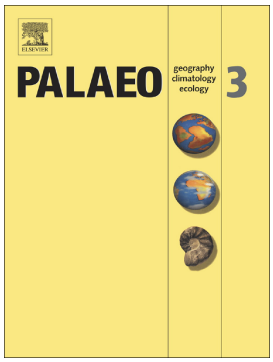


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# Possible evidence of primary succession in a juvenile-dominated Ediacara fossil surface from the Flinders Ranges, South Australia.

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**Abstract:** Ediacara fossil surfaces from the Flinders Ranges (South Australia) commonly record excellent preservation quality and can provide a palaeoecological window into some of the oldest communities on Earth (ca. 555 Ma). An excavated semi-contiguous sandstone bed of 6.5 $m^2$ from a fossil locality at Crisp Gorge in the central Flinders Ranges records an abundance of taxa and structures characteristic of White Sea assemblage communities. Stratigraphic analysis places the fossil surface within the Oscillation Rippled Sandstone Facies of the Ediacara Member at Crisp Gorge. The community appears to be predominantly juvenile forms, with *Dickinsonia costata*, *Parvancorina minchami* and *Tribrachidium*