

Addendum

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A New Species of *Modocia* (Trilobita: Ptychoparioidea) in the Late Middle Cambrian (Guzhangian: Miaolingian) Devoncourt Limestone, Northwestern Queensland

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Abstract

The Tasmanian species *Asthenopsis conandersoni* Bentley & Jago is recognised as closely related to *Modocia priva* Jell and transferred to *Modocia*, identifying a group of three Australian species (*immodulata* Öpik, *conandersoni*, *priva*) assignable to *Modocia*.

Keywords: trilobite, Solenopleuridae, *Modocia*, *Lejopyge laevigata* Zone

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Subsequent to the immediately preceding paper (Jell, 2021) being published online, I recognised a further Australian species of *Modocia*. Bentley & Jago (2014) erected *Asthenopsis conandersoni* Bentley & Jago, 2014 from the Christmas Hills of north-western Tasmania as part of a moderately diverse fauna that includes the index species *Lejopyge laevigata* (Dalman, 1828), plus *Pianaspis sors* (Öpik, 1961) and *Centroleura phoenix* Öpik, 1961. These species occur with *Modocia priva* Jell, 2021 in the Guzhangian (*Lejopyge laevigata* Zone) Devoncourt Limestone, northwestern Queensland (Öpik, 1961). Bentley & Jago (2014) assigned exactly the same age to their Christmas Hills fauna with *Modocia conandersoni*.

Asthenopsis conandersoni Bentley & Jago, 2014 shares with *M. priva* a well-rounded glabella anterior (a solenopleurid rather than ptychopariid feature, though not definitive), small palpebral lobes situated anterior to the cranidial mid-length, 12 thoracic

segments and a pygidium lacking a border furrow. In concert, these features place that species with *M. priva* in *Modocia* and not *Asthenopsis*. Bentley & Jago (2014) commented that their species differed from all other known species of *Asthenopsis* in possessing 12 thoracic segments rather than the 14 in *Asthenopsis*. Both Bentley & Jago (2014) and Jell (2021) regarded *Modocia? immodulata* Öpik, 1967 as a related species with 12 thoracic segments and with *Modocia priva* Jell, 2021 also possessing 12 thoracic segments, a group of three *Modocia* species (Figure 1) is identified occurring within two consecutive biozones in widely separated parts of Australia. *Modocia conandersoni* (Bentley & Jago, 2014) is distinct from *M. priva* in its longer (sag.) anterior border, more narrowly rounded glabella anterior, its thoracic fulcral line being closer to the axial furrow producing more extensive free thoracic pleurae and its lack of tuberculate ornament, particularly on the pygidial axis.

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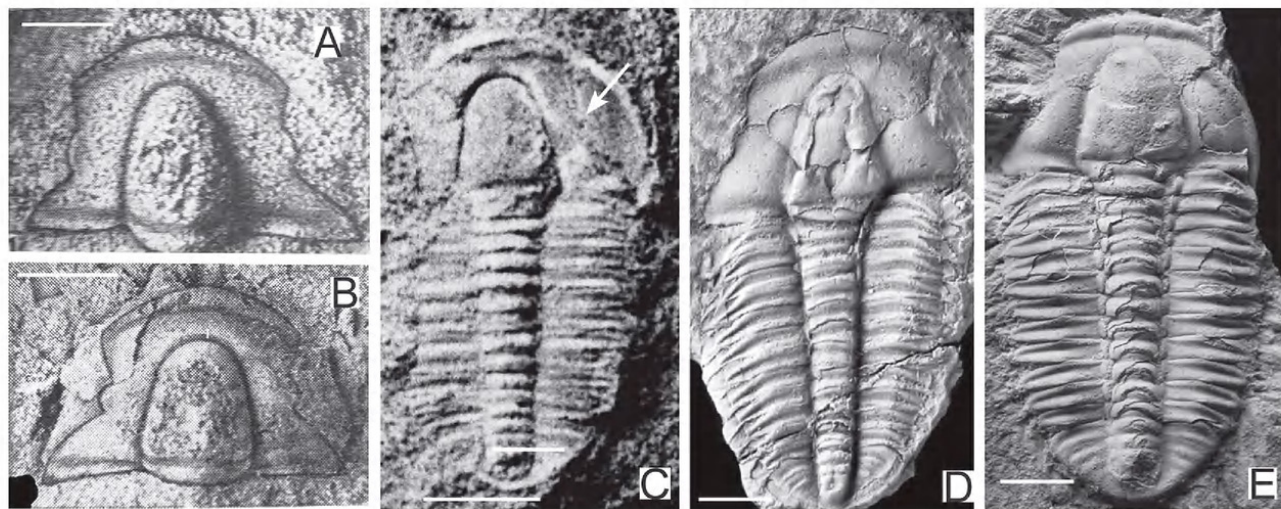


FIGURE 1. A, B, *Modocia oweni* (Meek & Hayden, 1861), exfoliated internal moulds of cranidia (B retains some exoskeleton), in dorsal view; from Walcott, 1924, pl. 16, figs 1 (USNM24581) and 3 (USNM1180), respectively; B is the holotype. C, *Modocia? immodulata* Öpik, 1967, CPC5388, incomplete exoskeleton in dorsal view, arrow indicates indistinctly preserved palpebral lobe, from Öpik, 1967, pl. 4, fig. 9 (© Commonwealth of Australia (Geoscience Australia) 2021, released under the Creative Commons Attribution 4.0 International Licence <http://creativecommons.org/licenses/by/4.0/legalcode>). D, *Modocia conandersoni* (Bentley & Jago, 2014), UTGD125577, incomplete exoskeleton in dorsal view (reproduced with permission from Bentley & Jago 2014, fig. 9G, AAP Memoir 45). E, *Modocia priva* Jell, 2021, QMF59832, incomplete exoskeleton in dorsal view, from Jell, 2021, fig. 1D. Scale bars = 10 mm.

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