

BARRIER ISLANDS, MISSISSIPPI GULF COAST: CLASSIFICATION OF GEOMORPHIC FEATURES.

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The trial classification presented herein characterizes the sedimentary-geomorphic setting of the five barrier Islands (Petit Bois, Horn, East Ship, west Ship, and Cat) protecting the Mississippi Gulf coast. Four categories form the basis of the classification: 1) barrier framework, 2) morpho-sedimentary zones, 3) coastal processes, and 4) geomorphic features. A framework of submerged platform (shelf), subaerial margin (beach), and Interior (eolian-washover-marsh complex) is influenced by specific processes. The shelf is either non-barred or barred with ridge and runnel topography. Mean low-tide marks the shelf-beach boundary. Beaches are grouped as, 1) either Sound-facing, Gulf-facing, or adjacent to tidal passes, and 2) either erosional or depositional. Erosional beaches reflect barrier migration, diminishing sediment supply, and sediment removal. They are recognized by drowned maritime flora, exhumed marsh, and erosional scarps of elevated eolian, washover, beach, and marsh platforms. Depositional beaches express the accretion of barrier margins through spit growth and wind-washover sedimentation. Above the level of mean spring tide is a complex of washover corridor/splay, wind flat, dune, beach ridge, maritime forest, and pond/marsh of the island interior.