



Corridors of Invasiveness: Early Detection of New Invasive Exotic Plants in Big Cypress National Preserve

2013

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

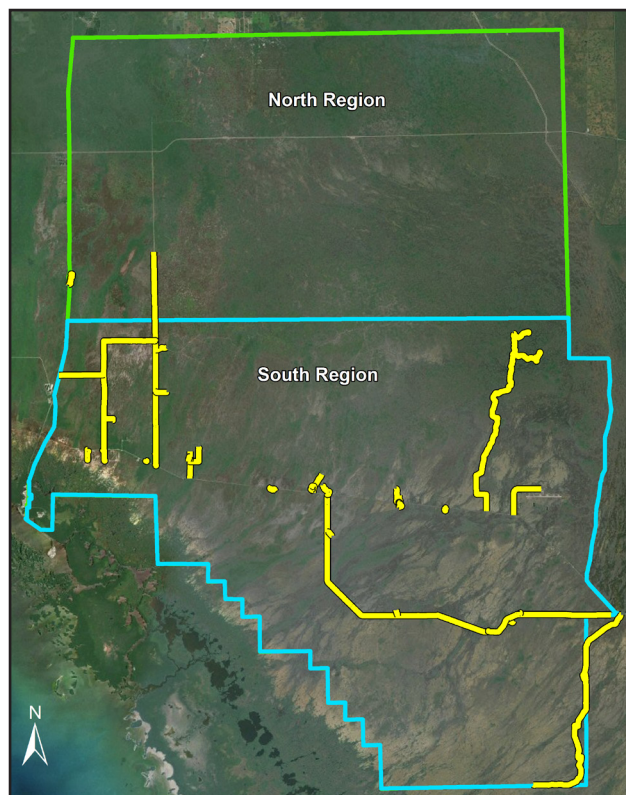
The objective is to detect newly emerging invasive plant species in the National Parks of South Florida along the most likely routes, or “corridors of invasiveness”, i.e., trails, roadways, campgrounds, and boat launches. Surveys are conducted by an experienced SFCN botanist along with an Exotic Plant 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 2013 survey was completed in the southern region of Big Cypress National Preserve (BICY) during the month of May 2013. A total of 307 km (191 miles) were surveyed, with a total of 65 exotic species encountered within the survey field of view area. Of these 65 species, seven (~11%) were new records of exotics found in the park. The new species are Crested Floating Heart (*Nymphoides cristata*), Grass Leaved Eulophia (*Eulophia graminea*), Bamboo (*Bambusa vulgaris*), Aloe (*Aloe vera*), Sago Palm (*Cycas revoluta*), Sprenger's Asparagus-Fern (*Asparagus aethiopioides*), and Senegal Date Palm (*Phoenix reclinata*). There were a total of 311 infestations observed within the survey area. The total area surveyed taking into account the field of view estimate was 2,647,740 m² (654 acres). The total area infested within the field of view survey was 25,358 m² (6.3 acres); about 1% of the total area surveyed.



SFCN Botanist and Florida and the Caribbean EPMT member identify a patch of Guinea grass in the Deep Lake trail. SFCN and EPMT work as a team to identify exotics and remove small infestations once they are found.



Map of the areas surveyed within BICY in 2013 (yellow line). The Southern region (blue line) of the park was surveyed this year while the Northern portion will be surveyed in 2015. Areas are resurveyed on a 5 year rotation.



Photos

An example of some of the exotic plants that were encountered during the 2013 surveys.



Common Bamboo (*Bambusa vulgaris*). This is a new species to the park and was found near an old home site.



Grass-leaved Eulophia (*Eulophia graminea*). This ground orchid is a new species to the park and was found in a pile of mulch at the edge of Eleven mile road. Mulch within the park should be monitored to prevent the spread of this species.



Cogon grass (*Imperata cylindrica*). This is an exotic species of concern due to its invasive tendencies and may spread to drier prairie habitats if not contained. It is usually found along road shoulders.



Sago Palm (*Cycas revoluta*). This is a new species to the park and was found at the entrance of Deep Lake.



Crested Floating Heart (*Nymphoides cristata*). This is a new species to the park and is on the spread. It was usually found in canals and Cypress strands.



Sisal hemp (*Agave sisalana*). This is a species of concern due its potential invasive nature. This infestation of 30-50 individuals was found along Loop Road in the vicinity of Golightly's.



Hydrilla (*Hydrilla verticillata*). An exotic submerged aquatic that forms a monoculture in canals. This infestation was found in the canal at the intersection of Birdon Road and Wagonwheel Road.



Java Plum (*Syzygium cumini*). An exotic tree from the Indo-Malaysian region found in disturbed hammocks throughout the park.



Lantana (*Lantana camara*). This species, which contains colorful flowers, was found in numerous locations in the park, including the Oasis Visitor Center and the head of the Northern Florida Scenic trail.