

Ecology and morphology of the Caribbean Mio-Pliocene reef-coral *Siderastrea*

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Small paucispecific banks constructed by the massive scleractinian *Siderastrea* occur along the northern margins of hermatypic coral distribution during the Miocene and Pliocene epochs. Quantitative studies of environmental variation in one bank-builder, *S. mendenhalli*, from sandstones north of the Gulf of California show that distinctively thin, closely spaced synapticalae form in turbid, nearshore habitats in the same manner as in modern *S. siderea* from Jamaica. Analysis of variation between *Siderastrea* species suggests that, like these nearshore populations, framework-building species have comparatively large corallite diameters; thin septa, columellae, and walls; and numerous synaptical rings. These results imply that skeletal configurations of Tertiary bank-building *Siderastrea* may have been uniquely adapted for rapid colony growth in turbid, protected environments with abundant suspended organic material.

Key words: Corals, Scleractinia, environmental variation, multivariate analysis, Caribbean, Cenozoic.

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