

**IDENTIFYING MIGRATORY PATHWAYS AND FORAGING HABITAT USE BY
LOGGERHEAD TURTLES (*CARETTA CARETTA*) NESTING ON FLORIDA'S EAST COAST**

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Nesting trends in Florida's loggerhead sea turtles have been the subject of concern among the scientific community, conservationists and the general public. Florida's beaches play a key role in the persistence of this species as they host the largest loggerhead rookery in the western hemisphere and the second largest in the world. An updated analysis of Florida's loggerhead nesting trend by the Florida Fish and Wildlife Conservation Commission indicates a nesting decline of 25% from 1998 to 2010. With the recent increase in nesting in 2010, it appears that the 22-year trend (1989 to 2010) may be stabilizing. Between 2008 and 2010, thirteen loggerheads nesting at the Archie Carr National Wildlife Refuge were fitted with satellite tags. Satellite tracking identified three major migratory pathways and foraging areas: (1) a seasonal North-South migratory pattern between Virginia and North Carolina; (2) a residency in southern foraging areas; and (3) a residency in an area adjacent to the nesting beach. Half of the individuals migrated north, revealing for the first time that the coast of the United States constitutes an extremely important feeding area for nesting loggerheads from Florida. Turtles that migrated north from Florida over the course of the year showed a seasonal movement between Virginia/Delaware (warmer months) and North Carolina (cooler months). Loggerheads moving south showed a year-round residency two feeding areas: Bahamas (n=2) and Florida Bay/Florida West Coast (n=2). The remaining loggerheads (n=3) did not make long post-nesting migrations. Instead they remained in the shallow waters off the east central Florida coast with no evidence of nesting activity. While in-water studies have consistently captured sub-adult loggerheads (less than 90 cm SCL) in these areas, there has been no documentation of these areas being important as a year round feeding area for Florida's nesting loggerheads. With the recent trends in Florida's loggerhead nesting numbers, it has become even more important to identify all of the pathways and areas being used by its nesting turtles as well as the threats to these turtles based on fisheries methods, seasons, and by-catch data. The results of this further analysis will be of importance to the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Florida Fish and Wildlife Conservation Commission in establishing better regulations to reduce by-catch in US fisheries, and for evaluating protections at both the National and State levels.