

GEOMORPHIC EXPRESSION OF EROSION ON THE MISSISSIPPI GULF COAST ISLANDS  
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The impacts of Hurricane Georges on the Mississippi Gulf Coast islands are evident in field visits, digital shoreline position mosaics, and remotely sensed images. Erosional features and land loss patterns suggest that several mechanisms interacted in varying degrees to modify the islands. Areas associated with low-angle wave attack and high tides created expansive wave terraces with marked dune erosion. Peat banks and exposed stumps typify stretches with extensive erosion, possibly from higher longshore currents. Ends of islands that were subjected to high flood and/or ebb tidal flow are characterized by the formation of sand shoals. On the four islands (Petit Bois, Horn Island, E. and W. Ship) with sand shoals, small “relict” headlands remained at or near the previous terminus of the island. This characteristic feature, along with the formation of large seaward moving mega-ripples and antidunes indicates that ebb flow played a major role in modifying these islands in the short term. The longer-term recovery and westward migration of the four islands may ultimately be linked to a seaward source (ebb delta) of sediment. Cat Island, the westernmost barrier island, does not exhibit sand shoal formation. Cat Island displays a nearly continuous offshore bar on the SE-facing shoreline and appears to have been affected mainly by ebb flow and lower angle wave attack.