



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

2014

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

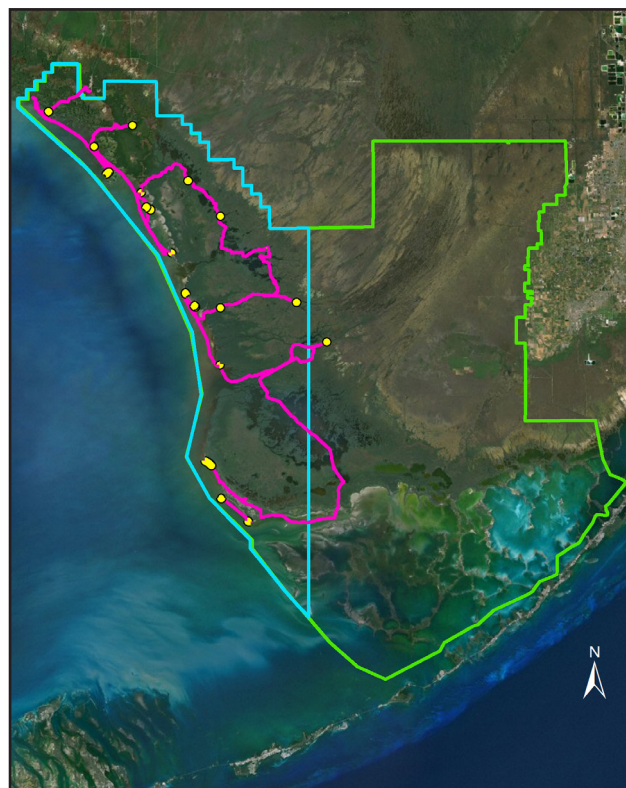
The objective is to detect newly emerging invasive plant species in the National Parks of South Florida along the most likely routes, or “corridors of invasiveness”, i.e., trails, roadways, campgrounds, and boat launches. Surveys are conducted by an experienced SFCN botanist along with an Exotic Plant 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 2014 survey was completed in the western region of Everglades National Park (EVER) during the months of February and May. A total of 14 km (9 miles) were surveyed, with a total of 23 exotic species encountered within the survey field of view area. There were a total of 153 infestations observed within the survey area. The exotic species with the highest number of infestations encountered were Latherleaf (*Colubrina asiatica*) with 32 infestations, followed by Brazilian Pepper (*Schinus terebinthifolius*) with 22 infestations. The species with the highest total area of infestation was Brazilian Pepper with a total infested area of 1,693m². The total area surveyed, taking into account the field of view estimate, was 190,994 m² (47 acres). The total area infested within the field of view survey was 9,029 m² (2.2 acres); about 5% of the total area surveyed.



SFCN Botanist identifies a patch of Bowstring Hemp (*Sansevieria hyacinthoides*) on Pavillion Key. SFCN and EPMT work as a team to identify exotics and remove small infestations once they are found.



Map of the areas surveyed within EVER in 2014 (yellow line) and the boat tracklines to each site (pink line). The Western region (blue line) of the park was surveyed this year while the Eastern portion was surveyed in 2012. Regions are resurveyed on a 5 year rotation.



Photos of exotic plants encountered during the 2014 surveys



Madagascar Periwinkle (*Catharanthus roseus*) is an exotic commonly found in coastal areas and other dry, disturbed sites. Like its common name implies, this herbaceous plant is native to Madagascar. The substances vincristine and vinblastine are extracted from this plant and used in the treatment of leukemia and Hodgkin's lymphoma.



This Common Onion (*Allium cepa*) was found at a campsite on Middle Cape. The onion is considered an annual and more than likely would not spread, however, finding human transported and discarded plants like this helps to validate the idea that certain sites act as corridors for invasive plants to become established in these wilderness areas.



Bowstring Hemp (*Sansevieria hyacinthoides*) is native to Africa and has escaped cultivation, becoming established in disturbed areas. Originally introduced in Florida in the early 1800's as an ornamental, this species is now a Category II pest plant on the Florida Exotic Pest Plant Council (FLEPPC) 2013 list of invasive plant species. Category II pest plants are those that have increased in abundance but have not yet altered Florida plant communities to the extent shown by Category I species.



Shakesake (*Crotalaria incana*) is a weedy shrub that occurs in coastal communities and other disturbed sites. Native to Africa, this species has hairy seed pods that contain many small seeds. The seeds eventually come loose inside the seed pod and produce a rattle sound when shaken. SFCN found this species on New Turkey Key.



Seaside Mahoe, or Portia Tree, (*Thespesia populnea*) on Turkey Key. This tree is native to the Old and New World tropics, but not native to Florida. This species is abundant in coastal hammocks and beaches and is prolific at producing seeds as each seed pod holds five seeds.



Beach Naupaka (*Scaevola sericea*), is native to the tropical areas of the Indo-Pacific and is a commonly found exotic in the coastal areas of South Florida. This one was located on Northwest Cape.