Trade Lands Ecological Value - Biele Tract

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Element Occurrences on the Biele Tract

PLANTS

1. *Cladonia perforata*
Population of over 100 plants observed at edge of scrubby flatwoods on north edge of site, near northwest corner. Also seen within scrubby flatwoods near northwest corner. This species is listed as G1/S1 by FNAI and Endangered by the State of Florida.

2. *Asclepias curtissii*
Three plants seen in center of scrubby flatwoods on northwest corner of site. This species is listed as G3/S3 by FNAI and Endangered by the State of Florida.

3. *Tillandsia fasciculata* var. *densispica*
Small colony of ca. 5 plants inside western edge in scrubby flatwoods. This species is listed as Endangered by the State of Florida.

4. *Lechea cernua*
Approximately 100-200 plants found throughout scrubby flatwoods. This species is listed as G3/S3 by FNAI and Threatened by the State of Florida.

ANIMALS

1. *Gopherus polyphemus*
Two active burrows seen in scrubby flatwoods. This species is listed as G3/S3 by FNAI and as a Species of Special Concern by the State of Florida.

PROPERTY DESCRIPTION

The 21 acre Biele Tract consists of scrubby flatwoods, baygall, wet flatwoods, mesic flatwoods, and wet prairie communities. The scrubby flatwoods occur in the northwest corner of the site and is of high quality. No canopy exists in this area, possibly because of previouse hot fires. Only a few sand pine (*Pinus clausa*) saplings were observed. The understory is dominated by myrtle oak (*Quercus myrtifolia*), Chapman's oak (*Quercus chapmanii*), sand-live oak (*Quercus geminata*), scrub oak (*Quercus inopina*), and hog-plum (*Ximenia americana*). A few specimens of rosemary (*Ceratiola ericoides*) were also present. The population of scrub oaks is one of only a few in Martin county. Common forbs and graminoides include *Bulbostylis warei*, *Rhynchospora megalocarpa*, corkscrew threeawn (*Aristida gyrans*), golden-aster (*Chrysopsis scabrella*), sand spike-moss (*Selaginella arenicola*), lichens (*Cladina* spp., *Cladonia* spp.), and wireweeds (*Polygonella* spp). Two active gopher tortoise burrows were observed here. This community is in excellent condition. The subcanopy is ca. 1 - 1.5 m tall with many gaps exposing open sandy areas with little to no organic-matter accumulation. Only a few individuals of Brazilian-pepper (*Schinus terebinthifolius*) were observed. The soil type is Satellite variant sand.

The baygall community is formed on a seepage slope to the east of the scrubby flatwoods community. The canopy is dominated by loblolly bay (*Gordonia lasianthus*). The understory is dominated by Virginia chain fern (*Woodwardia virginica*). Other common species in this community include rein orchid (*Habenaria floribunda*), royal fern (*Osmunda regalis* var. *spectabilis*), and dahoon holly (*Ilex cassine*). The soil type is Salerno sand.

An elongate wet prairie community occurs near the southern end of the site. It extends from east to west and is bordered on the north and south by wet flatwoods and mesic flatwoods. No canopy exists in this community although trees and shrubs have recruited in the community as a result of fire suppression and, possibly, hydrologic alterations. The understory is dominated by gallberry (*Ilex glabra*) with occasional specimens of red maple (*Acer rubrum*). Common forbs and graminoides include pipewort (*Eriocaulon decangulare*), pickerelweed (*Pontederia cordata*), mermaidweed (*Proserpinaca palustris*), and sugarcane plumegrass (*Saccharum giganteum*). This community is fire excluded and is being invaded by hardwoods and, in most areas, has a significant accumulation of organic duff material. The soil type is Waveland, depressional.

Wet flatwoods occur along the north and south edges of the wet prairie community. The subcanopy in most areas is 1.5 - 2 m high. Common understory species are saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), and tarflower (*Befaria racemosa*). Common forbs and graminoids include pipewort (*Eriocaulon decangulare*), cinnamon fern (*Osmunda cinnamomea*), *Dichanthelium* spp., sugarcane plumegrass (*Saccharum giganteum*), fleabane (*Pluchea rosea*), and mermaid weed (*Proserpinaca palustris*). This community has suffered from fire exclusion. The soil type is Waveland, depressional.

Mesic flatwoods occur between the scrubby flatwood and the wet prairie, and along the south edge of the site. This area has a canopy of slash pine and a dense understory of saw palmetto, gallberry and tarflower that is approximately 1.5 to 2 m high. Because of the dense understory few forbs or graminoides presently occur here. This community has suffered greatly from fire exclusion. The soil type is Waveland, depressional.

Exotic pest plants are most frequent along the edges of the site, primarily along the west edge along US1. The most common exotic is Brazilian-pepper. Other species that were observed include carrotwood (*Cupaniopsis ansacardioides*), natal grass (*Rhynchelytrum repens*), torpedo grass (*Panicum repens*), and bishop wood (*Bischofia javanica*). These species are still rare within the interior of the site.

CONCLUSIONS

The scrubby flatwoods in the northwest corner of the site is in excellent condition and of high ecological value. Four state-listed species occur in this community, one of which (*Cladonia perforata*) is listed as endangered by the U.S. Fish and Wildlife Service. This community should be maintained as a preserve. The baygall community in the northeast corner is also in excellent condition. While it contains no listed species it is one of the few examples of this community remaining in southeastern Florida and should thus be preserved. The wet flatwoods, wet prairie, and mesic flatwoods are of lesser quality due to fire exclusion. While no state-listed plant species occur in these communities, it is likely that gopher tortoises utilize these areas. Exotic pest plants have had very little impact in these communities. They can be restored by implementing a prescribed fire program. These areas are also important by serving as a buffer zone to the scrubby flatwoods and baygall communities.