



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

2015

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 2015 survey was completed in the northern region of Big Cypress National Preserve (BICY) through the months of February and June. A total of 84 km were surveyed, with a total of 31 exotic species encountered during the survey. All species found were previously reported as present in the park (no new exotic species). There were a total of 240 infestations observed during the survey. The exotic species with the highest number of infestations encountered were Brazilian Pepper (*Schinus terebinthifolius*), followed by cogongrass (*Imperata cylindrica*), Java-plum (*Syzygium cumini*), lantana (*Lantana camara*), and valamuerto (*Senna pendula*). The species with the highest total area of infestation was Brazilian Pepper, Burmареed (*Neyraudia reynaudiana*), cogongrass, torpedo grass (*Panicum repens*), and Peruvian primrosewillow (*Ludwigia peruviana*). The total area surveyed within the field of view estimate, was 1,307,088 m² (323 acres). The total area infested within the field of view survey was 252,967 m² (62.5 acres); about 19% of the total area surveyed.



SFCN botanist examining the fruit of a sour orange tree at the Pink Jeep campground. Sour orange trees found within the preserve were not treated due to their popularity with visitors.



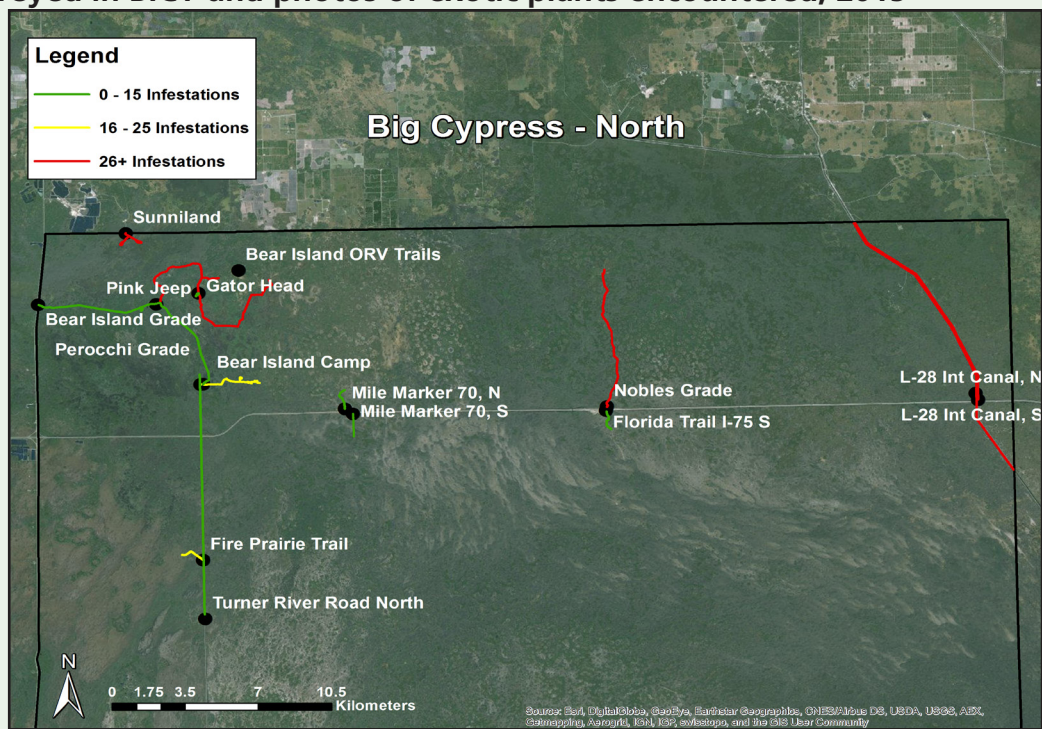
Native to the Old World, cogongrass is seen invading the roadside along Noble's grade.



The Exotic Plant Management Team (EPMT) treating cogongrass along Perocchi Grade.



Map of area surveyed in BICY and photos of exotic plants encountered, 2015



Infestation densities along the corridors sampled in 2015. Tracklines colored in red had the highest number of infestations, while the green lines show areas with the fewest number of infestations. The black line denotes the northern boundary of the preserve.



Native to the Indo-Malayan region, the Java-plum can be found throughout the preserve, especially along the roadside of the L-28 Interceptor canal in northeast Big Cypress.



The exotic Bermuda grass (*Cynodon dactylon*) is native to Africa and was frequently found in the ruts of ORV trails.



Valamuerto is a shrub native to South America. This exotic was found at the Sunniland site growing at roadside edges.



The submerged aquatic pest plant hydrilla (*Hydrilla verticillata*) is found in many of the roadside canals. Here it is seen choking the canal along Noble's grade.