

## **A *Marrella*-like arthropod from Cambrian of Australia: A new link between "Orsten"-type and Burgess Shale assemblages**

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An isolated exopod in uncompressed three-dimensional "Orsten"-type preservation from the Cambrian of Australia represents a new species of Marrellomorpha, *Austromarrella klausmuelleri* gen. et sp. nov. The exopod is composed of at least 17 annuli. Each of the proximal annuli carries a pair of lamellae: one lamella on the lateral side and one on the median side. The distal annuli bear stout spines in the corresponding position instead of lamellae, most likely representing early ontogenetic equivalents of the lamellae. The new find extends the geographical range of the taxon Marrellomorpha. Additionally, it offers a partial view into marrellomorph ontogeny. The occurrence of a marrellomorph fragment in "Orsten"-type preservation provides new palaeo-ecological insights into the possible connections between the "Orsten" biotas and other fossil Lagerstätten. Finding such connections is necessary for understanding the complex ecosystems of early Palaeozoic times.

**Key words:** Arthropoda, Marrellomorpha, *Austromarrella*, palaeoecology, Lagerstätte, phosphatization, Cambrian, Australia.

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