



Institute for
Regional
Conservation

Restoring Pine Rocklands

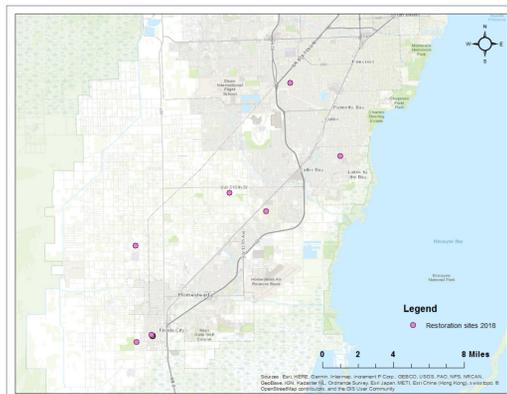
The Institute for Regional Conservation, Michelle M. Smith



JACKSONVILLE
ZOO
AND GARDENS

ABOUT:

The Institute for Regional Conservation (IRC) has been working on the imperiled pine rockland habitats for several years in Miami-Dade and Monroe Counties. IRC has conducted work on county-owned lands and privately-owned lands. This has been an on-going project that has been funded by U.S. Fish and Wildlife Service. Additional funding includes Jacksonville Zoo and Gardens and collaboration with Miami-Dade County Environmentally Endangered Lands.



The 45 miles of Miami Rock Ridge outside of Everglades National Park (ENP) has been almost completely modified for human use. Development and agriculture in Miami-Dade County have reduced pine rocklands significantly from approximately 183,000 ac in the early 1900s. Less than 2% of the original pine rockland in this area is estimated to remain. Over 2.3 million people currently live in Miami-Dade County, and pine rocklands are found only as small, isolated patches of habitat surrounded by homes, agricultural lands, and industrial parks. The largest remaining intact pine rocklands (approximately 5,716 ac) is Long Pine Key in ENP. Outside of ENP, much of what is left comprises small scattered remnants isolated from other natural areas.



Pine rockland habitat is globally imperiled due to development, habitat fragmentation, and fire suppression (FNAI 2010). The only canopy species that should be seen in a pine rockland habitat is *Pinus elliottii* var. *densa* (South Florida slash pine) (FNAI 2010). Due to fire suppression, disturbance, and habitat fragmentation, non-native, invasive plants such as *Neyraudia reynaudiana* (Burma reed), *Schefflera actinophylla* (umbrella tree) and *Schinus terebinthifolia* (Brazilian pepper) and native plants such as *Bursera simaruba* (gumbo limbo), *Metopium toxiferum* (poisonwood), and *Miconia bicolor* (Tetrazygia) have become overgrown, impeding on the canopy and altering the habitat structure. Pine rocklands are composed of many rare and endemic plants and animals, (Bradley and Gann 1999) from snakes to insects.

OBJECTIVES:

This project aims to continue restoration of the pine rocklands habitat and assist in the recovery of 28 federally-listed species occurring in this habitat type in south Florida, including plants and animals.



WHAT'S BEEN DONE:

To restore pine rockland habitat, IRC has been treating and removing the non-native, invasive plants including treatment of Florida Exotic Pest Plant Council (FLEPPC) Category I and II invasive species, native hardwood plants using herbicide and mechanical treatment in hopes of one day being able to reintroduce fire back into the highly fragmented community.

Monitoring pine rockland habitat is done by collecting data before and after treatments to document and monitor the success of the habitat restoration.



This area has been fire suppressed for many, many years. Non-native, invasive plants here include Brazilian pepper, umbrella tree, and jasmine.

This area has been treated with herbicide on native grapevine that has covered the forest floor.



This area is considered high quality pine rocklands. It shows slash pine as the only canopy species.

References:
FNAI Natural Community Guide. 2010. http://www.fnai.org/PDF/NC/Pine_Rockland_Final_2010.pdf
Bradley and Gann. 1999. Multi-Species Recovery Plan for South Florida