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HYSILOPHODONTID (DINOSAURIA: ORNITHISCHIA) FROM LATEST ALBIAN, WINTON FORMATION, CENTRAL QUEENSLAND. *Memoirs of the Queensland Museum* 52(2): 212. The first and youngest recorded occurrence of fossilised remains of hypsilophodontids are in Queensland. Evidence of abundant small ornithomimid dinosaurs were indicated by trackways in the Winton Formation (Thulborn & Wade, 1984), however, this is the first skeletal evidence. Numerous hypsilophodontid dinosaur remains, including cranial and postcranial specimens have been described from the Aptian and Albian of Victoria (Rich, 1996) (Fig 1a-b). Hypsilophodontids have also been described from Albian deposits of northern New South Wales Griman Creek Formation (Fig 1c), including *Fulgurotherium australe* Huene 1932 and an undescribed taxon (Molnar & Galton, 1986); so it is noteworthy, but not surprising that hypsilophodontid remains are present in younger sequences within the Great Artesian Basin.

The single specimen described here was recovered from sievings derived from excavations within 40m of the stratigraphic base of the Winton Formation. Designated by Burger (1986) within the upper *Phimopollenites pannosus* palynomorph Zone, Dettmann & Clifford (2000), and others (e.g. Pole, 2000) have designated a latest Albian age for the lower Winton Formation. Clifford & Dettmann (2005) assign a latest Albian age to their type locality of *Tempuskyia judithae*, the same locality from which the present remains are described; Belmont Station, northeast of Winton, central Queensland (Fig 1d).

Description. QMF52774 (Fig 2) is an isolated right maxillary tooth bearing a well formed crown and a single root. Tooth crown split, labial crown face preserved, lingual crown face missing. Crown length: 3.96mm; crown height: 2.68mm. Single prominent primary ridge divides labial tooth crown in two, running to the base of the crown. Secondary ridge extends anteriorly at approximately 1/3 of length from primary ridge tip, does not fully divide from the primary ridge. Three distinctive secondary ridges extend from anterior crown base, forming cuspsules, reduced in size anteriorly. Fourth, tiny cuspule emergent on anterior margin. Anterior

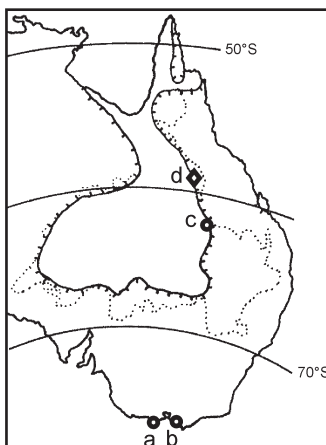


FIG 1. The Late Albian of eastern Australia showing the extent of the inland sea and localities. a. Otway Ranges (Albian), Victoria, b. Strzelecki Ranges (Aptian), Victoria, c. Lightning Ridge, Griman Creek Formation (Albian), New South Wales d. Belmont Station, Winton Formation (late Albian – Cenomanian), Queensland.

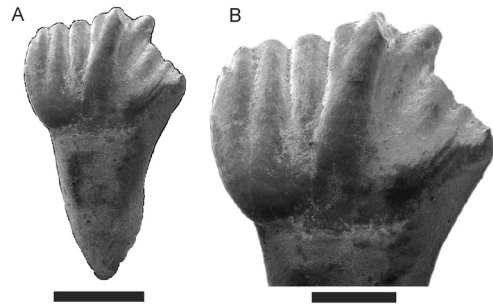


FIG 2. A. QMF52774, hypsilophodontid tooth in labial profile (scale bar = 2mm). B. Close up of tooth crown showing posterior ware facet (scale bar = 1mm).

margin of tooth crown curved, terminates at root, forming a distinctive neck. Posterior tip of primary ridge broken and worn. Posterior to primary ridge, four heavily faceted secondary ridges, extending from crown base to form distinct cuspsules. First cuspsule posterior of primary ridge largest and heavily worn below tip. Remaining posterior cuspsules smaller posteriorly, all heavily worn. Posterior margin of tooth crown angulate and terminates above the line of the anterior margin.

Remarks. QMF52774 is similar to maxillary teeth of the hypsilophodontids, *Atlascopcosaurus loadsi* Rich & Rich (1989) and *Qantassaurus intrepidus* Rich & Vickers-Rich (1999) described from the Aptian-Albian deposits of southern Australia. These taxa share with QMF52774 the prominent primary ridge, 7-8 similarly strong secondary ridges and the curved anterior margin. Although QMF52774 is very small, it is not outside the size range of *Atlascopcosaurus loadsi*.

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Literature Cited.

- BURGER, D. 1986. Palynology, cyclic sedimentation and palaeoenvironments in the Late Mesozoic of the Eromanga Basin. Geological Society Special Publication 12: 53-70.
- CLIFFORD, H.T. & DETTMANN, M.E. 2005. First record from Australia of the Cretaceous fern genus *Tempuskyia* and the description of a new species, *T. judithae*. Review of Palaeobotany and Palynology 134: 71-84.
- DETTMANN, M.E. & CLIFFORD, H.T. 2000. Gemmae of the marchantiales from the Winton Formation (mid-Cretaceous), Eromanga Basin, Queensland. *Memoirs of the Queensland Museum*. 45: 285-292.
- HUENE, F. VON, 1932. Die fossile Reptil-Ordnung Saurichia, ihre Entwicklung und Geschichte. Monog. Geol. Palaö. I: 1-361.
- MOLNAR, R.E. & GALTON, P.M. 1986. Hypsilophodontid Dinosaurs from Lightning Ridge, New South Wales, Australia. *Geobios* 19(2): 231-239.
- POLE, M.S. 2000. Mid-Cretaceous conifers from the Eromanga Basin, Australia. *Australian Systematic Botany* 13: 153-197.
- RICH, T.H. 1996. Significance of polar dinosaurs in Gondwana. *Memoirs of the Queensland Museum* 39(3): 711-718.
- RICH, T.H. & RICH, P.V. 1989. Polar dinosaurs and biotas of the Early Cretaceous of southeastern Australia. *National Geographic Society Research Reports* 5: 15-53.
- RICH, T.H. & VICKERS-RICH, P. 1999. The Hypsilophodontidae from Southeastern Australia. *National Science Museum Monographs* 15: 167-180.
- THULBORN, R. A. & WADE, M. 1984. Dinosaur trackways in the Winton Formation (mid-Cretaceous) of Queensland. *Memoirs of the Queensland Museum* 21: 413-517.

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