

**Management and habitat conservation and improvement for two plant species, the  
federally endangered Small's milkpea and candidate species sand flax at U.S.  
Special Operations Command South Headquarters,  
Homestead, Florida**

**Cooperative Agreement # W9126G-12-2-0063**

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**October 10, 2013**



**Submitted by:**



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## **Introduction**

The U.S. Army Special Operations Command South (SOCSOUTH) headquarters is located adjacent to the Homestead Air Reserve Base in Miami-Dade County. A portion of the site is important habitat for the federally endangered Small's milkpea (*Galactia smallii*) and the federal candidate sand flax (*Linum arenicola*). Two areas (Management Areas 1 and 2) have been identified as conservation areas for the protection of these species.

The primary habitat for Small's milkpea and sand flax is the pine rockland community, which historically occupied most of the uplands of southern Miami-Dade County. As a result of a variety of land clearing activities, less than 2% of the historical pine rockland habitat remains outside of Everglades National Park. Prior to restoration and management activities in the 1990s and 2000s, much of these remnant pine rocklands in Miami-Dade County had been degraded by fragmentation, fire suppression and exotic species invasions. However, significant work has occurred over the last 20 years that demonstrates that degraded pine rockland habitat can be restored.

The pine rockland community is dominated by a single canopy tree, South Florida slash pine (*Pinus elliotii* var. *densa*), with a diverse hardwood and palm shrub layer composed of a mixture of temperate and tropical species. It also has a rich herbaceous layer containing many endemic and tropical species. Pine trees are indicators of a pine rockland but it is the shrub and herbaceous layers that make the community unique. The habitat is naturally maintained by periodic fire, which controls vertical structure and species composition and prevents the accumulation of nutrients. Although fire is the preferred management tool in pine rocklands, many pine rockland species have shown persistence following disturbances including pine harvesting, mechanical scraping and repeated mowing. At SOCSOUTH, both Small's milkpea and sand flax have persisted despite significant disturbance, but would benefit from invasive species removal and other activities that would reduce threats and increase habitat viability for the species.

## **Project Objective**

Habitat Restoration and Monitoring for Small's milkpea and sand flax.

## **Project Area**

The U.S. Army Special Operations Command South headquarters is located adjacent to the Homestead Air Reserve Base in Miami-Dade County. Management Areas 1 and 2 (Figure 1) account for a total of 5.95 hectares (14.7 acres). Both Management Areas were fenced by a previous contractor. The Management Areas have previously been disturbed and mechanically scraped.

## **Methods**

*Determining baseline species composition and distribution*

To collect baseline species composition data from both Management Areas a 25 x 25 meter grid polygon was placed over each study area using GIS ArcMap 10 (ESRI). With the use of a Global Positioning System (GPS), the two Management Areas were surveyed using the overlaid 25x25 meter grid system. An initial survey was conducted by walking each individual 25 x 25 m polygon to determine the location of threatened and endangered species, to create a record of all observable species within the restoration site prior to the onset of restoration practices, and to determine habitat quality throughout the site. After the initial survey, three random points were created within each larger polygon using the software extension Hawthorns tools. At each random point, a 1x1 meter square plot was used to estimate species composition within each polygon.

To document the restoration thirteen photo points set in specific locations were established to monitor the restoration progress. Periodically, photographs were taken to show the changes to the vegetation during the restoration.

#### *Treatment and removal of exotic species*

All species listed as category I and II by the Florida Exotic Pest Plant Council (FLEPPC) were targeted for herbicidal treatment (Table 2). Exotic species which pose a threat to the pine rockland community on the SOCSOUTH Management Areas were also exterminated even though they were not listed as invasive species by the FLEPPC. Other non-native species considered naturalized to the state of Florida were not treated as they do not pose a threat to the health of the ecosystem (Table 3).

Several large stands of Brazilian pepper (*Schinus terebinthifolius*) and Australian pine (*Casuarina equisetifolia*) existed on the management sites. The majority of these exotic species were cut down and treated with herbicide using a cut/stump method and removed from the site. A subcontractor cut and removed the larger stands of exotic hardwood species. Invasive trees and shrubs that were not cut and removed were treated in place and left standing using a hack and squirt method. Other large tree species, found at lower densities scattered throughout the management areas, were also cut and removed. Large patches of tall graminoids such as Burma reed (*Neyraudia reynaudiana*) and Napier grass (*Pennisetum purpureum*) were also cut using brush cutters and removed by hand. After re-growth of the Burma reed and Napier grass occurred, a foliar herbicide was applied in order to kill the plant while at a manageable height.

Turf grasses such as St. Augustine grass (*Stenotaphrum secundatum*) and Zoysia grass (*Zoysia tenuifolia*) were encountered in high abundances in localized areas of both management sites. Typically, invasive turf grasses are eliminated by applying a foliar herbicide; however, areas invaded with the turf grass *Zoysia tenuifolia* often contain high densities of the endangered Small's milkpea and candidate species sand flax as well as other native plants. This relationship makes it difficult to eradicate the invasive species without harming the native vegetation. In order to limit damage to rare plants and other native species, a clipping technique was implemented. Rare and native plant stems were manually clipped below the *Zoysia* grass, approximately 2.5 cm above ground level,

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which removes the above ground biomass and eliminates the ability of foliar herbicides to be absorb into the plant. The clipped plants were left for 24-72 hours, during the waiting period the plants naturally seal the clipped part of the stem forming a barrier. After the waiting period a foliar spray was used on the *Zoysia* grass allowing the clipped native vegetation to re-sprout as the *Zoysia* grass died.

### *Determining plant succession after exotic removal*

Multiple areas were monitored to ensure proper native plant succession typical of a pine rockland after restoration methods were implemented. Locations were chosen depending on the scale of disturbance and location of exotic species. A line transect was established through an area once mechanically scraped and highly invaded with Australian pine and Burma reed, through areas dominated by *Zoysia* grass, and through monotypic stands of Brazilian pepper. Square meter plots were analyzed for species composition at different distances along the length of the transect after the exotic species were removed and all endangered or threatened species quantified along each transect.

### *Re-sampling*

Using the initial grid system we will resurvey the management areas after exotic species have been removed as well as after the prescribed burn. Due to slow succession of native species in sprayed *Zoysia* we have not resurveyed to document changes in the restoration process. Due to unfavorable weather conditions, we have been unable to burn the management areas at this point

## Results

### *Species composition and distribution*

Several areas of high quality habitat defined by native species diversity and the absence of exotic species, were found in both management areas (Figure 2). Other areas of poor quality habitat, defined by an abundance of exotic species and/or the lack of native vegetation or altered habitat (e.g. asphalt), were also found in each Management Area.

A total of 179 plant species were found on the SOC south management areas, 41 of which are not considered native to south Florida with 16 species listed as a category I or II invasive (Table 1; Table 2; Table 3). During the surveys no other species considered as endangered, threatened, or candidates by the US Fish and Wildlife Service were found other than *Galactia smallii* and *Linum arenicola*. A total of 24 species listed by the State of Florida Department of Agriculture and Consumer Services as endangered, threatened, or commercially exploited were found on the property (Table 4). Estimates prior to the removal of exotic species in Management Area 1 for Small's milkpea were  $0.84 \pm 0.15$  (SE)/m<sup>2</sup>, and total estimates for sand flax were  $0.49 \pm 0.23$  (SE)/m<sup>2</sup>. Estimates prior to the removal of exotic species in Management Area 2 for Small's milkpea were  $0.47 \pm 0.12$  (SE)/m<sup>2</sup>, and total estimates for sand flax were  $0.40 \pm 0.1$  (SE)/m<sup>2</sup>.

### *Treatment and removal of exotic species*

High density areas of exotic invasive species, covering a total of 3.8 hectares (9.4 acres), are shown in Figure 3 and the areas which they occupied before herbicidal and mechanical treatments were applied are shown in Table 5. The species found in dense stands are: Australian pine (*Casuarina equisetifolia*) (Figure 4), St Augustine (*Stenotaphrum secundatum*) (Figure 5), lead tree (*Leucaena leucocephala*) (Figure 6), scarlet jungle flame (*Ixora coccinea*) (Figure 7), tall graminoids Burma reed (*Neyraudia reynaudiana*) and Napier grass (*Pennisetum purpureum*) (Figure 8), Zoysia grass (*Zoysia tenuifolia*) (Figure 9) and Brazilian pepper (*Schinus terebinthifolius*) (Figure 10).

Sparse presences of these and other species also occurred in other locations throughout the management areas and were eradicated when found. Other exotic invasive species also occurred throughout the area but were not found in dense stands such as ear-leaf acacia (*Acacia auriculiformis*), seaside mahoe (*Thespesia populnea*), umbrella tree (*Schefflera actinophylla*), woman's tongue (*Albizia lebbek*), lead tree (*Leucaena leucocephala*), and scaevola (*Scaevola taccada*) (Table 6).

### *Monitoring plant succession after exotic removal*


Jack-in-the-bush (*Chromolaena odorata*) and Mexican clover (*Richardia grandiflora*) began populating large areas that were treated for Zoysia grass. Both species can become problematic weeds if left unchecked, therefore herbicidal spot treatments are being applied to avoid allowing the plants to mature and reproduce. Pitted bluestem (*Bothriochloa pertusa*) began sprouting in high abundances in areas once dominated by Australian pine and tall invasive graminoids and is being treated with herbicides. Treatments of this type will continue until the seed source is depleted from the substrate as long as new plants are not allowed to mature, this includes the initial dominant invading species (e.g. Burma reed). Initial line transect data of disturbed areas once dominated by invasive species show a total of at least 36 early successional species (Figure 11; Table 7).

### **Acknowledgements**

Huge thanks to Rasheed Bradley and Sarah Marin for their leadership and dedicated work in removing the exotic species and restoring the habitat in the Management Areas. Thanks to the crew for putting up with the constant itches from poison wood. Steve Woodmansee did a great job identified several unknown plants.



**Legend**

 Management Area1 and 2 boundary

0 37.5 75 150 Meters



Figure 1: Map showing Management Areas 1 and 2.



Figure 2: High quality habitat in the Management Areas.



**Legend**

-  Management Area1 and 2 boundary
-  High quality habitat
-  Brazilian pepper
-  Zoysia
-  Tall graminoids
-  Leadtree
-  St. Augustine
-  Australian pine

0 37.5 75 150 Meters



Figure 3: Map showing coverage of densely populated areas.







Figure 4: High density areas of Australian pine (*Casuarina equisetifolia*).



Figure 5: High density areas of St. Augustine grass (*Stenotaphrum secundatum*).



**Legend**

-  Management Area1 and 2 boundary
-  Leadtree

0 37.5 75 150 Meters



Figure 6: High-density areas of lead tree (*Leucaena leucocephala*). This species was also found in low densities and scattered throughout both Management Areas.



Figure 7: High density areas of scarlet jungle flame (*Ixora coccinea*).



Figure 8: High density areas of tall invasive graminoids consisting of Burma reed (*Neyraudia reynaudiana*) and Napier grass (*Pennisetum purpureum*).



Figure 9: High density areas of *Zoysia* grass (*Zoysia tenuifolia*).



Figure 10: High density areas of Brazilian pepper (*Schinus terebinthifolius*)



Figure 11: Example of a line transect through an area that was once a monotypic stand of Burma reed and Napier grass.



## Tables

Table 1: Common native species found on SOC south management areas

Scientific Name	Common Name
<i>Abildgaardia ovate</i>	Flatspike sedge
<i>Ambrosia artemisiifolia</i>	Common ragweed
<i>Andropogon glomeratus var. pumilus</i>	Common bushy bluestem
<i>Andropogon ternarius</i>	Splitbeard bluestem
<i>Andropogon virginicus var. decipiens</i>	Broomsedge bluestem
<i>Aristida purpurascens</i>	Arrowfeather threeawn
<i>Aster adnatus</i>	Clasping aster
<i>Ayenia euphrasiifolia</i>	Eyebright ayenia
<i>Baccharis glomeruliflora</i>	Silverling
<i>Baccharis halimifolia</i>	Saltbush
<i>Bidens alba var. radiata</i>	Spanish-needles
<i>Buchnera americana</i>	American bluehearts
<i>Callicarpa americana</i>	American beautyberry
<i>Capraria biflora</i>	Goatweed
<i>Cassytha filiformis</i>	Lovevine
<i>Cenchrus spinifex</i>	Coastal sandspur
<i>Centrosema virginianum</i>	Spurred butterfly-pea
<i>Chamaecrista deeringiana</i>	Deering partridge pea
<i>Chamaecrista nictitans var. aspera</i>	Hairy sensitive-pea
<i>Chamaesyce blodgettii</i>	Limestone sandmat
<i>Chamaesyce conferta</i>	Everglades key sandmat
<i>Chamaesyce hypericifolia</i>	Eyebane
<i>Chiococca alba</i>	Common snowberry
<i>Chiococca parvifolia</i>	Pineland snowberry
<i>Chromolaena odorata</i>	Jack-in-the-bush
<i>Cirsium horridulum</i>	Purple thistle
<i>Cissus verticillata</i>	Possum-grape
<i>Cnidioscolus stimulosus</i>	Tread-softly
<i>Coccoloba uvifera</i>	Seagrape
<i>Conyza canadensis var. pusilla</i>	Dwarf Canadian horseweed
<i>Coreopsis leavenworthii</i>	Leavenworth's tickseed
<i>Crotalaria pumila</i>	Low rattlebox
<i>Croton linearis</i>	Pineland croton
<i>Cyperus polystachyos</i>	Manyspike flatsedge
<i>Desmodium incanum</i>	Beggar's-ticks
<i>Dichanthelium spp.*</i>	

Scientific Name	Common Name
<i>Dodonaea angustifolia</i>	Narrow varnishleaf
<i>Dyschoriste angusta</i>	Rockland twinflower
<i>Echites umbellatus</i>	Devil's-potato, Rubbervine
<i>Eragrostis elliottii</i>	Eragrostis elliottii
<i>Erigeron quercifolius</i>	Southern-fleabane
<i>Eupatorium capillifolium</i>	Dog-fennel
<i>Eupatorium serotinum</i>	Lateflowering thoroughwort
<i>Eustachys petraea</i>	Common fingergrass
<i>Ficus aurea</i>	Strangler fig
<i>Flaveria linearis</i>	Narrowleaf yellowtops
<i>Forestiera segregata</i>	Florida privet
<i>Galactia volubilis</i>	Downy milkpea
<i>Hamelia patens</i>	Firebush
<i>Hedyotis nigricans var. floridana</i>	Florida diamond flowers
<i>Heliotropium polyphyllum</i>	Pineland heliotrope
<i>Hypericum hypericoides</i>	St. Andrew's-cross
<i>Indigofera miniata var. florida</i>	Florida coastal indigo
<i>Lantana involucrata</i>	Wild-sage
<i>Liatris gracilis</i>	Slender gayfeather
<i>Licania michauxii</i>	Gopher-apple
<i>Ludwigia microcarpa</i>	Smallfruit primrosewillow
<i>Ludwigia octovalvis</i>	Mexican primrosewillow
<i>Ludwigia repens</i>	Creeping primrosewillow
<i>Lysiloma latisiliquum</i>	Wild-tamarind
<i>Melothria pendula</i>	Creeping-cucumber
<i>Metopium toxiferum</i>	Poisonwood
<i>Mikania scandens</i>	Climbing hempweed
<i>Morinda royoc</i>	Mouse's pineapple
<i>Muhlenbergia capillaris</i>	Muhlygrass
<i>Parthenocissus quinquefolia</i>	Virginia-creeper
<i>Paspalum caespitosum</i>	Blue paspalum
<i>Paspalum setaceum</i>	Thin paspalum
<i>Passiflora suberosa</i>	Corkystem passionflower
<i>Pectis glaucescens</i>	Tea-blinkum
<i>Phyla nodiflora</i>	Frogfruit
<i>Phyllanthus pentaphyllus var. floridanus</i>	Florida five-petalled leafflower
<i>Physalis walteri</i>	Walter's groundcherry
<i>Pilea microphylla</i>	Artillery plant

Scientific Name	Common Name
<i>Pinus elliottii</i> var. <i>densa</i>	South Florida slash pine
<i>Piriqueta caroliniana</i>	Pitted stripeseed
<i>Pityopsis graminifolia</i>	Narrowleaf silkgrass
<i>Pluchea odorata</i>	Sweetscent
<i>Pluchea rosea</i>	Rosy Camphorweed
<i>Poinsettia cyathophora</i>	Paintedleaf
<i>Poinsettia heterophylla</i>	Fiddler's spurge
<i>Polygala violacea</i>	Candyweed
<i>Randia aculeata</i>	White indigoberry
<i>Rhynchosia cinerea</i>	Brownhair snoutbean
<i>Rhynchosia minima</i>	Least snoutbean
<i>Rhynchospora colorata</i>	Starrush whitetop
<i>Rhynchospora floridensis</i>	Florida whitetop
<i>Ruellia succulenta</i>	Thickleaf wild petunia
<i>Sabal palmetto</i>	Cabbage palm
<i>Sabatia stellaris</i>	Rose-of-Plymouth
<i>Samolus ebracteatus</i>	Water pimpernel
<i>Schizachyrium gracile</i>	Wire bluestem
<i>Schizachyrium rhizomatum</i>	Rhizomatous bluestem
<i>Schizachyrium sanguineum</i>	Crimson bluestem
<i>Setaria parviflora</i>	Knotroot foxtail
<i>Sida acuta</i>	Common fanpetals
<i>Sida elliottii</i>	Elliott's fanpetals
<i>Sideroxylon salicifolium</i>	Willow-bustic
<i>Sisyrinchium angustifolium</i>	Narroleaf blueeyed-grass
<i>Solanum americanum</i>	Common nightshade
<i>Solidago gigantea</i>	Giant goldenrod
<i>Sorghastrum secundum</i>	Lopsided Indian grass
<i>Spermocoe assurgens</i>	Woodland false buttonweed
<i>Spigelia anthelmia</i>	West Indian pinkroot
<i>Stachytarpheta jamaicensis</i>	Blue porterweed
<i>Stylosanthes hamata</i>	Cheesytoes
<i>Teucrium canadense</i>	Wood sage
<i>Thelypteris kunthii</i>	Southern shield fern
<i>Tillandsia recurvata</i>	Ball-moss
<i>Trema micranthum</i>	Florida tremma
<i>Tridax procumbens</i>	Brittleweed
<i>Verbena scabra</i>	Harsh verbena

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<b>Scientific Name</b>	<b>Common Name</b>
<i>Waltheria indica</i>	Sleepy morning

- \* Sterile specimen, unable to identify to species level

Table 2: Non-native species found on SOC south management areas listed by the Florida Exotic Pest Plant Council as a category 1 or 2 invasive species.

<b>Scientific Name</b>	<b>Common Name</b>	<b>FLEPPC Listing</b>
<i>Acacia auriculiformis</i>	Earleaf acacia	1
<i>Albizia lebeck</i>	Woman's tongue	1
<i>Ardisia elliptica</i>	Shoe-button ardisia	1
<i>Casuarina equisetifolia</i>	Australian-pine	1
<i>Dactyloctenium aegyptium</i>	Crow's-foot grass	2
<i>Ficus microcarpa</i>	Laurel fig	1
<i>Lantana camara</i>	Shrubverbena	1
<i>Leucaena leucocephala</i>	Lead tree	2
<i>Neyraudia reynaudiana</i>	Burma reed	1
<i>Pennisetum purpureum</i>	Napier grass	1
<i>Pteris vittata</i>	China brake	2
<i>Scaevola taccata</i>	Scaevola	2
<i>Schefflera actinophylla</i>	Australian umbrellatree	1
<i>Schinus terebinthifolius</i>	Brazilian-pepper	1
<i>Thespesia populnea</i>	Seaside mahoe	1
<i>Wedelia trilobata</i>	Creeping wedelia	2

Table 3: Non-native species found on SOC south management areas but not listed by FLEPPC.

Scientific Name	Common Name
<i>Alysicarpus vaginalis</i>	White moneywort
<i>Asclepias curassavica</i>	Scarlet milkweed
* <i>Bothriochloa pertusa</i>	Pitted bluestem
<i>Desmodium triflorum</i>	Threeflower ticktrefoil
<i>Eleusine indica</i>	Indian goose grass
<i>Emilia fosbergii</i>	Florida tasselflower
<i>Eulophia graminea</i>	no common name available
<i>Euphorbia graminea</i>	Grassleaf spurge
<i>Fimbristylis cymosa</i>	Hurricane sedge
<i>Indigofera spicata</i>	Creeping indigo
* <i>Ixora coccinea</i>	Scarlet jungleflame
<i>Kalanchoe daigremontiana</i>	Devil's-backbone
<i>Ligustrum japonicum</i>	Japanese privet
* <i>Macroptilium lathyroides</i>	Wild-bean
* <i>Melaleuca viminalis</i>	Weeping bottlebrush
<i>Momordica charantia</i>	Wild balsam-apple
<i>Paspalum urvillei</i>	Vasey grass
<i>Pluchea carolinensis</i>	Cure-for-all
<i>Pteris xdelchampsii</i>	Delchamps' brake
* <i>Richardia grandiflora</i>	Mexican clover
<i>Spermacoce verticillata</i>	Shrubby false buttonweed
<i>Sporobolus indicus</i>	Smut grass
* <i>Stenotaphrum secundatum</i>	St. Augustine grass
* <i>Tabebuia heterophylla</i>	White-cedar
* <i>Zoysia tenuifolia</i>	Zoysia grass

- \* Problematic weedy species targeted during restoration.

Table 4: Endangered, threatened, and commercially exploited plant species found on SOC south management areas.

Scientific Name	Common Name	Status
<i>Angadenia berteroi</i>	Pineland-allamanda	State threatened
<i>Bletia purpurea</i>	Pinepink	State threatened
<i>Byrsonima lucida</i>	Locustberry	State threatened
<i>Chaptalia albicans</i>	White sunbonnets	State threatened
<i>Coccothrinax argentata</i>	Florida silver palm	State threatened
<i>Crossopetalum ilicifolium</i>	Quailberry	State threatened
<i>Cynanchum blodgettii</i>	Blodgett's swallowwort	State threatened
<i>Ernodea cokeri</i>	Coker's creeper	State endangered
<i>Galactia smallii</i>	Small's milkpea	Federally endangered
<i>Ipomoea microdactyla</i>	Man-in-the-ground	State endangered
<i>Jacquemontia curtisii</i>	Pineland clustervine	State threatened
<i>Lantana depressa</i>	Pineland lantana	State endangered
<i>Linum arenicola</i>	Sand flax	State endangered, Federal candidate
<i>Melanthera parvifolia</i>	Pineland blackanthers	State threatened
<i>Phyla stoechadifolia</i>	Southern fogfruit	State endangered
<i>Psidium longipes</i>	Longstalked-stopper	State threatened
<i>Pteris bahamensis</i>	Bahama ladder brake	State threatened
<i>Roystonea regia</i>	Royal palm	State endangered
<i>Scutellaria havanensis</i>	Havana skullcap	State endangered
<i>Senna mexicana</i> var. <i>chapmanii</i>	Bahama senna	State threatened
<i>Smilax havanensis</i>	Havana greenbrier	State threatened
<i>Spermacoce terminalis</i>	Everglades Keys false buttonweed	State threatened
<i>Swietenia mahagoni</i>	West Indian mahogany	State threatened
<i>Tetrazygia bicolor</i>	West Indian-lilac	State threatened
<i>Zamia integrifolia</i>	Coontie	Commercially exploited

Table 5: Areas (acres and hectares) of treated high density invasive species

<b>Invasive species</b>	<b>Acres</b>	<b>Hectares</b>
<i>Casuarina equisetifolia</i>	0.573292274	0.232003152
<i>Schinus terebinthifolius</i>	4.382184531	1.773407161
<i>Zoysia tenuifolia</i>	3.367062368	1.362601797
<i>Leucaena leucocephala</i>	0.081043559	0.032797165
<i>Ixora coccinea</i>	0.015801159	0.006394502
<i>Tall graminoids</i>	0.90234024	0.36516414
<i>Stenotaphrum secundatum</i>	0.076838635	0.031095492



Table 6: Total individual counts of treated exotic species sporadically located throughout the SOC south management areas

<b>Invasive species</b>	<b>Total treated</b>
<i>Acacia auriculiformis</i>	246
<i>Albizia lebbek</i>	213
<i>Ardisia elliptica</i>	525
<i>Lantana camara</i>	702
<i>Leucaena leucocephala</i>	670
<i>Melaleuca viminalis</i>	20
<i>Scaevola taccada</i>	3
<i>Schefflera actinophylla</i>	15
<i>Thespesia populnea</i>	4

Table 7: Early succession species from transect monitoring

<b>Early succession species</b>	<b>Status</b>
<i>Abildgaardia ovata</i>	Native
<i>Alysicarpus vaginalis</i>	Non-native
<i>Andropogon ternarius</i>	Native
<i>Aster adnatus</i>	Native
<i>Baccharis halimifolia</i>	Native
<i>Chamaecrista nictitans var. aspera</i>	Native
<i>Chamaesyce blodgettii</i>	Native
<i>Chamaesyce hypericifolia</i>	Native
<i>Chromolaena odorata</i>	Native
<i>Conyza canadensis var. pusilla</i>	Native
<i>Desmodium triflorum</i>	Non-native
<i>Eragrostis elliottii</i>	Native
<i>Eupatorium capillifolium</i>	Native
<i>Eustachys petraea</i>	Native
<i>Galactia smallii</i>	Native
<i>Hedyotis nigricans var. floridana</i>	Native
<i>Indigofera spicata</i>	Native
<i>Lantana camara</i>	Non-native
<i>Lantana involucrata</i>	Native
<i>Linum arenicola</i>	Native
<i>Metopium toxiferum</i>	Native
<i>Neyraudia reynaudiana</i>	Non-native
<i>Paspalum setaceum</i>	Native
<i>Pectis hedyotis</i>	Native
<i>Pennisetum purpureum</i>	Non-native
<i>Phyla nodiflora</i>	Native
<i>Phyllanthus pentaphyllus var. floridanus</i>	Native
<i>Pluchea carolinensis</i>	Native
<i>Pluchea rosea</i>	Native
<i>Polygala violacea</i>	Native
<i>Pteris spp.</i>	Native
<i>Rhynchospora floridensis</i>	Native
<i>Schizachyrium sanguineum</i>	Native
<i>Spermacoce verticillata</i>	Non-native

Draft

<b>Early succession species</b>	<b>Status</b>
<i>Stachytarpheta jamaicensis</i>	Native
<i>Stylosanthes hamata</i>	Native
<i>Tridax procumbens</i>	Native