

Examining the Energetic Importance of Two Gulf Coast Barrier Islands for Transient Birds during Spring Migration

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Coastal ecosystems on the north coast of the Gulf of Mexico are under significant threats due to human disturbance, climate change, and sea-level rise. Barrier islands not only provide ecological benefits to the wetlands and coastal communities that they protect, but they also serve as a haven for a variety of wildlife, including migratory songbirds, many of which are facing population declines. For many of these birds, barrier islands are critical stopover habitats, providing them with a place to rest and refuel before continuing their migration. With these added threats to barrier island ecosystems, several of the stressors songbirds experience during migration may become intensified.

This study examines the energetic importance of two barrier islands in the Apalachicola National Estuarine Research Reserve for transient birds during spring migration. Using an analysis of body mass, physical condition, and avian triglyceride concentrations of birds captured on these islands during migration, I will provide information about the ecosystem functioning of St. George and St. Vincent islands as it relates to transient birds. Understanding the use of these islands by migratory species will allow conservationists to better manage these vulnerable lands, especially as they are altered due to climate change and sea-level rise.