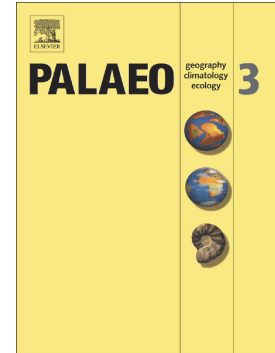


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# First Lower Jurassic vertebrate burrow from southern Africa (upper Elliot Formation, Karoo Basin, South Africa)

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## ABSTRACT

Vertebrate burrows are common ichnofossils in the Permo-Triassic of the main Karoo Basin in South Africa. They are generally attributable to one of several lineages of therapsid, including the derived clade known as cynodonts. Despite the presence of cynodont species in the Upper Triassic and Lower Jurassic of the Karoo Supergroup, vertebrate burrows have never been reported from this part of the succession. Recent fieldwork recovered a semi-elliptical burrow cast in the Lower Jurassic upper Elliot Formation (Stormberg Group) on the farm Edelweiss 698 (Free State). The horizontal and vertical diameters of the burrow cast are ~18 and ~7 cm, respectively. This semi-horizontal, straight to slightly sinuous tunnel is ~50 cm long with a ramp angle of <5°. The tunnel lacks branching, terminal chambers, and associated fossil bones. The burrow cast consists of medium, massive sandstone and very rare, faint, horizontal to slightly inclined lamination. The burrow cast is hosted in fine-grained, palaeo-pedogenically altered, crevasse splay sandstone that is 10-20 cm thick and is under- and overlain by a massive, red, bioturbated floodplain mudstone unit with large-scale

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