

**Vegetation Monitoring at Sacred Heart  
Northwest Florida Water Management District  
Non-FDOT Mitigation Site**

Fall 2024

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Funding for this project was provided by the Northwest Florida Water Management District under the  
Purchase Order #00250061-000 with the Florida Natural Areas Inventory  
Florida State University

Sacred Heart Mitigation Site  
Bay County  
USACE Permit #SAJ-1998-4720 IP-RVH  
Qualitative and Quantitative Monitoring  
November 2024

## INTRODUCTION

The Sacred Heart Mitigation Site project compensates for impacts to jurisdictional wetlands associated with the construction of Sacred Heart Hospital near the intersection of US 98 and Mack Bayou Road in Walton County. The goal of this mitigation is to restore 82 acres of hydric pine flatwoods at Devils Swamp, an area that is owned and managed for ecological integrity by the Northwest Florida Water Management District (NFWFMD) and is part of the Choctawhatchee River Water Management Area. The offsite mitigation area is located approximately 15 miles east of the impact along an unnamed dirt road east of the unincorporated community of Bunker. The site is adjacent to the Bayport Mitigation Site which was monitored at the same time (Figure 1). Prior to NFWFMD acquisition in 1992, the Devils Swamp site had been converted to slash pine plantation.

The mitigation area is divided into two polygons. According to NFWFMD, mitigation activities implemented to date include baseline monitoring (August 2017), shrub and tree density reduction, prescribed fire, repeat panoramic photography, herbicide treatments to reduce shrub regrowth, and post-baseline quantitative vegetation monitoring.

FNAI conducted quantitative and qualitative monitoring to document the current plant species composition and vegetation structure of these targeted areas. FNAI biologists previously monitored the site vegetation in Fall 2023.

## METHODS

We measured percent vegetation cover along four 150-foot transects (Figure 2). We placed fifteen 1m x 1m quadrats along the left side of each transect line, beginning at 10 feet and then spaced every 10 feet thereafter. In each quadrat, we visually estimated the percent cover of each plant species, including individuals rooted in the quadrat as well as overhanging. Canopy over 2 m in height was excluded from cover estimates. Only the lower 2 m portions of larger individuals were counted as cover, including the lower portions of tree trunks rooted in quadrats. We estimated open ground in each quadrat as the percentage of ground not obscured by plant cover up to 2 m tall. We converted plant cover estimates to mid-point values and averaged them across each transect. We also calculated relative cover (in which all plant cover and open ground is given as a proportion of 100 percent cover); this is reported in separate pie charts.

To monitor rooted shrub stem density, we used five 1 m<sup>2</sup> quadrats established at random (Table 6).

For qualitative monitoring, we walked meandering transects throughout the mitigation site and recorded all plant species as well as observations on vegetation structure. FNAI botanists Allie Heiker and Amy Jenkins performed field surveys on November 19-20, 2024.

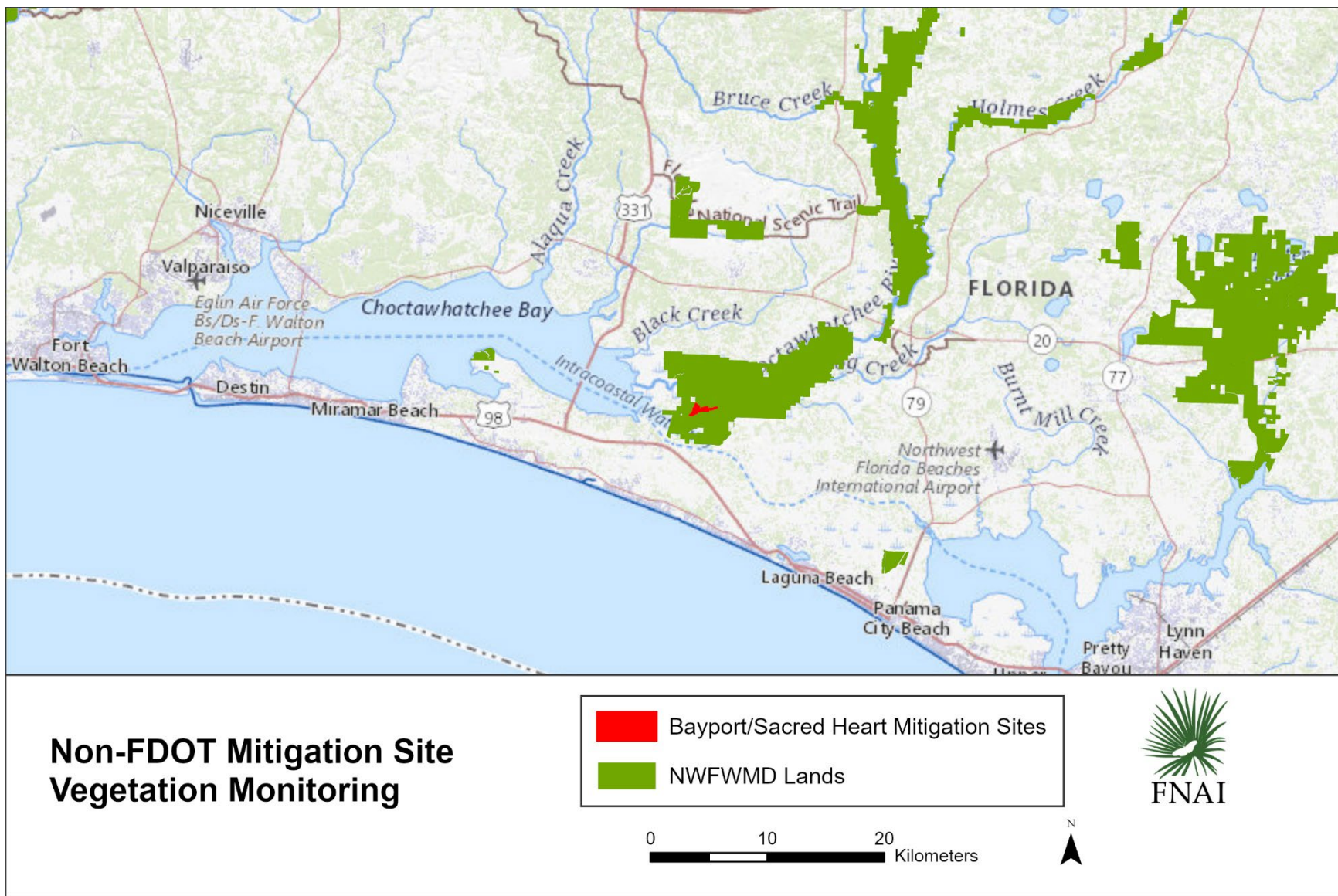
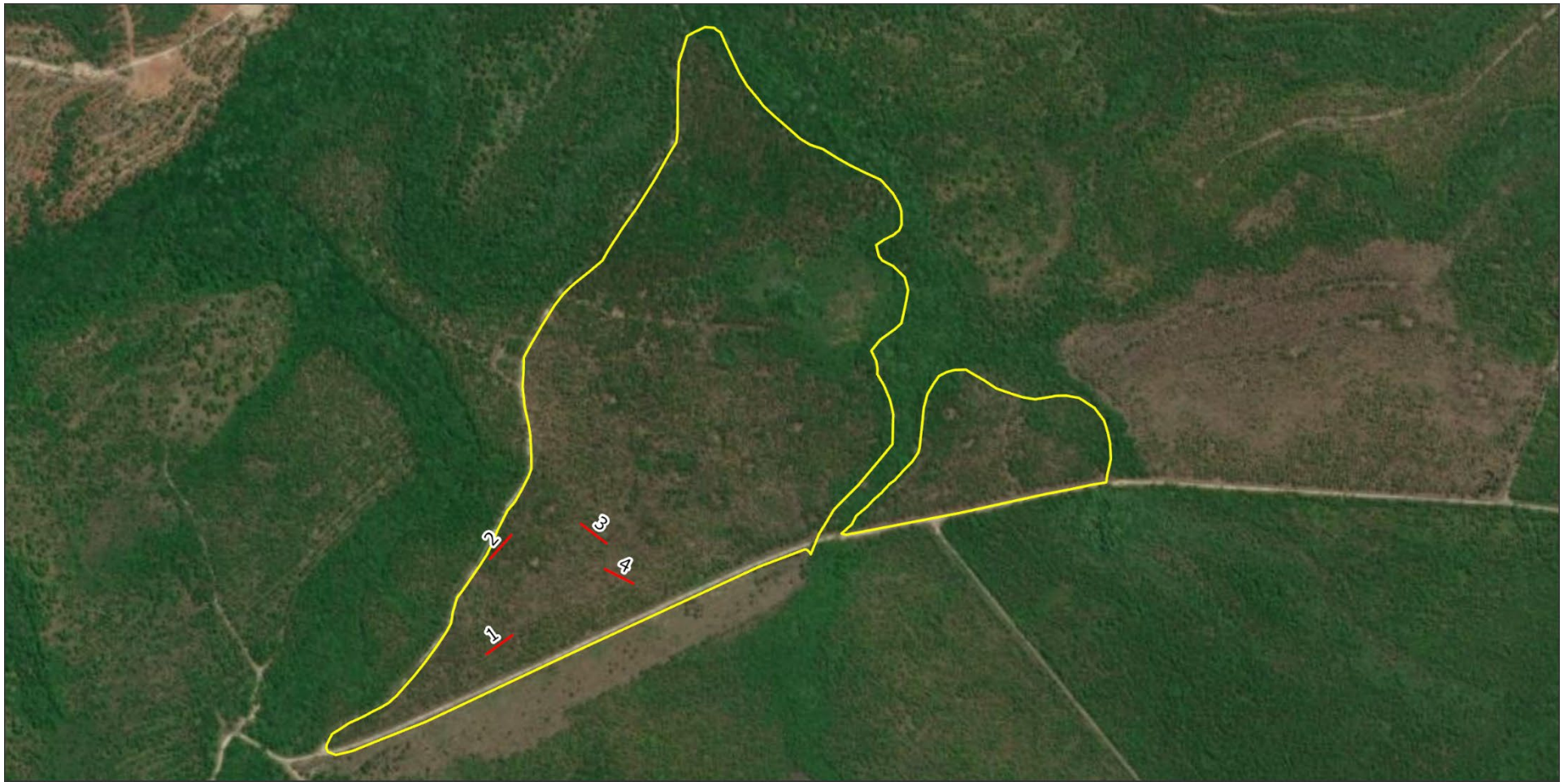


Figure 1. Location map of Devils Swamp non-FDOT NFWMD mitigation sites monitored by FNAI.



## Sacred Heart Mitigation Site Vegetation Monitoring

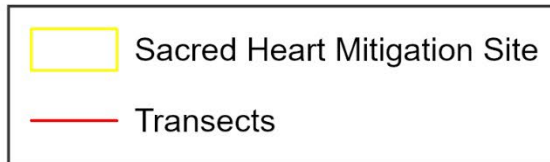


Figure 2. Location of transects at Sacred Heart Mitigation Site.

## RESULTS AND DISCUSSION

FNAI detected 111 plant taxa in the surveyed area of Sacred Heart Mitigation Site during the 2024 monitoring period (Table 1). We documented 18 new taxa during the 2024 monitoring (i.e., species or varieties not observed during 2021-2023 site visits).

Taxonomy follows Weakley, A.S., and Southeastern Flora Team. 2023. Flora of the southeastern United States: Florida. University of North Carolina Herbarium, North Carolina Botanical Garden, Chapel Hill, U.S.A. This is a change from the previous FNAI monitoring reports, which followed Wunderlin, R. P., B.F. Hansen, A.R. Franck, and F.B. Essig. 2017. Atlas of Florida Plants (<http://florida.plantatlas.usf.edu/>), Institute for Systematic Botany, University of South Florida, Tampa.

The average shrub stem density was practically unchanged from 2023. We recorded an average of 11.4 shrub stems/m<sup>2</sup> (Table 6), compared to 13 shrub stems/m<sup>2</sup> in 2023.

Table 1. Species observed at Sacred Heart Mitigation Site, November 19-20, 2024 (bold name = new species, \* = state-listed threatened or endangered, † = non-native invasive).

Scientific Name	Common Name
<b><i>Acer rubrum</i></b>	<b>red maple</b>
<b><i>Aletris lutea</i></b>	<b>yellow colic-root</b>
<b><i>Anchistea virginica</i></b>	<b>Virginia chain fern</b>
* <i>Andropogon arctatus</i>	pinewoods bluestem
<i>Andropogon capillipes</i> / <i>Andropogon dealbatus</i>	dryland/wetland white bluestem
<i>Andropogon cretaceus</i>	purple bluestem
<i>Andropogon glomeratus</i>	bushy bluestem
<i>Andropogon</i> sp.	bluestem
<i>Andropogon virginicus</i> var. <i>virginicus</i>	broomsedge bluestem
<i>Anthenantia rufa</i>	purple silkscale
<i>Aristida beyrichiana</i>	Southern wiregrass
<i>Aristida palustris</i>	longleaf threeawn
<i>Aronia arbutifolia</i>	red chokeberry
* <i>Calamovilfa curtissii</i>	Curtiss' sandgrass
<i>Carphephorus pseudoliatris</i>	bristleleaf chaffhead
<b><i>Centella erecta</i></b>	<b>spadeleaf</b>
<b><i>Chrysopsis lanuginosa</i></b>	<b>Lynn Haven goldenaster</b>
<i>Clethra alnifolia</i>	sweet pepperbush
<b><i>Clethra tomentosa</i></b>	<b>downy sweet pepperbush</b>
<i>Cliftonia monophylla</i>	black titi
<i>Coleataenia longifolia</i>	ciliate redtop panicum
<i>Ctenium aromaticum</i>	toothache grass
<b><i>Cyperus</i> sp.</b>	<b>flatsedge</b>
<b><i>Cyrilla parvifolia</i></b>	<b>littleleaf titi</b>

Scientific Name	Common Name
<i>Cyrilla racemiflora</i>	titi
<i>Dichanthelium ensifolium</i>	small-leaved witchgrass
<i>Dichanthelium laxiflorum</i>	openflower witchgrass
<i>Dichanthelium leucothrix</i>	rough witchgrass
<i>Dichanthelium ovale</i> var. <i>ovale</i>	oval-flowered witchgrass
<i>Dichanthelium scabriusculum</i>	woolly witchgrass
<i>Dichanthelium</i> sp.	witchgrass
<i>Dichanthelium strigosum</i> var. <i>leucoblepharis</i>	roughhair witchgrass
<i>Dichanthelium tenue</i>	white-edged witchgrass
<i>Diospyros virginiana</i>	common persimmon
<b><i>Drosera brevifolia</i></b>	<b>dwarf sundew</b>
<i>Drosera capillaris</i>	pink sundew
<i>Edrastima uniflora</i>	oldenlandia
<i>Eriocaulon compressum</i>	flattened pipewort
<i>Eriocaulon decangulare</i>	tenangle pipewort
<i>Eupatorium mohrii</i>	Mohr's thoroughwort
<i>Euthamia caroliniana</i>	slender flattop goldenrod
<i>Gaylussacia dumosa</i>	dwarf huckleberry
<i>Gaylussacia mosieri</i>	woolly huckleberry
<b><i>Gaylussacia nana</i></b>	<b>dwarf dangleberry</b>
<i>Gaylussacia tomentosa</i>	blue huckleberry
<b>*<i>Gentiana pennelliana</i></b>	<b>wiregrass gentian</b>
<i>Hypericum brachyphyllum</i>	coastalplain St. John's wort
<i>Hypericum crux-andreae</i>	St. Peter's wort
<i>Hypericum fasciculatum</i>	peelbark St. John's wort
<b><i>Hypericum hypericoides</i></b>	<b>St. Andrew's cross</b>
<i>Hypericum microsepalum</i>	flatwoods St. John's wort
<i>Hypericum tetrapetalum</i>	fourpetal St. John's wort
<i>Ilex coriacea</i>	large gallberry
<i>Ilex glabra</i>	gallberry
<i>Ilex myrtifolia</i>	myrtle-leaved holly
<i>Ilex vomitoria</i>	yaupon
<b><i>Iva microcephala</i></b>	<b>Piedmont marshelder</b>
<i>Kelochloa verrucosa</i>	warty panicgrass
<i>Lachnanthes caroliniana</i>	Carolina redroot
<i>Lachnocaulon anceps</i>	whitehead bogbutton
<b><i>Liatris resinosa</i></b>	<b>dense gayfeather</b>
<i>Lobelia brevifolia</i>	shortleaf lobelia
<i>Lophiola aurea</i>	golden crest
<i>Ludwigia</i> sp.	primrosewillow
<i>Lycopodiella alopecuroides</i>	foxtail club-moss
<i>Magnolia virginiana</i> var. <i>australis</i>	sweetbay
<i>Mitreola sessilifolia</i>	swamp hornpod

Scientific Name	Common Name
<i>Morella cerifera</i>	Southern bayberry
<i>Muscadinia rotundifolia</i>	muscadine
<i>Osmunda spectabilis</i>	royal fern
<i>Osmundastrum cinnamomeum</i>	cinnamon fern
<i>Pinus elliotii</i>	slash pine
<i>Polygala lutea</i>	orange milkwort
<i>Polygala</i> sp.	milkwort
<i>Proserpinaca pectinata</i>	combleaf mermaidweed
<i>Pteridium pseudocaudatum</i>	tailed bracken
<i>Quercus elliotii</i>	runner oak
<i>Quercus hemisphaerica</i>	laurel oak
<i>Quercus minima</i>	dwarf live oak
<i>Quercus virginiana</i>	live oak
<i>Rhexia alifanus</i>	savannah meadowbeauty
<b><i>Rhexia lutea</i></b>	<b>yellow meadowbeauty</b>
<i>Rhexia mariana</i> var. <i>mariana</i>	pale meadowbeauty
<i>Rhexia petiolata</i>	fringed meadowbeauty
<i>Rhexia</i> sp.	meadowbeauty
<i>Rhexia virginica</i>	handsome harry
<i>Rhynchospora chalarocephala</i>	loosehead beaksedge
<i>Rhynchospora chapmanii</i>	Chapman's beaksedge
<i>Rhynchospora ciliaris</i>	fringed beaksedge
<i>Rhynchospora fascicularis</i>	fascicled beaksedge
<b><i>Rhynchospora latifolia</i></b>	<b>white-top sedge</b>
<i>Rhynchospora plumosa</i>	plumed beaksedge
<i>Rhynchospora</i> sp.	beaksedge
<i>Rubus pensilvanicus</i>	sawtooth blackberry
<i>Sarracenia flava</i>	yellow pitcherplant
<i>Schizachyrium stoloniferum</i>	creeping little bluestem
<i>Scleria ciliata</i> var. <i>elliotii</i>	broad-leaved hairy nutrush
<i>Scleria reticularis</i>	netted nutrush
<i>Serenoa repens</i>	saw palmetto
<i>Smilax auriculata</i>	earleaf greenbriar
<i>Smilax glauca</i>	cat greenbriar
<i>Smilax laurifolia</i>	laurel greenbriar
<b><i>Smilax rotundifolia</i></b>	<b>roundleaf greenbriar</b>
<b><i>Sphagnum</i> sp.</b>	<b>sphagnum moss</b>
<i>Vaccinium elliotii</i>	Elliott's blueberry
<i>Vaccinium fuscatum</i>	hairy highbush blueberry
<i>Vaccinium myrsinites</i>	shiny blueberry
<i>Viola lanceolata</i>	bog white violet
<i>Xyris ambigua</i>	coastalplain yellow-eyed grass
<i>Xyris caroliniana</i>	Carolina yellow-eyed grass

Scientific Name	Common Name
<i>Xyris</i> sp.	yellow-eyed grass
<b>Total number of taxa: 111</b>	

**Qualitative sampling.** We found 111 plant taxa at this site in 2024 (Table 1). Species include two state-listed threatened species (Curtiss’ sandgrass and pinewoods bluestem) that have been found in prior surveys. We also found a new occurrence of the state-listed endangered wiregrass gentian this year. No non-native invasive species were observed. This is a pine plantation in various stages of thinning. Slash pines are young with basal areas ranging from 10-30 ft<sup>2</sup> per acre up to 150-200 ft<sup>2</sup> per acre, depending on how much canopy reduction has taken place. There is heavy soil disturbance from past bedding plus scattered low artificial mounds. There are patches of dense, tall titi shrubs, but otherwise, shrubs are around 1 meter or shorter, mostly gallberry, black titi, and woolly huckleberry. Herbs are primarily weedy bluestems with a mix of other mostly graminoids. Laurel greenbrier is found throughout, forming some thick patches. We noted hog digging in this area in 2024.

**Quantitative sampling.**

- Transect 1 (Figure 3, Table 2) had a total of 39 taxa with 42% average open ground. Woody species made up around 7% average cover per quadrat. Compared to 2023, this represents a slight increase in species diversity (35 in 2023), a small increase in open ground (30% in 2023), and a small decrease in woody cover (13% in 2023).
- Transect 2 (Figure 4, Table 3) had a total of 36 taxa with 39% average open ground. Woody species made up around 16% average cover per quadrat. Compared to 2023, this represents a small decrease in species diversity (44 in 2023), no change in open ground (40% in 2023), and little change in woody cover (22% in 2023).
- Transect 3 (Figure 5, Table 4) had a total of 37 taxa with 33% average open ground. Woody species made up around 23% average cover per quadrat. Compared to 2023, this represents little change in species diversity (35 in 2023), little change in open ground (29% in 2023), and little change in woody cover (18% in 2023).
- Transect 4 (Figure 6, Table 5) had a total of 44 taxa with 33% average open ground. Woody species made up around 9% average cover per quadrat. Compared to 2023, this represents an increase in species diversity (29 in 2023), an increase in open ground (17% in 2023), and no change in woody cover (8% in 2023).

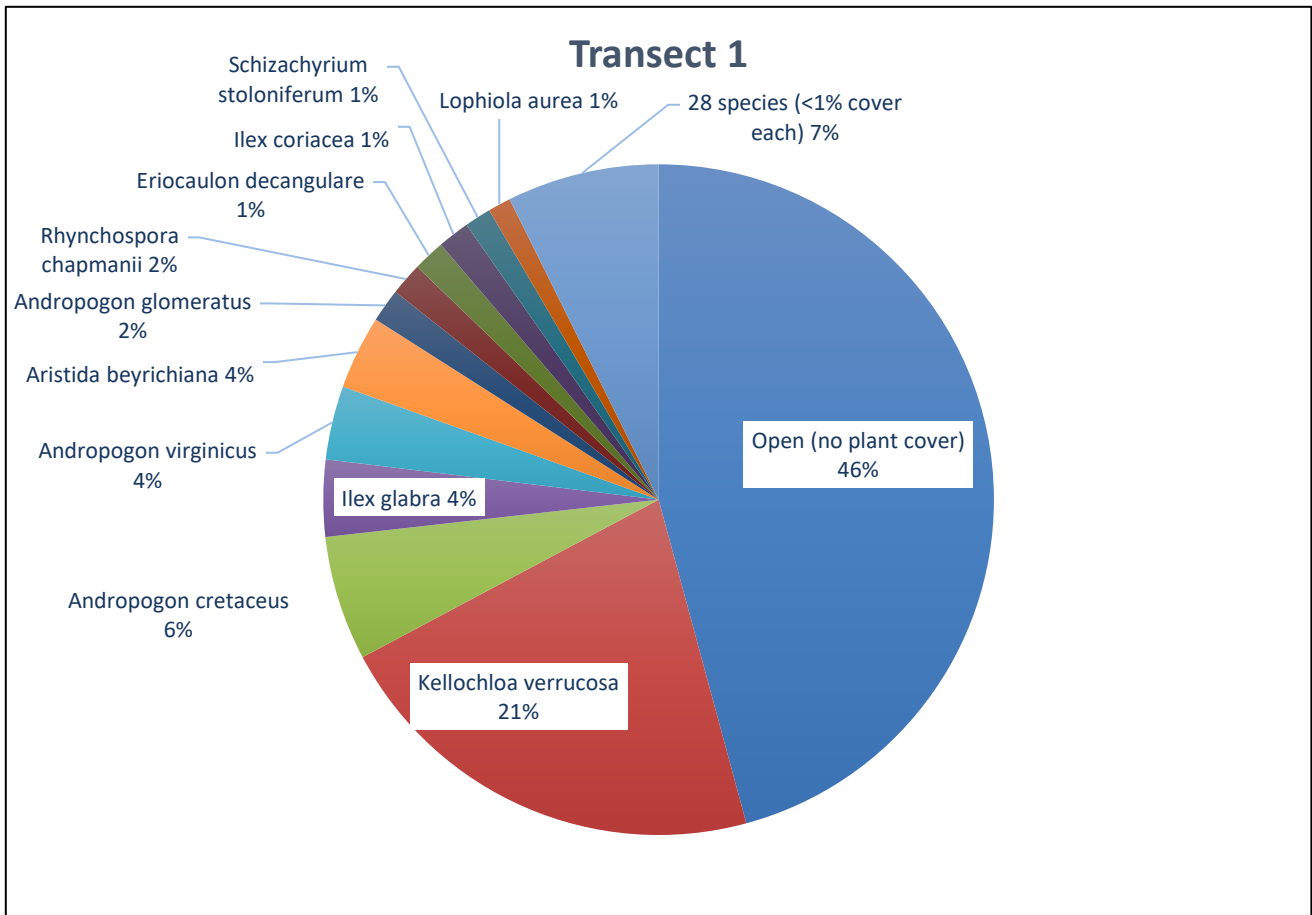


Figure 3. Percent relative cover of plant species in Transect 1.

Table 2. Percent cover of plant species in Transect 1 sampled on November 20, 2024.

Scientific name	Common name	Average percent cover per quadrat
<i>Andropogon cretaceus</i>	purple bluestem	5.47
<i>Andropogon glomeratus</i>	bushy bluestem	1.47
<i>Andropogon sp.</i>	bluestem	0.47
<i>Andropogon virginicus</i>	broomsedge bluestem	3.23
<i>Aristida beyrichiana</i>	Southern wiregrass	3.23
<i>Carphephorus pseudoliatris</i>	bristleleaf chaffhead	0.10
<i>Cliftonia monophylla</i>	black titi	0.23
<i>Ctenium aromaticum</i>	toothache grass	0.03
<i>Cyrilla parvifolia</i>	littleleaf titi	0.10
<i>Cyrilla racemiflora</i>	titi	0.10
<i>Dichanthelium leucothrix</i>	rough witchgrass	0.70
<i>Dichanthelium scabriusculum</i>	woolly witchgrass	0.23
<i>Eriocaulon decangulare</i>	tenangle pipewort	1.40
<i>Eupatorium mohrii</i>	Mohr's thoroughwort	0.03
<i>Gaylussacia mosieri</i>	woolly huckleberry	0.80

Scientific name	Common name	Average percent cover per quadrat
<i>Hypericum microsepalum</i>	flatwoods St. John's wort	0.23
<i>Ilex coriacea</i>	large gallberry	1.40
<i>Ilex glabra</i>	gallberry	3.37
<i>Kellochloa verrucosa</i>	warty panicgrass	19.50
<i>Lobelia brevifolia</i>	shortleaf lobelia	0.03
<i>Lophiola aurea</i>	golden crest	1.00
<i>Ludwigia</i> sp.	primrosewillow	0.03
<i>Lycopodiella alopecuroides</i>	foxtail club-moss	0.23
<i>Osmunda spectabilis</i>	royal fern	0.10
<i>Pinus elliotii</i>	slash pine	0.03
<i>Polygala lutea</i>	orange milkwort	0.07
<i>Quercus minima</i>	dwarf live oak	0.23
<i>Quercus virginiana</i>	live oak	0.10
<i>Rhexia alifanus</i>	savannah meadowbeauty	0.33
<i>Rhexia petiolata</i>	fringed meadowbeauty	0.07
<i>Rhynchospora chapmanii</i>	Chapman's beaksedge	1.43
<i>Rhynchospora plumosa</i>	plumed beaksedge	0.40
<i>Rhynchospora</i> sp.	beaksedge	0.23
<i>Schizachyrium stoloniferum</i>	creeping little bluestem	1.17
<i>Smilax laurifolia</i>	laurel greenbrier	0.70
<i>Vaccinium myrsinites</i>	shiny blueberry	0.03
<i>Xyris ambigua</i>	coastalplain yellow-eyed grass	0.27
<i>Xyris caroliniana</i>	Carolina yellow-eyed grass	0.53
<i>Xyris</i> sp.	yellow-eyed grass	0.23
Open (no plant cover)		41.67

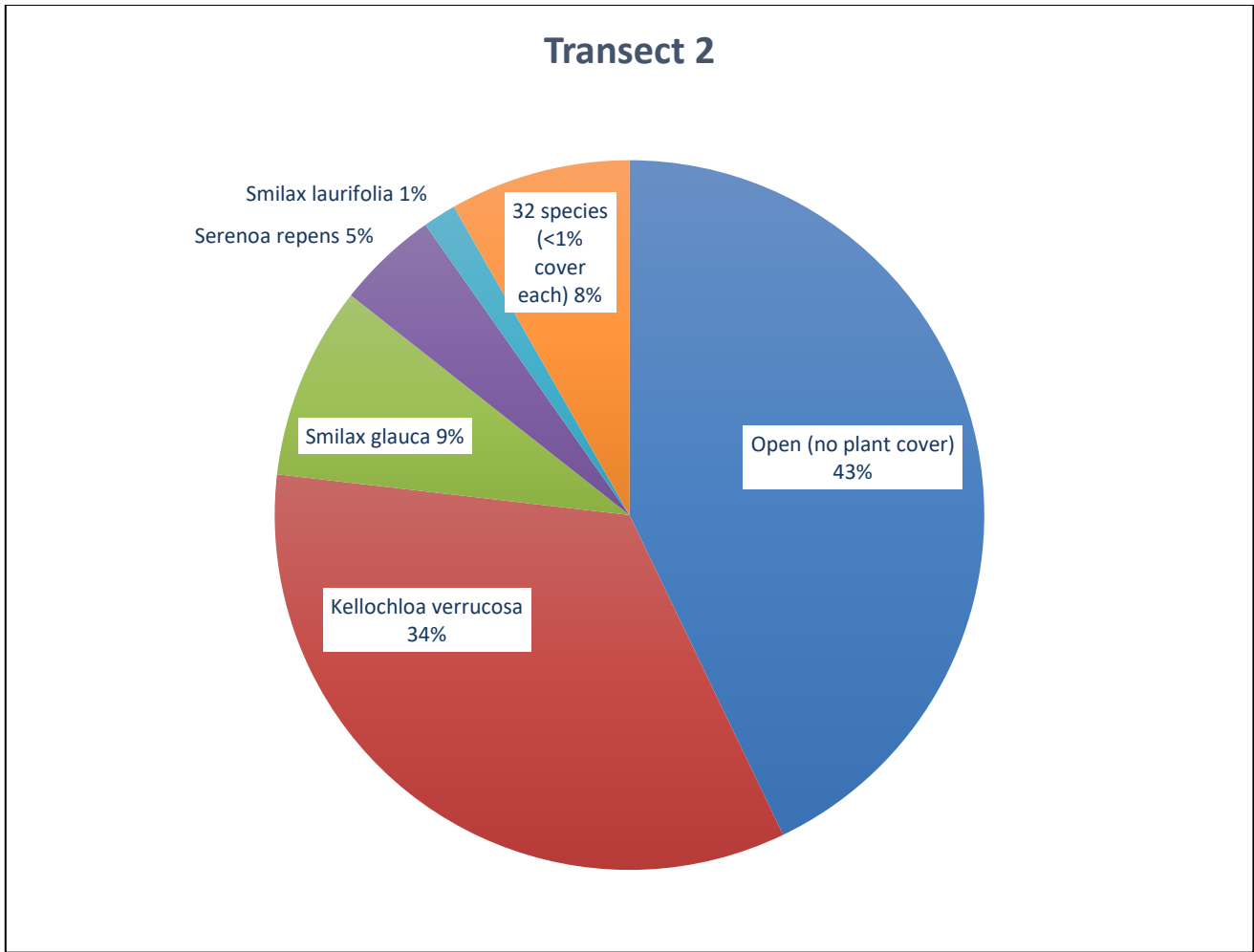


Figure 4. Percent relative cover of plant species in Transect 2.

Table 3. Percent cover of plant species in Transect 2 sampled on November 19, 2024.

Scientific name	Common name	Average percent cover per quadrat
<i>Andropogon cretaceus</i>	purple bluestem	0.73
<i>Andropogon sp.</i>	bluestem	0.97
<i>Andropogon virginicus</i>	broomsedge bluestem	0.37
<i>Aristida beyrichiana</i>	Southern wiregrass	0.33
<i>Cliftonia monophylla</i>	black titi	0.03
<i>Coleataenia longifolia</i>	ciliate redtop panicum	0.10
<i>Dichantheium leucothrix</i>	rough witchgrass	0.03
<i>Dichantheium scabriusculum</i>	woolly witchgrass	0.10
<i>Dichantheium strigosum</i>	roughhair witchgrass	0.03
<i>Edrastima uniflora</i>	oldenlandia	0.10
<i>Eriocaulon decangulare</i>	tenangle pipewort	0.03
<i>Eupatorium mohrii</i>	Mohr's thoroughwort	0.33
<i>Gaylussacia dumosa</i>	dwarf huckleberry	0.23
<i>Gaylussacia mosieri</i>	woolly huckleberry	0.20

Scientific name	Common name	Average percent cover per quadrat
<i>Hypericum crux-andreae</i>	St. Peter's wort	0.07
<i>Hypericum microsepalum</i>	flatwoods St. John's wort	0.03
<i>Ilex coriacea</i>	large gallberry	0.23
<i>Ilex glabra</i>	gallberry	0.50
<i>Kellochloa verrucosa</i>	warty panicgrass	30.63
<i>Lachnanthes caroliniana</i>	Carolina redroot	0.13
<i>Pinus elliotii</i>	slash pine	0.77
<i>Quercus minima</i>	dwarf live oak	0.13
<i>Rhexia alifanus</i>	savannah meadowbeauty	0.03
<i>Rhexia lutea</i>	yellow meadowbeauty	0.73
<i>Rhexia mariana</i>	pale meadowbeauty	0.03
<i>Rhexia petiolata</i>	fringed meadowbeauty	0.03
<i>Rhynchospora chapmanii</i>	Chapman's beaksedge	0.33
<i>Rhynchospora fascicularis</i>	fascicled beaksedge	0.10
<i>Rhynchospora sp.</i>	beaksedge	0.10
<i>Rubus pensilvanicus</i>	sawtooth blackberry	0.20
<i>Scleria reticularis</i>	netted nutrush	0.10
<i>Serenoa repens</i>	saw palmetto	4.17
<i>Smilax glauca</i>	cat greenbrier	7.93
<i>Smilax laurifolia</i>	laurel greenbrier	1.37
<i>Xyris ambigua</i>	coastalplain yellow-eyed grass	0.10
<i>Xyris caroliniana</i>	Carolina yellow-eyed grass	0.20
Open (no plant cover)		38.67

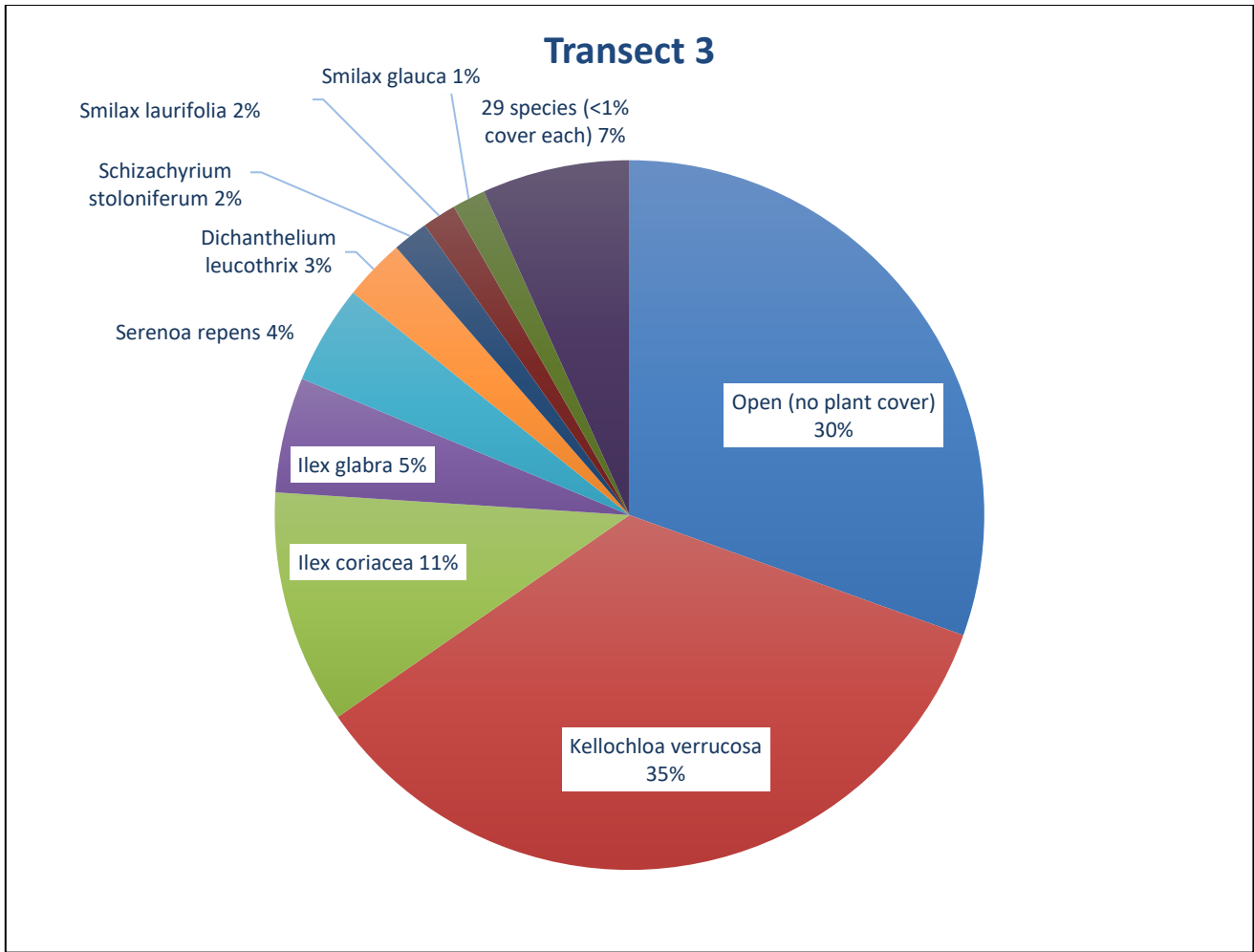


Figure 5. Percent relative cover of plant species in Transect 3.

Table 4. Percent cover of plant species in Transect 3 sampled on November 19, 2024.

Scientific name	Common name	Average percent cover per quadrat
<i>Andropogon sp.</i>	bluestem	0.70
<i>Andropogon virginicus</i>	broomsedge bluestem	0.20
<i>Aristida beyrichiana</i>	Southern wiregrass	0.87
<i>Clethra alnifolia</i>	sweet pepperbush	0.13
<i>Coleataenia longifolia</i>	ciliate redtop panicum	0.03
<i>Ctenium aromaticum</i>	toothache grass	0.50
<i>Dichantheium ensifolium</i>	small-leaved witchgrass	0.33
<i>Dichantheium leucothrix</i>	rough witchgrass	2.60
<i>Dichantheium scabriusculum</i>	woolly witchgrass	0.60
<i>Dichantheium sp.</i>	witchgrass	0.03
<i>Dichantheium tenue</i>	white-edged witchgrass	0.13
<i>Gaylussacia dumosa</i>	dwarf huckleberry	0.03
<i>Gaylussacia mosieri</i>	woolly huckleberry	0.03
<i>Gaylussacia tomentosa</i>	blue huckleberry	0.03

Scientific name	Common name	Average percent cover per quadrat
<i>Ilex coriacea</i>	large gallberry	9.87
<i>Ilex glabra</i>	gallberry	4.87
<i>Ilex myrtifolia</i>	myrtle-leaved holly	0.23
<i>Kelloggloa verrucosa</i>	warty panicgrass	32.27
<i>Lachnanthes caroliniana</i>	Carolina redroot	0.10
<i>Lachnocaulon anceps</i>	whitehead bogbutton	0.20
<i>Liatris resinosa</i>	dense gayfeather	0.07
<i>Lycopodiella alopecuroides</i>	foxtail club-moss	0.07
<i>Muscadinia rotundifolia</i>	muscadine	0.03
<i>Pinus elliotii</i>	slash pine	0.57
<i>Polygala</i> sp.	milkwort	0.03
<i>Quercus hemisphaerica</i>	laurel oak	0.03
<i>Rhexia alifanus</i>	savannah meadowbeauty	0.27
<i>Rhexia petiolata</i>	fringed meadowbeauty	0.07
<i>Rhexia</i> sp.	meadowbeauty	0.07
<i>Rhynchospora chapmanii</i>	Chapman's beaksedge	0.23
<i>Rhynchospora plumosa</i>	plumed beaksedge	0.47
<i>Rhynchospora</i> sp.	beaksedge	0.07
<i>Schizachyrium stoloniferum</i>	creeping little bluestem	1.50
<i>Serenoa repens</i>	saw palmetto	4.17
<i>Smilax glauca</i>	cat greenbrier	1.40
<i>Smilax laurifolia</i>	laurel greenbrier	1.43
<i>Xyris caroliniana</i>	Carolina yellow-eyed grass	0.10
Open (no plant cover)		28.23

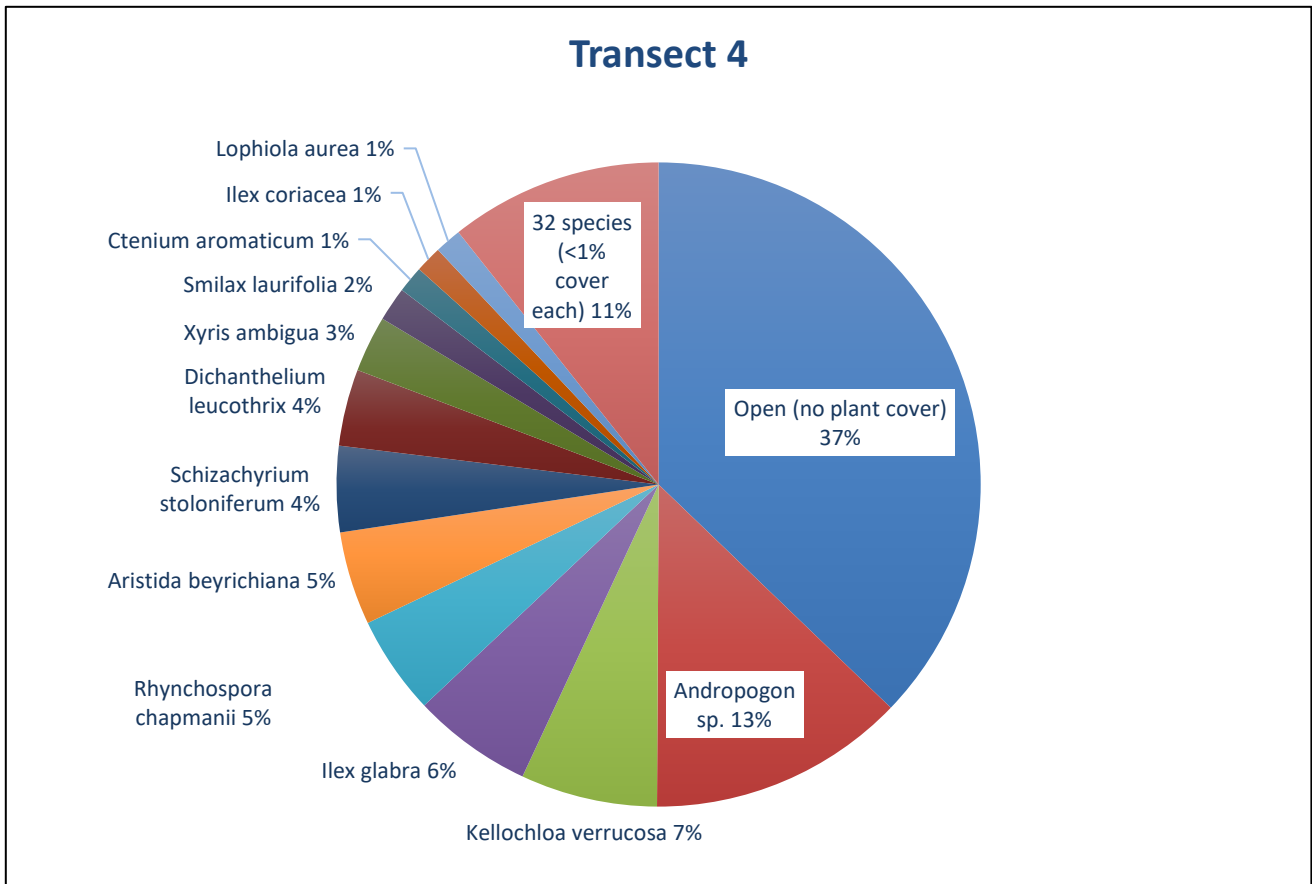


Figure 6. Percent relative cover of plant species in Transect 4.

Table 5. Percent cover of plant species in Transect 4 sampled on November 19, 2024.

Scientific name	Common name	Average percent cover per quadrat
<i>Andropogon glomeratus</i>	bushy bluestem	0.47
<i>Andropogon sp.</i>	bluestem	11.27
<i>Andropogon virginicus</i>	broomsedge bluestem	0.73
<i>Aristida beyrichiana</i>	Southern wiregrass	4.10
<i>Aronia arbutifolia</i>	red chokeberry	0.03
<i>Carphephorus pseudoliatris</i>	bristleleaf chaffhead	0.03
<i>Clethra alnifolia</i>	sweet pepperbush	0.03
<i>Ctenium aromaticum</i>	toothache grass	1.17
<i>Dichanthelium leucothrix</i>	rough witchgrass	3.37
<i>Dichanthelium ovale</i>	oval-flowered witchgrass	0.23
<i>Dichanthelium sp.</i>	witchgrass	0.30
<i>Dichanthelium strigosum</i>	roughhair witchgrass	0.33
<i>Dichanthelium tenue</i>	white-edged witchgrass	0.40
<i>Drosera brevifolia</i>	dwarf sundew	0.07
<i>Eriocaulon compressum</i>	flattened pipewort	0.43
<i>Eupatorium mohrii</i>	Mohr's thoroughwort	0.20

Scientific name	Common name	Average percent cover per quadrat
<i>Gaylussacia dumosa</i>	dwarf huckleberry	0.03
<i>Gaylussacia mosieri</i>	woolly huckleberry	0.23
<i>Hypericum hypericoides</i>	St. Andrew's cross	0.03
<i>Hypericum microsepalum</i>	flatwoods St. John's wort	0.57
<i>Ilex coriacea</i>	large gallberry	1.17
<i>Ilex glabra</i>	gallberry	5.27
<i>Kellochloa verrucosa</i>	warty panicgrass	6.00
<i>Lachnanthes caroliniana</i>	Carolina redroot	0.10
<i>Lachnocaulon anceps</i>	whitehead bogbutton	0.93
<i>Lophiola aurea</i>	golden crest	1.17
<i>Lycopodiella alopecuroides</i>	foxtail club-moss	0.83
<i>Polygala</i> sp.	milkwort	0.10
<i>Pteridium pseudocaudatum</i>	tailed bracken	0.10
<i>Rhexia alifanus</i>	savannah meadowbeauty	0.07
<i>Rhexia petiolata</i>	fringed meadowbeauty	0.10
<i>Rhexia</i> sp.	meadowbeauty	0.33
<i>Rhynchospora chapmanii</i>	Chapman's beaksedge	4.33
<i>Rhynchospora fascicularis</i>	fascicled beaksedge	0.10
<i>Rhynchospora plumosa</i>	plumed beaksedge	0.97
<i>Rhynchospora</i> sp.	beaksedge	0.20
<i>Schizachyrium stoloniferum</i>	creeping little bluestem	3.77
<i>Scleria reticularis</i>	netted nutrush	0.23
<i>Smilax glauca</i>	cat greenbrier	0.30
<i>Smilax laurifolia</i>	laurel greenbrier	1.50
<i>Sphagnum</i> sp.	sphagnum moss	0.23
<i>Vaccinium myrsinites</i>	shiny blueberry	0.03
<i>Xyris ambigua</i>	coastalplain yellow-eyed grass	2.47
<i>Xyris caroliniana</i>	Carolina yellow-eyed grass	0.57
Open (no plant cover)		32.50

## Shrub Quadrats

Table 6. Rooted Shrub Stems per Square Meter (Fall 2024)

Shrub Quadrat	Shrub Stems per m <sup>2</sup>
1	8
2	9
3	29
4	11
5	0
Average Stems per m <sup>2</sup>	11.4