



Coral Reefs and Hard Bottom Areas

Description

Coral reefs are wave-resistant carbonate structures built by lime-secreting organisms called corals on geological formations distinct from the reefs (Bright, Jaap, and Cashman, 1981). Reef-forming corals inhabit only tropical and a very few subtropical regions where the water temperature remains above 18°C year-round. Patch reefs and outer bank reefs are dense, massive reefs that form when coral larvae settle slowly on a firm substrate in nonturbid water of moderately high salinity (Sumich, 1980).

Hard bottoms are surficial coral communities lacking the density, reef development, and species diversity of patch and outer-bank reefs. The biota of hard bottoms usually constitute a thin veneer of live corals covering a rock outcrop or relict reef and associated bottom-dwelling organisms (Gulf of Mexico and South Atlantic Fishery Management Councils, 1982).

In the eastern, northeastern, and southern sections of the Gulf of Mexico, coral reefs have formed on limestone veneers and escarpments. In the northwest section, reefs have formed on isolated banks that protrude from a mud bottom on the seaward half of the continental shelf. These coral reefs occupy the northernmost limit of suitable climatological conditions and exhibit some of the most extensive biological zonation of corals in the Gulf (Bright, Jaap, and Cashman, 1981). More than 130 such banks occur in the northwest Gulf, including the vast East and West Flower Garden banks off the Texas-Louisiana coast, which have been proposed as national marine sanctuaries.

Coral reefs have special natural value because of their importance as habitats for commercial and recreational marine species and are of special concern because of their susceptibility to both natural and human-induced damage, which is heightened by their very slow rate of growth. The Dry Tortugas, Looe Key, Key Largo, and Biscayne Bay are coral reef areas in Florida presently under Federal management programs. Looe Key and Key Largo are designated national marine sanctuaries; Biscayne Bay and Dry Tortugas are units of the National Park System.



Known Coral Reefs



Supposed Areas of Scattered Coral Heads, Banks, or Hard Bottoms

References

Earle, S.A., 1972; Gulf of Mexico and South Atlantic Fishery Management Councils, 1982; Jaap, W.C., pers. comm.; US DOI Minerals Management Service, 1982.

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