

# ***THE EFFECTS OF HURRICANE FLOYD ON THE FIDELITY OF CORAL LIFE AND DEATH ASSEMBLAGES IN SAN SALVADOR, BAHAMAS: DOES A HURRICANE LEAVE A SIGNATURE IN THE FOSSIL RECORD?***

**BISHOP, Dana** and GREENSTEIN, Benjamin J., Department of Geology, Cornell College, 600 1st street West, Mt. Vernon, IA 52314, d-bishop@cornell-iowa.edu

The passage of Hurricane Floyd over San Salvador Island, Bahamas in 1999 provided a natural experiment to determine whether a coral death assemblage might preserve an ecologic disturbance of significant magnitude. A change in the fidelity between coral life and death assemblages is a change that could be potentially preserved in the fossil record. Four coral reef sites were surveyed including, Snapshot, French Bay and Gaulins leeward and windward reefs. Live and dead coral assemblages were surveyed from the same reefs in 1998 (before Hurricane Floyd) and again in 2000 after Hurricane Floyd swept over San Salvador. The species richness and the fidelity of the life and death assemblages in 1998 were compared to the 2000 data. Snapshot reef was the only reef site that appeared to show any significant changes in species richness; this may be because of the reported decline in reef health due to natural and anthropogenic problems. Also, corals may have been killed-off by the hurricane and have yet to be re-established into the life assemblage. Results suggest that Hurricane Floyd increased the fidelity of the assemblages proportionally, therefore it is impossible to recognize the difference between the fidelity signal of a hurricane and the initial fidelity measures, suggesting that recognition of such an event in the fossil record is unlikely.

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