

NEW FINDINGS ON THE PLEISTOCENE EMERGENCE OF BARBADOS

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ABSTRACT

The Pleistocene coral limestone cap of Barbados covers some 75% of the island and excludes only the northeastern section known as the Scotland District. This coral cap includes relatively extensive unconformities and some deformation, so far seen only in eastern Barbados - St. Phillip, St. John and St. Lucy. These phenomena imply that the evolution of the coral cap in eastern Barbados differs somewhat from that on the western side, where evidence from other workers gives reasonable support for steady tectonic uplift over the past 200K - 300K years.

The deformation consists of folding of older (pre-300 Ka.) coral cap, and faulting of both older and younger tracts of coral cap. In eastern Barbados much of the older coral cap was removed by erosion and faulting before deposition above them of younger tracts of beach and reef, which now exist at varied levels above sea level. The new findings indicate that the emergence of Barbados above sea level in the past (0.5 - 1.0 Ma.) has not followed the 'bathtub ring' model, i.e. not a rigid steadily rising edifice, but rather that the tectonics causing emergence have produced a space available and perhaps a time variable field of uplift rates.