LIMESTONE BUILDUPS AS ECOTECTONIC INDICATORS WITHIN THE TERTIARY OF THE SOUTHERN CARIBBEAN REGION

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ABSTRACT

Common tectonostratigraphic relationships are displayed in the stratigraphic and regional distribution of certain prominent limestone units within the Tertiary of the Southern Caribbean region. The most conspicuous and extensive is a line of late Middle Eocene algal/foraminiferal limestones which extend eastward from the Central American isthmus, through northern Colombia and Venezuela, to Trinidad. All of these limestones appear to cap highly deformed flysch and other deep-water marine sediments, with their most prominent development associated with major frontal thrusts of the region. In western Venezuela and Trinidad identical relationships are seen at the late Miocene level, indicating synchronous tectonostratigraphic events taking place in these widely separated provinces. The limestone units comprising the Paleocene "morros" of central northern Venezuela probably belong to the same tectonostratigraphic model.

It is postulated that these dominantly algal buildups became established on paleobathymetric highs of deep water sediments which were accreted to the northern border of South America, and they are thereby indicative of synchronous major events within the tectonic history of the region. These particular limestone buildups are differentiated from those of similar biological character which clearly occupied other paleoecological niches during the paleogeographic evolution of the southern Caribbean area..