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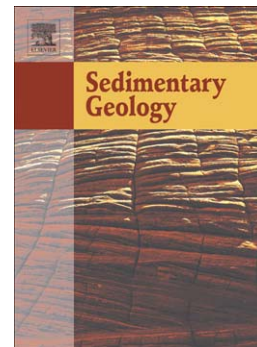
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Macro- and meso-fabric structures of peritidal tufa stromatolites along the Eastern Cape coast of South Africa

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Abstract

Stromatolites are rare in modern ecosystems due to factors associated with seawater chemistry or biological competition that restrict their formation. Actively calcifying stromatolites, near the Kei Mouth in the Eastern Cape, South Africa, were discovered in the early 2000s. Similar deposits were later described along a 200 km stretch on the south coast of Port Elizabeth. This study aims to describe the environmental setting, the macro- and meso-structures, as well as the evolution of the deposits near Port Elizabeth compared to other similar formations. Results show that the general environmental setting is consistent amongst peritidal stromatolites, including those described in this study. In all instances stromatolite growth occurs on a wave-cut rocky platform in and around rock pools. Growth is maximal within the intertidal to supratidal zone, as a result of freshwater inflow via emerging mineral springs at the base of landward slopes, and the periodic intrusion of seawater via storm surges or wave splash. In comparison with other systems, the South

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