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Martina Nohejlová, Bertrand Lefebvre, Christophe Dupichaud

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# CONFERENCE BOOKLET

## 17<sup>th</sup> International Echinoderm Conference and 2<sup>nd</sup> International Hemichordate Meeting

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## FILLING THE SILURIAN KNOWLEDGE GAP: A NEW OCCURRENCE OF SOLUTANS IN THE WENLOCK OF WALES

**Nohejlová, M.<sup>1\*</sup>, Lefebvre, B.<sup>2</sup> and Dupichaud, C.<sup>2</sup>**

<sup>1</sup> Czech Geological Survey, Prague, Czech Republic

<sup>2</sup> LGLTPE, Lyon 1 University, 69100, Villeurbanne, France

\* e-mail: [martina.nohejlova@geology.cz](mailto:martina.nohejlova@geology.cz)

The class Soluta is a small clade of asymmetrical, unusual-looking Palaeozoic echinoderms ranging from the middle Cambrian (Miaolingian, Drumian) to the Lower Devonian (Emsian). They are made up of a polyplated theca and, articulated to it, of two distinct appendages. The first one is a free ambulacral structure (brachiole) and the second, longer one is a stem-like structure (homoiostele) used for permanent attachment (plesiomorphic condition) or for locomotion on soft substrates. The taxonomic position of this class is still controversial, with solutans interpreted either as basal, pre-radial echinoderms, or as blastozoans deriving from a gogiid-like ancestor.

Both taxonomic diversity and palaeobiogeographic dispersal of solutans reached their peak in the Late Ordovician. The class was subsequently strongly affected by the Hirnantian mass-extinction. Until last year and the description of *Dehmicystis ariasi* from the Ludlow of Spain, no solutans were known from Silurian deposits, while several taxa have been reported, worldwide, in the Lower Devonian. Here, we report the second known occurrence of solutan echinoderm from the Silurian. The studied material, which comes from the Nantglyn Flags (Wenlock) of Wales (UK), represents the earliest occurrence of post-Ordovician solutans. This new taxon will help to better understand the evolutionary patterns of the class Soluta, by filling the knowledge gap between its earliest members (Cambro–Ordovician) and its latest representatives in the Devonian.