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## Patterns of the benthic community structure in coral reefs of the north western Caribbean

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Data on the benthic community structure of six coral reefs of the Mexican portion of the Mesoamerican Barrier Reef System using the photographic-transect method, aimed to describe the structural patterns in each reef, and comparing differences between shallow and deep reefs. In the shallow stratum (Colombia 6-7m, Chankanaab 6m, Majahual 1-6m and Akumal 8m) hexacorals, sponges and algae dominated, with 38%, 34.6% and 14.5% of abundance, respectively. The species most commonly found were: *Montastrea annularis*, *Agaricia agaricites*, *Agaricia tenuifolia*, *Siderastrea siderea*, *Diploria strigosa*, *Agelus* sp, *Pandarus acanthifolium*, *Haliclona hogarthi*, *Neofibularia nolitangere*, *Cliona delitrix*, *Dictyota dichthota*, *Penicillus dumetosus* and *Halimeda opuntia*. Hexacorals and sponges dominated in the deep stratum (Chankanaab 30m, Chemuyil 20-27m, and Palancar 16-20, 17, 22 and 27m), with 38% and 29% of total abundance, respectively. The species most commonly found were: *Montastrea annularis*, *Acropora cervicornis*, *Agaricia agaricites*, *Montastrea cavernosa*, *Goreauia auriculata*, *Agelus* sp, *Cliona lampa* and *Chondilla nucula*. The Mexican Caribbean reefs display some differences in the benthic community structure and composition, which are determined by depth. It is likely that the differences detected in the community structure also depend on other unidentified extrinsic and intrinsic factors, which may be regulating the benthic community dynamics of these coral reefs.

Palabras clave: diversity, Structure, coral reef, benthic community, Mesoamerican Barrier Reef System

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