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ECE 11

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ABSTRACT BOOK

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**Taxonomic revision of the first described stylophoran echinoderm:
Ateleocystites huxleyi Billings, 1858**

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The mitrate stylophoran *Ateleocystites huxleyi* was originally described based on four incomplete specimens collected in the Trenton Group (Hull Beds), Quebec, Canada (Billings, 1858; Wilson, 1946). Additional and better preserved material from the Guttenberg Formation (lower Katian, Upper Ordovician) of Illinois, Missouri and Wisconsin was subsequently assigned by Kolata & Jollie (1982) to a distinct species of the same genus: *A. guttenbergensis*. In the past twenty years, several new specimens of *Ateleocystites* were collected in the lower Katian (Upper Ordovician) of the Québec City area (Neuville Formation) and on the island of Montréal (Rosemont Member, Montréal Formation) and Ontario, Canada (Brechin Lagerstätte: Kirkfield and Verulam formations), as well as in coeval rocks of New York State, USA (Rust Formation).

The reexamination of the type material of *A. guttenbergensis* and *A. huxleyi*, along with the observation of the new specimens, largely confirms the validity of previous descriptions. However, an unexpected morphological variability is evidenced in the arrangement and number of imbricate supracentral elements forming the posterior half of the upper thecal surface of *A. huxleyi*. Examination of a larger number of specimens also indicates that all other characters supposedly diagnostic of *A. guttenbergensis* fall within the range of variation observed in *A. huxleyi*. This implies that *A. guttenbergensis* represents a junior synonym of *A. huxleyi*. This anomalocystitid mitrate was thus palaeobiogeographically widespread in Laurentia, though within an apparently short time interval bracketed in the early Katian. Several aspects of its morphology remain poorly documented, in particular the morphology of its two posterior spines. Their presence has been so far only deduced from the observation of 'sockets' for their articulation onto the postero-lateral corners of the marginal frame.

References

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