

**Big Cypress National Preserve
Exotic Plant Management Program
FY2006, 2nd Quarter Progress Report**

The intention of this report is to provide an update on ongoing exotic plant management projects in Big Cypress National Preserve. Activities conducted between January 1, 2006 and March 31, 2006 are covered.

Project: Task Order 10, Melaleuca retreatment, Turner River Unit

Task Order No.: T5120054144

Contractor: Applied Aquatic Management, Inc
PO Box 1469
Eagle Lake, FL 33839-1469

Contract No.: 5120036200

Funding Sources: National Park Service Challenge Funding

Related PMIS No.: 41189, Exotic Plant Control

Contributes to PMIS Goals: Ia01b- By September 30, 2006, 82,000 (50%) of the 164,000 acres of BICY lands known to be impacted by targeted exotic vegetation is contained.

Treatment Objectives and Methods

The objective of this project is to revisit sites in which *Melaleuca quinquenervia* was previously treated. These sites are located in the area roughly bounded by Burns Lake campground on the west and Monroe Station on the east and extending approximately 16 km to the north of Tamiami Trail (Figure 1). This area was chosen for retreatment because over three years had passed since the last treatment was conducted in the area. In addition, contracted crews and NPS staff observed many scattered trees when conducting other activities in the area. This area also ties in with a large area revisited in 2004.

Treatment history maps were prepared from data contained in the exotic treatment database maintained by Big Cypress Exotic Plant Management. All previously treated melaleuca sites within the work area were plotted on an aerial basemap. These maps and a list of UTM coordinates were provided to the contractor. The contractor then revisits each site and treats melaleuca trees found there. A cut stump treatment with an herbicide mixture containing 25% Arsenal and 25 % Glypro in water is used for saplings and trees. Seedlings are pulled up. Melaleuca trees encountered en route to retreatment sites are also treated. In addition, other exotic species found while carrying out this work are treated on a case by case basis and treated with approval from BICY Exotic Plant Management as described in the task order.

Results

During the second quarter of FY2006, Melaleuca trees were found at 334 sites and an estimated 126,564 stems were treated. Mature, seed producing trees were found at 274 of the 334 sites and an average of 378 stems was found at each site. The number of stems per site ranged from 1 to 25,000. Approximately 50,043 acres were visited and total of 49.22 gallons of herbicide mix was applied to the treated area (0.002qts active ingredient imazapyr/acre and 0.002qts active ingredient triclopyr/acre). The total cost of this treatment was approximately \$42806.52 or \$0.85/acre.

In addition to Melaleuca, several other exotic invasive species were treated during this quarter. These include Old World climbing fern (*Lygodium microphyllum*), java plum (*Syzygium cumini*), bishopwood (*Bischofia javanica*) Indian laurel (*Ficus microcarpa*) and shoebutton ardisia (*Ardisia elliptica*). The shoebutton ardisia site found during the 1st quarter was revisited during this quarter and plants not originally treated were treated. This site has now been completely treated. Two additional *Lygodium* sites were found and treated during this quarter, bringing the project total to four sites.

A small portion of the original project area remains untreated. Contractors were recently moved to Brazilian pepper treatment while conditions are favorable for that activity. This area will be retreated later this year using funds remaining in this task order.

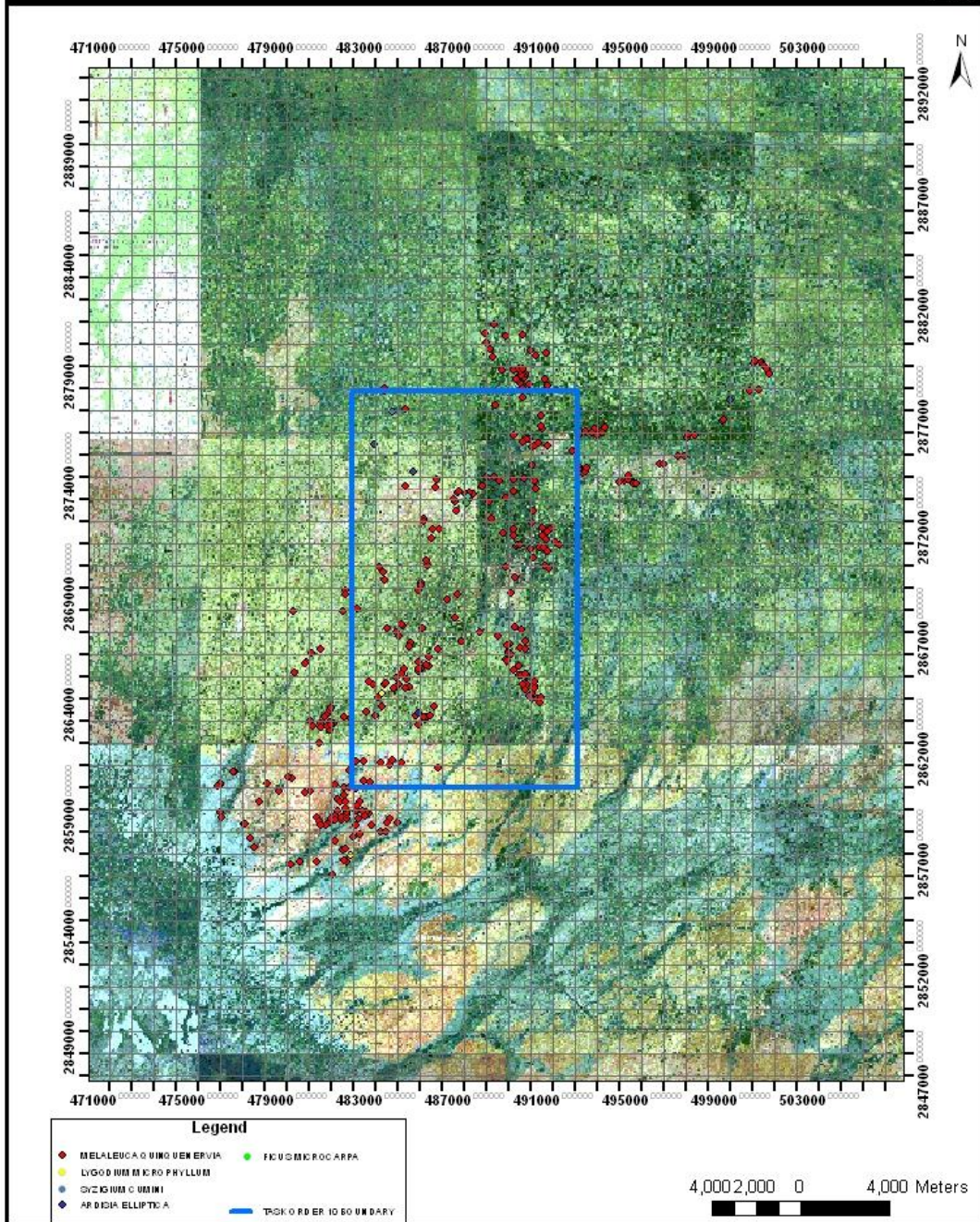


Figure 1. Exotic invasive plant site treated during the 2nd quarter of FY2006.

Project: Addition Lands Brazilian Pepper Control

Task Order No.: T2145040106

Contractor: Applied Aquatic Management, Inc
PO Box 1469
Eagle Lake, FL 33839-1469

Contract No.: 5120036200

Funding Sources: Florida/Caribbean Exotic Plant Management Team

Related PMIS No.: 41189, Exotic Plant Control

Contributes to PMIS Goals: Ia1b- By September 30, 2005, 82,000 (50%) of the 164,000 acres of BICY lands known to be impacted by targeted exotic vegetation is contained.

Treatment Methods and Objectives

The goal of this project is to establish control over Brazilian pepper in the addition lands north of Interstate 75 and west of Nobles Grade (Florida Trail). Historically, portions of this area underwent significant modification through agricultural and ranching activities. Once disturbed and abandoned, these areas eventually became heavily infested with Brazilian pepper and other invasive exotic species. However, many relatively undisturbed areas remain, especially lower lying land and land away from raised roads. This has resulted in a mixture of intact habitat, Brazilian pepper monoculture and transitional areas between the two extremes.

To gain control over Brazilian pepper in this portion of the preserve a variety of techniques have been used. BICY fire management was working in this area to reduce hazardous fuel accumulations. Accumulated fuel was being mulched using a piece of heavy equipment called a gyrotrack. Many of the gyrotracked areas were heavily infested with Brazilian pepper. When ground stumps resprouted, contracted herbicide spray crews were sent in to gyrotracked sites to control resprouting Brazilian pepper. In addition, seedlings of Brazilian pepper and other invasive exotics that appear after gyrotrack treatment were treated. Spray crews used backpack sprayers with 15% Garlon4 in oil as a basal bark or cut stump application. Recently, the gyrotrack equipment was moved to other park service units and BICY fire is not conducting this work any longer. Alternative methods for treatment of heavily infested areas are being investigated. Aerial treatment is now being proposed for abandoned agricultural field within the preserve. Site evaluations are currently underway.

Currently, ground crews are conducting full coverage surveys and treating all Brazilian pepper trees in all areas except those that may be treated by air. Plants are now treated with 10% Garlon4 in oil as a basal bark application. Brazilian pepper infestation levels in the undisturbed areas of BICY are generally sparse, but vary significantly with proximity to heavily infested areas, habitat type, hydrological modification and other factors. Crews

will also treat heavily infested areas that are too small for aerial treatment or contain species of special concern.

Results:

During the 2nd quarter of FY06, sites originally treated (FY2005) were revisited for follow up treatment. All new seedlings and previously untreated trees (those missed in the original treatment) were treated. Once these sites were revisited, the remaining untreated, heavily infested areas adjacent to Nobles Grade were treated. Upon completion of those areas, crews moved into natural areas, continuing the complete coverage approach being used in this project. The total area worked during this quarter was 1131 acres. Of the 1131 acres worked, follow-up treatment occurred in 677 acres and 454 acres were treated for the first time. (Figure 2). A total of 2039 gallons of herbicide mix was applied to the project area resulting in 1.44 qts of active ingredient/acre. A total of \$77,570, or \$68.64/acre, was spent during this quarter on this treatment project. Other exotic species treated under this project include Old World climbing fern (*Lygodium microphyllum*), Melaleuca (*Melaleuca quinquenervia*), Java Plum (*Syzygium cumini*) and tropical soda apple (*Solanum viarum*). Pesticide totals and per acre costs will be included in the next quarterly report.

Work will continue to occur west of Nobles Grade and north of Interstate 75 through the end of FY06 with the goal of reaching State Road 29. This will allow a tie in with FY04 projects in the Bear Island and Turner River Road areas. Containment of Brazilian pepper in this portion of the preserve is the ultimate goal of this effort. It is anticipated that this will take several years to complete, depending on funding levels and field conditions.

Figure

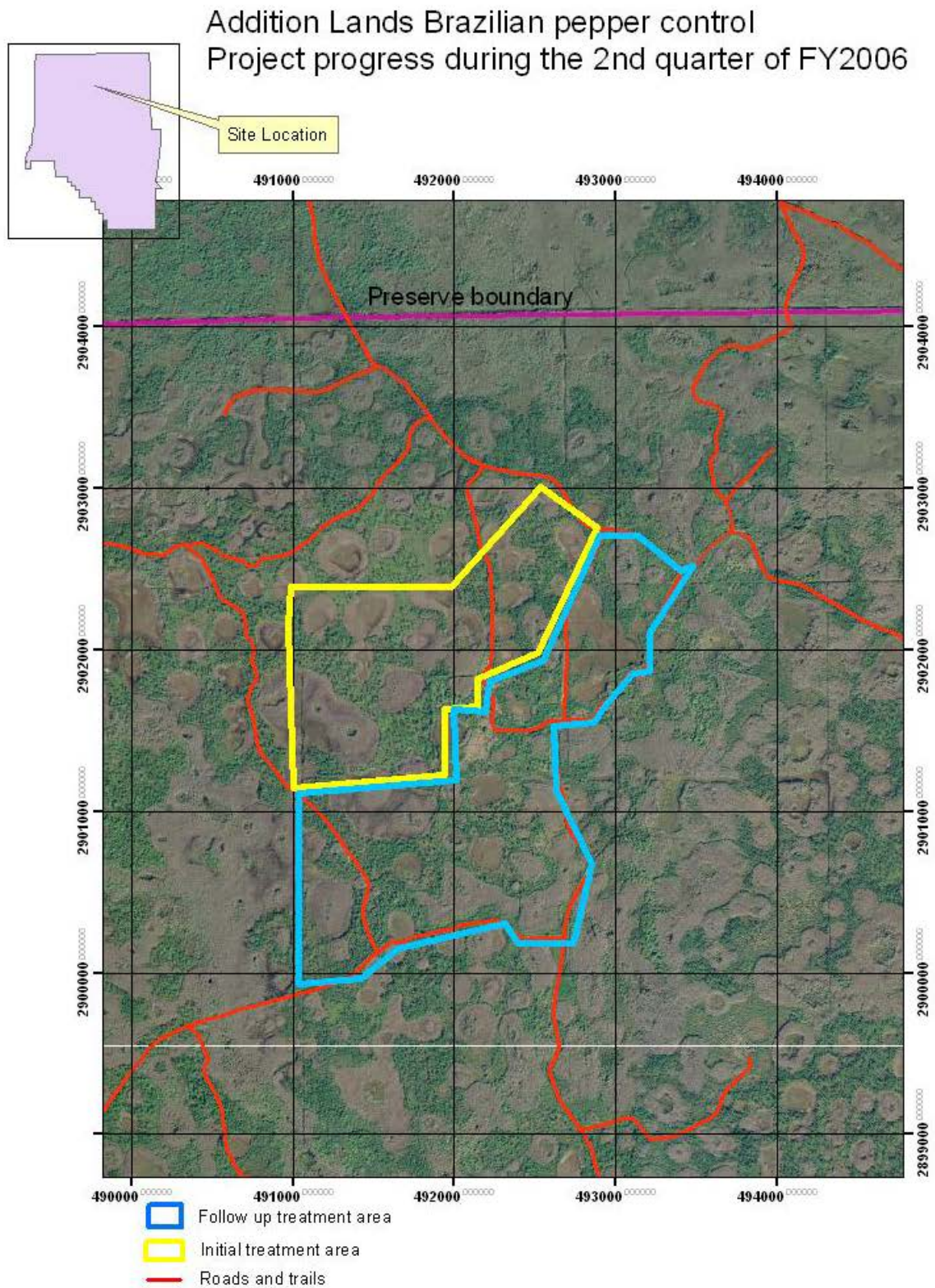


Figure 2. Addition Lands Brazilian pepper control project map showing areas of initial and follow-up treatment during the 2nd quarter of FY2006.