Influences of Seasonality and Oceanographic Features on the Habitat Use of Seabirds in Onslow Bay, NC (Oral)

Lesley Thorne, Andrew Read
Duke University, Beaufort, NC, United States

At-sea surveys of seabirds can provide important information on the state and dynamics of marine ecosystems if they are conducted in a regular and systematic fashion. To this end, we conducted cross-shelf vessel-based band transect surveys in Onslow Bay, NC between June 2007 and May 2009 to evaluate at-sea distributions of seabirds in relation to local oceanographic factors. This area is of particular interest to studies of seabirds and oceanography for several reasons: dynamic oceanographic features are formed in the region due to Gulf Stream effects; meso-scale eddies and seasonal fronts occur commonly; and the area has been proposed as a future naval training range. We conducted surveys aboard a 53-foot research vessel at a cruising speed of 10 knots and observed 1300 individuals of 22 species of seabirds during 160 hours of survey effort conducted on 41 different days, primarily between June and October of both survey years. Seabird sightings showed seasonal patterns in both years, with the greatest number of sightings per unit effort (SPUE) observed in September and relatively high SPUE values also observed between February and April. Diversity indices were fairly constant year-round, with slightly higher diversity observed during the summer and late fall. Seabird species differed in their affinity for different oceanographic features, particularly with respect to three specific features: fine-scale sea surface temperature fronts, the Gulf Stream front, and Gulf Stream Frontal Eddies.

Identifying Wood Stork Foraging Habitat in Coastal South Carolina, USA (Oral)

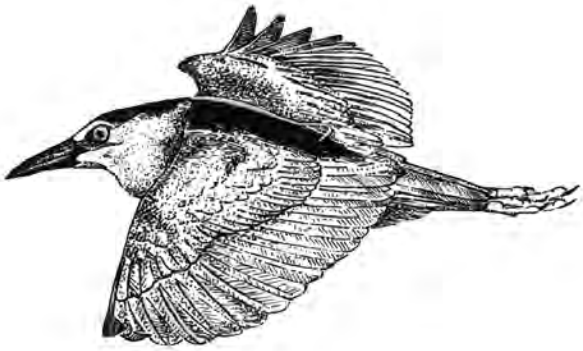
Bree Tomlinson
College of Charleston, Charleston, SC, United States

Flight-follows were conducted for three Wood Stork (*Mycteria americana*) colonies in the coastal ACE Basin region in South Carolina during the 2008-nesting season to identify foraging habitat use and selection. Various elements were evaluated for trends based on habitat-selection and include distance, time, colony nesting stage, tidal stage, and flight date. These analyses were done to illustrate any possible habitat use trends during the 2008-nesting season that may provide further insight regarding species management and protection for the US Fish and Wildlife Service and the South Carolina Department of Natural Resources. The coastal colonies of Donnelley Wildlife Management Area (DWMA), Pon Pon Lakes (PPL), and White Hall II (WH II) selected comparable foraging habitats by proportion, and expressed statistically similar habitat-use trends while maintaining minimally overlapping foraging habitat regions. Furthermore, the colonies remained predominately within their own river drainages and used varying proportions of the following habitats: bay/estuary/sandy, forested wetlands, and nonforested wetlands. The varied habitat types provided the nesting Wood Storks with steadily available foraging options, though the primary habitats utilized were forested wetlands and nonforested wetlands. Overall, Wood Storks from our three coastal colonies maintained similar foraging habit-use patterns within their own foraging grounds. The foraging uniformity suggests that the state of South Carolina may apply broad-ranging management guidelines to protect nesting Wood Stork foraging habitat throughout the region during a typical nesting season.

33rd Annual Meeting - Waterbird Society

November 4 - 8, 2009

Cape May, NJ



NEW JERSEY AUDUBON

www.njaudubon.org

Hosted by New Jersey Audubon