Treasure Coast Regional Working Group

Hobe Sound Invasive Exotic Plant Control	County: Martin
PCL: Hobe Sound National Wildlife Refuge	PCL Size: 980 acres
Project Manager: U.S. Fish and Wildlife Service Margo Stahl, Refuge Manager 13640 SE Federal Highway, Hobe Sound, Florida 33455 Phone: 561-546-6141, Fax: 561-545-7572 E-mail: Margo_Stahl@fws.gov	
Project ID: TC-025	Project Size: 120 acres
Fiscal Year 01/02	Project Cost: $79,867.96

Hobe Sound National Wildlife Refuge is comprised of two separate and distinct tracts of land: the 232-acre mainland tract located between US Highway 1 and the Indian River Lagoon, and the 735-acre island tract located at the north end of North Beach Access Road on Jupiter Island. Within the past two years, large scale exotic treatment has begun to occur on the north end of Jupiter Island. With joint funding from the USFWS and Florida Park Service, Australian pines along the St. Lucie Inlet State Preserve dunes were treated. With funding through the Treasure Coast Upland Invasive Plant Working Group, many exotics along the fore- and mid-dune of the refuge have been treated and/or removed. Although much work has been done, there are still large areas of the island infested or that have become re-infested with invasive exotics. Along the Indian River Lagoon there are still large monotypic stands of Australian pines, some reaching heights of over 30 meters, which are found on the spoil islands created many years ago.

This project addressed invasive exotics only on the Jupiter Island tract north of the beach parking lot of the refuge. The project area ran from the northern boundary of the refuge and St. Lucie Inlet State Preserve south to the beach parking lot of the refuge, approximately 3.3 miles. The project area covered approximately 120 acres of low to moderate infestation of mainly Australian pine and Brazilian pepper with scattered lather leaf, mahoe, beach naupaka, climbing cassia, and others. The primary target, Australian pine, was scattered in small clumps and as individual trees from the top of the beach dune toward the ICW approximately 350 feet and covered approximately 10% of this refuge beach.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Schinus terebinthifolius	Brazilian pepper	Category I	basal/girdle/cut stump	Garlon 4
Casuarina equisetifolia	Australian pine	Category I	basal/cut stump/hand pull	Garlon 4
Senna pendula	climbing cassia	Category I	cut stump/hand pull	Garlon 4
Scaevola sericea	beach naupaka	Category I	cut stump	Garlon 4
Urochloa mutica	Pará grass	Category I	foliar	Rodeo
Sansevieria hyacinthoides	bowstring hemp	Category II	cut stump	Garlon 4

Dense mats of scaevola were a problem, in addition to Brazilian pepper and Australian pine (in background).

Some projects are better described in miles than acres.

A Gyro-Trac brush cutter (center) wreaks havoc on the woody wall of invasive plants.

Savannas Invasive Exotic Plant Control — County: Martin, St. Lucie

PCL: Savannas Preserve State Park — PCL Size: 5,116 acres

Project Manager: Florida Park Service (DEP)
Dan Griffen, Park Manager
13798 SE Federal Highway, Hobe Sound, Florida 33455
Phone: 561-546-0900, Fax: 561-223-2591
E-mail: dan.griffen@dep.state.fl.us

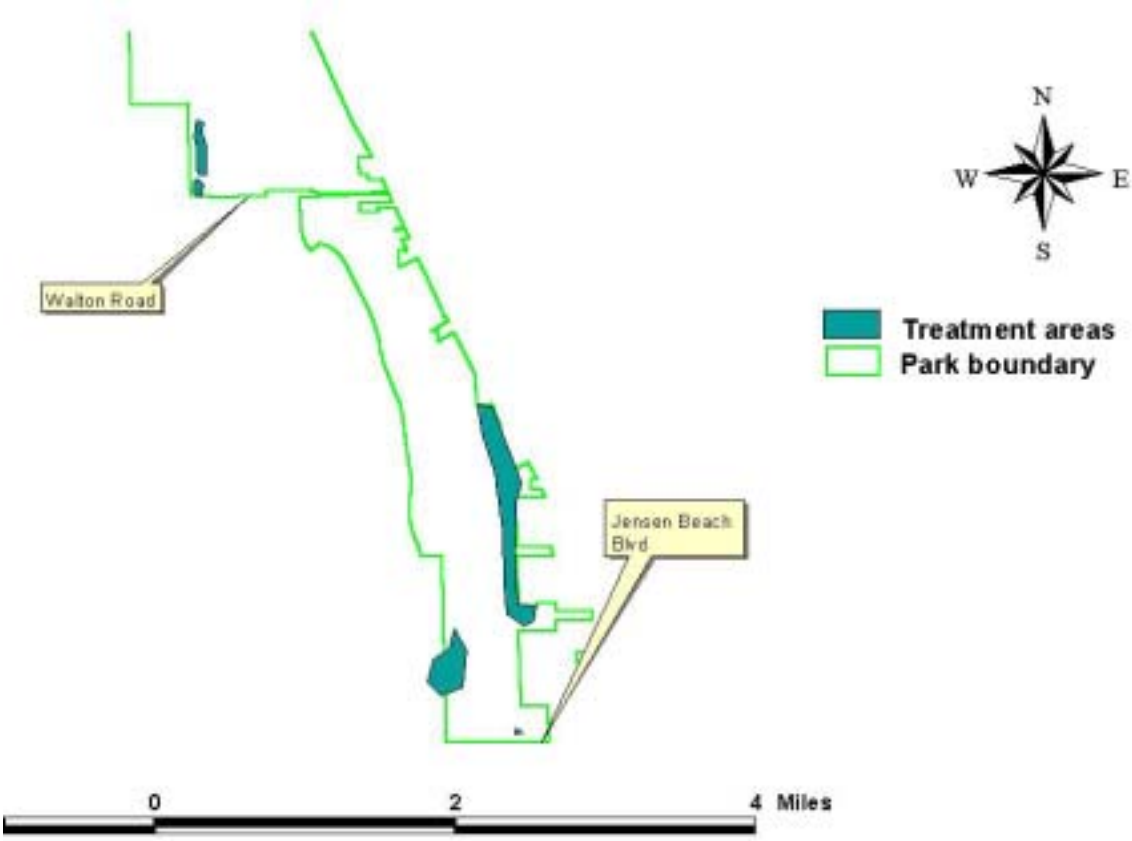
Project ID: TC-024 — Project Size: 3,000 acres

Fiscal Year 01/02 — Project Cost: $49,984.62

Savannas Preserve State Park contains extensive areas of a pristine marsh system that includes several different natural community types: basin marsh, sawgrass dominant basin marsh, depression marsh, wet prairie, and marsh lake. The marsh system runs north to south though the length of the park, between scrub on the east and mesic flatwoods on the west. This extensive marsh system is an important natural area because it encompasses the largest and ecologically most intact stretch of Florida's east coast savannas.

Prior control work had been conducted on the park, but follow-up work was needed to remove the remaining melaleuca, Brazilian pepper, Australian pine, and other invasive plants. Melaleuca was by far the largest problem and occurred as numerous small trees scattered throughout the marsh or in small clumps no bigger than a tenth of an acre. Brazilian pepper was small in number. A small stand of Australian pine occurred on a small spit of land extending into the southern end of the marsh. The South Florida Water Management District administered this project under an existing agreement with DEP.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Melaleuca quinquenervia	melaleuca	Category I	girdle, cut stump	Arsenal/+Rodeo
			hand pull	n/a
Schinus terebinthifolius	Brazilian pepper	Category I	girdle	Garlon 4+Stalker
Lygodium microphyllum	Old World climbing fern	Category I	foliar	Rodeo



Melaleuca was controlled at various sites on the park.

Kissimmee Prairie Invasive Exotic Plant Control — County: Okeechobee

PCL: Kissimmee Prairie Preserve State Park — PCL Size: 46,452 acres

Project Manager: Florida Park Service (DEP)
Parks Small, Park Manager
33104 NW 192nd Avenue, Okeechobee, Florida 34972
Phone: 941-462-5360, Fax: 941-467-6962
E-mail: kisspres@okeechobee.com

Project ID: TC-021 — Project Size: 200 acres

Fiscal Year 01/02 — Project Cost: $22,588.75

Kissimmee Prairie Preserve State Park is located in the northwest corner of Okeechobee County. The property borders on 9 miles of the Kissimmee River. Kissimmee Prairie consists of 46,000 acres of high quality natural areas managed to protect the largest remaining tract of dry prairie habitat east of the Kissimmee River. Dry prairie is endemic to Florida and is listed as a globally and state imperiled natural community by the Florida Natural Areas Inventory. Dry prairie covers approximately 19,000 acres of the property. There are many endemic, listed species that depend on the dry prairie community. These species include the federally endangered Florida grasshopper sparrow, the federally threatened crested caracara and Florida scrub-jay, and the state threatened hooded pitcher plant.

Cogon grass was scattered throughout the dry prairie/wet prairie matrix. The patches varied in size, with the largest patches occurring near the river. Due to the size and inaccessibility of much of the property, a systematic ground search would have been very difficult; therefore, the most effective way to locate and treat cogon grass was by using a helicopter. The South Florida Water Management District administered this project under an existing agreement with DEP.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Imperata cylindrica	cogon grass	Category I	aerial	Rodeo+Arsenal

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Queens Island Invasive Exotic Plant Control — County: St. Lucie

PCL: Queens Island Park — PCL Size: 288 acres

Project Manager: St. Lucie Public Works Department
Anna Smith, Ecosystems Manager
2300 Virginia Avenue, Ft. Pierce, Florida 34982
Phone: 561-462-1685; Fax: 561-462-1684
E-mail: annas@stlucieco.gov

Project ID: TC-023 — Project Size: 8 acres

Fiscal Year 01/02 — Project Cost: $8,677.12

Queens Island Park was purchased through the USFWS National Coastal Wetland Restoration Act and the CARL, Save Our Rivers, and county Environmentally Sensitive Lands programs. The park supports 210 acres of mangrove swamp (some impounded), 70 acres of maritime hammock, and 8 acres of coastal strand/beach dune habitats. The native vegetation found on site includes the following species: sea oats (*Uniola paniculata*) seagrape (*Coccoloba uvifera*), cabbage palm (*Sabal palmetto*), saw palmetto (*Serenoa repens*), gumbo limbo (*Bursera simaruba*), pigeon plum (*Coccoloba laurifolia*), torchwood (*Amyris elemifera*), and limber caper (*Capparis flexuosa*). In the fall of 1999 and spring 2000, the county removed all of the pepper along a dike. This project controlled Brazilian pepper and Australian pine in the coastal strand and dune habitats. The estimated aerial coverage by exotics throughout the site ranged from 25-45%.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Schinus terebinthifolius	Brazilian pepper	Category I	basal bark	Garlon 4
Casuarina spp.	Australian pine	Category I	cut stump/girdle	Garlon 4

Walton Scrub Invasive Exotic Plant Control | County: St. Lucie

PCL: Walton Scrub | PCL Size: 33 acres

Project Manager: St. Lucie County
Steven Fousek, Environmental Lands Specialist
2300 Virginia Avenue, Ft. Pierce, Florida 34954-0760
Phone: 561-462-1513, Fax: 561-462-1940
E-mail: stevef@stlucieco.gov

Project ID: TC-026 | Project Size: 9 acres

Fiscal Year 01/02 | Project Cost: $24,087.72

Walton Scrub is located in Port St. Lucie and is adjacent to the Indian River Lagoon Aquatic Preserve and Savannas State Park. Walton Scrub consists primarily of Scrub and Maritime Hammock communities. The majority of exotics had become established within the Maritime Hammock community, affecting native plants including the endangered satinleaf (*Chrysophyllum oliviforme*) and fragrant prickly cactus (*Cereus eriophorus*). Several of these endangered plants are located within the proposed treatment area. Surinam cherry and bowstring hemp were the dominant exotic species on the site. *Sansevieria* was extremely dense within the project area, consisting of a monotypic understory in many areas (~150,000 stems/acre). *Eugenia* in many areas was dominant in the shrub layer, with densities ranging from 400-2,000 stems per acre.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Eugenia uniflora	Surinam cherry	Category I	basal bark	Garlon 4
Sansevieria hyacinthoides	bowstring hemp	Category II	cut stump	Garlon 4

Environmental Learning Center Invasive Exotic Plant Control | County: St. Lucie

PCL: Environmental Learning Center | PCL Size: 220 acres

Project Manager: St. Lucie County
Steven Fousek, Environmental Lands Specialist
2300 Virginia Avenue, Ft. Pierce, Florida 34954-0760
Phone: 561-462-1513, Fax: 561-462-1940
E-mail: stevef@stlucieco.gov

Project ID: TC-031 | Project Size: 35 acres

Fiscal Year 01/02 | Project Cost: $31,874.48

The Environmental Learning Center is located in Port St. Lucie. The Center is adjacent to the North Fork St. Lucie River, an Aquatic Preserve, and Scitturo's Island, a Save Our Rivers/CARL/St. Lucie County acquisition project. The site was acquired in 1996 with the assistance of South Florida Water Management District and St. Lucie County's Environmentally Sensitive Lands Program. The site consists primarily of Mesic Flatwoods and Floodplain Forest communities. Exotics had primarily established within the Floodplain Forest community, affecting native plant associations. The endangered hand fern (*Cheiroglossa palmata*) is located on the site and within the control area.

Exotics infested approximately 35 acres of the site. Shoebutton ardisia was extremely dense within the project, consisting of a large portion of the understory in many areas (~40,000 stems/acre in some instances). Guava in many areas occupied the area between the Floodplain Forest and Mesic Flatwoods, and was dominant in the shrub layer with densities ranging up to 2,000 stems per acre.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Psidium guajava	guava	Category I	basal/cut stump	Garlon 4
Ardisia elliptica	shoebutton ardisia	Category I	basal/cut stump	Garlon 4

Ten Mile Creek Invasive Exotic Plant Control	County: St. Lucie
PCL: North Fork Saint Lucie River State Buffer Preserve	PCL Size: 987 acres
Project Manager: Southeast Florida Aquatic Preserves (DEP) Jeff Beal, Environmental Specialist II 9737 Gumbo Limbo Lane, Jensen Beach, Florida 34957 Phone: 561-873-6590, Fax: 561-873-6599 E-mail: jeffbeal@hotmail.com	
Project ID: TC-028, TC-029	Project Size: 156 acres
Fiscal Year 01/02	Project Cost: $160,623.39

The project area is part of the North Fork St. Lucie River State Buffer Preserve, which comprises a natural river corridor along a 12-mile stretch of river. The two project sites comprise three complete tracts plus three parcels that are connected to one another and which lie in St. Lucie County between Five Mile and Ten Mile Creeks. This land was purchased under the Save Our Rivers Program by the South Florida Water Management District and is co-owned and managed by the Florida Department of Environmental Protection. The total project area is approximately 156 acres, of which approximately 77 acres are Hydric Hammock/Floodplain Forest, 29 acres are overgrown Mesic Flatwoods, and 50 acres are disturbed pasturelands. Rare species present include giant leather fern (*Acrostichum danaeifolium*), red wild pine (*Tillandsia fasciculata*), and green wild pine (*Tillandsia utriculata*), and possibly hand fern (*Cheiroglossa palmata*).

The banks of Five Mile and Ten Mile Creeks have spoil piled from 2 to 12 feet high along their lengths and were heavily infested with Brazilian pepper, especially along Five Mile Creek. Pepper was also scattered throughout the remaining areas in light to occasionally moderate infestations with a total infested area of approximately 33 acres. Caesar's weed appeared in light to heavy infestations throughout much of the area, especially along the spoil banks with a total infested area of approximately 23 acres. Rosary pea occurred in light to moderate infestations throughout the area, especially along the railroad easement, and accounted for another 7 acres. Shoebutton ardisia was scattered in light infestations throughout the floodplain, as was strawberry guava, which together infested approximately 7 acres total. Tropical soda apple was scattered in moderate amounts throughout the pasturelands of two tracts and accounted for about 3 acres.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Schinus terebinthifolius	Brazilian pepper	Category I	basal/cut stump	Garlon 4
Psidium cattleianum	strawberry guava	Category I	basal/cut stump	Garlon 4
Ardisia elliptica	shoebutton ardisia	Category I	basal bark	Garlon 4
Abrus precatorius	rosary pea	Category I	foliar	Rodeo
Solanum viarum	tropical soda apple	Category I	foliar	Rodeo
Dioscorea bulbifera	air-potato	Category I	foliar	Rodeo
Senna pendula	climbing cassia	Category I	hand pull	n/a
Urena lobata	Caesar's weed	Category II	foliar	Rodeo

The following two projects were also conducted at the North Fork St. Lucie Buffer Preserve.

Idabelle Island Invasive Exotic Plant Control | County: St. Lucie
Project ID: TC-022 | Project Size: 23 acres
Fiscal Year 01/02 | Project Cost: $20,670.95

This project targeted Brazilian pepper, shoebutton ardisia, Caesar's weed, and rosary pea on Idabelle Island (also known as Sciturro's Island) in the North Fork St. Lucie River. The treatment site is a 23-acre island composed of hydric hammock and floodplain forest. There is a spoil bank along the main river channel that ranges from two to eight feet in height. All target species were found scattered throughout the project area. Rosary pea and Caesar's weed were found in moderate infestations over about 9 acres. Brazilian pepper and ardisia were found in light concentrations on about 2 acres.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Schinus terebinthifolius	Brazilian pepper	Category I	basal bark	Garlon 4
Ardisia elliptica	shoebutton ardisia	Category I	basal bark	Garlon 4
Abrus precatorius	rosary pea	Category I	foliar	G4; Rodeo; Roundup
Lygodium microphyllum	Old World climbing fern	Category I	foliar	Rodeo
Imperata cylindrica	cogon grass	Category I	foliar	Garlon 4; Roundup
Urena lobata	Caesar's weed	Category II	foliar	G4; Rodeo; Roundup
Wedelia trilobata	wedelia	Category II	foliar	Rodeo; Roundup

North Fork Prima Vista Invasive Exotic Plant Control | County: St. Lucie
Project ID: TC-027 | Project Size: 160 acres
Fiscal Year 01/02 | Project Cost: $47,950.16

This project includes those lands from the original NFSLRSBP purchase that lie from Prima Vista Boulevard north for 2 miles. The treatment sites are composed of several adjacent parcels, some of which are separated by river channels, along both sides of the North Fork St. Lucie River, including two islands. Hydric hammock accounts for approximately 45% of the area, mesic flatwoods 30%, and floodplain forest 25%. There is a spoil bank, ranging from 2 to 12 feet high, along approximately 60% of the main river channel.

Targeted species were scattered throughout the project area with spoil banks being the most heavily infested by some species. Brazilian pepper and shoebutton ardisia occurred in light to moderate and occasionally heavy concentrations, rosary pea and Caesar's weed were found in light to moderate infestations, and strawberry guava was found in light concentrations. Brazilian pepper covered approximately 35 acres, rosary pea 18 acres, ardisia 8 acres, Caesar's weed 6 acres, and strawberry guava 2 acres.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
Schinus terebinthifolius	Brazilian pepper	Category I	basal/cut stump/hand pull	Garlon 4
Psidium cattleianum	strawberry guava	Category I	basal/cut stump	Garlon 4
Ardisia elliptica	shoebutton ardisia	Category I	cut stump	Garlon 4
Abrus precatorius	rosary pea	Category I	foliar	Rodeo
Dioscorea bulbifera	air-potato	Category I	cut stump	Rodeo
Eugenia uniflora	Surinam cherry	Category I	cut stump	Garlon 4
Urena lobata	Caesar's weed	Category II	foliar	Rodeo