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BARRIER ISLAND GEOLOGY AND UNION STRATEGY FOR THE ASSAULT AND SIEGE OF CHARLESTON, SOUTH CAROLINA, 1862 - 1863

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ABSTRACT

The Union strategies for taking Charleston, South Carolina, in 1862 and 1863 were dictated by the geomorphology of the Quaternary and modern barrier island systems south of the city. Troop movement across the majority of the depositional environments on and around modern and older barrier islands, including Folly and Morris Islands, was impossible and the disastrous Union assaults at Fort Lamar (Secessionville) and Battery Wagner (Morris Island) were largely determined by the lack of alternate strategies available for attacking shoreline-perpendicular sand fortifications. The geology of the island also proved ideal for the Confederate defense, both in terms of the narrow dune ridges and the nature of the sediment. Well rounded and sorted quartz sand allowed rapid entrenching and minimized the effectiveness of an overwhelming artillery advantage of the Union field and naval forces. The character of the sediment was also favorable to Union sappers, and trenching ultimately led to the abandonment of Battery Wagner by Confederate defenders. Geology was also a contributing factor in terms of fresh water supply for the troops of both sides during the conflict.