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First Recorded Turtle Nesting on Mississippi's Man-Made Beach

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On 22 June 1990 we were notified of a sea turtle nest on the man-made beach in Biloxi, Mississippi. The previous evening a jogger had discovered a loggerhead turtle nesting in the sand next to the western edge of the concrete breakwater sheltering Broadwater Marina from Mississippi Sound. Sea turtles occasionally nest on Mississippi's barrier islands (e.g., Ship, Horn, Petit Bois), situated about 19 km south of the mainland (Carr et al. 1982). During aerial surveys in 1990, personnel from the Gulf Islands National Seashore documented 15 crawls along these islands; well defined body pits associated with nine of the crawls indicated probable nesting (Gary Hopkins, pers. comm., Gulf Islands National Seashore). However, to our knowledge, this is the first record of a sea turtle nesting on a man-made beach in Mississippi.

The man-made beach (42 km long, ca. 100 m wide, and 1.5 m above mean sea level; Irby and McCaughan 1978) was constructed in 1955 from sand dredge material acquired from Mississippi Sound. It was last replenished in 1988, again using dredged material from just offshore (Cliff Kirkland, City of Biloxi, pers. comm.). During the tourist season, Biloxi beach entertains a great deal of pedestrian traffic; heavy equipment is also used to clean and level the beach. The 22 June nest was in an area undisturbed by both forms of traffic.

On 30 August 1990, personnel at the J. L. Scott Marine Education Center (MEC) in Biloxi received a sea turtle hatchling from a local fisherman at the marina. He had been working on his boat and noticed gulls attempting to feed near the stern; upon investigation he found a loggerhead hatchling resting on the swim platform of his boat. The local newspaper carried a short article and the following day, two more hatchlings were found inside the marina and brought to the MEC. These hatchlings probably emerged the night before, swam the length of the breakwater (ca. 300 m), and then turned 180 degrees to enter the enclosed marina. The marina is well lighted at night. A small lighthouse illuminates the entrance of the harbor and its beam, in combination with security and boat lights, may disorient hatchlings swimming in the vicinity. The three recovered hatchlings were placed aboard the NOAA research vessel *Oregon II* on 1 September 1990 and released in the Gulf of Mexico into the first sargassum rip encountered the following day (28°04.2 N, 84°44.0 W).

On 31 August the nest on the man-made beach was located and excavated. Eggs were first encountered at a depth of 38.1 cm and the nest was approximately 48.3 cm deep; this is within the normal range for loggerhead turtles (Nelson 1988). A total of 118 eggs were recovered. Dodd (1988) reported similar clutch sizes from Florida nests. Thirty-four eggs had hatched (28.8%), which was considerably lower than the 83%-90% hatch rate documented on some Florida beaches (Nelson 1988). All eggs near the bottom of the nest were in moist, cool sand. Ten of these were sampled and had not developed. The majority of the hatchlings came from eggs in the top layers of the nest. The proximity of the nest to the breakwater prevented the nest from receiving morning sun.

I would like to thank Mr. Roy Strickland for initially reporting the nesting, and for continuing to monitor the

nest until the hatchlings emerged.

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