

# Distribution and morphologies of modern microbialites of the Great Salt Lake, Utah, USA

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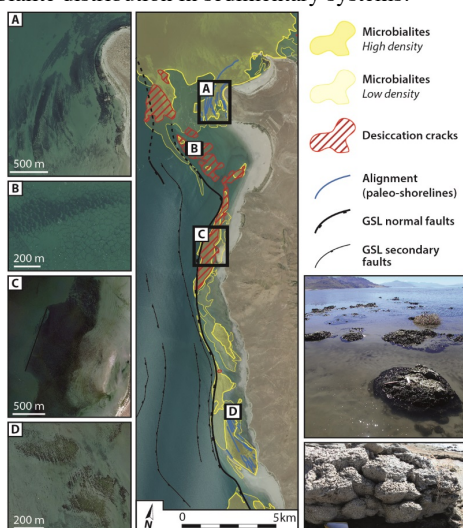
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Microbialites of the Great Salt Lake (GSL) were mapped in 1938 but remained largely understudied since then. High resolution aerial imageries coupled to detailed field mapping of facies indicate a non-random distribution of microbialites along the GSL shoreline. Here, we discuss the main factors involved in the formation and preservation of microbialites since the lake reached its modern configuration (*ca.* 10 Ka). Microbialites and microbial mats were investigated on the western margin of Antelope Island at 0-3m waterdepth. Our results suggest an interplay of tectonic (active faults, groundwater seepage) and climatic (long term to seasonal lake level fluctuations) processes in the control of the distribution, size and morphologies of the microbial deposits. Our observations have direct implications for the prediction of microbialite distribution in sedimentary systems.



**Figure 1:** Antelope field site. Repartition of microbialites in the western side of Antelope Island, influenced by the effect of faults, desiccation cracks and paleo-shorelines.