



Project Number

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Project Manager

Fernando Ascanio

FDOT Environmental Management Office

Principal Investigator

Dale Gawlik

Florida Atlantic University

Florida Department of Transportation Research

Wood Stork Use of Roadway Corridor Features in South Florida

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Current Situation

The wood stork is the only stork that breeds in the U.S. In 1984, the wood stork was listed as an endangered species. In 2014, its status was changed to threatened, indicating the success of thirty years of conservation efforts. The wood stork is an important indicator of the overall health of the Everglades and the South Florida ecosystem. To continue this progress, the Florida Department of Transportation (FDOT) must consider the impact of its projects on wood stork populations. Yet, under the Clean Water Act, FDOT must mitigate the impact of transportation projects on wetlands, usually by constructing swales and stormwater ponds which often attract wood storks, bringing them near highways.

Research Objectives

In this project, Florida Atlantic University researchers collected field data on wood stork behavior that can help FDOT develop plans to protect this threatened species.

Project Activities

The researchers sought information in three areas: (1) which roadway features attract storks and which do not; (2) what potential stork food supply do the features produce; and (3) what portion of the available food is consumed by storks. A deeper understanding of these three issues would allow refinement of the calculations that are used to estimate the impact of construction activities on stork populations. Field work was conducted in South Florida from February 2014 to May 2016.

To determine which features of transportation corridors and neighboring natural areas that storks frequented, the researchers conducted monthly aerial surveys and bimonthly roadway surveys of storks. They also characterized the morphology and plant community structure of water features.

To appraise potential food sources storks might use in corridor features, the researchers sampled swales, stormwater ponds, and canals. First, they determined the amount and pattern of standing water throughout the year, and second, they determined the biomass and community structure of aquatic fauna produced in these three corridor features.

To understand what food sources storks actually used, food samples were collected from young storks still in the nest. Regurgitated stomach contents were analyzed, and this inventory was compared to the inventory of the available fish and crayfish community in roadways and natural marshes developed in the previous task.

Based on the findings from these three tasks, the researchers made specific recommendations for the construction of stormwater mitigation features that can discourage wood storks from foraging and/or nesting in these areas.

Project Benefits

Improved knowledge of wood stork behavior will lead to roadway corridors that are increasingly friendly to wood stork populations and further FDOT's record of good environmental stewardship.

For more information, please see www.fdot.gov/research/.



A wood stork tends a nest full of nestlings.