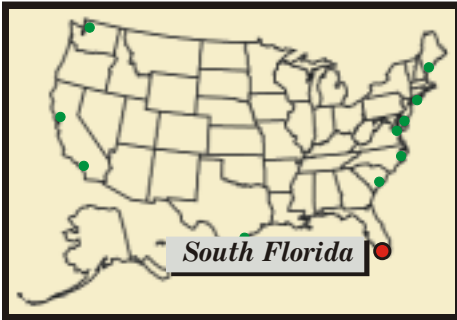




U.S. Fish & Wildlife Service

The Coastal Program

Success in South Florida



In South Florida nest on gravel roof tops rather than on beaches due to anthropogenic factors such as condominiums, beach use, and pets. Exotic, non-native plants have replaced many square miles of native habitat in and around the Indian River Lagoon. Some areas that may not have normally been vegetated such as mud and sand flats or spoil areas have been overtaken with invader plants.

Caring for Our Coastal Habitats

Islands of Habitat... in a Sea of Development

Islands of habitat along Florida's east coast are being enhanced for shorebird nesting thanks to the Fish and Wildlife Service Coastal Program, Florida Game and Fresh Water Fish Commission, Florida Division of Forestry, Florida Department of Environmental Protection, Jonathon Dickinson State Park, Savannahs State Reserve, Florida Inland Navigation District, Treasure Coast Regional Planning Council, St. Lucie County Audubon Society, and St. Lucie County Conservation Alliance.

Located where temperate and tropical climates converge, the Indian River Lagoon is an estuary of national significance. Its 156-mile length harbors the greatest biodiversity of any estuary in North America. The Lagoon is also very attractive to humans, and development and tourism continue to escalate along its coast. Up to 95% of the least terns, a threatened shorebird,

How to "Recreate" Habitat?

Volunteers removed exotic vegetation from four spoil islands with suitable topography and substrate for shorebird nesting. A horde of volunteers, 20 or more at a time, made quick work of exotic vegetation removal, getting rid of decades of unproductive alien plant species covering about five acres in just two days. The same amount of work would have cost an estimated \$45,000 if performed by contractors. State forestry experts assisted with burning the remains of the invasive vegetation.

After the burn, rains washed charred matter and residues away and the newly re-exposed beaches were then prepped for nesting shorebirds with a scattering of fresh beach sand. Another critical aspect of the project was improvement of other neighboring islands for human use in order to lure people away from the shorebird use area. As a finishing touch, least tern decoys were added to entice this threatened species to abandon nesting habitats on the roofs of Walmart, Lowes, and other local businesses for some real beach. Says Jane Tutton of the U.S. Fish and Wildlife Service's Vero Beach Field Office: "It was a great project...bringing all these



"For very little money, and a lot of camaraderie, we transformed some ecologically unimportant, manmade spoil islands into worthwhile shorebird habitat."

Trish Adams, Florida Department of Environmental Protection

Wood stork.
Photo by Barron Crawford/
USFWS

agencies together and working on least tern decoy construction. The location gave us a means to connect with the public and do outreach."

Measure of Success

Shorebirds such as brown pelicans, cormorants, sanderlings, Wilson's plovers, royal terns, and Forster's terns now use the areas as well as least tern pairs. Exotic vegetation continues to be a challenge, although the partners keep up with monthly volunteer site visits. This project served as a catalyst for formation of a spoil island work group with additional partners coming out to support spoil island enhancements in the Indian River Lagoon.

Lower Florida Keys: Restoring Native Vegetation

Thanks to private-public collaboration, dwindling native hardwood hammock vegetation and scarce freshwater wetland habitats are being reestablished in the Lower Florida Keys at the Key West Botanical Garden. The non-profit Garden, the Florida Audubon Florida Keys Environmental Restoration Trust Fund, the Florida Keys Invasive Exotics Task Force, the City of Key West, Florida Game and Fresh Water Fish Commission, and the U.S. Fish and Wildlife Service Coastal Program have become partners in managing a 10-acre area to exclude pest plants and animals and re-establish freshwater wetlands. The restored habitat will support the threatened stock island tree snail, neotropical migratory birds, and wading birds.

Hammocks: Paradise Lost

Tropical hardwood hammocks, found in seven counties in South Florida, are closed canopy forests dominated by evergreen and semi-deciduous trees and shrubs such as the gumbo-limbo tree, paradise tree, pigeon plum, ironwood, marlberry and wild mastic as well as potentially 140 more species of trees and shrubs. The plants are of West Indian origin and occupy the northernmost range for many of these tree and shrub species.

Florida Keys hammocks are significantly threatened by development and impacted chiefly by destruction and conversion, invasion by exotic plant and animal species, and alterations in hydrology. Key West hammocks were completely obliterated with the exception of one tiny patch at Little Hamaca Park. At least 162 species of exotic plants are known to invade tropical hardwood hammocks in South Florida and in cases on the Miami ridge, more than half of the flora is now exotic. In addition, exotic animals such as black rats and fire ants prey on native animals.

The hammocks provide habitat for many species of wildlife, including seven federally listed species. The native Stock Island tree snail is a tree resident in the hardwood hammocks of the Florida Keys, moving to the forest floor only to nest or travel. It has



“The Key West Botanical Garden provides a significant refuge for snails and other wildlife, but some of its edge has become infested with exotic species. Once these invaded areas are restored they will again be capable of providing significant tree snail habitat.”

Kalani Cairns,
FWS Assistant Field
Supervisor, Vero Beach

The threatened Stock Island tree snail. USFWS photo

mostly been eliminated from its historic range by collectors and habitat destruction. The snails appear to survive best on smooth-barked native trees covered with lichens and algae. The recovery plan for the snail calls for allowing the species to repropagate in the wild.

Recovery Found

A private-public collaboration is restoring 10-acres of hammock on Key West. Re-establishing the native hammock vegetation by removing invasive exotic species and reconnect-

ing wetland hydrology has had direct and immediate benefits to neotropical migrant bird species such as the mangrove cuckoo, thick-billed vireo, and scissor-tailed flycatcher. This effort also greatly increases the chances for survival of the Stock Island tree snail that occurs on Key West with the only other known populations artificially established in Key Largo and the southernmost part of mainland Florida.

Removal of exotic vegetation in South Florida. USFWS photo

