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Palaeoecology of corals and stromatoporoids in a late Silurian biostrome in Estonia

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A middle Ludlow biostrome at Katri, western Estonia, the richest accumulation of corals and stromatoporoids in Estonia, is partly exposed in a coastal section. The fully marine biostrome consists of 5 fossiliferous layers of carbonate skeletons, grouped into Facies 1 (grainstone-packstone, layers 1, 3, 5) and Facies 2 (wackestone, interbedded layers 2, 4). Pressure solution degraded original sedimentary relationships and morphologies of stromatoporoids, tabulates and rugosans which constructed the biostrome, but the two facies have major faunal differences. Facies 1 is rich in stromatoporoids "*Stromatopora*" *bekkeri* and *Plectostroma scaniense* (low to high domical up to ca. 30 cm in basal length); and tabulate *Favosites forbesi* (bulbous to high domical up to ca. 25 cm wide). In Facies 2, all three taxa are less common and much smaller. Instead, the most abundant stromatoporoid is laminar *Syringostromella borealis* up to 30 cm basal length; the most abundant coral is erect branching *Laceripora cribrosa*, as scattered fragments up to 24 cm long. Neither occurs in Facies 1. Six other stromatoporoid taxa, 5 other tabulate and 5 rugosan taxa occur uncommonly in the biostrome, mostly in both facies. The Katri biostrome is slightly younger than, but facially similar to biostromes in the middle Ludlow Hemse Group on Gotland ca. 250 km WSW, with well-known stromatoporoid faunas. Corals are abundant in Hemse biostromes. Several key stromatoporoids occur in both the Hemse biostromes and Katri, but two abundant taxa in Hemse biostromes are absent in Katri and two tabulate corals abundant in Katri are missing in Hemse biostromes. Thus there was a wide distribution of such biostromes in the central Baltic large shallow marine carbonate platform, but with previously unreported variable assemblages presumed due to facies features not recognised in the sediments.

Key words: Anthozoa, Stromatoporoidea, palaeoecology, biostrome, Silurian, Estonia.

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