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Stromatactis limestone below and above the Permian-Triassic boundary event: evidence of sponge microbial build-up.

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New exposures in the Upper Permian to basal Triassic carbonate succession near Shanggan (Leye County, NW Guangxi, South China) shows an Upper Permian stromatactis mound directly resting on top of a coral reef. The top of this Late Permian stromatactis buildup is cut by an irregular surface overlain by a 1.5 m thick high-energy laminated lime grainstone followed by a 5 m thick basal Triassic stromatolite facies. The upper, domal part of this microbial buildup displays centimetric cavities of stromatactis type cemented by blocky calcite.

Abundant and larger stromatactis type cavities with fibro-radial calcite cement occur in the overlying upper Griesbachian coquina limestone (Hautmann et al., 2011, Kaim et al., 2010 and Frisk et al., 2012). Next above, horizontally elongated stromatactis cavities and sheet cracks type filled by gray lime mud and micro-layered isopachous cements occur in the lower Dienerian lime siltstone.

The Shanggan section fills a gap between previously known stromatactis occurrences and bridges Paleozoic and Mesozoic stromatactis limestone. This continuum was favored by the local persistence of open marine carbonate deposition from the Permian into the Triassic on a tectonically uplifted marine shoal.

Due to their partly sponge-microbial origin, the stromatactis buildup seems unaffected by the great extinction, and it is interesting to note that Sponges are extending across this greatextinction horizon in the open marine Central Iran Permian-Triassic transition (Leda et al. (2013). Hence, these boundary-crossers must be considered as background survivors and not as Early Triassic "disaster" forms.

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