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A new brittle star from the early Carboniferous of Poland and its implications on Paleozoic modern-type ophiuroid systematics

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The fossil record of Paleozoic ophiuroids includes a number of forms which share striking similarities with modern relatives in terms of skeletal morphology. These so called modern-type Paleozoic ophiuroids yield an enormous potential for a better understanding of ophiuroid evolution, yet the scarcity of accurate and sufficiently detailed morphological descriptions available to date precludes any further-reaching assessments. Here, we describe an articulated ophiuroid specimen from the Late Tournaisian (early Carboniferous) of Czatkowice quarry, southern Poland, as a new species *Aganaster jagiellonicus* sp. nov. The good preservation of the specimen allowed for a morphological analysis at a level comparable to recent ophiuroid descriptions. It shows remarkable morphological similarities with extant former ophiolepidids *Ophiomusium* and *Ophiosphalma*. The new find thus contributes to a solid basis for future investigations on the position of the modern-type Paleozoic ophiuroid in the phylogeny of the class.

Key words: Echinodermata, Ophiuroidea, crown-group, evolution, Carboniferous, Tournaisian, Poland.

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