinosaur group as a whole. *Iguanodon* was the second dinosaur taxon to be formally described and illustrated (Mantell, 1825) and was one of the three founding members of Richard Owen's Dinosauria (1842). Ever since Mantell's formal description this taxon has been the subject of minor, but important, nomenclatural dispute. In short, this was because Mantell failed to suggest a specific name for the material that he described, because Owen was fond of his own rather idiosyncratic nomenclature, because it has proved difficult to identify Mantell's original type series of teeth from the material that he sold to the Natural History Museum in London, and finally, but of greatest importance, because dinosaurian teeth of a type morphologically very similar to those described by Mantell have proved to be rather ubiquitous in late Mesozoic deposits worldwide.

Stabilisation of the name *Iguanodon* is therefore of considerable historical, taxonomic and nomenclatural importance. The action suggested in the application by Charig & Chapman cuts through the inevitable earlier subjectivity surrounding the name and is, to my mind, both prudent and sensible; it will combine the first well-established species of *Iguanodon* as the designated type of the genus with a virtually complete skeleton that has been long and internationally recognised in the literature associated with this dinosaur.

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The proposal to designate a type species in accord with usage for the genus *Iguanodon* resolves long-standing anomalies and misconceptions. It will be surprising to many that the formal systematics of such a well known genus as *Iguanodon* have been so confused and unsatisfactory for so many years.

The proposal to designate *Iguanodon bernissartensis* as the type species of *Iguanodon* is logical and obvious. It is the senior species based on diagnostic material, and it well fulfils the function of a type species under the Code. The designation of IRSNB 1534, skeleton Q, in the Institut Royal des Sciences Naturelles de Belgique as the lectotype of *I. bernissartensis* is also in accord with its (albeit invalid) citation as the type specimen.

I support this application to clarify, at last, the taxonomy and nomenclature of *Iguanodon*.

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(Case 3037; see BZN 55: 99–104, 172, 239–241)

David Norman

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I would like to reply to the recent objection to the proposal to stabilise the generic name *Iguanodon* Mantell, 1825 by the designation of *I. bernissartensis* Boulenger in Beneden, 1881 as the type species, as advocated by Charig & Chapman in their application (BZN 55: 99–104, June 1998). While I sympathise with the views of Dr Sues (BZN 55: 240–241, December 1998) regarding the historical primacy of the original teeth described by Gideon Mantell in 1825, Sues nevertheless admits that they lack diagnostic characteristics which provide for unequivocal stability of such an important (historically-speaking) dinosaur name.

In my monograph on *Iguanodon* published in 1986 (to which Sues refers) I wrestled with this particular taxonomic problem and concluded that it might be best to reserve the name *Iguanodon anglicus* Holl, 1829 exclusively for the original teeth collected from the now abandoned (and infilled) quarry at Cuckfield, Sussex, and described by Mantell. I was attempting to preserve what I deemed to be historically important icons that could be associated with the first establishment of the name. This is the point to which Sues pays particular attention, in the belief that the teeth discovered by Mantell may, in time, prove to have some diagnostic characters.

I discussed this matter with the late Dr Alan Charig on several occasions, and have had the benefit of studying the teeth of a wide range of iguanodontid dinosaurs, including the European forms *Iguanodon atherfieldensis*, *I. bernissartensis* and *I. fittoni*, as well as *I. lakotaensis* from North America, *Ouranosaurus nigeriensis* from North Africa and *Altirhinus kurzanovi* from Mongolia, and the more distantly related *Camptosaurus* from North America/England. My view is that the circumstances suggested by Sues (that tooth characters may emerge that are likely to prove diagnostic for the teeth described originally by Mantell) are remote in the extreme. The degree of variability exhibited in the teeth of all the animals mentioned above, both within the jaw at any one time (positional variation) and as a consequence of changes due to growth (ontogeny), are such that teeth alone cannot be used reliably for taxonomic assignment.

In view of this I disagree with Sues's objections and support the proposal of Charig & Chapman, which modifies what I originally (1986) hoped would prove to be a 'safe' solution to the problem of the nomenclatural vulnerability of the famous dinosaur name *Iguanodon*.