

BIOTIC AND SEDIMENTOLOGIC COMPARISON OF PATCH REEFS ON THE NORTH AND SOUTH SHELF OF BELIZE, CENTRAL AMERICA

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Holocene patch-reefs occur throughout the shallow marine platform, to the lee of the barrier reef in northern and southern Belize, Central America. Patch reefs on the northern shelf that occur within an areally extensive patch reef complex (Mexico Rocks) indicate that differences exist between reefs here and well-studied patch reefs on the southern shelf that have been used by workers as a general model for patch reef development throughout Belize. This model proposes that patch reefs on the Belizean shelf are dominated by typical Atlantic-Caribbean, biotically-zoned coral assemblages of *Acropora palmata* and *A. cervicornis* that kept up or caught up with Holocene sea level rise during the last 8000 years to form large "keep up" or in some instances "catch up" reefs.

In contrast to those in the south, the northern patch reefs are not biotically zoned, are dominated by *Montastrea annularis* rather than *Acropora* spp., and are much younger (400 years old) than those in the south. In addition, northern shelf patch reefs developed predominantly by lateral growth in a milieu of static sea level and are herein called "accretion" type reefs. These differences in biotic and sedimentologic parameters between reefs on the northern and southern shelves imply fundamentally different ecologic and sea level history controls on patch reef formation from north to south. A leading contributor to the variation among the reefs along the Belizean shelf may be species-specific growth rates of the coral species that initiate each patch reef, and response to sea level fluctuation versus stasis through time.