

THE DISTRIBUTION OF RECENT MARINE OSTRACODES FROM BRITISH HONDURAS

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ABSTRACT

Recent marine ostracode species from British Honduras define four major biofacies, each with typical characteristics. The Chetumal Bay Biofacies, which extends southward along the mainland coast from Chetumal Bay to Belize, is typified by low variable salinities and water shallower than twenty feet.

The Southern Nearshore Biofacies is restricted to a narrow strip along the coast southward from Belize. The faunal difference between the first two biofacies probably is controlled by differences in water chemistry of the influent streams, because the rivers of northern British Honduras drain a low, flat-lying carbonated terrain, whereas the streams of southern British Honduras flow across the igneous and metamorphic rocks of the Maya mountains.

The Main Lagoon Biofacies is characterized by a depth range from twenty to over two hundred feet, normal marine salinity and a very fine grained, commonly soupy substrate; this biofacies extends southward from the Chetumal Bay Biofacies and is bounded by the Southern Nearshore Biofacies on the west and the Carbonate Barrier Rim and Platform Biofacies on the east.

The Carbonate Barrier Rim and Platform Biofacies faces the Caribbean Sea and is characterized by depths shallower than thirty feet and water of normal marine salinity which supports abundant carbonate secreting organisms, including reef-building corals. All biofacies, with the exception of the Southern Nearshore, may be further divided on the basis of their ostracode faunas.

The 105 species examined in this study include 6 new genera, 35 new species, and 1 new subspecies. At least 19, and possibly as many as 25, species of the entire fauna have been found as fossils, some dating back to the late Eocene. Knowledge of the Recent distribution of such long ranging species offers a powerful tool for the paleoecological interpretation of past sedimentary environments. At the generic level, assemblages from the various biofacies exhibit close similarity to ostracode associations found in Tertiary sedimentary formations of the Caribbean area.

Ten of the species studied also occur in other tropical and sub-tropical areas, notably the Indo-Pacific. Mechanisms which have been suggested to account for this wide distribution include transport by maritime birds, in ballast tanks or anchor mud of ocean-going vessels, and either recent or ancient dispersal by floating seaweed. None of these mechanisms offers an entirely satisfactory explanation.