



Corridors of Invasiveness: Early Detection of New Invasive Exotic Plants in Biscayne National Park

2016

Importance

Invasive plants are one of the most serious threats to maintaining ecosystem integrity in South Florida parks. Once established, invasive exotic plant species can affect park natural resources by altering the natural landscape, reducing habitat for native plants and animals, and changing how the natural ecosystem functions, e.g., altering hydrology, fire patterns, etc. Detecting new exotic plant species with the potential to become invasive, while they are still in small controllable populations, is the most successful and cost effective strategy for preventing the establishment of exotic plant species.

Objectives and Approach

The objective is to detect newly emerging invasive plant species in the National Parks of South Florida along the most likely routes, or “corridors of invasiveness”, i.e., trails, roadways, campgrounds, and boat launches. Surveys are conducted by an experienced SFCN botanist along with an Exotic Plant Management Team (EPMT) member. Exotics are treated immediately when possible or are reported to park staff and through EDDMapS, a multi-agency web-based mapping system for invasive species.

Results

The 2016 survey was completed in Biscayne National Park (BISC) during the months of February and May. A total of 25 km were surveyed, with a total of 45 exotic species encountered during the survey. Of these 45 species, six records of new exotic plant species found within Biscayne National Park. The new exotic species encountered were Indian laurel (*Ficus microcarpa*), Sprenger's asparagus-fern (*Asparagus aethiopicus*), Shoebutt ardisia (*Ardisia elliptica*), Lilac tasselflower (*Emilia sonchifolia*), Australian umbrella tree (*Schefflera actinophylla*), and Brazilian jasmine (*Jasminum fluminense*). The SFCN referenced the certified species list from NPSpecies as the official list to compare with during the surveys. There were a total of 301 infestations observed during the survey. The exotic species with the highest number of infestations encountered were Brazilian Pepper (*Schinus terebinthifolius*), followed by latherleaf (*Colubrina asiatica*), Portia tree (*Thespesia populnea*), beach naupaka (*Scaevola sericea*), and Australian pine (*Casuarina equisetifolia*).



Indian laurel (*Ficus microcarpa*) is a new exotic species to BISC. It was found in three places along the main park road at Convoy Point, roadside along Noble's grade.



Another new exotic to BISC, Sprenger's asparagus fern was found once along the main park road at Convoy Point.



Shoebutt ardisia, a new exotic species to BISC, was found along Military canal and all individuals found were eradicated.



The species with the highest total area of infestation was Brazilian Pepper with a total infested area of 7,768 m², Australian pine (6,406 m²), Burmameed (*Neyraudia reynaudiana*) (6,406 m²), St. Augustine grass (*Stenotaphrum secundatum*) (2,876 m²), and latherleaf (2,531 m²). The total area surveyed within the field of view estimate was 357,477 m² (88.3 acres). The total area infested within the field of view survey was 32,973 m² (8.15 acres); about 9.2% of the total area surveyed.



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