

LOW-ORDER, MORPHO-SEDIMENTARY CHANGES ON BARRIER ISLANDS, MISSISSIPPI GULF COAST.

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Morpho-sedimentary features observed in aerial photography serve as reference data for monitoring local changes in the barrier island system of the Mississippi Gulf Coast. Drowned maritime flora, exhumed marsh, scarps, spits, washover flats/splays, eolian flats/dunes, dune-beach ridges, pond/marsh, and maritime forest are semi-permanent features which evolved over different time spans at different rates. They are low- and medium-order responses to coastal processes. A comparison between aerial videodata collected in July, 1989 and in July, 1991 indicates the persistence of low-order geomorphic modification. Several washover splays were deposited near the east end of West Ship Island; a recurved spit became attached to the island and formed a partially enclosed lagoon- Washover corridors on East Ship Island were reoccupied and buried with dark sediment. Near West Point of Cat Island, barred topography incised with channels formed on the nearshore shelf and spits were built across mouths of some tidal creeks. An interdune pond/marsh on Horn Island diminished in size due to the encroachment of washover and eolian sediment- The cumulative effect of small-scale, low-order geomorphic changes, over time, contributes to high-order changes at the scale of the total barrier island.