



Forest Vegetation Monitoring Protocol

2020

Importance: Monitoring the Health of Forests

Forest communities are an important natural resource and cover a large portion of the park units of the South Florida/Caribbean Network. Some forest communities, such as tropical hardwoods and pinelands, are homes for rare, endemic species. The forest communities within South Florida and U. S. Virgin Island parks can be severely altered by disturbances such as changes in fire regimes, hydrology, disease, invasive species, sea-level rise, and hurricanes. Monitoring forest resources helps park staff understand the dynamics of the system, document and mitigate the effects of extreme disturbance, and effectively manage the park units.

Objectives and Approach

Permanent vegetation plots and standard forestry metrics (mortality, recruitment, basal area, canopy height and cover, biomass, seedling counts) are used to determine the status of forested communities and to detect meaningful changes in species composition and vegetation structure within specific focal forest communities. The data collected in SFCN parks are used to determine whether these changes are correlated with trends in key stressors. The focal forest communities are typically the dominant forest types within the parks and a few additional forest communities of special management concern.

Results

The South Florida/Caribbean Network Forest Vegetation Monitoring Protocol Implementation Plan was published in January 2020 (Figure 1). Forest monitoring began in January 2020 in the mangrove forests of Biscayne National Park. Nine mangrove sites were evaluated with six sites being found acceptable (Figure 2). Five mangrove forest plots were established and sampled; a sixth plot was started prior to shutting down field operations due to the COVID-19 pandemic. The Forest Monitoring database was developed with the assistance of an external database designer. Initial data has been entered into the database.

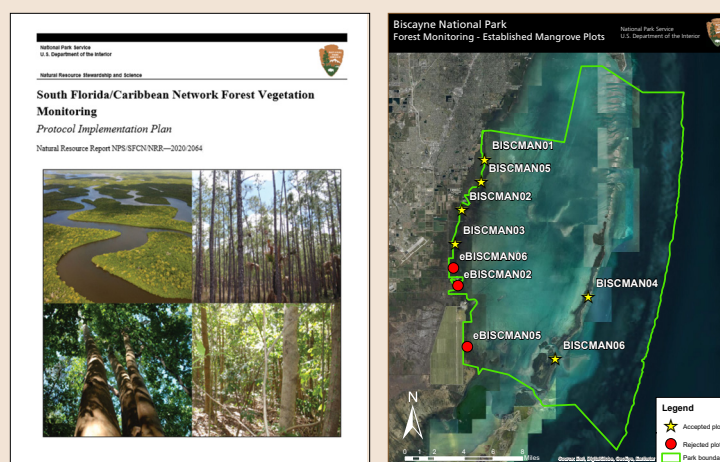


Figure 1. (above left) The Forest Monitoring Protocol Implementation Plan was published in January 2020.

Figure 2. (above right) Plots evaluated in Biscayne National Park during the 2020 field season.



Left: Hiking to access a mangrove site in Biscayne National park.

Above right: Sampling a mangrove forest in Biscayne National park.

