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The Early Cambrian (Botomian) stem group brachiopod *Mickwitzia* from Northeast Greenland

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The problematic brachiopod *Mickwitzia* Schmidt, 1888 is re-described based on new material of *M* . cf. *occidens* Walcott, 1908 from the Early Cambrian (Botomian) Bastion and Ella Island formations of Northeast Greenland. Etched material demonstrates that *Mickwitzia* has a lingulid-like juvenile ("larval") shell with trails of nick-points, reflecting the movement of marginal setae. Juvenile and early mature ventral valves have a lingulid-like pseudointerarea with a pedicle groove. The shell of M. cf. occidens is only partially phosphatic, in particular around the juvenile-early mature shell in both valves. The phosphatic shell includes at least two types of cylindrical structures: (1) slender columns identical with the columns of acrotretoid brachiopods and (2) relatively thicker tubes which may be open to the exterior surface and have internal striations (on the ventral pseudointerarea). The striations are most likely imprints of microvilli and these tubes can be inferred to have contained setae. The thinner linguliform columns and thicker setigerous striated tubes are considered to be homologous with identical structures in the sellate and mitral sclerites of the problematic Micrina, which has been identified as a probable primitive stem group of the Brachiopoda. *Mickwitzia* represents a more derived member of the stem group Brachiopoda.

Key words: Brachiopoda, Mickwitzia, ontogeny, shell structure, Cambrian, Botomian, Greenland.

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