

## Siphuncular structure in Ordovician endocerid cephalopods

Harry Mutvei

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Exceptionally well-preserved shells of the endocerids *Dideroceras wahlenbergi* (Foord, 1887), *Anthoceras vaginatum* (Schlotheim, 1820), and *Suecoceras barrandei* (Dewitz, 1880) from phosphatized Early and Middle Ordovician limestones of Northern Estonia were studied by means of SEM. The septal neck in these endocerids is composed of three, structurally different, aragonite layers: outer spherulitic-prismatic, nacreous, and inner prismatic. The connecting ring is a continuation of the spherulitic-prismatic layer of the septal neck. Its inner surface was probably covered by a thin glycoprotein (conchiolin) sheet. Structural differentiations in the spherulitic-prismatic layer of the connecting ring, such as a layering and 'eyelet', reported by previous writers, were not observed. These differentiations probably result from diagenesis. The siphuncular structure in endocerids agrees in detail with that in Recent *Spirula* and *Nautilus*. The conical endosiphuncular deposits (endocones) of endocerids show extensive intraspecific variation. Morphological and structural differences in these deposits should therefore be used with caution in generic and specific diagnoses.

**Key words:** endocerids, structure, Ordovician, siphuncle, *Nautilus*, *Spirula*.

Harry Mutvei [[harry.mutvei@nrm.se](mailto:harry.mutvei@nrm.se)], Department of Palaeozoology, Swedish Museum of Natural History, Box 50007, SE-10405 Stockholm, Sweden.

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