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The first record of *Aspiduriella* (Ophiuroidea) in the Upper Muschelkalk of Poland

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The ophiuroid *Aspiduriella* sp. is recorded for the first time from the Upper Muschelkalk (*Ceratites* Beds), at Nietulisko, northern margin of the Holy Cross Mountains, central Poland.

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Key words: Germanic Basin, Holy Cross Mountains, Upper Muschelkalk, Ophiuroidea, *Aspiduriella*.

INTRODUCTION

Ophiuroids from the Muschelkalk sediments of the eastern part of the Germanic Basin (Poland) have been recorded few times (Piotrowski and Liszkowski, 1981; Radwański, 2002; Salamon *et al*., 2003).

All ophuiroid specimens studied in this paper come from a thin layer of organodetrital limestone located within the *Ceratites* Beds (2 metres below the Muschelkalk/Keuper boundary) at Nietulisko (Fig. 1A, B). Also occurring in the marly and partly glauconitic limestones found there are bivalves, gastropods, brachiopods, rarely ceratites, and crinoids (Salamon, 2002). Other Muschelkalk fossil localities along the northern margin of the Holy Cross Mountains (e.g. Jakimowice, Bliżyn, Doły Biskupie, Bukowie, Jarugi) have also been investigated for fossil ophiuroids, but none have so far been found.

SYSTEMATIC PALAEONTOLOGY

Phylum **Echinodermata** Klein, 1734
Subphylum **Asterozoa** Zittel, 1895
Class **Ophiuroidea** Gray, 1840
Order **Ophiurida** Müller and Troschel, 1840
Family **Ophiuridae** Lyman, 1865

Aspiduriella Bolette, 1998 [nomen nov. pro *Aspidura* Agassiz, 1835]
Aspiduriella sp.
(Fig. 2)

M a t e r i a l . One almost complete specimen (diameter 5.75 mm; GIUS 7-2083) — aboral view; two separate arm fragments (length 2.85–7.25 mm; GIUS 7-2083) — aboral and oral views.

D e s c r i p t i o n . A small ophiuroid with central disc of oval outline; the center of the disc has a small, pentagonal centrodorsal plate. The first circlet is composed of five irregular, hexagonal basal plates. The radial plates are drop-shaped in outline and are very large in relation to the whole specimen. Among the first circlet of basal and radial plates are numerous, irregular, multiangular secondary plates. The plates of the central disc are not sculptured, with the exception of the radials, which have single, small protuberances in the radial position on each plate. The arms are slender and long, and do not taper distally; their tips are not preserved. The lateral plates in the proximal part of the arms are narrow and low, closely adjacent to themselves. The dorsal plates are smooth and rhomboid in outline, decrease in size distally. The ventral plates have very sharp edges and also become smaller towards the ends of the arms.

R e m a r k s . The specimens differ from *Aspiduriella similis* (Eck) by possessing longer arms, a larger central disc, and a smaller number of secondary plates. Distinctive charac-

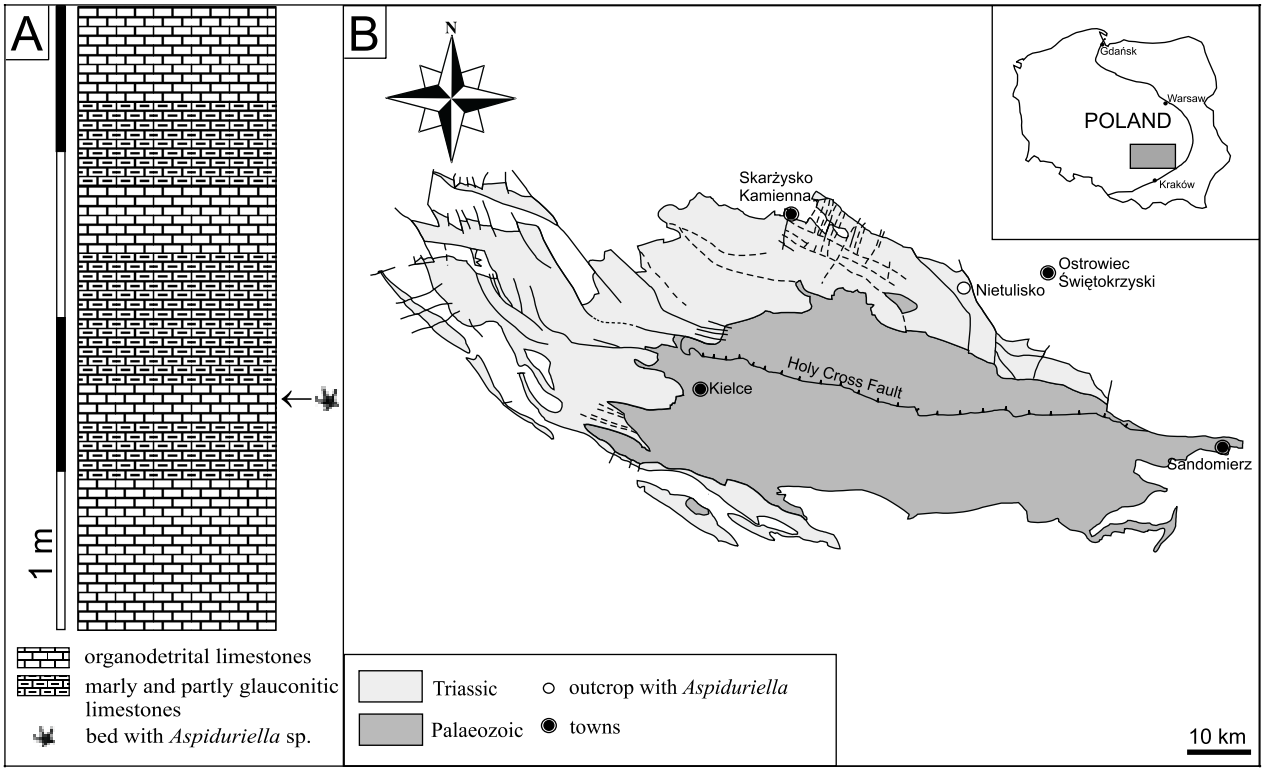

Fig. 1. A — Simplified lithological profile of *Ceratites* Beds at Nietulisko; B — location of fossil site (the map after Marynowski *et al*., 2002; slightly modified)

ters diagnostic of *A. scutellata* (Blumenbach) include small radial plates and numerous secondary disc plates; radials of *Aspiduriella* sp. are similarly flat as in *A. scutellata*. In *A. similis* the secondary plates are arranged in a distinct additional circlet as well as fill spaces among main plates like the centrodorsal, basals and radials. However, in the specimen described in this paper, the secondary plates lie among main plates only. *Aspiduriella* sp. lacks a granular surface on the central disc, but this can be the result of a poor preservation.

O c c u r r e n c e . Known only from the Upper Muschelkalk of Nietulisko, northern margin of the Holy Cross Mountains, central Poland.

DISCUSSION

Aspiduriella, quite common in Upper Muschelkalk sediments of Germany (e.g. Kutscher, 1940), has not yet been recorded in deposits of the same age in the Polish part of the Germanic Basin. *A. similis* has been recorded in the Gogolin Beds (Aegean–Pelsonian) in Upper Silesia (e.g. Boczarowski and Salamon, 2000) and *Aspiduriella* sp. has been described from the North-Sudetic Basin (Salamon *et al*., 2003; Upper Gogolin Beds; Bithynian–Pelsonian). Additionally, *Aspiduriella* sp. has only been recorded from the Łukowa Beds (Bithynian) from the southern and western margin of the Holy Cross Mountains (Senkowiczowa, 1961).

Abbreviation of cited repository: GIUS — Geological Institute of the University of Silesia, Sosnowiec, Poland.

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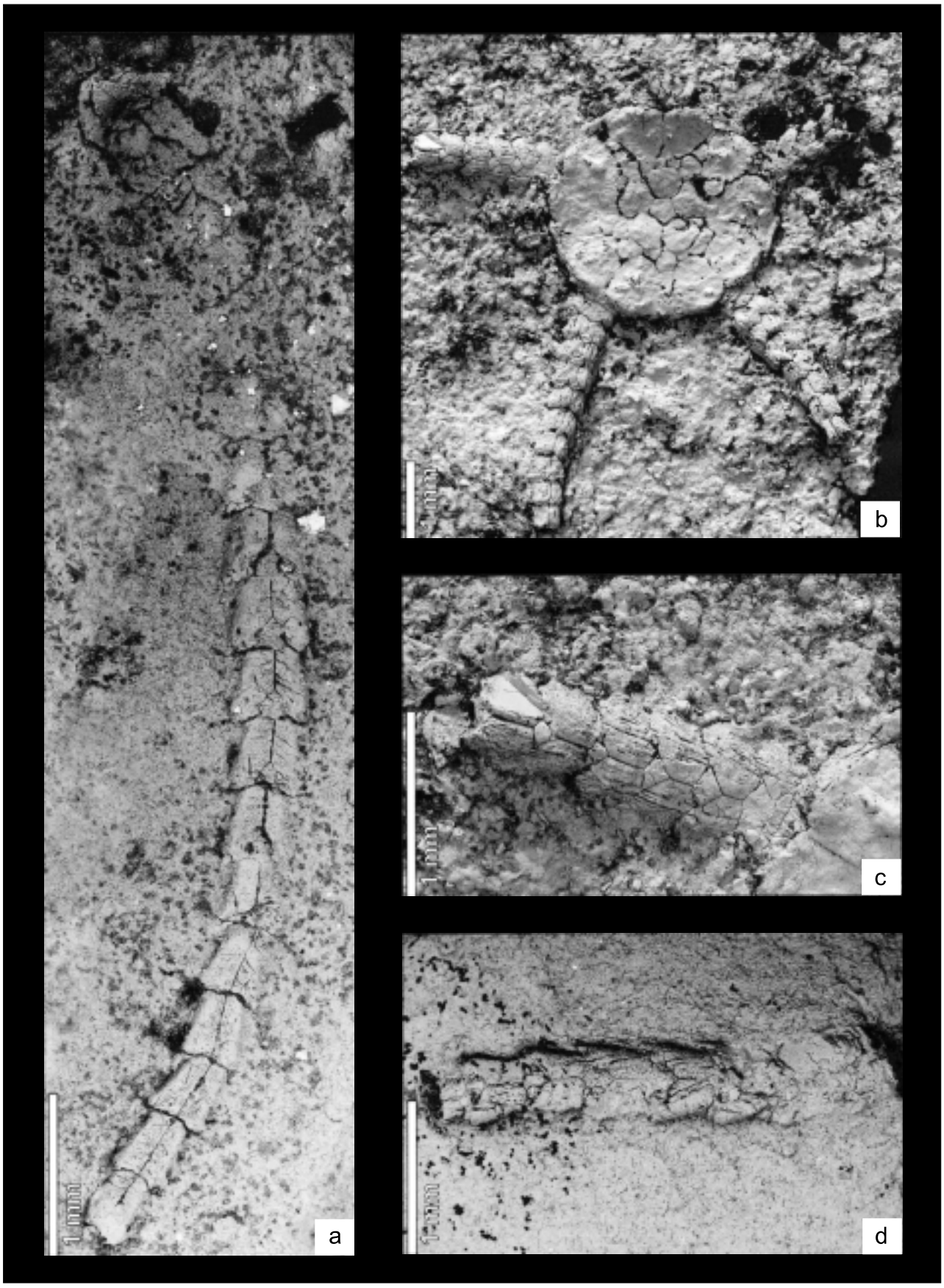

Fig. 2. *Aspiduriella* sp., Upper Muschelkalk, Holy Cross Mountains, Poland

a — arm with fragment of mouth frame, oral view, GIUS 7-2083 Nie./01; b — almost complete specimen, GIUS 7-2083 Nie./02, aboral view; c — almost complete specimen, GIUS 7-2083 Nie./02, aboral view with arm detail; d — fragment of arm, aboral view, GIUS 7-2083 Nie./02

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