

Naval Live Oaks Area

(Santa Rosa County)

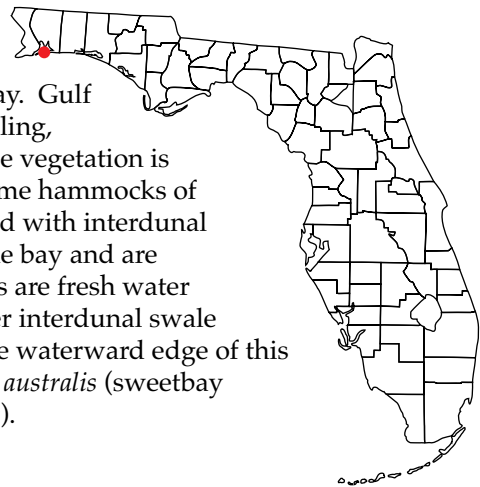
FRESHWATER INTERDUNAL SWALE



Maritime hammock

LOCATION

The Naval Live Oaks Area, part of the Santa Rosa Island National Seashore, is located in coastal Santa Rosa county. The park includes large areas of tidal marsh and maritime coastal hammock. The reference site is located on the peninsula between Santa Rosa sound and East Bay. Gulf Breeze is the nearest town. The land is gently rolling, reflecting a history of coastal dunes. Seaward, the vegetation is stunted by the wind, producing the dense maritime hammocks of live oak. The maritime hammocks are punctuated with interdunal swales. Some of these swales are connected to the bay and are dominated by salt marsh vegetation, while others are fresh water marshes. The reference site is part of a freshwater interdunal swale dominated by *Cladium jamaicense* (sawgrass). The waterward edge of this wetland is dominated by *Magnolia virginiana* var. *australis* (sweetbay magnolia) and *Myrica cerifera* (southern bayberry).



ACCESS

This reference site is located west of the visitors center at the Naval Live Oaks area of Gulf Islands National Seashore. The visitor center is located between Gulf Breeze and Navarre on U.S. Highway 98. Parking is available in the visitor center parking area. The site is easily reached by a trail that parallels Santa Rosa sound. Access is through the visitor center, across the deck in back, and west on the hiking trail. The interdunal swale can be reached in a few minutes by a pleasant walk through a maritime hammock. The wetland boundary is marked with wooden posts.

COMMUNITY CHARACTERIZATION

The reference site is a freshwater marsh of an interdunal swale. The center of this wetland is dominated by *Caladium jamaicense* (sawgrass) with an outer zone of *Magnolia virginiana* var. *australis* (sweetbay magnolia) and *Myrica cerifera* (southern bayberry). The wetland boundary is established immediately upslope from the sweetbay magnolia. Landward of the boundary line, the maritime forest of *Quercus geminata* (sand live-oak), *Magnolia grandiflora* (southern magnolia), *Carya glabra* (pignut hickory) and *Persea borbonia* (redbay) produces a closed canopy of twisting branches.



Sawgrass marsh within interdunal swale

DELINEATION PROCEDURE

The deepest portion of the interdunal swale is a marsh dominated by sawgrass, a wetland that is identifiable by using the wetland definition. Surrounding the marsh is dense forest. Beginning at the marsh/forest interface, vegetative dominance by hydrophytic species in the canopy, corroborated by hydric soil indicators (subsections 62-340.300(2)(a) and (b), F.A.C.), is followed landward. The initial canopy encountered is composed of sweetbay magnolia, an obligate species and *Persea borbonia* (red bay), an upland species. The wetland boundary is established where the areal extent of sweetbay no longer exceeds the areal extent of upland species. Landward of the *Magnolia virginiana* var. *australis* zone, the composition of the canopy changed rapidly to upland species. Similarly the soil also changes from hydric to non-hydric. Further observation showed that recent extreme inundation, probably associated with the tropical storms of July and August of 1994 has killed the *Myrica cerifera* around the edge of this wetland but not the *Magnolia virginiana* var. *australis*.

Vegetation of the Wetland Interior.

Ground cover

| | | |
|----------------------------------|-----|------------|
| <i>Cephalanthus occidentalis</i> | OBL | buttonbush |
| <i>Caladium jamaicense</i> | OBL | sawgrass |

Vegetation Immediately Waterward of the Wetland Boundary.

Canopy

| | | |
|---|--------|--------------------|
| <i>Magnolia virginiana</i> var. <i>australis</i> | OBL | magnolia, sweetbay |
| <i>Persea borbonia</i> | UPLAND | bay, red |

Subcanopy

| | | |
|------------------------|-----|--------------------|
| <i>Myrica cerifera</i> | FAC | bayberry, southern |
|------------------------|-----|--------------------|

Vegetation Immediately Landward of the Wetland Boundary.

Canopy

| | | |
|------------------------------|--------|--------------------|
| <i>Magnolia grandiflora</i> | UPLAND | magnolia, southern |
| <i>Persea borbonia</i> | UPLAND | bay, red |
| <i>Pinus elliottii</i> | UPLAND | slash pine |
| <i>Quercus hemisphaerica</i> | UPLAND | oak, laurel |
| <i>Quercus geminata</i> | UPLAND | oak, sand-live |

Subcanopy

Myrica cerifera FAC bayberry, southern

Ground Cover

Aronia arbutifolia FACW red chokeberry
Bignonia capreolata VINE cross-vine

SOIL DESCRIPTIONS

USDA-NRCS Santa Rosa County Soil Survey - Sheet 83

The soil is mapped as Kureb sand, 0 to 8 percent slope.

Soil Profile Descriptions

Transect 1:

Point 1-1. One foot waterward of the wetland boundary line (water table - one inch).

| <u>Horizon</u> | <u>Depth (in)</u> | |
|----------------|-------------------|-------------------------------------|
| Oe | 3-0 | dark reddish brown (5YR 3/3) peat |
| Oa | 0-1 | black (10YR 2/1) muck |
| A1 | 1-3 | black (10YR 2/1) mucky fine sand |
| A2 | 3+ | very dark gray (10YR 3/1) fine sand |

Hydric soil: Yes

Hydric soil field indicators: one inches of muck (horizon Oa), three inches of mucky texture

Point 1-2. Ten feet landward of the wetland boundary line (water table - ten inches).

| <u>Horizon</u> | <u>Depth (in)</u> | |
|----------------|-------------------|-----------------------------------|
| Oe | 1-0 | dark reddish brown (5YR 3/3) peat |
| A1 | 0-2 | brown (7.5YR 4/2) fine sand |
| A2 | 2-7 | dark gray (10YR 4/1) fine sand |
| E or C | 7+ | gray (10YR 5/1) fine sand |

Hydric soil: No

Hydric soil field indicators: none

Transect 2:

Point 2-1. One foot waterward of the wetland boundary line (water table - one inch).

| <u>Horizon</u> | <u>Depth (in)</u> | |
|----------------|-------------------|-------------------------------------|
| Oe | 2-0 | dark reddish brown (5YR 3/3) peat |
| Oa | 0-1 | black (10YR 2/1) muck |
| A1 | 1-3 | black (10YR 2/1) mucky fine sand |
| A2 | 3+ | very dark gray (10YR 3/1) fine sand |

Hydric soil: Yes

Hydric soil field indicators: one inches of muck in the Oa horizon and three inches of mucky texture in the A1 horizon.



Point 2-2

Point 2-2. Ten feet landward of the wetland boundary line (water table - eight inch).

| <u>Horizon</u> | <u>Depth (in)</u> | |
|----------------|-------------------|-----------------------------------|
| Oe | 2-0 | dark reddish brown (5YR 3/3) peat |
| A | 0-4 | dark gray (10YR 4/1) fine sand |
| E or C | 4+ | gray (10YR 5/1) fine sand |

Hydric soil: No

Hydric soil field indicators: none