ACTA PALAEONTOLOGICA POLONICA

Aysheaia prolata from the Utah Wheeler Formation (Drumian, Cambrian) is a frontal appendage of the radiodontan *Stanleycaris*

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Acta Palaeontologica Polonica 62 (3), 2017: 619-625 doi:https://doi.org/10.4202/app.00361.2017

Aysheaia prolata, was described as the only lobopodian from the Drumian (Cambrian) Wheeler Formation in Utah, USA, and the sole representative of this genus besides the type species *Aysheaia pedunculata*, from the Cambrian (Stage 5) Stephen Formation, British Columbia. A redescription of *Aysheaia prolata* reveals previously overlooked morphological features, including segmental boundaries between putative lobopods, and curved terminal spines on the putative anterior end. These observations undermine lobopodian affinities of *Aysheaia prolata* , and instead we interpret this specimen as an isolated radiodontan frontal appendage. The presence of 11 podomeres, five of which possess elongate and anteriorly recurved ventral blades with auxiliary spines, together with shorter robust dorsal spines, identify the specimen as *Stanleycaris*. This represents the first report of *Stanelycaris* outside of the Cambrian Stage 5 thin Stephen Formation in British Columbia, expanding its palaeobiogeographic and stratigraphic range. *Aysheaia* is left as a monotypic genus endemic to the Burgess Shale. The Spence Shale luolishaniid *Acinocrinus stichus* is currently the only lobopodian known from the Cambrian of Utah.

Key words: Euarthropoda, Radiodonta, Hurdiidae, Cambrian, USA.

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