

A BOREAL PERISPHINCTID AMMONITE IN AUSTRALIA - A CASE OF NINETEENTH CENTURY TRANSPORTATION?

by Simon R.A. Kelly



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The type specimens of *Simbirskites morvenae* Whitehouse from the supposed Early Cretaceous of Queensland, Australia, are re-identified as *Kerberites* ssp. Their matrix and other fauna suggests a Late Jurassic, English Portland Stone provenance. The occurrence of *Simbirskites* from Australia should be deleted from the record.

Simon R.A. Kelly*, British Antarctic Survey (N.E.R.C.), High Cross, Madingley Road, Cambridge CB3 0ET, U.K. *now at 10 Belvoir Road, Chesterton, Cambridge CB4 1JJ, U.K. Revised version received 2nd April 1993.

Introduction

During a visit to the Queensland Museum in 1991, I saw a specimen of a large ammonite (Figure 1), strongly reminiscent of the enormous examples of perisphinctids, characteristic of the Portland Stone (Late Jurassic) of southern England. I was surprised to read the label which indicated that it was the paratype of *Simbirskites morvenae* Whitehouse, supposedly from the Hauterivian (Early Cretaceous) of Queensland. Closer examination showed that another ammonite (the holotype of *S. morvenae*) and several gastropods had been artificially cemented to the umbilicus of the larger specimen. The gastropods are internal moulds of '*Leptomaria*' *rugata* (Benett). The matrix of the large ammonite contained bivalves which I identified as *Laevitrigonia* sp. s.s. and oysters. The ammonites are referred here to *Kerberites* spp. The whole assemblage is suggestive of an English Portlandian/Tithonian (Late Jurassic) fauna.

The importance of this specimen is that it is one of the few austral records figured of the boreal genus *Simbirskites*. However, it should be pointed out that most of these occurrences have been questioned (Rawson 1971). There has been doubt concerning the Australian provenance of this specimen since the work of Whitehouse (1946), and it had been suspected that it originated from Germany (Rozeffelds, McKenzie and Mobbs 1990). Turner (1982) reported on British fossils in the Queensland Museum, but did not recognise any type or figured specimens. Most of them are Palaeozoic, and although little in the way of Mesozoic collections are mentioned, it was noted that one dealer, Robert Damon of Weymouth, had written to the Museum with the offer of some *Microdon* fish-teeth from the Portlandian near Weymouth (Turner 1982, fig. 2).

The composite specimen was originally donated as part of a collection to the Queensland Museum in 1893, and

the locality was given as 'Victoria Downs, Morven'. The donor is unclear and was either a Mr Hurst or a Mr Hunter (Rozeffelds, McKenzie and Mobbs 1990). In this part of Queensland there are extensive outcrops of marine, Aptian, Roma Series sediments (Early Cretaceous). However, no more specimens of *Simbirskites* have been discovered subsequently in the area (Day 1969).

Discussion

The ammonites are characterised by straight to slightly curved, forward swept ribs which pass over the venter with biplicate or triplicate branching. The largest specimen (QMF.1270) is 365mm in maximum diameter and the smaller one 65mm (QMF.16438). They were first described by Etheridge (1909) who believed that they were close to Hauterivian perisphinctids from north Germany. They were formally placed in *Simbirskites* by Whitehouse (1926). The following year Whitehouse (1927) designated the smaller specimen the holotype of *Simbirskites morvenae*, and the larger specimen was the sole paratype. Initially he believed that the specimens were indigenous to Queensland. Subsequently, however, doubts were expressed (Whitehouse 1946, 1954; Day 1969). Rozeffelds, McKenzie and Mobbs (1990) suggested that the specimens were actually north German. The usual matrix for German simbirskitids is mudstone or sandstone (Rawson 1971) which contrasts with the pale cream-brown limestone with much bioclastic debris of the 'Queensland' specimens. The presence of *Laevitrigonia* s.s. in the matrix indicates first that the specimens are broadly Late Jurassic to earliest Cretaceous age, being no younger than Berriasian (Kelly 1988, 1992). Secondly they are European. *Laevitrigonia* s.s. is most abundant in the Portland Stone of southern England, of Portlandian/Tithonian

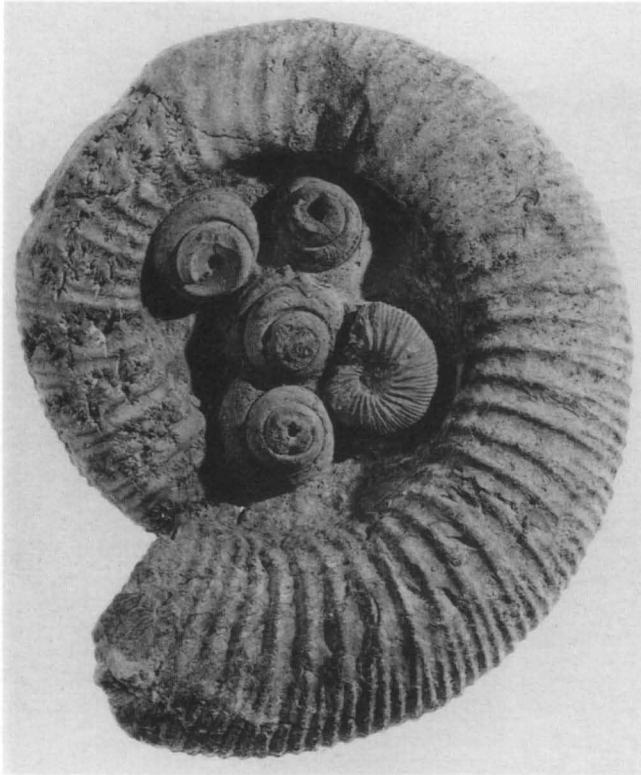


Figure 1. Composite block of large and small *Kerberites* and additional gastropods '*Leptomaria*' *rugata* (Benett), stated to be from the Early Cretaceous of Queensland, but most probably from the Portland Limestone of England. QMF.1270 (large ammonite) and associated specimens; the small ammonite (QMF.16438) is the holotype of *Simbirskites morvenae* Whitehouse. x0.4. Original photograph courtesy of the Queensland Museum.

age. Further information concerning the systematics and more detailed comparison of the Queensland material was published elsewhere (Kelly 1993).

Conclusions

The occurrence of *Simbirskites* should now be deleted from the record in Australia. I am convinced now that a German source for the Queensland specimens is unlikely. The matrix and associated fauna, e.g. *Laevitrigonia* and '*Leptomaria*' match lithologies and fossils from the Portland Stone of England. It is also much more likely that the assemblage was taken out as a souvenir by an English, rather than a German colonial pioneer. The provenance of other material of the Hurst/Hunter bequest should be treated with caution, until fresh, comparable material has been collected from, or in the vicinity of, the original stated locality for the specimens.

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References

- DAY, R.W. 1969. The Lower Cretaceous of the Great Artesian Basin. In Campbell, K.S.W. (ed.). *Stratigraphy and palaeontology. Essays in honour of Dorothy Hill*. Pp. 140-173. Australian National University Press, Canberra.
- ETHERIDGE, R. Jr. 1909. Lower Cretaceous fossils from the sources of the Barcoo, Ward and Nive Rivers. Part II-Cephalopoda (contd). *Records of the Australian Museum* 7, 235-240.
- KELLY, S.R.A. 1988. *Laevitrigonia cineris* sp. nov., a bivalve from near the Jurassic-Cretaceous boundary in the Durlston Formation (Purbeck Limestone Group) of Dorset. *Proceedings of the Dorset Natural History and Archaeological Society* 109, 113-119.
- KELLY, S.R.A. 1992. Bivalvia of the Spilsby Sandstone and Sandringham Sands (Late Jurassic-Early Cretaceous) of eastern England. Part 2. *Palaeontological Society Monographs* 146(591), 95-123.
- KELLY, S.R.A. 1993. On the alleged occurrence of the Early Cretaceous ammonite, *Simbirskites*, in Queensland, Australia. *Memoirs of the Queensland Museum* 33(1), 245-251.
- RAWSON, P.F. 1971. Lower Cretaceous ammonites from north-east England: the Hauterivian genus *Simbirskites*. *Bulletin of the British Museum (Natural History) geology* 20, 25-86.
- ROZEFELDS, A.C., MCKENZIE, E.D. and MOBBS, C. 1990. Type, figured and mentioned fossil invertebrates in the Queensland Museum. *Memoirs of the Queensland Museum* 28, 665-713.
- TURNER, S. 1982. British fossils at the Queensland Museum. *The Geological Curator* 3(4), 227-231.
- WHITEHOUSE, F.W. 1926. The Cretaceous Ammonoidea of eastern Australia. *Memoirs of the Queensland Museum* 8, 195-214.
- WHITEHOUSE, F.W. 1927. Additions to the Cretaceous ammonite fauna of eastern Australia. Part 1 (*Simbirskitidae*, *Aconeceratidae* and *Parahoplitidae*). *Memoirs of the Queensland Museum* 9, 109-120.
- WHITEHOUSE, F.W. 1946. A marine Early Cretaceous fauna from Stanwell (Rockhampton District). *Proceedings of the Royal Society of Queensland* 57, 1-15.
- WHITEHOUSE, F.W. 1954. The geology of the Queensland portion of the Great Australian Basin. Appendix G. In (editor not cited) *Artesian Water Supplies in Queensland*. Department for the Co-ordination of General Public Works. Parliamentary Papers 56 (1955), 1-20.