

Hurricane records on the South Carolina coast: patterns of periodicity over the last 5000 years

D.B.Scott¹, E. S. Collins¹, P.T. Gayes², and E. Wright²

¹*Centre for Marine Geology, Dalhousie University, Halifax, Nova Scotia B3H 3J5, Canada*

²*Center for Marine and Wetland Studies, Coastal Carolina University, Conway, South Carolina 29526, USA*

Singleton Swash on the South Carolina coast provides an extended record of storm events for this coast. Using experience gained by looking at traces of a known storm in the area, *Hugo*, which occurred in 1989, we were able to confidently pick out storm horizons from the sediments that have been accumulating in Singleton Swash since 5000 years ago. We found that although our record went back 5000 years the most intense storm activity occurred since 1800 years ago with major storm strikes on this location every 300-400 years. No storms were detected prior to that except two giant storms at about 5000 years ago. The storms were detected primarily

by content of offshore foraminifera in marsh sediments at selected intervals except the two giant storms that had thick (10 cm) sand layers with offshore foraminifera. It has been suggested that the position of the Bermuda High plays a role in hurricane storm tracks in the Atlantic and our data combined with that of others appears to confirm this with most hurricanes before 2000 years hitting the Gulf Coast when the High was in a southerly position. After 2000 years ago when the Bermuda High moved up over Bermuda, we observe storms more frequently on the Atlantic coast.