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Palaeobiology of orthothecide hyoliths from the Cambrian Manto Formation of Hebei Province, North China

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Newly discovered specimens of the orthothecide hyoliths in Hebei Province of North China reveal new data on diversity, skeletal microstructure and palaeoecology of the order Orthothecida. *Decoritheca cyrene* possesses a well-defined skeletal structure consisting of rows of tubercles in the shell wall, which correspond to dimples on the internal surface of the conch. We describe a new species *Cupitheca convexa* sp. nov. characterised by a planar and interior convex operculum with a pair of bilobate cardinal processes, which differs from the more widespread *C. holocyclata* in opercular morphology and overall ornamentation of the conch, highting the significance of operculum in the classification of hyoliths. First discovery of the presumed unusual protoconch of *C. convexa* sp. nov. implies a possible lecithotrophic development to adapt to nutrient-fluctuant environments. Pitting structure on the operculum and shell as well as lamellar- fibrillar structure on the internal mould of *C. convexa* sp. nov. are observed herein.

Key words: Hyolitha, Orthothecida, ontogeny, larval conch, skeletal microstructure, Cambrian, China.

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