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MIDDLE CAMBRIAN BIOSTRATIGRAPHY OF THE ALMBACKEN DRILL-CORE, SCANIA, SWEDEN

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The Middle Cambrian succession of the Almbacken core is one of the stratigraphically most complete ones so far available from Scania (Skåne), southern Sweden. The core drilling was carried out in 1949, probably at a site just north of the Almbacken farm (about one km south of Södra Sandby Church, west-central Scania), and penetrated a c. 30 m thick succession of flat-lying Middle Cambrian–upper Lower Cambrian strata. The core, which has a diameter of 72 mm, contains a stratigraphical sequence from the middle *Lejopyge laevigata* Zone (upper *Paradoxides forchhammeri* Stage) to the *Holmia kjerulfi*-group Zone (upper Lower Cambrian). There is no faunal evidence for the presence of the *Acadoparadoxides oelandicus* Stage. Only the uppermost part of the Lower Cambrian (Gislöv Formation) was recovered, comprising c.1.5 m of unfossiliferous siltstones and a thin limestone bed with indeterminable trilobite fragments at the base of the core.

The Middle Cambrian is c. 28.3 m thick and consists of dark grey to black mudstones and shales (alum shale) with stinkstones and limestone beds. Three major limestone beds can be identified, in ascending order: the “Fragment Limestone” (35 cm), the Exsulans Limestone (40 cm), and the Andrarum Limestone (155 cm). The Middle Cambrian is richly fossiliferous, except in the lower six metres, and agnostoid trilobites generally dominate the faunas. Polymeroid trilobites, mainly solenopleurids and paradoxidids, and indeterminate lingulate brachiopods are abundant at some levels. Eodiscid trilobites are very rare, but are represented by *Opsidiscus bilobatus* (Westergård, 1946) in the *L. laevigata* Zone, and *Eodiscus scanicus* (Linnarsson, 1883) in the topmost part of the *Ptychagnostus gibbus* Zone. The succession of trilobite species are used for a biostratigraphical subdivision into seven biozones. The Ptychagnostidae is important because several of its species have a cosmopolitan distribution and relatively short stratigraphic ranges.

The preservation is generally good and 31 trilobite species have been identified. The excellent preservation in the limestones allowed a description of growth stages in pygidia of *Ptychagnostus punctuosus* (Angelin, 1851). Several characters change markedly during ontogeny. Most noticeable are weakening of the postaxial median furrow and the shape of the

pygidial axis, which is acutely pointed and lanceolate-shaped in meraspides, and distinctly constricted in holaspides (Fig. 1). The pleural fields are smooth in early-middle meraspides, but become progressively more and more granulose in succeeding moult stages.

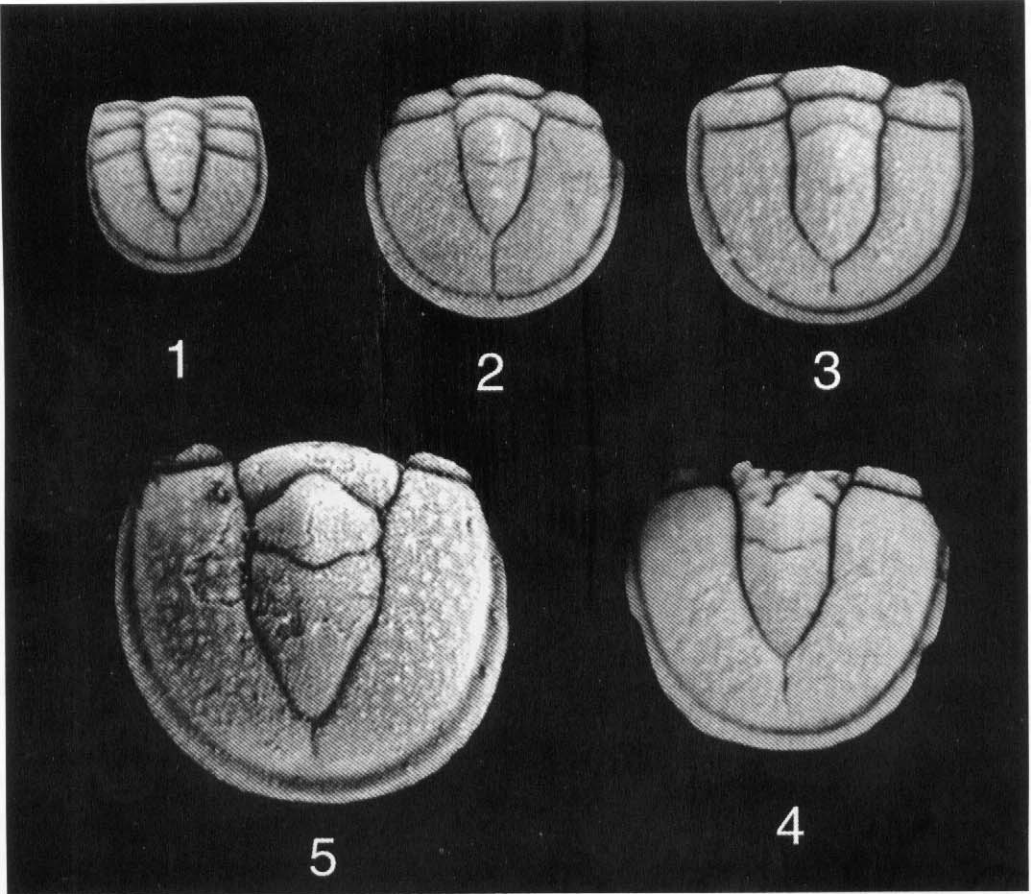


Fig.1. Growth stages in pygidia of *Ptychagnostus punctuosus* (Angelin, 1851) from the *P. punctuosus* Zone in the Albacken drill core, Scania, southern Sweden. All photographs x 14 except 5. 1. LO 8462t, depth 14.5m; 2. LO 8463t, depth 11.90m; 3. LO 8464t, depth 14.15m; 4. LO 8465t, depth 14.80m; 5. LO 8466t, depth 11.90m, x13.

LO: Lund Original, Department of Geology, division of Historical Geology and Palaeontology, Lund University, Sweden.