

A FLORISTIC INVENTORY OF CORKSCREW SWAMP SANCTUARY (COLLIER COUNTY AND LEE COUNTY), FLORIDA, U.S.A.

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ABSTRACT

Documented presently as growing wild within Corkscrew Swamp Sanctuary (Collier Co. and Lee Co., Florida, U.S.A) are individuals of 126 families, 401 genera, 756 species, and 773 infrageneric taxa of vascular plants. Those data, combined with records from previous workers, yield a total of 770 species and 787 infrageneric taxa documented for the Sanctuary. Of the 773 infrageneric taxa documented presently, 611 (79.0%) are native to Florida. Herein, seven main kinds of habitats are recognized for the study area, and individual taxa inhabit one or more of those habitats. Twenty-nine presently reported infrageneric taxa are listed as Endangered (16 taxa) or Threatened in Florida (13 taxa). For South Florida, 36 infrageneric taxa listed as Extirpated (3 taxa), as Historical (5 taxa), or as Critically Imperiled (28 taxa) were documented during this study.

RESUMEN

Existen documentados individuos de 126 familias, 401 géneros, 756 especies, y 773 taxa infragenéricos de plantas vasculares que actualmente crecen silvestres en Corkscrew Swamp Sanctuary (Collier Co. y Lee Co., Florida, U.S.A). Estos datos, combinados con los registros de investigadores anteriores, dan un total de 770 especies y 787 taxa infragenéricos documentados para el Sanctuary. De los 773 taxa infragenéricos documentados actualmente, 611 (79.0%) son nativos de Florida. En estos, se reconocen siete tipos principales de hábitats en el área de estudio, y los taxa individuales habitan en uno o más de estos hábitats. Veintinueve de los taxa infragenéricos citados ahora están listados como En Peligro (16 taxa) o Amenazados en Florida (13 taxa). Para el Sur de Florida, 36 taxa infragenéricos están listados como Extirpados (3 taxa), como Históricos (5 taxa), o como Críticamente Amenazados (28 taxa) se documentaron durante este estudio.

INTRODUCTION

This is the sixth of a series of papers focused on the flora of south Florida (Wilder & McCombs 2006; Wilder & Roche 2009; Wilder & Barry 2012; Wilder et al. 2014; Wilder & Thomas 2016). Presented herein are the results of a floristic inventory of the native and exotic taxa of vascular plants growing wild in Corkscrew Swamp Sanctuary (hereafter, also called CSS or the Sanctuary).

Historical sketch

The Sanctuary was established to save a tract of old-growth bald-cypress forest from logging and to protect the associated plants and wildlife.

In the 1920s, logging of bald-cypress (*Taxodium distichum*) was initiated in the Big Cypress Swamp of south Florida. It peaked there "... in the mid-1940s and tapered off in the 1950s, when most of the large [bald-cypress] trees had been removed" (Gunderson 1977 [quoting Betts 1960]; language in brackets is ours).

Initially, in Collier County the virgin bald-cypress forests "... stretched for fifty miles" (McIver 1989); however, after logging only three remnants of the old-growth forests remained in the County: a northern remnant (of ca. 700 acres) and two southern remnants (of 215 and 40 acres). The larger of the two southern remnants is now part of Fakahatchee Strand Preserve State Park, whereas, the smaller remnant is privately owned (Michael Owen [Park Biologist at Fakahatchee Strand Preserve State Park], pers. comm. to George Wilder, 21 July 2017).

The northern remnant represented the last remaining unlogged portion of Corkscrew Strand—a more-or-less linear bald-cypress forest more than 20 miles long. In the early 1950s, the northern remnant was owned by Collier Enterprises and the Lee Tidewater Cypress Company, and it was threatened with imminent logging.

Many of the bald-cypress trees there ranged from 200 to nearly 700 years old (Sprunt 1961). Too, the northern remnant contained the largest rookery of wood storks and egrets remaining within the United States (Buchheister [undated]).

In 1954, the Corkscrew Cypress Rookery Association was established (that Association consisting of fourteen different conservation organizations [including the National Audubon Society] plus various individuals). Also in 1954, the Association purchased three contiguous tracts for preservation, totaling 2,240 acres. The largest tract contained the northern remnant (Fig. 1). As well, the Lee Tidewater Cypress Company contributed 640 additional acres for preservation, and Collier Enterprises facilitated the purchase, later on, of 3,200 more acres (Sprunt 1961). The National Audubon Society assumed ownership and management of all of the purchased/donated properties and named them, collectively, Corkscrew Swamp Sanctuary (McIver 1989).

Additional properties were added to CSS, in 1966, 1967, 1968, 1998, 1999, 2001, 2007, and 2010; however, the property acquired in 1967 was traded-away in 2007. Also, one property acquired in 1954 was traded-away during that year, but was reacquired in 2010 (Fig. 1).

Six properties currently located within the northern and western limits of CSS were established as a mitigation bank which was named Panther Island Mitigation Bank (Fig. 1; the properties delineated, collectively, by a thick solid line). From 1999 to the present, landscape-remodeling and habitat-restoration have been underway there.

The Sanctuary currently includes ca. 13,400 acres (20.9 square miles) and is centered at ca. 26°23'60"N and 81°36'37"W. The National Audubon Society owns the entire Sanctuary, except for 320 acres which are managed by CSS staff, but owned by the State of Florida (Fig. 1 [the southeasternmost tract of land added in 1954]). Most of CSS is located in Collier County, but part of its northeastern sector lies in Lee County (Fig. 1). The Sanctuary is situated within Corkscrew Swamp—a region that contains the headwaters of the Imperial River. “Corkscrew” refers to the twisted course of the River, which was formerly known as the Corkscrew River or Corkscrew Creek (Buchheister [undated]).

The land presently included in CSS has a history of human disturbances. They include cattle-grazing (e.g., on the North Marsh and on Panther Island); logging (pine trees were logged on Little Corkscrew Island, Eagle Island, Panther Island, and Ruess Island); farming (near Little Corkscrew Island, in the 1960s, and on Panther Island); intentional burning as well as fire suppression; construction of a fish farm for CSS (that facility, now defunct, includes large, water-filled basins excavated for rearing fish); operation of a plant nursery on land (the Rigsby Tract) subsequently purchased for CSS, in 1999; construction of a visitors' center, housing, and two maintenance facilities for CSS; installation of an (unsuccessful) exploratory oil well at Ruess Island; construction of roads and associated drainage ditches; hydrological alterations; and the introduction of white-tail deer and of hogs (Carlson [1982a] and personal observations; Fig. 1).

When CSS was established, it was ranked among the Audubon Society's “... finest and most spectacular sanctuaries” (Buchheister [undated]). Today CSS is a world-famous natural area. In 1964, it was designated as a National Natural Landmark (by the U.S. Department of Interior) and, in 2009, it was deemed a Wetland of International Importance (by Ramsar). Too, the National Audubon Society and Birdlife International have designated the Corkscrew Swamp Watershed (a region which includes CSS) as an Important Bird Area.

Previous research at CSS

From the outset, previous investigators undertook biological (including botanical) studies and pursued other areas of research at CSS (CSS 2017). For example, previous workers investigated plant-ecological aspects of CSS (Carlson 1982b; Duever 1978, 1990; Duever & McCollom 1987; Duever et al. 1975, 1976, 1978, 1984; Gunderson 1977, 1984; Knoble et al. 1978; Ludwig, 2001; McCollom 1990; Riopelle 1978, 1980).

Previous investigators compiled unpublished checklists of the flora and fauna of CSS. We have located 13 different checklists of the flora (listed at the end of References), but there might have been more. Today copies of the checklists are rare.

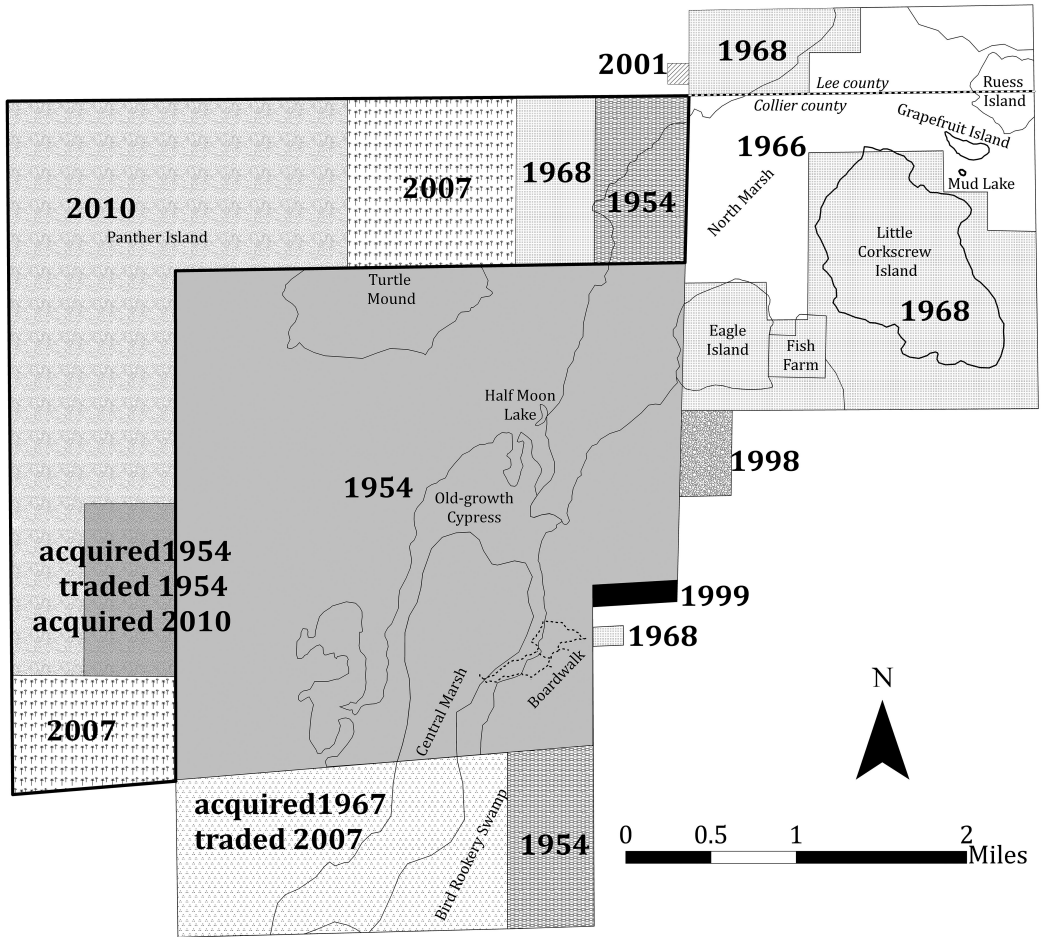


Fig. 1. Map depicting Corkscrew Swamp Sanctuary (CSS). Outlined separately, and indicated both by their dates of acquisition and by separate backgrounds, are the tracts of land composing the Sanctuary. Six contiguous tracts delineated, collectively, by a thick black line constitute the Panther Island portion of CSS (i.e., the Panther Island Mitigation Bank). The map indicates that one of the southernmost tracts no longer belongs to CSS; that tract, acquired in 1967, was traded-away in 2007. Indicated, too, is a tract that was acquired in 1954, was traded-away in 1954, and was reacquired in 2010. Indicated, are five "Islands" (defined and listed elsewhere in this paper); the Central Marsh and North Marsh; the remnant of old-growth bald-cypress forest ("Old-growth Cypress") which surrounds the Central Marsh and appears, partly, as an upside-down U; the Fish Farm (an area for raising fish, no longer in use); a boardwalk; and Half Moon Lake and Mud Lake (small, shallow bodies of water). Most of the territory is in Collier County. The relatively small portion in Lee County is located within the northeastern sector of the Sanctuary and its southern boundary is delineated by a dashed line. This map is based partly on information provided verbally by Jason Lauritsen (pers. comm. to Jean McCollom, 5 July 2017)

Davis et al. (1955) compiled the first floristic checklist that we know of. It was attached to a checklist of the fauna of CSS, and both checklists were entitled, jointly, "A general description of Corkscrew Swamp Sanctuary and a preliminary list of its flora and fauna". The latest floristic checklist, of 1999, was assembled by A.J. Mackie as an emendation of previous checklists (Mackie et al. 1999).

The other floristic checklists included Anonymous (undated, 1956, 1957, 1984 [with appended, handwritten additions for 1985], 1986, 1988), Avery (1983), Bantz (1979), Butler (undated), Hammer et al. (1989), and Judd et al. (1994).

In addition to the checklists, aforementioned, two other plant lists were produced that pertained to the

vascular flora of CSS. Michael Barry compiled an unpublished, undated list for part/all of the Panther Island sector of CSS that was acquired in 2010. Too, the Institute of Regional Conservation (IRC 2017) assembled a list of the species attributed to CSS.

Numerous individuals—independently or in small groups—have collected, and deposited in herbaria, plant specimens from CSS. They have included J.R. Abbott, G.N. Avery, R. Bantz, M.J. Barry, J.E. Carlson, F.C. Craighead, G. Fleming, P. Genelle, W.T. Gillis, G.F. Guala, J.L. Hansen, M.J. Huebschen, C. Hutchinson, W.S. Judd, O. Lakela, D. Lauer, P. McDermott, M. Meisenburg, P. Owens, L. Riopelle, and D. Workman (based on specimen labels from the CSS herbarium and seen in University of Florida Herbarium Collections Catalog 2017, Virtual Herbarium 2017, and Wunderlin et al. 2017).

Climate

Collier County manifests a subtropical climate, albeit "... temperatures are greatly modified by winds ... from the Gulf of Mexico and the Atlantic Ocean" (Leighty et al. 1954). Annually, there occur a rainy season (from ca. May through Oct) and a dry season (from ca. Nov through Apr).

The following data are for Immokalee (Collier Co.), an unincorporated area situated ca. 7.5 miles east of CSS. During Jun through Sep (the four peak months of the rainy season), average monthly precipitation varies from 6.18 to 7.83 in., whereas, during Nov through Apr (the six months of the dry season) the corresponding data vary from 1.77 to 2.91 in. The highest average monthly high temperatures (91–93°F) and the highest average monthly low temperatures (70–73°F) coincide with the four peak months of the rainy season. For Nov through Apr, the lowest average monthly high temperatures are 76–85°F and the lowest average monthly low temperatures are 49–59°F (Your Weather Service 2017).

There occur occasional freezes (FAWN 2017) and tropical storms. Hurricane Donna (a Category 4 hurricane in 1960) and Hurricane Irma (a Category 3 hurricane when in Collier County, in 2017) were the most powerful storms to impact CSS after it was established. They inflicted considerable damage on trees there (Buchheister [undated]; Naples Daily News 2017; National Hurricane Center 2017).

Topography, geology, and soils

The Sanctuary is located within the Coastal Lowlands region of Florida (Schmidt 1977). The land is nearly flat, varying in elevation from ca. 15 to 28 feet.

The Sanctuary manifests uplands (some known locally as "islands" [Google Technology Company 2016; Rand McNally Education Company 1999]) and lowlands. Certain "islands" that exist partly, or entirely, within CSS are listed (Fig. 1): Big Corkscrew Island; Eagle Island; Grapefruit Island; Little Corkscrew Island; Ruess Island; Spirit Dance Island (a small "island" not depicted in Fig. 1, located just west of Mud Lake); and Turtle Mound. Prominent lowlands include all areas of bald-cypress, the Central Marsh (also called Horseshoe Marsh), and the North Marsh (Fig. 1).

"Panther Island" actually has two meanings. As indicated, it means six properties, collectively, located within the northern and western limits of CSS. It also signifies a small "island" within CSS, situated partially within Panther Island in the first sense. Elsewhere, herein we discuss "Panther Island" solely in the first sense.

The uplands at CSS are most appropriately characterized as islands during the rainy season, when the surrounding lowlands are flooded; however, excluding differences in habitats and substrates, the "islands" are little differentiated from the lowlands, for the following reasons. (1) Minuscule differences in elevation (a few feet) distinguish the "islands" from the lowlands. (2) During the rainy season large areas of the "islands" may themselves be shallowly flooded. (3) During the dry season water may evaporate from both the "islands" and the lowlands, creating a continuum of dry land.

The uplands support primarily pine flatwoods, mesic hardwood hammock, and ruderal land. Lowland habitats include bald-cypress swamp, hardwood swamp, freshwater marsh, wet prairie, ruderal land, and aquatic ruderal land (see below).

Limestone, the uppermost bedrock underlying CSS, usually ranges from 1–3 m below the ground surface (Duever et al. 1984) but is occasionally above the ground surface at a few localized sites. Also, four "general soil

map units” are represented within CSS: Boca-Riviera-Copeland, Holopaw-Malabar-Basinger-Immokalee, Immokalee-Oldsmar-Basinger, and Winder-Riviera-Chobee (Liudahl et al. 1998).

Remodeling of the landscape and restoration

On Panther Island, extensive acreage of ruderal land has been/is being remodeled with heavy equipment and restored as freshwater marsh, wet prairie, and pine flatwoods. In the process, numerous individuals of species native to Florida have been planted. Those species were/are intended to represent specific environments. Examples—provided here as named by the restorers—are listed together with selected species: canopy (*Persea borbonia*, *Pinus elliottii*, *Quercus laurifolia*), sub-canopy (*Cephalanthus occidentalis*, *Ilex glabra*, *Serenoa repens*), groundcover (*Lachnanthes caroliniana*, *Tripsacum dactyloides*, *Paspalum monostachyum*), shallow marsh (*Canna flaccida*, *Juncus effusus*, *Panicum hemitomon*), deep marsh (*Cladium jamaicense*, *Eleocharis interstincta*, *Pontederia cordata*), and flowway (*Muhlenbergia capillaris*, *Spartina bakeri*) (Robert Colvin [Restoration Manager], pers. comm. to George Wilder, 1 Sep 2017).

Habitats

We recognize seven main types of habitats within CSS: hardwood forest, pine flatwoods, bald-cypress swamp, wet prairie, freshwater marsh, aquatic-ruderal land, and ruderal land. Areas within each habitat-type may become flooded during the rainy season and dry-up during the dry season.

Hardwood forest.—This includes all forest other than forest containing conifers. Two subcategories of hardwood forest are represented at CSS: mesic hardwood hammock and hardwood swamp. Forest of the first subcategory is more common than, and is flooded less often than, that of the second subcategory.

Mesic hardwood hammock is abundant on Little Corkscrew Island and also occurs on Grapefruit Island, Panther Island, Spirit Dance Island, and in isolated areas west of Half-Moon Lake and north of Fish Farm Rd. (at a point by the northwestern corner of the Fish Farm). Common dominant trees include *Acer rubrum*, *Quercus laurifolia*, *Quercus virginiana*, and *Sabal palmetto*. Present frequently, are *Telmatoblechnum serrulatum*, *Myrsine cubana*, *Smilax* spp., and—in places—*Ximenia americana*.

Compared to other mesic hardwood hammock at CSS, the hammock on Grapefruit Island contains many tropical and/or subtropical species of woody plants: *Ardisia escallonioides*, *Bursera simaruba*, *Carica papaya*, *Chrysophyllum oliviforme*, *Eugenia axillaris*, *Myrcianthes fragrans*, *Psychotria nervosa*, *Psychotria sulzneri*, *Schoepfia schreberi*, *Sideroxylon foetidissimum*, and *Zanthoxylum fagara*. It also manifests a subterranean shell mound (likely created by Indians), elevated limestone, and proximity to a major flow-way that normally holds water well into the winter; those factors have likely favored the growth of the tropical/subtropical species (Michael Duever, verbal communications of 4 Jan 2016 and 2 Sep 2017).

Pine flatwoods.—These comprise more-or-less open forest in which *Pinus elliottii* (Slash Pine) is dominant and bald-cypress is absent. At CSS, different areas of pine flatwoods exhibit features of either of two natural communities recognized by FNAI (2010): “wet flatwoods” and “mesic flatwoods.”

Pine flatwoods at CSS may exhibit a ground cover composed primarily of grasses or of *Serenoa repens* (Saw Palmetto). Those two kinds of ground cover are sometimes intermixed. For example, the ground cover may be primarily of grasses but include scattered individuals or clumps of *S. repens*. Conversely, plants of *S. repens* may enclose a limited grassy area. Pine flatwoods are extensive at CSS, and good examples may be found on Eagle Island, on Ruess Island, on Turtle Mound, on property situated west of Rookery Lane (i.e., southeast of the boardwalk), on land north of the Riggs Tract (the property purchased in 1999 [Fig 1]), and elsewhere.

During the rainy season, different areas of pine flatwoods may become flooded or not so. Much of the flatwoods on Eagle Island and west of Rookery Lane becomes flooded. By contrast, an area of relatively dry flatwoods exists on Panther Island, ca. 1/8 mile south of the northeastern corner of the large tract purchased in 2010 (Fig. 1). Certain species exist there that are, apparently, absent elsewhere in the Sanctuary: *Carphephorus corymbosus*, *Carphephorus paniculatus*, *Commelina communis*, *Eryngium aromaticum*, *Gymnopogon chapmanianus*, *Habenaria quinqueseta*, *Pteroglossaspis ecristata*, *Rhynchospora plumosa*, and *Sporobolus junceus*.

Because of flooding during the rainy season, a portion of pine flatwoods may manifest species generally attributed to aquatic habitats, e.g., *Nymphaea elegans*, *Nymphaea jamesoniana*, *Utricularia foliosa*, and *Utricularia purpurea*. Also, by the southwestern corner of the Sanctuary there exists considerable acreage of pine flatwoods where periphyton covers the forest floor (that circumstance reflecting the shallow depth to limestone and flooding during the rainy season). Another area of pine flatwoods, located near Turtle Mound (Fig. 1), exhibits soil that contains marl (a calcite clay that overlies limestone).

Wet prairie and freshwater marsh.—We describe these habitat-types together because they appear outwardly similar. They generally exhibit relatively short (especially herbaceous) vegetation, they are normally inundated during the rainy season, and subtle intergradations (ecotones) exist between them.

In south Florida, freshwater marsh and wet prairie differ hydrologically from one another, as follows (Duever & Roberts 2013). Their substrates are inundated from 6 to 10 and from 2 to 6 months per year, respectively. During a normal rainy season their water depths range from 0.3 m to 0.6 m and from 0.15 m to 0.4 m, respectively. And, their water tables fluctuate annually from 0.6 m to 0.9 m and from 0.9 m to 1.2 m, respectively. Those differences are reflected by differences in organic substrates, which are present or absent, respectively. Commonly, too, at CSS the uppermost substrate of wet prairie includes sand, whereas, that of freshwater marsh lacks sand. As well, freshwater marsh tends to be dominated by fewer species than does prairie.

At CSS, the Central Marsh and North Marsh both contain freshwater marsh, but the North Marsh—its name notwithstanding—also manifests wet prairie. A prominent strip of wet prairie also exists eastward of the eastern arm of old-growth cypress that borders the Central Marsh (Fig. 1). Too, certain portions of the Central Marsh and North Marsh exhibit dense concentrations of *Salix caroliniana* or *Typha* sp.

We also consider as freshwater marsh Half Moon Lake and Mud Lake (two small bodies of water; Fig. 1); both “Lakes” are shallow and—at least sometimes—each Lake dries-up during the dry season. We likewise classify as marsh the openings within cypress donuts and the “lettuce lakes” (isolated ponds with dense, floating concentrations of *Pistia stratiotes*) that occur sporadically within the bald-cypress swamp.

Bald-cypress swamp.—Varying concentrations of *Taxodium distichum* sensu lato together with woody dicotyledons are dominant, whereas, pines are absent. The Sanctuary manifests three main categories of bald-cypress swamp: (1) swamp containing the stand of large, more-or-less scattered, old-growth bald-cypress trees, (2) swamp having medium-size, densely arranged bald-cypress trees, and (3) a small forest of dwarf bald-cypress trees situated by the western boundary of CSS. (Craighead [1971], discussing dwarf-cypress associations in general, stated that “. . . the dwarfing [of the trees] reflects the shallow marl soil, which is often only 4 to 10 inches deep with little humus . . .”).

The areas of medium-size bald-cypress trees manifest shorter hydroperiods (and, hence, less organic substrate and more frequent fires) than does the stand of large, old-growth bald-cypress trees (Duever et al. 1984).

The dicotyledonous trees and shrubs within bald-cypress swamp include *Acer rubrum*, *Annona glabra*, *Cephalanthus occidentalis*, *Ficus aurea*, *Fraxinus caroliniana*, *Ilex cassine*, *Itea virginica*, *Magnolia virginiana*, *Morella cerifera*, *Myrsine cubana*, *Persea palustris*, and *Sambucus nigra*.

Some portions of bald-cypress swamp exhibit extensive, dense concentrations of terrestrial ferns, e.g., *Nephrolepis* spp., *Telmatoblechnum serrulatum*, *Thelypteris interrupta*, and *Woodwardia virginica*. Epiphytes may also abound, e.g., *Campyloneurum phyllitidis* and various species of Bromeliaceae and Orchidaceae. During the dry season the substrate within bald-cypress swamp may become exposed. Then opportunistic, herbaceous angiosperms may overgrow extensive areas of the substrate, e.g., *Commelina diffusa*, *Erigeron quercifolius*, *Hydrocotyle umbellata*, *Limnophila sessiliflora*, *Persicaria punctata*, and *Rorippa teres*.

Aquatic ruderal land.—This includes excavated areas which hold water during the rainy season. Three main categories of aquatic ruderal land occur: drainage ditches bordering roads, borrow pits, and the basins within the fish farm. Many ditches were designed to not drain the surrounding terrain and they, therefore, contain stagnant water. Examples of borrow pits include one pit located just west of the southern terminus of

Rookery Lane (i.e., by the southeastern corner of the large tract purchased in 1954), two others being situated by the main maintenance area of CSS (i.e., within the smaller of the two tracts purchased in 1968), and another pit located on the tract acquired in 1998 (Fig. 1).

Aquatic ruderal land manifests aquatic/subaquatic species, e.g., *Ceratopteris pteridoides*, *Cyperus blepharoleptos*, *Eichhornia crassipes*, *Eleocharis interstincta*, *Hymenachne amplexicaulis*, *Landoltia punctata*, *Pistia stratiotes*, *Pontederia cordata*, *Salix caroliniana*, *Salvinia minima*, *Scleria lacustris*, *Thalia geniculata*, and *Typha domingensis*.

As is true of bald-cypress swamp, during the dry season standing water may evaporate from aquatic ruderal land, which may then be overrun by opportunistic herbaceous species of angiosperms. Examples include *Bacopa monnieri*, *Boehmeria cylindrica*, *Gamochoaeta antillana*, *Gamochoaeta pensylvanica*, *Parietaria floridana*, *Persicaria punctata*, *Pluchea baccharis*, *Proserpinaca palustris*, *Ptilimnium capillaceum*, *Rorippa teres*, and *Solanum americanum*.

Ruderal land.—This includes paved and non-paved roads, disturbed roadsides, and other cleared lands (including all restored/remodeled areas).

Ecotones.—The Sanctuary exhibits ecotones that are abrupt (e.g., ecotones where main natural habitats abut trails) as well as more extensive ecotones. Examples of ecotones that manifest considerable acreage include: (1) pine flatwoods—bald-cypress swamp ecotone (situated, for example, on Panther Island; some portions of that ecotone exhibit comparable numbers of pine- and bald-cypress trees), (2) hardwood swamp—bald-cypress swamp ecotone (located at a remote area somewhat west of Half Moon Lake), and (3) mesic hardwood hammock—pine flatwoods ecotone (situated, for example, on Little Corkscrew Island, where it coexists with abundant mesic hardwood hammock).

Prescribed burns

Periodically, CSS staff members and volunteers burn areas of three fire-dependent habitats within the Sanctuary: pine flatwoods, wet prairie, and freshwater marsh (Wade et al. 1980, National Audubon Society 2017). Before those areas were incorporated into CSS, their previous owners/inhabitants burned them more frequently than they have been burned since. The current, lower frequency of burning has allowed certain woody species, including *Morella cerifera* and *Salix caroliniana*, to become more abundant in those areas (Duever & Roberts 2013). Current efforts are being made to restore natural plant community fire frequencies of 2–4 years for pine flatwoods and wet prairie and 3–5 years for freshwater marsh.

Reasons for undertaking the present investigation

We undertook this study for three main reasons. (1) We wished to update the previous floristic checklists for CSS. (2) We desired to document (with specimens or with photographs, where appropriate) all the taxa encountered by us. In contrast, the previous floristic checklists for CSS (and the lists by Barry and by IRC [2017]) indicated no, or inconsistent, documentation. Roger Hammer highlighted the need for increased documentation in the Introduction to his emended checklist of 1989, stating that “It is my hope that future field biologists working within Corkscrew Swamp Sanctuary will ... [document] plant species (with the exception of very rare taxa) with herbarium material”. Andrew Mackie, in 1999, reprinted Hammer’s remark in Appendix II of his own emended floristic checklist for CSS. (3) We wished to ascertain the habitat(s) within CSS which were occupied by individual species, varieties, and subspecies.

METHODS AND TERMINOLOGY

We undertook field work for this study from/including 15 Oct 2015 through 17 Oct 2017. During that time period we made 160 field trips to CSS, including multiple visits for each month of the year. Also, George Wilder visited CSS earlier, on 12 Aug 2009, and documented *Urochloa ramosa* there (a species not observed during current field work).

We considered species, subspecies, varieties, and hybrids that grew wild at CSS, omitting taxa that were only introduced during restoration or otherwise cultivated. A minority of species at CSS was represented by

wild—as well as by introduced/cultivated individuals; for those species we documented solely wild individuals.

We vouchered all infrageneric taxa with specimens or photographs and we deposited all voucher materials at the Herbarium of Southwestern Florida (SWF; Appendix 1). Mostly, we prepared dried herbarium specimens; however, we fixed materials of the following species in an aqueous solution of ethanol (50%), formaldehyde (5%), and either acetic acid (5%) or propionic acid (5%): *Azolla filiculoides*, *Callitriche peploides*, *Ceratophyllum demersum*, all observed species of Lemnaceae, and *Salvinia minima*. Those fixed materials were rinsed in water and were then stored permanently in an aqueous solution of glycerin (5%) and ethanol (50%). For *Cuscuta compacta*, we prepared both dried herbarium specimens and materials fixed and stored in liquid, as described above; the superior preservation of the liquid-preserved materials aided in distinguishing *C. compacta* from other species of *Cuscuta*.

We documented certain presently observed species, solely, with numbered photographs rather than with actual specimens. Those species and the individuals who photographed them are listed: *Calopogon pallida* (pink-flowered and white-flowered formas), *Epidendrum floridense*, *Epidendrum nocturnum*, *Eulophia alta*, *Pteroglossaspis ecristata*, *Roystonea regia*, *Tillandsia pruinosa*, *Tillandsia utriculata* (Jean McCollom); *Cyrtopodium punctatum* (Sally Stein); *Dendrophylax lindenii*, *Platanthera nivea* (Ralph Arwood); *Epidendrum anceps*, *Epidendrum rigidum*, *Polystachya concreta*, *Tillandsia fasciculata* (Myron Barefoot); *Ionopsis utricularioides* (Dick Brewer); *Prosthechea cochleata* (Michael Duever); and *Sacoila lanceolata* var. *paludicola* (Nelson Pole).

Prior to the present investigation, Michael Duever (in 1991) and Sally Stein (at an unspecified date) had photographed, at CSS, two other species which we did not subsequently observe there: *Malaxis spicata* and *Nymphoides* sp. (possibly, *Nymphoides peltata*), respectively. We also cite their photographs as voucher materials (Appendix 1).

Too, we examined specimens of species not collected by us, at the University of Florida Herbarium (UF), the University of South Florida Herbarium (USF), and the herbarium of Corkscrew Swamp Sanctuary (that herbarium lacks a formal name and acronym).

During our work we located rare copies of checklists compiled by previous workers, of the flora and fauna of CSS. In order to safeguard those checklists we made certain that originals/photocopies were deposited in the CSS library and that all checklists were scanned electronically for permanent storage in the library-archive of Florida Gulf Coast University (Fort Myers, FL).

Mostly, present nomenclature follows Wunderlin et al. (2017); however, Appendix 1 (footnote 1) specifies nomenclatural differences between that source and the present paper. We define **infrageneric taxa** as species, subspecies, varieties, and hybrids. In Appendix 1, certain species are listed more than once, as different varieties or subspecies. For each such species, following its initial listing in Appendix 1, each additional listing is said to represent an **additional infrageneric taxon**.

We also follow Wunderlin et al.'s (2017) assessments as to whether individual species are native, endemic, or exotic. For various species, those assessments differ from those of Wunderlin and Hansen (2011). Accordingly, for those species the assessments presented herein differ from those presented in earlier papers of the present series (e.g., Wilder & Thomas 2016).

RESULTS AND DISCUSSION

Taxonomic analysis of present data

The Sanctuary exhibited 126 families, 401 genera, 756 species, and 773 infrageneric taxa of vascular plants (herein we count the infrageneric taxa of *Citrus* as species rather than as hybrids).

Between parentheses, the numbers of families, genera, and infrageneric taxa are indicated, respectively, for each of the following major groups: pteridophytes (13, 20, 32), gymnosperms (2, 2, 2), angiosperms (111, 379, 739), monocotyledons (27, 120, 311), and dicotyledons sensu lato (84, 259, 428).

The eight largest families of monocotyledons, as gauged by the numbers of infrageneric taxa present, are Poaceae (123), Cyperaceae (80), Orchidaceae (28), Bromeliaceae (11), Juncaceae (7), Lemnaceae (6), Commelinaceae (6), and Xyridaceae (6) (for each family the number of infrageneric taxa is listed between parentheses). The families Poaceae and Cyperaceae, collectively, exhibited 26.3% of all 773 infrageneric taxa listed (i.e., 203 taxa).

The 11 largest families of dicotyledons *sensu lato* are Asteraceae (73), Fabaceae (37), Euphorbiaceae (21), Rubiaceae (17), Lentibulariaceae (12), Onagraceae (12), Plantaginaceae (12), Lamiaceae (10), Malvaceae (10), Clusiaceae (9), and Polygalaceae (9). The families Asteraceae and Fabaceae, collectively, exhibited 14.2% of all 773 infrageneric taxa listed (i.e., 110 taxa).

Infrageneric taxa and habitats

Habitats are listed for all 773 infrageneric taxa reported here (Appendix 1). Within CSS, ruderal land and pine flatwoods exhibited the highest percentages of infrageneric taxa. Intermediate percentages of taxa grew in bald-cypress swamp. Lowest percentages occurred within wet prairie, freshwater marsh, aquatic ruderal land, and hardwood forest.

Supporting data are presented. Each number, below, refers solely to the infrageneric taxa that we noted inside of a habitat, not to taxa whose sole association with the habitat was occurrence within ecotone(s) involving that habitat. For each habitat indicated, listed between parentheses are the number of infrageneric taxa observed therein and the percentage which that number represents of all 773 infrageneric taxa reported here: ruderal land (427, 55.2%); pine flatwoods (344, 44.5%); bald-cypress swamp (201, 26.0%); wet prairie (142, 18.4%); freshwater marsh (128, 16.6%); aquatic ruderal land (128, 16.6%); and hardwood forest (125, 16.2%).

We studied both subcategories of hardwood forest, i.e., mesic hardwood hammock and hardwood swamp. We noted 99 and 61 infrageneric taxa within the two subcategories, respectively (Appendix 1).

For the Poaceae and Cyperaceae, the two largest families of vascular plants at CSS, the data for ruderal land and pine flatwoods, essentially, paralleled the corresponding data for vascular plants overall, i.e., for each family those two habitats manifested the highest and second-highest numbers of infrageneric taxa present, respectively. Between parentheses, for each habitat listed are indicated the numbers of infrageneric taxa represented of Poaceae and Cyperaceae, respectively: ruderal land (74, 49), pine flatwoods (49, 31), bald-cypress swamp (20, 13), wet prairie (23, 14), freshwater marsh (17, 14), aquatic ruderal land (14, 10), and hardwood forest (2, 3).

Infrageneric taxa that were not observed in particular habitats sometimes grew in one or more ecotones which involved those habitats (Appendix 1). For example, 35 taxa were not noted in hardwood forest but grew in ecotone(s) involving hardwood forest (e.g., hardwood forest—pine flatwoods ecotone). Similarly, 81 taxa were not noted from pine flatwoods, but grew in ecotone(s) involving pine flatwoods and habitats other than hardwood forest (e.g., pine flatwoods—bald-cypress-swamp ecotone).

Native and endemic taxa inventoried during the present study

Six hundred and eleven (79.0%) of the 773 infrageneric taxa recorded were native to Florida (Appendix 1). Between parentheses, the number and percentage of native infrageneric taxa within each major group of vascular plants are listed, respectively: pteridophytes (25, 78.1%), gymnosperms (2, 100%), angiosperms (584, 79.0%), monocotyledons (241, 77.5%), and dicotyledons *sensu lato* (343, 80.1%). We have excluded two taxa, *Myriophyllum* sp. and *Pistia stratiotes*, from these determinations, because: (1) *Myriophyllum* is known from both native—and exotic species in Florida, making the status of *Myriophyllum* sp. indeterminable, and (2) the status (native vs. exotic) of *P. stratiotes* in Florida is unclear (Wunderlin et al. 2017).

Eighteen taxa were endemic to Florida: *Aristida patula*, *Bigelovia nudata* subsp. *australis*, *Campanula floridana*, *Carex vexans*, *Carphephorus odoratissimus* var. *subtropicanus*, *Clematis baldwinii*, *Echinochloa paludigena*, *Elytraria caroliniensis* var. *angustifolia*, *Eupatorium mikanioides*, *Euphorbia inundata* var. *garrettii*, *Euphorbia polyphylla*, *Juncus paludosus*, *Lobelia homophylla*, *Mecardonia acuminata* subsp. *peninsularis*, *Micranthemum glomeratum*, *Polygala rugelii*, *Ruellia succulenta*, and *Schizachyrium rhizomatum*.

Exotic species inventoried during the present study

One hundred and sixty infrageneric taxa observed within CSS are exotic within Florida (not including *Myriophyllum* sp. and *Pistia stratiotes*; Appendix 1).

The Florida Exotic Pest Plant Council (FLEPPC 2017) has recognized two categories of plant species exotic within Florida, that pose especial threats to the ecology of the State, overall, i.e., Category I and Category II (those categories indicate decreasing degree of threat; FLEPPC 2017). Noted presently were 33 Category I species (*Abrus precatorius*, *Acacia auriculiformis*, *Albizia lebbek*, *Bischofia javanica*, *Colocasia esculenta*, *Cupaniopsis anacardioides*, *Dioscorea bulbifera*, *Eichhornia crassipes*, *Ficus microcarpa*, *Hydrilla verticillata*, *Hymenachne amplexicaulis*, *Imperata cylindrica*, *Lantana camara*, *Ludwigia peruviana*, *Lygodium microphyllum*, *Melaleuca quinquenervia*, *Melinis repens*, *Nephrolepis brownii*, *Nephrolepis cordifolia*, *Panicum repens*, *Pistia stratiotes*, *Psidium cattleianum*, *Psidium guajava*, *Rhodomyrtus tomentosa*, *Salvinia minima*, *Schinus terebinthifolia*, *Scleria lacustris*, *Senna pendula*, *Sporobolus jacquemontii*, *Syngonium podophyllum*, *Syzygium cumini*, *Urena lobata*, and *Urochloa mutica*) and 20 Category II species (*Alternanthera philoxeroides*, *Crassocephalum crepidioides*, *Dactyloctenium aegyptium*, *Eulophia graminea*, *Hemarthria altissima*, *Landoltia punctata*, *Leucaena leucocephala*, *Limnophila sessiliflora*, *Macroptilium lathyroides*, *Momordica charantia*, *Pennisetum polystachion*, *Phoenix reclinata*, *Pteris vittata*, *Richardia grandiflora*, *Ruellia blechum*, *Spermacoce verticillata*, *Sphagneticola trilobata*, *Terminalia catappa*, *Terminalia muelleri*, and *Urochloa maxima*). The 33 Category I species and the 20 Category II species comprised 41.3% and 23.5% of all 80 Category I species and 85 Category II species recognized for Florida, respectively.

We rank 14 species (12 were listed by FLEPPC 2017) as being among the most troublesome exotic species at CSS: *Colocasia esculenta*, *Cyperus blepharoleptos*, *Hymenachne amplexicaulis*, *Imperata cylindrica*, *Ludwigia peruviana*, *Lygodium microphyllum*, *Panicum repens*, *Schinus terebinthifolia*, *Scleria lacustris*, *Sporobolus jacquemontii*, *Syzygium cumini*, *Urena lobata*, *Urochloa arrecta*, and *Urochloa mutica*.

Staff members and volunteers at CSS regularly eradicate individuals of exotic species. They do so mostly with herbicides but also, to a lesser extent, with mechanical equipment and by hand.

Native taxa deemed rare by Weaver and Anderson (2010) and/or by Gann et al. (2002)

Weaver and Anderson (2010) and Gann et al. (2002) listed infrageneric taxa which they considered rare in Florida and in south Florida, respectively. During the present study we documented 62 of those taxa (Table 1). For Florida, Weaver and Anderson (2010) ranked 29 of the 62 taxa as Endangered (16 taxa) or as Threatened (13 taxa). For south Florida, Gann et al. (2002) ranked 36 of the taxa as Extirpated (3 taxa), as Historical (5 taxa), or as Critically Imperiled (28 taxa).

Of the species that solely previous workers had documented at CSS, Gann et al. (2002) ranked two as Critically Imperiled (Table 1).

We comment on the three species at CSS that Gann et al. (2002) listed as Extirpated in south Florida. **A.** *Botrychium biternatum*.—Gann et al. (2002) stated that *B. biternatum* was “Collected once in 1934 near La Belle” (Hendry Co.). At CSS (within that portion in Collier Co.) we found two individuals of *B. biternatum* growing in mesic hardwood hammock. **B.** *Eleocharis microcarpa*.—Gann et al. (2002) stated that this species was “Last collected in 1917 in the vicinity of Fort Myers.” At CSS (within both Collier Co. and Lee Co.) we found populations of *E. microcarpa* in bald-cypress swamp and on ruderal land. **C.** *Lipocarpha maculata*.—Gann et al. (2002) stated that *L. maculata* was “Collected once in 1965 near Immokalee.” At CSS (within that portion in Collier Co.) we found *L. maculata* growing on sandy ruderal land.

George Wilder and coworkers have also documented the three species, aforementioned (with voucher specimens at SWF), at locations outside of CSS, in Collier County and Lee County (*L. maculata* [in 2002 through 2007]; Wilder & McCombs 2006) or solely in Lee County (*B. biternatum* [in 2007], *E. microcarpa* [in 2005, 2006]).

Below, we discuss three additional rare taxa.

A. *Ophioglossum palmatum* (Hand Fern).—This species is State-listed as Endangered. Wunderlin and

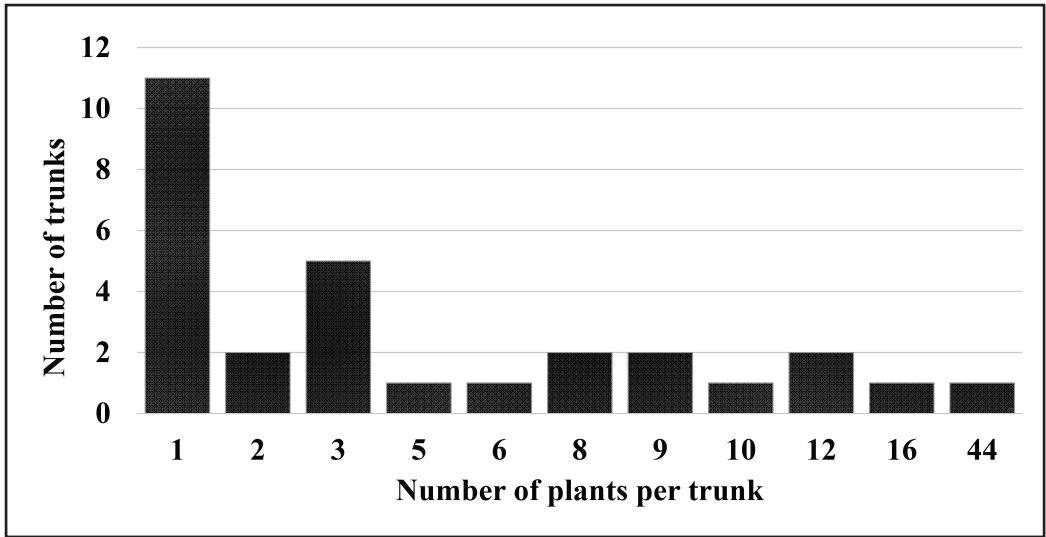


Fig. 2. Histogram depicting the relationship between the number of plants of *Ophioglossum palmatum* per trunk of *Sabal palmetto* (X axis) and the number of trunks of *Sabal palmetto* bearing that number of plants (Y axis). Distances are nonlinear along the X axis.

Hansen (2000) indicated that *O. palmatum* has declined in Florida because of over-collection, habitat destruction, and fire.

Most of the plants at CSS manifested the norm for *O. palmatum*, growing axillary to leaf sheaths on the trunks of *Sabal palmetto* (Cabbage Palm); however, only a miniscule proportion of the cabbage palms at CSS exhibited *O. palmatum*. We observed *Ophioglossum* plants inserted at levels of palm trunks, from ground level to 20 to 25 feet aboveground. Cabbage palms bearing *O. palmatum* grew in hardwood hammock (17), in bald-cypress swamp (3), on ruderal land (5), and in three kinds of ecotones (4) (the numbers between parentheses indicate the numbers of *Ophioglossum*-bearing palms observed per habitat; Appendix 1).

For 29 palm trunks bearing *O. palmatum*, we counted the number of *Ophioglossum* plants per trunk. The data are presented as a histogram (Fig. 2).¹ Based on those data, the total number of *Ophioglossum* plants counted, the median number of plants per trunk, and the mean number of plants per trunk were 169, 3, and 5.8, respectively.

In light of the miniscule proportion of cabbage palms that bore *O. palmatum* at CSS, one might expect there to have occurred, typically, no more than one *Ophioglossum* plant per palm. In that case the data, aforementioned, would be counterintuitive. We envision two possible explanations for those data. (1) Perhaps, the spores released from an *Ophioglossum* plant on one palm trunk drift preferentially to, and germinate axillary to, the leaf sheaths of the same palm trunk or of nearby palm trunks, rather than travelling to, and germinating axillary to, the sheaths of distant palm trunks. (2) Certain palm trunks might constitute more suitable micro-habitat than do others.

Although, most plants of *O. palmatum* were epiphytic on trunks of *Sabal palmetto*, we observed over 30 juvenile plants and fertile individuals growing together on a root ball (Fig. 3). The root ball was elevated

¹ It was sometimes uncertain whether a palm leaf sheath subtended one, or more than one, *Ophioglossum* plant. To provide certainty would have required bending that sheath outward to better expose the *Ophioglossum* plant(s)—a procedure that might have damaged or destroyed it/them. Thus, where uncertainty occurred, we recognized solely one *Ophioglossum* plant per leaf sheath. Accordingly, we may have undercounted, to a small extent, the number of *Ophioglossum* plants that were present.



FIG. 3. A portion of a clump of over 30 plants of *Ophioglossum palmatum*. The clump is highly unusual, being located on a root ball at the base of a trunk of *Sabal palmetto*. Photographic image by Jean McCollom (2017).

minimally above ground level, it contained little soil, and it encircled, and was apparently derived from, the base of a trunk of *S. palmetto*.

B. *Thelypteris serrata* (Thelypteridaceae).—This terrestrial species is State-listed as Endangered. We observed *T. serrata* at ca. 10 places near the northern boundary of Panther Island, where the plants were either solitary or composed a clump. The species grew in bald-cypress swamp and in the ecotone between hardwood hammock and pine flatwoods.

C. *Dendrophylax lindenii* (Orchidaceae).—This epiphytic species, the so-called “Ghost Orchid,” is State-listed as Endangered. Ghost orchids are unusual (but not unique) among Florida orchids, because they lack foliage leaves; however, they produce photosynthetic roots.

Ghost orchids were once more frequent at CSS. Apparently, freeze(s) during past year(s) decimated the population there (Michael Duever, pers. comm. to George Wilder, 4 June 2016). Today we know of two remaining ghost orchids. Each is rooted to a separate bald-cypress tree situated within the remnant of old-growth bald-cypress swamp.

During the weekend of July 7–8, 2007, Maryanne Biggar (in the company of Jean McCollom, Michael Duever, and John Ogden) discovered the larger of the two remaining ghost orchids (Figs. 4, 5). That individual (clone?) is unusual. (1) It ranks among the largest of ghost orchids known. (2) It flowers more prolifically than do other ghost orchids in south Florida. It bore nine flowers when it was discovered and, in 2014, it produced more than 40 flowers. In contrast, ghost orchids in south Florida commonly produce from one to three flowers



FIG. 4. An exceptionally large, profusely flowering plant of *Dendrophylax lindenii*, located high on a trunk of *Taxodium distichum*. Photographic image by Ralph Arwood (2014).

per year (Michael Owen, pers. comm. to George Wilder, 23 Aug 2017). (3) On 25 Jan 2015, it manifested its first flowers at anthesis for that calendar year; thereby, it set an early-flowering record for *D. lindenii* in south Florida. Ghost orchids in south Florida typically flower in June, July, and August. (4) The plant is situated ca. 50 to 60 feet above ground, being located higher-up than any other ghost orchid known.

A record of the large ghost orchid's flowering behavior over several years is available at <http://corkscrew.audubon.org/visit/corkscrews-ghost-orchids>.

Native and exotic infrageneric taxa that are rare within the Sanctuary

Considered under this heading are only infrageneric taxa that were documented currently, not ones documented solely by previous workers.

We deem 291 infrageneric taxa (37.6% of all 773 infrageneric taxa presently reported) to be rare within CSS (Appendix 1). Included among those 291 taxa are 41 of the taxa discussed above, that are State listed as Endangered or Threatened in Florida or that are designated as Critically Imperiled or Historical in south Florida (Gann et al. 2002; Weaver & Anderson 2010; Table 1).

Certain of the rarest species in the Sanctuary are considered. For each of the following species, indicated between parentheses after the species name is the number of individuals that we encountered thereof: *Bischofia javanica* (1), *Botrychium biternatum* (2), *Carica papaya* (1), *Clematis baldwinii* (2), *Cupaniopsis anacardioides* (ca. 2), *Cyperus hyalinus* (1), *Eragrostis cumingii* (1 or 2), *Ipomoea hederifolia* (1), *Pinguicula caerulea* (ca. 3), *Psidium cattleianum* (1), *Psidium guajava* (1), *Pteroglossaspis ecristata* (1), *Roystonea regia* (1), and *Tillandsia flexuosa* (1). Also, we observed solely one small clump of *Ophioglossum petiolatum*. Too, on 15 Sep 2017, five days after Hurricane Irma, we collected near ground level the single specimen of *T. flexuosa*; that plant was

TABLE 1. List of species and varieties of rare plants of Corkscrew Swamp Sanctuary. Certain rankings of rarity are for Florida (Weaver & Anderson 2010) and for south Florida (Gann et al. 2002). One ranking of rarity (**r** after the name of a taxon) is solely for the study area; **r** is used here only for taxa that were listed by Weaver & Anderson (2010) and by Gann (2002). See Appendix 1 for an accounting of additional taxa that are rare in the study area. Taxa documented during the present study and solely by previous workers are represented with non-bold font and bold font, respectively. **Crit. Imp.** = critically imperiled; **End.** = endangered; **Ext.** = extirpated; **Hist.** = historical; **Threat.** = threatened; **r** = a taxon documented during the present study and deemed to be rare within the study area.

Taxon	Weaver & Anderson (2010)	Gann et al. (2002)
<i>Anagallis minima</i>		Crit. Imp.
<i>Anagallis pumila</i> ^r		Crit. Imp.
<i>Aristida purpurascens</i> var. <i>virgata</i> ^r		Crit. Imp.
<i>Bartonia virginica</i> ^r		Crit. Imp.
<i>Botrychium biternatum</i> ^r		Ext.
<i>Burmannia biflora</i> ^r		Crit. Imp.
<i>Callitriche peploides</i>		Hist.
<i>Campsis radicans</i>		Crit. Imp.
<i>Carex gigantea</i> ^r		Crit. Imp.
<i>Carex verrucosa</i>		Crit. Imp.
<i>Ceratopteris pteridoides</i>		Crit. Imp.
<i>Chamaecrista nictitans</i> var. <i>nictitans</i> ^r		Hist.
<i>Chrysophyllum oliviforme</i> ^r	Threat.	
<i>Cyperus squarrosus</i> ^r		Crit. Imp.
<i>Cyrtopodium punctatum</i> ^r	End.	
<i>Dendrophylax lindenii</i> ^r	End.	
<i>Dendrophylax porrectus</i> ^r	Threat.	
<i>Echinodorus berteroi</i> ^r		Hist.
<i>Eleocharis microcarpa</i> ^r		Ext.
<i>Epidendrum anceps</i> ^r	End.	
<i>Epidendrum floridense</i> ^r	End.	
<i>Epidendrum nocturnum</i> ^r	End.	
<i>Epidendrum rigidum</i>	End.	
<i>Eragrostis hypnoides</i> ^r		Crit. Imp.
<i>Euphorbia inundata</i> var. <i>garrettii</i> ^r		Crit. Imp.
<i>Gymnopogon chapmanianus</i> ^r		Crit. Imp.
<i>Hibiscus coccineus</i>		Crit. Imp.
<i>Ionopsis utricularioides</i> ^r	End.	Crit. Imp.
<i>Juncus dichotomus</i> ^r		Crit. Imp.
<i>Juncus repens</i> ^r		Crit. Imp.
<i>Lilium catesbaei</i>	Threat.	
<i>Lipocarpha maculata</i>		Ext.
<i>Lobelia homophylla</i>		Hist.
<i>Myrcianthes fragrans</i>	Threat.	
<i>Nephrolepis biserrata</i>	Threat.	
<i>Nymphaea jamesoniana</i>	End.	
<i>Nymphaea mexicana</i> ^r		Crit. Imp.
<i>Ophioglossum palmatum</i>	End.	
<i>Persicaria setacea</i>		Crit. Imp.
<i>Pinguicula caerulea</i> ^r	Threat	
<i>Platanthera nivea</i> ^r	Threat.	
<i>Polystachya concreta</i> ^r	End.	
<i>Prosthechea cochleata</i> ^r	End.	
<i>Pteroglossaspis ecristata</i> ^r	Threat.	
<i>Rhynchospora fernaldii</i> ^r		Crit. Imp.
<i>Rhynchospora pusilla</i> ^r		Crit. Imp.
<i>Rhynchospora rariflora</i> ^r		Crit. Imp.
<i>Roystonea regia</i> ^r	End.	
<i>Sacoila lanceolata</i> var. <i>paludicola</i> ^r	Threat.	
Sageretia minutiflora		Crit. Imp.
<i>Scutellaria integrifolia</i> ^r		Hist.
<i>Spiranthes praecox</i>		Crit. Imp.
<i>Thelypteris hispida</i> ^r		Crit. Imp.
<i>Thelypteris serrata</i> ^r	End.	Crit. Imp.

TABLE 1. cont.

Taxon	Weaver & Anderson (2010)	Gann et al. (2002)
<i>Tillandsia balbisiana</i>	Threat.	
<i>Tillandsia fasciculata</i>	End.	
<i>Tillandsia flexuosa</i> *	Threat.	
<i>Tillandsia pruinosa</i> *	End.	Crit. Imp.
<i>Tillandsia utriculata</i> *	End.	
<i>Tillandsia variabilis</i>	Threat.	
<i>Utricularia juncea</i>		Crit. Imp.
<i>Viola palmata</i> *		Crit. Imp.
<i>Wolffiella gladiata</i>		Crit. Imp.
<i>Zephyranthes simpsonii</i>	Threat.	



FIG. 5. The same plant of *Dendrophyllax lindenii* as in Figure 4, lacking flowers. The plant consists primarily of roots. Photographic image by Ralph Arwood (2015).

anchored to a branch of *Pinus elliottii* which had, apparently, broken away from a tree during the Hurricane. During collection, we apparently extirpated from CSS two of the species, aforementioned (both exotic): *B. javanica* and *C. hyalinus*.

We offer a caveat. Because population sizes may vary over time, our assessments of the rarity of taxa at CSS are not necessarily permanent. Consider two herbaceous annuals: *Amaranthus australis* and *Pentodon pentandrus* (Godfrey & Wooten 1981). During our initial year of study, we observed ca. two individuals of *A. australis* and we saw no plants of *P. pentandrus*. Thus, we initially ranked *A. australis* as rare at CSS. Later on,

though, there appeared at CSS, to our astonishment, thousands of densely arranged individuals of each species. Thus, we reassessed each species as non-rare (Appendix 1).

The pronounced increase in population sizes of those two species transpired during a severe drought, when standing water had evaporated from much of CSS. We suspect that, for both species, the newly dried-up soils greatly enhanced seed germination and/or seedling survival.

A species new for North America north of Mexico

Herein, *Phyllanthus debilis* J.G. Klein ex Willd. is reported for the first time for North America north of Mexico (John Kartesz, pers. comm. to George Wilder, 4 Oct 2017; Kartesz 2017; USDA 2017). Included, within the current issue (p. 245) of this journal is a more detailed report of this range extension, authored by G. Levin et al. (2018).

Comparisons with previous studies

As was stated above, we presently report 773 infrageneric taxa and 756 species of vascular plants for the Sanctuary. Also, previous workers documented at least 14 additional species there (Appendix 1). Thus, we and those workers have documented, collectively, a total of 787 infrageneric taxa and 770 species for the Sanctuary. Of the 14 previously collected species, 10 are native to Florida.

Below, we compare our list of presently documented taxa with two of the previous plant lists for CSS. Exact comparisons are precluded for two reasons. First, we cannot equate certain of our collections of sterile material (which we identified solely to genus) with particular species indicated within the previous lists. Secondly, in cases where two species have been recognized in place of one, we could not determine the identity in a strict sense, of an undocumented species that previous workers had listed in a broad sense. Because of such shortcomings, we apply the phrase “at least” to qualify some of the numbers/percentages presented below.

Mackie et al. (1999) reported 550 infrageneric taxa of vascular plants for CSS (including *Taxodium ascendens* and *Taxodium distichum* sensu stricto—taxa which we subsume within *Taxodium distichum* sensu lato). During present field work we documented at least 430 (78.2%) of those 550 taxa. Too, Mackie et al. (1999) listed five of the 14 species, aforementioned, that solely previous workers had documented at CSS.

The Institute for Regional Conservation (IRC 2017) maintains a database based on previous floristic work undertaken within the Sanctuary. That database lists 511 infrageneric taxa of vascular plants for CSS (including *Taxodium ascendens* and *Taxodium distichum* sensu stricto). During present field work we documented at least 430 (84.1%) of those 511 taxa. Too, IRC (2017) listed seven of the 14 species, aforementioned, that solely previous workers had documented at CSS.

For 32 species documented during the present study we provide the first published records of voucher specimens from Collier County: *Botrychium biternatum*, *Bromelia pinguin*, *Citrus reticulata*, *Commelina communis*, *Commelina gambiae*, *Crotalaria lanceolata*, *Descurainia pinnata*, *Eleocharis microcarpa*, *Equisetum hyemale*, *Fimbristylis littoralis*, *Geranium carolinianum*, *Juncus dichotomus*, *Mimosa quadrivalvis*, *Mimosa strigillosa*, *Nuphar advena*, *Nymphaea jamesoniana*, *Panicum laxum*, *Parietaria praetermissa*, *Paspalum acuminatum*, *Paspalum plicatulum*, *Paspalum praecox*, *Phyllanthus debilis*, *Rhynchospora eximia*, *Rhynchospora distans*, *Rotboellia cochinchinensis*, *Rumex paraguayensis*, *Schizachyrium rhizomatum*, *Scutellaria integrifolia*, *Spiranthes lacera*, *Terminalia catappa*, *Tithonia diversifolia*, and *Viola palmata* (The Florida State University Biology Department 2017; University of Florida Herbarium Collections Catalog 2017; Virtual Herbarium 2017; Wilder & Barry 2012; Wilder & McCombs 2006; Wilder & Roche 2009; Wilder & Thomas 2016; Wunderlin et al. 2017). Austin et al. (1990) listed *Citrus reticulata*, *Iris savannarum* (“*Iris hexagona*”), and *Nuphar advena* (“*Nuphar luteum*”) for Fakahatchee Strand State Preserve (Collier Co.), but they specified no voucher specimens for those species. Based on certain of the sources, aforementioned, for *Thelypteris hispida* we provide the first published record of a voucher specimen from Lee County.

APPENDIX 1

Table of infrageneric taxa (species, subspecies, varieties, forms, and a hybrid [*Citrus* sp.]) and of higher-level taxa documented at Corkscrew Swamp Sanctuary (CSS) during, and previous to, the present study. The names of infrageneric taxa documented during the

present investigation are listed in non-bold font. For certain of those infrageneric taxa, listed after the name of a taxon is/are relevant synonym(s) [between brackets], an indication of whether the taxon is rare within CSS, and/or the designation of the taxon by the Florida Exotic Plant Pest Council (FLEPPC 2017). Also, presented after the name of an infrageneric taxon is the five-digit Wilder and McCombs collection number² of a voucher specimen or of a voucher photograph of that taxon. The names of infrageneric taxa that we (in one case) and previous workers had previously documented within CSS, but that were not observed during the present study, are presented in bold font. For those taxa, data are provided as follows after the Latin name of a taxon: relevant synonym, if any [between brackets]; collector(s); collection number; year of collection; and acronym of the herbarium where the specimen is on deposit (in parentheses).³ After the name of each family and suprafamilial taxon, between parentheses are included two or four numbers; the two numbers not in italics—if present—signify, respectively, the numbers reported presently of genera and infrageneric taxa (excluding formas) within that family or suprafamilial taxon; the two numbers in italics—if present—signify, respectively, the sums of numbers reported presently and by previous workers, of such genera and infrageneric taxa (excluding formas). Habitat data are provided within the seven vertical columns at the right of this table. * = alien to Florida; ? = a taxon (*Myriophyllum* sp., *Pistia stratiotes*) that is not clearly native to, or exotic within, Florida; □ = endemic to Florida; Aq-rud = aquatic ruderal land; Cypr = bald-cypress swamp; Hardw = hardwood forest; Pinefl = pine flatwoods; Marsh = freshwater marsh; Prairie = wet prairie; Rud = ruderal land; FLEPPC I and FLEPPC II = taxa recognized as Category I or Category II species, respectively, by the Florida Exotic Plant Pest Council (2017). Each of X, X̄, and X^m = occurrence of an infrageneric taxon within a habitat, away from the habitat boundary; also, each of X and X^m (with or without superscript) signifies material that was observed and/or collected within part(s) of the Sanctuary situated in Collier County; X̄ represents a specimen that was collected in Lee County. Each of the following symbols indicates the occurrence of a taxon either (a) at a sharp boundary between the habitat represented by the associated vertical column and another habitat or ecotone, and/or (b) within an extended ecotone comprised by the habitat represented by the associated vertical column and another habitat: X^{aq} = growing at the boundary with aquatic ruderal land; X^c = occurring at the boundary with, and/or within the extended ecotone comprised together with, bald-cypress swamp; X^m = occurring at the boundary with, and/or within the extended ecotone comprised together with, freshwater marsh; X^p = occurring at the boundary with, and/or within the extended ecotone comprised together with, wet prairie; X^{pf} = occurring at the boundary with, and/or within the extended ecotone comprised together with, pine flatwoods; X^{pf-c} = occurring by the ecotone comprised by pine flatwoods and bald-cypress swamp; X^{pf-h} = occurring by the ecotone comprised by pine flatwoods and mesic hardwood hammock; X^{pf-p} = occurring by the ecotone comprised by pine flatwoods and wet prairie; X^r = occurring at the boundary with ruderal land. For hardwood forest, X (with or without a superscript) refers to forest other than hardwood swamp, whereas X^m specifies hardwood swamp.

¹ We follow the nomenclature of Wunderlin et al. (2017), with the following exceptions. (1) We recognize the family Lemnaceae, which Wunderlin and Hansen (2011) and Wunderlin et al. (2017) submerged into Araceae. (2) We recognize solely *Taxodium distichum* (L.) Rich. sensu lato (as did Adams et al. 2012, Denny and Arnold 2007, and Watson 1985), whereas, Wunderlin et al. (2017) recognized *Taxodium distichum* (L.) Rich. sensu stricto and *Taxodium ascendens* Brongn.; we do, however, cite voucher specimens for both segregate taxa. (3) We recognize solely *Symphytichum subulatum* (Michx.) G.L. Nesom rather than either of two segregate taxa, *Symphytichum bahamense* (Britton) G.L. Nesom and *Symphytichum expansum* (Poepig ex Spreng.) G.L. Nesom. (4) We recognize subspecies of *Dichantheum aciculare* (Desv. ex Poir.) Gould & C.A. Clark and of *Dichantheum dichotomum* (L.) Gould (as did Freckmann and Lelong 2003 [for both species]); we also recognize varieties of *Digitaria ciliaris* (Retz.) Koeler, *Eragrostis ciliaris* (L.) R. Br., *Lindernia dubia* (L.) Pennell, and *Paspalum setaceum* Michx. (as did Wipff 2003, Peterson 2003, Cooperider 1995, and Allen and Hall 2003, respectively). Wunderlin et al. (2017) recognized neither the subspecies nor varieties, aforementioned. (5) We recognize *Rhynchospora distans* (Michx.) Vahl (as did McMillan 2007), a taxon which Wunderlin et al. (2017) submerged into *Rhynchospora fascicularis* (Michx.) Vahl. (6) We recognize *Cyperus ovatus* Baldwin sensu stricto and *Cyperus retrorsus* Chapm. (as did Tucker et al. 2002), taxa which Wunderlin et al. (2017) grouped within *Cyperus ovatus* Baldwin sensu lato. (7) We recognize *Panicum anceps* Michx., *Panicum hians* Elliott, *Panicum laxum* Sw., *Panicum rigidulum* Bosc ex Nees, and *Panicum tenerum* Beyr. ex Trin., taxa which Wunderlin et al. (2017) have called *Coleataenia anceps* (Michx.) Soreng, *Steinchisma hians* (Elliott) Nash, *Steinchisma laxum* (Sw.) Zuloaga, *Coleataenia rigidula* (Bosc ex Nees) LeBlond, and *Coleataenia tenera* (Beyrich ex Trin.) Soreng, respectively. (8) We refer to one of our collections as *Cynanchum* sp. sensu lato, whereas, Wunderlin et al. (2017) recognized four genera in place of *Cynanchum* sensu lato: *Cynanchum* sensu stricto, *Metastelma*, *Orthosia*, and *Patalias*. We refer to *Cynanchum* sp. sensu lato, because our material is sterile, precluding identification as any of the four narrowly defined genera. (9) We retain 25 species names from Wunderlin and Hansen (2011), which Wunderlin et al. (2017) replaced with different names (listed between brackets after each retained name is Wunderlin et al.'s [2017] replacement): *Ampelopsis arborea* (L.) Koehne [*Nekemias arborea* (L.) J. Wen & Boggan], *Anagallis minima* (L.) E.H.L. Krause [*Lysimachia minima* (L.) U. Manns & Anderb.], *Anagallis pumila* Sw. [*Lysimachia ovalis* (Ruiz & Pav.) U. Manns & Anderb.], *Chamaesyce blodgettii* (Engelm. ex Hitchc.) Small [*Euphorbia blodgettii* Engelm. ex Hitchc.], *Chamaesyce hirta* (L.) Millsp. [*Euphorbia hirta* L.], *Chamaesyce hypericifolia* (L.) Millsp. [*Euphorbia hypericifolia* L.], *Chamaesyce hyssopifolia* (L.) Small [*Euphorbia hyssopifolia* L.], *Chamaesyce lasiocarpa* (Klotzsch) Arthur [*Euphorbia lasiocarpa* Klotzsch], *Chamaesyce maculata* (L.) Small [*Euphorbia maculata* L.], *Chamaesyce mendezii* (Boiss.) Millsp. [*Euphorbia mendezii* Boiss.], *Chamaesyce ophthalmica* (Pers.) D.G. Burch [*Euphorbia ophthalmica* Pers.], *Chamaesyce thymifolia* (L.) Millsp. [*Euphorbia thymifolia* L.], *Kyllinga brevifolia* Rottb. [*Cyperus brevifolius* (Rottb.) Endl. ex Hassk.], *Kyllinga odorata* Vahl [*Cyperus sesquiflorus* (Torr.) Mattf. & Kük.], *Kyllinga squamulata* Thonn. ex Vahl [*Cyperus metzii* (Hochst. ex Steud.) Mattf. & Kük.], *Leptochloa fusca* (L.) Kunth subsp. *fascicularis* (Lam.) N. Snow [*Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult. subsp. *fascicularis* (Lam.) P.M. Peterson & N. Snow], *Lipocarpha aristulata* (Coville) G.C. Tucker [*Cyperus aristulatus* (Coville) Bauters], *Lipocarpha maculata* (Michx.) Torr. [*Cyperus neotropicalis* Alain], *Lipocarpha micrantha* (Vahl) G.C. Tucker [*Cyperus subsquarrosus* (Muhl.) Bauters], *Oldenlandia uniflora* L. [*Edrastima uniflora* (L.) Raf.], *Pennisetum polystachion* (L.) Schult. [*Cenchrus polystachios* (L.) Morrone], *Poinsettia cyathophora* (Murray) Bartl. [*Euphorbia cyathophora* Murray], *Poinsettia heterophylla* (L.) Klotzsch & Garcke ex Klotzsch [*Euphorbia heterophylla* L.], and *Pteroglossaspis ecristata* (Fernald) Rolfe [*Orthochilus ecristatus* (Fernald) Bytebier].

² Ms. Martha McCombs contributed importantly to SWF; hence, on the label of each herbarium sheet from SWF George Wilder's name and Martha McCombs' name precede the collection number of each specimen, a circumstance not duplicated in this appendix.

³ Data for previous collections were compiled from Wunderlin et al. (2017) and during visits to UF, USF, and the herbarium at Corkscrew Swamp Sanctuary; the latter herbarium lacks an acronym from Index Herbariorum; we call it CSS, herein.

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
PTERIDOPHYTES (20, 32)							
AZOLLACEAE (1, 1)							
Azolla filiculoides Lam. [Azolla caroliniana Willd.]; 37992					X	X	
BLECHNACEAE (2, 2)							
Telmatoblechnum serrulatum (Rich.) Perrie et al. [Blechnum serrulatum Rich.]; 38398	X,X ^c ,X ^{pf} , X	X,X ^c ,X ^r	X,X ^c	X,X ^m ,X ^r	X	X,X ^r	X
Woodwardia virginica (L.) Sm.; 38113	X,X ^{pf}	X,X ^r	X	X	X		
DENNSTAEDTIACEAE (1, 2)							
Pteridium aquilinum (L.) Kuhn var. caudatum (L.) Sadèb.; Rare ; 39613		X					X
Pteridium aquilinum (L.) Kuhn var. pseudocaudatum (Clute) Clute ex A. Heller; 39728		X,X ^r					
EQUISETACEAE (1, 1)							
Equisetum hyemale L.; Rare ; 38725		X					
NEPHROLEPIDACEAE (1, 4)							
Nephrolepis biserrata (Sw.) Schott; 38359	X	X ^r		X			
*Nephrolepis brownii (Desv.) Hovenkamp & Miyam. [Nephrolepis multiflora (Roxb.) F.M. Jarrett ex C.V. Morton]; FLEPPC I; 38553	X	X,X ^r		X		X ^r	X
*Nephrolepis cordifolia (L.) C. Presl; Rare ; FLEPPC I; 39893				X			X
Nephrolepis exaltata (L.) Schott; 38262	X, X			X,X ^m ,X ^r			X
OPHIOGLOSSACEAE (2, 3)							
Botrychium biternatum (Savigny) Underw.; Rare ; 39611	X						
Ophioglossum palmatum L.; 38312	X,X ^r	X ^c ,X ^r		X			X
Ophioglossum petiolatum Hook.; Rare ; 39612	X						
OSMUNDACEAE (1, 2)							
Osmunda cinnamomea L.; Rare ; 38458	X ^{pf}					X	
Osmunda regalis L.; 38000	X,X ^c , X	X,X ^c ,X ^r	X	X,X ^m	X		
POLYPODIACEAE (3, 3)							
Campyloneurum phyllitidis (L.) C. Presl; 38358	X,X ^c , X			X,X ^m	X(juv)		
Phlebodium aureum (L.) Sm.; 38290	X,X ^{pf} , X	X		X,X ^m ,X ^r	X		X
Pleopeltis michauxiana (Weath.) Hickey & Sprunt [Pleopeltis polypodioides (L.) E. G. Andrews & Windham]; 38554	X,X ^c , X	X		X,X ^m ,X ^r	X		
PSILOTAECAE (1, 1)							
Psilotum nudum (L.) P. Beauv.; 38261	X,X ^r	X		X,X ^m			X
PTERIDACEAE (4, 5)							
Acrostichum danaeifolium Langsd. & Fisch.; 37996	X			X,X ^m			

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Ceratopteris pteroides</i> (Hook.) Hieron.; 37998				X,X ^r	X	X	
* <i>Pteris tripartita</i> Sw.; Rare ; 38459		X ^r		X			
* <i>Pteris vittata</i> L.; FLEPPC II; 38112		X ^r					X
<i>Vittaria lineata</i> (L.) Sm.; 38556	X,X ^r , X	X ^r		X,X ^m			X
SALVINIACEAE (1, 1)							
* <i>Salvinia minima</i> Baker; FLEPPC I; 37988	X ^c , X			X,X ^m	X	X	X(flooded)
SCHIZAEACEAE (1, 1)							
* <i>Lygodium microphyllum</i> (Cav.) R. Br.; FLEPPC I; 38399	X ^{pf} , X	X,X ^c ,X ^r		X			
THELYPTERIDACEAE (1, 6)							
* <i>Thelypteris dentata</i> (Forssk.) E.P. St. John; 38555	X,X ^{pf}	X ^r		X		X ^r	
<i>Thelypteris hispidula</i> (Decne.) C.F. Reed; Rare ; 38460	X ^r						X
<i>Thelypteris interrupta</i> (Willd.) K. Iwats.; 38500	X ^c ,X ^r , X			X,X ^m	X		X
<i>Thelypteris kunthii</i> (Desv.) C.V. Morton; 38538	X	X,X ^r		X			X
<i>Thelypteris palustris</i> Schott; 37999	X,X ^c , X	X ^p	X	X			X
<i>Thelypteris serrata</i> (Cav.) Alston; Rare ; 39615	X,X ^{pf}			X			

GYMNOSPERMS (2, 2)

CUPRESSACEAE (1, 1)							
<i>Taxodium distichum sensu lato</i> (L.) Rich. sensu lato (including <i>Taxodium ascendens</i> Brongn. {38001} and <i>Taxodium distichum</i> (L.) Rich. sensu stricto {38002})		X,X ^c	X,X ^c	X,X ^r	X	X,X ^r	X
PINACEAE (1, 1)							
<i>Pinus elliotii</i> Engelm.; 38434	X,X ^{pf}	X,X ^c ,X ^r					X

MONOCOTYLEDONS (120, 311; 124, 318)

ALISMATACEAE (2, 4)							
<i>Echinodorus berteroi</i> (Spreng.) Fassett; Rare ; 39496						X	
<i>Sagittaria filiformis</i> J.G. Sm.; Rare ; 38317	X						X(flooded)
<i>Sagittaria graminea</i> Michx. var. <i>chapmanii</i> J.G. Sm.; 38320	X		X	X,X ^r		X	
<i>Sagittaria lancifolia</i> L.; 38009	X ^{pf}		X,X ^m	X	X	X	X
AMARYLLIDACEAE (2, 2)							
<i>Crinum americanum</i> L.; 38010	X		X	X	X		
<i>Zephyranthes simpsonii</i> Chapm.; 38270		X					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
ARACEAE (4, 4)							
* <i>Colocasia esculenta</i> (L.) Schott; FLEPPC I; 38737				X,X ^r			
<i>Peltandra virginica</i> (L.) Schott; 38011	X			X	X		
? <i>Pistia stratiotes</i> L.; FLEPPC I; 38295	X ^c ,X			X	X	X	
* <i>Syngonium podophyllum</i> Schott; Rare ; FLEPPC I; 38228							X
ARECACEAE (4, 4)							
<i>Roystonea regia</i> (Kunth) O.F. Cook; Rare ; 38285 (photograph)				X			
* <i>Phoenix reclinata</i> Jacq.; Rare ; FLEPPC II; 38817				X,X ^r			
<i>Sabal palmetto</i> (Walter) Lodd. ex Schult. & Schult. f.; 39038	X,X ^c ,X ^{pf} ,X ^r ,X	X,X ^c ,X ^r	X	X	X	X ^r	X
<i>Serenoa repens</i> (W. Bartram) Small; 38297	X,X ^{pf}	X,X ^c ,X ^r		X			X
BROMELIACEAE (2, 11)							
* <i>Bromelia pinguin</i> L.; Rare ; 39022							X
<i>Tillandsia balsisiana</i> Schult. & Schult. f.; 38321	X,X ^r ,X	X,X ^c	X ^c	X,X ^m ,X ^r	X		X
<i>Tillandsia fasciculata</i> Sw.; 38288 (photograph)	X,X ^{pf} ,X	X,X ^c	X ^c	X,X ^m ,X ^r	X		X
<i>Tillandsia flexuosa</i> Sw.; Rare ; 40097		X					
<i>Tillandsia paucifolia</i> Baker; 38713		X ^c	X ^c	X,X ^r ,X ^m			
<i>Tillandsia pruinosa</i> Sw.; Rare ; 38572 (photograph)				X,X ^m			
<i>Tillandsia recurvata</i> (L.) L.; 38143	X,X ^r ,X	X,X ^c		X,X ^r			X
<i>Tillandsia setacea</i> Sw.; 38322	X,X ^c ,X ^{pf} ,X	X,X ^c	X ^c	X,X ^m ,X ^r			X
<i>Tillandsia usneoides</i> (L.) L.; 38328	X,X ^c ,X ^{pf} ,X ^r ,X	X,X ^c	X ^c	X,X ^m ,X ^r	X		X
<i>Tillandsia utriculata</i> L.; Rare ; 39238 (photograph)	X			X ^{aq} ,X ^m			X,X ^{pf-h}
<i>Tillandsia variabilis</i> Schltldl.; 38323	X			X,X ^m			
BURMANNIACEAE (1, 2)							
<i>Burmannia biflora</i> L.; Rare ; 38441		X					
<i>Burmannia capitata</i> (J.F. Gmel.) Mart.; 38549		X,X ^p					
CANNACEAE (1, 1)							
<i>Canna flaccida</i> Salisb.; 38945	X ^r				X ^r		X(flooded)
COMMELINACEAE (2, 6)							
* <i>Commelina communis</i> L.; Rare ; 38763		X					
* <i>Commelina diffusa</i> Burm. f.; 38229	X,X		X	X	X	X	X
<i>Commelina erecta</i> L.; Rare ; 38795		X ^r					
* <i>Commelina gambiae</i> C.B. Clarke; 38144							X
* <i>Murdannia nudiflora</i> (L.) Brenan; 39166							X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
*Murdannia spirata (L.) G. Brückn.; 38129		X		X ^r			X
CYPERACEAE (12, 80; 13, 82)							
*Bulbostylis barbata (Rottb.) C.B. Clarke; 38224							X
Carex comosa Boott; Rare ; 38708				X			
Carex gigantea Rudge; Rare ; 39617	X ^c						
Carex longii Mack.; 38567							X
Carex lupuliformis Sartwell ex Dewey; 38856	X ^r	X ^c		X			X
Carex verrucosa Muhl.; 38851	X ^p ,X ^{pf}		X	X	X		
▫Carex vexans F.J. Herm.; 38292						X	X ^{pf-p}
Cladium jamaicense Crantz; 38789	X	X,X ^c	X,X ^m	X,X ^m	X		X
Cyperus articulatus L.; Rare ; 39219							X
*Cyperus blepharoleptos Steud. [Oxycaryum cubense (Poepp. & Kunth) Palla; Scirpus cubensis Poepp. & Kunth]; 38570					X	X	
Cyperus compressus L.; 39033							X
Cyperus croceus Vahl; 38510							X
Cyperus distinctus Steud.; 38293	X ^p				X	X	
*Cyperus esculentus L.; 38141							X
Cyperus flavescens L.; 38511							X
Cyperus haspan L.; 38649	X	X,X ^c ,X ^p	X	X,X ^r	X	X,X ^r	X
*Cyperus hyalinus Vahl [Kyllinga hyalina (Vahl) T. Koyama]; Rare ; 39313							X
*Cyperus iria L.; 38732						X ^r	
Cyperus ligularis L.; 38466							X
Cyperus odoratus L.; 38568			X ^c	X	X	X ^r	X
Cyperus ovatus Baldwin; Rare ; 39164							X
Cyperus polystachyos Rottb.; 38294		X,X ^r		X			X
*Cyperus pumilus L.; 38512							X
Cyperus retrorsus Chapm.; 38733							X
*Cyperus richardii Steud. [Kyllinga bulbosa P. Beauv.; Kyllinga macrocephala A. Rich.]; 38142							X
*Cyperus sphacelatus Rottb.; 39525		X,X ^r					X
Cyperus squarrosus L. [Cyperus aristatus Rottb.]; Rare ; 39220							X
Cyperus surinamensis Rottb.; 38266							X
Eleocharis baldwinii (Torr.) Chapm.; 38513		X ^c					X
Eleocharis cellulosa Torr.; 38758		X ^c	X				X(flooded)

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Eleocharis flavescens</i> (Poir.) Urb.; 39056		X ^r					X
<i>Eleocharis geniculata</i> (L.) Roem. & Schult.; 38791							X
<i>Eleocharis interstincta</i> (Vahl) Roem. & Schult.; 38008					X	X	X
<i>Eleocharis microcarpa</i> Torr.; Rare ; 38650				X			X
* <i>Eleocharis nigrescens</i> (Nees) Steud.; 39057		X					X
<i>Fimbristylis autumnalis</i> (L.) Roem. & Schult.; 38515							X
<i>Fimbristylis caroliniana</i> (Lam.) Fernald; 38944	X ^{pf} (in opening)		X				
<i>Fimbristylis cymosa</i> R. Br.; 38516							X
<i>Fimbristylis dichotoma</i> (L.) Vahl; 38569						X	X
* <i>Fimbristylis littoralis</i> Gaudich. [<i>Fimbristylis miliacea</i> (L.) Vahl]; Rare ; 39310						X	
<i>Fimbristylis puberula</i> (Michx.) Vahl; 39495		X					
* <i>Fimbristylis schoenoides</i> (Retz.) Vahl; 39087							X
<i>Fimbristylis spadiacea</i> (L.) Vahl; 38438		X,X ^r					
<i>Fuirena breviseta</i> (Coville) Coville; 37921		X,X ^r		X ^r			
<i>Fuirena pumila</i> (Torr.) Spreng.; 38405		X ^r					X
<i>Fuirena scirpoidea</i> Michx.; 38406		X,X ^r	X,X ^r		X	X	X
* <i>Kyllinga brevifolia</i> Rottb.; 38268		X ^r					X
<i>Kyllinga odorata</i> Vahl; Rare ; 38365							X
* <i>Kyllinga squamulata</i> Thonn. ex Vahl; Rare ; 38517							X
* <i>Lipocarpa aristulata</i> (Coville) G.C. Tucker; 38269		X ^r					
<i>Lipocarpa maculata</i> (Michx.) Torr.; 38518							X
<i>Lipocarpa micrantha</i> (Vahl) G.C. Tucker; 38519							X
<i>Rhynchospora colorata</i> (L.) H. Pfeiff. [<i>Dichromena colorata</i> (L.) Hitchc.]; 38790		X ^c ,X ^r	X		X		X
<i>Rhynchospora corniculata</i> (Lam.) A. Gray; Rare ; 38734					X		
<i>Rhynchospora distans</i> (Michx.) Vahl [<i>Rhynchospora fascicularis</i> (Michx.) Vahl var. <i>distans</i> (Michx.) Chapm.]; Rare ; 39088		X					
<i>Rhynchospora divergens</i> Chapm. ex M.A. Curtis; 38088		X,X ^r	X	X		X	
<i>Rhynchospora eximia</i> (Nees) Boeck.[<i>Psilocarya schiedeana</i> (Kunth) Liebm.]; Rare ; 39094		X ^r					X,X
<i>Rhynchospora fascicularis</i> (Michx.) Vahl; 38571		X					X
<i>Rhynchospora fernaldii</i> Gale; Rare ; 38520		X,X ^r					
<i>Rhynchospora filifolia</i> A. Gray; 38544		X	X	X			
<i>Rhynchospora floridensis</i> (Britton ex Small) H. Pfeiff. [<i>Dichromena floridensis</i> Britton ex Small]; W.S. Judd 8027; 1999 (UF)							

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Rhynchospora globularis</i> (Chapm.) Small; 38439	X ^{pf}	X					
<i>Rhynchospora intermedia</i> (Chapm.) Britton; Rare ; 38760		X					
<i>Rhynchospora inundata</i> (Oakes) Fernald; 38545		X	X		X		
<i>Rhynchospora latifolia</i> (Baldwin) W.W. Thomas [<i>Dichromena latifolia</i> Baldwin]; Rare ; 38735		X					
<i>Rhynchospora microcarpa</i> Baldwin ex A. Gray (including <i>Rhynchospora sulcata</i> Gale); 38089		X	X	X	X		
<i>Rhynchospora miliacea</i> (Lam.) A. Gray; 37926	X ^c ,X	X		X			
<i>Rhynchospora nitens</i> (Vahl) A. Gray [<i>Psilocarya nitens</i> (Vahl) A.W. Wood]; 38087		X					X
<i>Rhynchospora odorata</i> C. Wright ex Griseb.; 38440		X					X
<i>Rhynchospora plumosa</i> Elliott; Rare ; 39318		X					
<i>Rhynchospora pusilla</i> Chapm. ex M.A. Curtis; Rare ; 39097		X					
<i>Rhynchospora rariflora</i> (Michx.) Elliott; Rare ; 38965	X ^{pf}						X
<i>Rhynchospora tracyi</i> Britton; 38652		X,X ^c	X	X	X		
Schoenoplectus pungens (Vahl) Palla; J.L. Hansen & M.J. Huebschen s.n.; 1977 (CSS)							
<i>Schoenus nigricans</i> L.; 38547		X,X ^c					
<i>Scleria baldwinii</i> (Torr.) Steud.; 38736			X		X,X		
<i>Scleria ciliata</i> Michx.; Rare ; 38657		X					
<i>Scleria distans</i> Poir. [<i>Scleria hirtella</i> Sw.]; Rare ; 38792		X,X					X
<i>Scleria georgiana</i> Core; 38548		X					
* <i>Scleria lacustris</i> C. Wright; FLEPPC I; 39102		X,X ^t	X			X	X
<i>Scleria reticularis</i> Michx.; 38090		X					X
<i>Scleria verticillata</i> Muhl. ex Willd.; 38521							X
DIOSCOREACEAE (1, 1)							
* <i>Dioscorea bulbifera</i> L.; Rare ; FLEPPC I; 38230							X
ERIOCAULACEAE (3, 5)							
<i>Eriocaulon compressum</i> Lam.; 38231		X,X ^c ,X ^m	X	X,X ^t			
<i>Eriocaulon decangulare</i> L.; 38324		X,X ^p	X				X
<i>Eriocaulon ravenelii</i> Chapm.; 39167		X					
<i>Lachnocaulon anceps</i> (Walter) Morong; 38658		X,X					
<i>Syngonanthus flavidulus</i> (Michx.) Ruhland; 38325		X					
HAEMODORACEAE (1, 1)							
<i>Lachnanthes caroliana</i> (Lam.) Dandy; Rare ; 38573							X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
HYACINTHACEAE (1, 1)							
Schoenolirion albiflorum (Raf.) R.R. Gates; 38946		X					
HYDROCHARITACEAE (3, 3)							
*Hydrilla verticillata (L. f.) Royle; Rare ; FLEPPC I; 38948							X(flooded)
Limnobia spongia (Bosc) Rich. ex Steud.; 38012				X	X		
Najas guadalupensis (Spreng.) Magnus; Rare ; 39037							X
HYPOXIDACEAE (1, 1)							
Hypoxis juncea Sm.; 38357		X,X ^r					
IRIDACEAE (2, 3)							
Iris savannarum Small; 38659	X,X	X,X ^c ,X ^p ,X ^r	X ^c	X		X	
Sisyrinchium angustifolium Mill.; Rare ; 38550		X,X ^r	X ^r				X ^{pf-c}
Sisyrinchium nashii E.P. Bicknell; Rare ; 39647		X ^c					X ^{pf-c}
JUNCACEAE (1, 7)							
Juncus dichotomus Elliott; Rare ; 39587							X
Juncus effusus L.; Rare ; 39446							X(flooded)
Juncus marginatus Rostk.; 38296	X	X					X
Juncus megacephalus M.A. Curtis; 38862		X,X ^r	X			X	X,X ^{pf-c}
♯Juncus paludosus E.L. Bridges & Orzell; 38863	X ^c ,X		X ^r	X			X
Juncus repens Michx.; Rare ; 38764			X ^{aq}				
Juncus scirpoides Lam.; Rare ; 38574		X					X
LEMNACEAE (5, 6; 5, 7)							
*Landoltia punctata (G. Mey.) Les & D.J. Crawford; FLEPPC II; 37989	X			X		X	
Lemna obscura (Austin) Daubs; Rare ; 39158						X	
Lemna valdiviana Phil.; 38278						X	
Spirodela polyrhiza (L.) Schleid.; 38279						X	X(flooded)
Wolffia columbiana H. Karst.; 38499						X	
Wolffiella gladiata (Hegelm.) Hegelm.; P. Genelle & G. Fleming 589; 1971 (USF)							
Wolffiella oblonga (Phil.) Hegelm.; 37991						X	
LILIACEAE (1, 1)							
Lilium catesbaei Walter; 39291		X,X ^r					X
MARANTACEAE (1, 1)							
Thalia geniculata L. (two forms in which the foliage leaves exhibit green leaf sheaths and red leaf sheaths [Rare], respectively); 38013	X ^c	X ^r		X	X	X	X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
NARTHECIACEAE (1, 1)							
<i>Aletris lutea</i> Small; 38741		X,X ^c ,X ^r					X
ORCHIDACEAE (17, 28; 18, 29)							
* <i>Bletia</i> sp. or <i>Bletia</i> -like species; Rare ; 40095		X					
<i>Calopogon pallidus</i> Chapm. (pink-flowered forma plus a white-flowered forma); Rare ; 38898, 38900 (photographs)		X					
<i>Calopogon tuberosus</i> (L.) Britton et al.; Rare ; 38765		X					
<i>Cyrtopodium punctatum</i> (L.) Lindl.; Rare ; 39999; (photograph)				X			
<i>Dendrophylax lindenii</i> (Lindl.) Benth. ex Rolfe [<i>Polyrrhiza lindenii</i> (Lindl.); Cogn.]; Rare ; 38280, 38281 (photographs)				X			
<i>Dendrophylax porrectus</i> (Rchb.f.) Carlswald & Whitten [<i>Harrisella porrecta</i> (Rchb.f.) Fawc. & Rendle]; Rare ; 38638				X			
<i>Encyclia tampensis</i> (Lindl.) Small; Rare ; 38850	X		X ^c	X,X ^m ,X ^r	X		
<i>Epidendrum anceps</i> Jacq.; Rare ; 38289 (photographs)	X ^c			X,X ^m			
<i>Epidendrum floridense</i> Hågsater; Rare ; 39692, 39693 (photographs)				X,X ^m			
<i>Epidendrum nocturnum</i> Jacq.; Rare ; 38897 (photograph)				X			
<i>Epidendrum rigidum</i> Jacq.; 38286 (photograph)				X,X ^m	X		
<i>Eulophia alta</i> (L.) Fawc. & Rendle; 37886 (photographs)		X,X ^r					
* <i>Eulophia graminea</i> Lindl.; Rare ; FLEPPC II; 38743							X
<i>Habenaria floribunda</i> Lindl. [<i>Habenaria odontopetala</i> Rchb.f.]; 38575	X	X,X ^r		X			
<i>Habenaria quinqueseta</i> (Michx.) Eaton; Rare ; 39320		X					
<i>Ionopsis utricularioides</i> (Sw.) Lindl.; Rare ; 39714 (photograph)							
Malaxis spicata Sw.; (photograph); M. Duever 39695; 1991 (SWF)							
* <i>Oeceoclades maculata</i> (Lindl.) Lindl.; 38259	X			X			X
<i>Platanthera nivea</i> (Nutt.) Luer [<i>Habenaria nivea</i> (Nutt.) Spreng.]; Rare ; 38895 (photograph)		X					
<i>Polystachya concreta</i> (Jacq.) Garay & H.R. Sweet; Rare ; 38287 (photographs)	X ^c			X			
<i>Prosthechea cochleata</i> (L.) W.E. Higgins; Rare ; 38896 (photograph)				X			
<i>Pteroglossaspis ecristata</i> (Fernald) Rolfe; Rare ; 39237 (photographs)		X ^r					
<i>Sacoila lanceolata</i> (Aubl.) Garay var. <i>lanceolata</i> ; Rare ; 38766		X					X
<i>Sacoila lanceolata</i> (Aubl.) Garay var. <i>paludicola</i> (Luer) Saulea et al.; Rare ; 39694 (photograph)				X			
<i>Spiranthes lacera</i> (Raf.) Raf. [<i>Spiranthes eatonii</i> Ames ex P.M. Br.]; 38661		X					
<i>Spiranthes odorata</i> (Nutt.) Lindl.; 38232	X			X			

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Spiranthes praecox</i> (Walter) S. Watson; 38662		X					
<i>Spiranthes vernalis</i> Englem. & A. Gray; 38551		X,X ^r					
* <i>Zeuxine strateumatica</i> (L.) Schltr.; 38327				X		X ^r	X
POACEAE (46, 123; 47, 125)							
<i>Amphicarpum muehlenbergianum</i> (Schult.) Hitchc.; 38291		X					
<i>Andropogon brachystachyus</i> Chapm.; 39171		X					
<i>Andropogon glomeratus</i> (Walter) Britton et al.; 38072		X,X ^r	X		X		
<i>Andropogon glomeratus</i> (Walter) Britton et al. var. <i>glaucopsis</i> (Elliott) C. Mohr; 39402		X					
<i>Andropogon longiberbis</i> Hack.; Rare ; 39213		X					
<i>Andropogon virginicus</i> L. var. <i>decipiens</i> C.S. Campb.; 39023		X ^r					
<i>Andropogon virginicus</i> L. var. <i>glaucus</i> Hack.; 38073		X,X ^c					
<i>Andropogon virginicus</i> L. var. <i>virginicus</i> ; 39962							X
<i>Aristida palustris</i> (Chapm.) Vascy; Rare ; 38361		X			X		
‡ <i>Aristida patula</i> Chapm. ex Nash; Rare ; 39407		X ^r					X
<i>Aristida purpurascens</i> Poir. var. <i>purpurascens</i> ; Rare ; 38855							X
<i>Aristida purpurascens</i> Poir. var. <i>tenuispica</i> (Hitchc.) Allred; Rare ; 39277		X					
<i>Aristida purpurascens</i> Poir. var. <i>virgata</i> (Trin.) Allred; Rare ; 39255		X					
<i>Aristida spiciformis</i> Elliott; 38435		X					
<i>Aristida stricta</i> Michx.; Rare ; 39803		X,X ^r					
<i>Axonopus compressus</i> (Sw.) P. Beauv.; 38709							X
<i>Axonopus fissifolius</i> (Raddi) Kuhl.; 38003							X
<i>Axonopus furcatus</i> (Flüggé) Hitchc.; 38501							X
* <i>Bothriochloa ischaemum</i> (L.) Keng; Rare ; 38132							X
<i>Cenchrus echinatus</i> L.; Rare ; 38936							X
<i>Cenchrus spinifex</i> Cav. [<i>Cenchrus incertus</i> M.A. Curtis]; 38218							X
<i>Chrysopogon pauciflorus</i> (Chapm.) Benth. ex Vasey; 39416		X,X ^r					
<i>Coelorachis rugosa</i> (Nutt.) Nash; Rare ; 38745		X ^r	X	X			
* <i>Cynodon dactylon</i> (L.) Pers.; 38710							X
* <i>Dactyloctenium aegyptium</i> (L.) Willd. ex Asch. & Schweinf.; FLEPPC II; 38780							X
<i>Dichantherium aciculare</i> (Desv. ex Poir.) Gould & C.A. Clark subsp. <i>fusiforme</i> (Hitchc.) Freckmann & Lelong; Rare ; 39583		X					
<i>Dichantherium aciculare</i> (Desv. ex Poir.) Gould & C.A. Clark subsp. <i>neuranthum</i> (Griseb.) Freckmann & Lelong; Rare ; 38727		X					X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Dichanthelium commutatum</i> (Schult.) Gould; 38004	X,X ^{pf}			X			X
<i>Dichanthelium dichotomum</i> (L.) Gould subsp. <i>roanokense</i> (Ashe) Freckmann & Lelong; 38133		X,X ^r		X	X		
<i>Dichanthelium dichotomum</i> (L.) Gould subsp. <i>nitidum</i> (Lam.) Freckmann & Lelong; Rare ; 38746		X ^r					
<i>Dichanthelium ensifolium</i> (Baldwin ex Elliott) Gould var. <i>ensifolium</i> ; Rare ; 38313		X					
<i>Dichanthelium ensifolium</i> (Baldwin ex Elliott) Gould var. <i>unciphylum</i> (Trin.) B.F. Hansen & Wunderlin; Rare ; 38502		X					
<i>Dichanthelium erectifolium</i> (Nash) Gould & C.A. Clark; 38314		X,X ^s ,X ^p	X	X			
<i>Dichanthelium laxiflorum</i> (Lam.) Gould; Rare ; 38005		X ^r					
<i>Dichanthelium ovale</i> (Elliott) Gould & C.A. Clark; Rare ; 38541		X ^r					X
<i>Dichanthelium portoricense</i> (Desv. ex Ham.) B.F. Hansen & Wunderlin; 38315		X					
<i>Dichanthelium strigosum</i> (Muhl. ex Elliott) Freckmann var. <i>glabrescens</i> (Griseb.) Freckmann; Rare ; 38558		X					
* <i>Digitaria bicornis</i> (Lam.) Roem. & Schult. ex Loudon; Rare ; 38559							X
<i>Digitaria ciliaris</i> (Retz.) Koeler var. <i>ciliaris</i> ; 38923				X		X	X
<i>Digitaria filiformis</i> (L.) Koeler; Rare ; 39279							X
* <i>Digitaria longiflora</i> (Retz.) Pers.; 39040		X				X,X ^r	X
<i>Digitaria serotina</i> (Walter) Michx.; Rare ; 38134							X
* <i>Echinochloa colona</i> (L.) Link; Rare ; 38782		X ^m		X ^r			X
* <i>Echinochloa crus-galli</i> (L.) P. Beauv.; Rare ; 39517							X
♠ <i>Echinochloa paludigena</i> Wiegand; 38006			X	X	X	X	
<i>Echinochloa walteri</i> (Pursh) A. Heller; Rare ; 38641			X	X	X	X	X
* <i>Eleusine indica</i> (L.) Gaertn.; 38783						X ^r	X
<i>Elionurus tripsacoides</i> Humb. & Bonpl. ex Willd.; Rare ; 39280		X,X ^r					
* <i>Eragrostis amabilis</i> (L.) Wight & Arn. ex Hook. & Arn.; Rare ; 39024							X
* <i>Eragrostis atrovirens</i> (Desf.) Trin. ex Steud.; 38400		X ^r		X,X ^r			X
* <i>Eragrostis ciliaris</i> (L.) R. Br. var. <i>ciliaris</i> ; 38135							X
* <i>Eragrostis cumingii</i> Steud.; Rare ; 40098							X
<i>Eragrostis elliotii</i> S. Watson; 38263		X,X ^r					
* <i>Eragrostis gangetica</i> (Roxb.) Steud.; 38362							X
<i>Eragrostis hypnoides</i> (Lam.) Britton et al.; Rare ; 39808			X				
* <i>Eragrostis scaligera</i> Salzm. ex Steud.; 39168							X
<i>Eragrostis virginica</i> (Zuccagni) Steud. [<i>Eragrostis refracta</i> Scribn.]; Rare ; 39128							X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
* <i>Eremochloa ophiuroides</i> (Munro) Hack.; Rare ; 38505							X
<i>Eriochloa michauxii</i> (Poir.) Hitchc. var. <i>michauxii</i> ; Rare ; 38937	X ^{pf} (in opening)	X					
<i>Eustachys glauca</i> Chapm.; 38711		X,X ^c					X
<i>Eustachys petraea</i> (Sw.) Desv.; 38076		X ^r				X ^r	X
<i>Gymnopogon chapmanianus</i> Hitchc.; Rare ; 39467		X,X ^r					X
* <i>Hemarthria altissima</i> (Poir.) Stapf & C.E. Hubb.; Rare ; FLEPPC II; 39041							X
* <i>Hymenachne amplexicaulis</i> (Rudge) Nees; FLEPPC I; 38560		X ^r		X,X ^r	X	X,X ^r	X
* <i>Imperata cylindrica</i> (L.) P. Beauv.; Rare ; FLEPPC I; 38543		X					
<i>Leersia hexandra</i> Sw.; 38561		X,X ^r	X		X	X	X
<i>Leptochloa fusca</i> (L.) Kunth subsp. <i>fascicularis</i> (Lam.) N. Snow; Rare ; 38748			X ^r				
<i>Luziola fluitans</i> (Michx.) Terrell & H. Rob.; 39025					X		X
* <i>Melinis repens</i> (Willd.) Zizka [<i>Rhynchelytrum repens</i> (Willd.) C.E. Hubb.]; FLEPPC I; 38221							X
<i>Muhlenbergia capillaris</i> (Lam.) Trin.; 37957		X,X ^c ,X ^p ,X ^r	X				
<i>Oplismenus hirtellus</i> (L.) P. Beauv. sensu lato; Rare ; 38462	X ^{pf}						
<i>Panicum anceps</i> Michx. [<i>Coleataenia anceps</i> (Michx.) Soreng]; 38784							X
<i>Panicum dichotomiflorum</i> Michx. var. <i>bartowense</i> (Scribn. & Merr.) Fernald; 39368		X	X	X			X
<i>Panicum dichotomiflorum</i> Michx. var. <i>dichotomiflorum</i> ; 38007			X				X
<i>Panicum hemitomom</i> Schult.; 38642	X ^r		X	X	X	X	
<i>Panicum hians</i> Elliott [<i>Steinchisma hians</i> (Elliott) Nash]; 38316		X,X ^p					X
* <i>Panicum laxum</i> Sw. [<i>Steinchisma laxum</i> (Sw.) Zuloaga]; Rare ; 39428		X					X
* <i>Panicum repens</i> L.; FLEPPC I; 38785					X	X	X
<i>Panicum rigidulum</i> Bosc ex Nees [<i>Coleataenia rigidula</i> (Bosc ex Nees) LeBlond]; 38044	X	X,X ^r	X	X	X	X	X
<i>Panicum tenerum</i> Beyr. ex Trin. [<i>Coleataenia tenera</i> (Beyrich ex Trin.) Soreng]; 39256		X,X ^c	X	X			X(flooded)
<i>Panicum virgatum</i> L.; Rare ; 39282		X	X				
<i>Paspalidium geminatum</i> (Forssk.) Stapf; 38222			X	X	X		X ^{pf-p}
* <i>Paspalum acuminatum</i> Raddi; 39081						X	X
<i>Paspalum caespitosum</i> Flügge; 38264							X
<i>Paspalum conjugatum</i> Bergius; 38401		X ^r		X			X
<i>Paspalum distichum</i> L.; 39027							X
<i>Paspalum floridanum</i> Michx.; Rare ; 38122		X					X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Paspalum laeve</i> Michx.; Rare ; 38730		X,X ^f					X
<i>Paspalum monostachyum</i> Vasey ex Chapm.; 39048		X,X ^c	X				
* <i>Paspalum nicorae</i> Parodi; Rare ; 39051							X
* <i>Paspalum notatum</i> Flügge; 38938							X
<i>Paspalum plicatum</i> Michx.; Rare ; 39471			X				X
<i>Paspalum praecox</i> Walter; Rare ; 38731		X					
<i>Paspalum repens</i> Bergius; 38852				X		X	X(flooded)
<i>Paspalum setaceum</i> Michx. var. <i>ciliatifolium</i> (Michx.) Vasey (atypical material); Rare ; 38648							X
<i>Paspalum setaceum</i> Michx. var. <i>longipedunculatum</i> (Leconte) Alph. Wood; Rare ; 39032		X,X					
<i>Paspalum setaceum</i> Michx. var. <i>stramineum</i> (Nash) D.J. Banks; 38753		X					X
<i>Paspalum setaceum</i> Michx. var. <i>supinum</i> (Bosc ex Poir.) Trin.; Rare ; 39085		X					
* <i>Paspalum urvillei</i> Steud.; 38138			X				X
<i>Paspalum vaginatum</i> Sw.; Rare ; 38139							X
* <i>Pennisetum polystachion</i> (L.) Schult.; FLEPPC II; 39356							X
<i>Phragmites australis</i> (Cav.) Trin. ex Steud. sensu lato; 39371		X ^c	X,X ^c			X	X
* <i>Rottboellia cochinchinensis</i> (Lour.) Clayton; Rare ; 39516							X
<i>Saccharum giganteum</i> (Walter) Pers.; 38364		X,X ^c	X	X	X		
* <i>Sacciolepis indica</i> (L.) Chase; 38329		X		X			X
<i>Sacciolepis striata</i> (L.) Nash; 38564			X		X		X
♯ <i>Schizachyrium rhizomatum</i> (Swallen) Gould; Rare ; 39258		X					
<i>Schizachyrium scoparium</i> (Michx.) Nash var. <i>scoparium</i> ; Rare ; 39283		X,X ^f					
<i>Setaria magna</i> Griseb.; Rare ; 39995					X		
<i>Setaria parviflora</i> (Poir.) Kerguelén; 38565		X	X	X		X	X
<i>Sorghastrum secundum</i> (Elliott) Nash; 39427		X					
* <i>Sorghum bicolor</i> (L.) Moench; Rare ; 38566							X
<i>Spartina bakeri</i> Merr.; 38509			X		X		
* <i>Sporobolus indicus</i> (L.) R. Br. [<i>Sporobolus indicus</i> (L.) R. Br. var. <i>indicus</i>]; Rare ; 40099							X
* <i>Sporobolus jacquemontii</i> Kunth [<i>Sporobolus indicus</i> (L.) R. Br. var. <i>pyramidalis</i> (P. Beauv.) Veldkamp]; FLEPPC I; 38788							X,X
<i>Sporobolus junceus</i> (P. Beauv.) Kunth; Rare ; 38754		X					
<i>Stenotaphrum secundatum</i> (Walter) Kuntze; W.S. Judd 6708; 1992 (UF)							
<i>Tripsacum dactyloides</i> (L.) L.; Rare ; 38926		X ^f					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
*Urochloa arrecta (Hack. ex T. Durand & Schinz) Morrone & Zuloaga; 38265						X	X
*Urochloa distachya (L.) T.Q. Nguyen [Urochloa subquadripa (Trin.) R.D. Webster]; Rare ; 38508							X
*Urochloa maxima (Jacq.) R.D. Webster [Panicum maximum Jacq.]; Rare ; FLEPPC II; 39080							X
*Urochloa mutica (Forssk.) T.Q. Nguyen; Rare ; FLEPPC I; 39361		X ^c ,X ^r					
*Urochloa piligera (F. Muell. ex Benth.) R.D. Webster; 39217							X
*Urochloa ramosa (L.) T.Q. Nguyen; G. Wilder, A. Webb, L. Berthelsen & J. Roche 30110; 2009 (SWF)							
Zizaniopsis miliacea (Michx.) Döll & Asch.; 38712				X,X ^m	X		
PONTERIACEAE (3, 3)							
*Eichhornia crassipes (Mart.) Solms; FLEPPC I; 38147						X	
*Heteranthera limosa (Sw.) Willd.; 38275							X
Pontederia cordata L. (blue-flowered forma plus a primarily white-flowered forma); 38276	X,X ^c ,X	X,X ^c ,X ^r	X,X ^r	X,X ^m	X	X	X
POTAMOGETONACEAE (1, 1)							
Potamogeton illinoensis Morong; Anonymous s.n.; 1977 (CSS)							
SMILACACEAE (1, 4)							
Smilax auriculata Walter; Rare ; 38720							X
Smilax bona-nox L.; 39825	X,X ^r						
Smilax laurifolia L.; 38299	X	X,X ^c	X	X,X ^m		X	
Smilax tamnoides L.; Rare ; 38721		X,X ^r		X ^r			
TYPHACEAE (1, 2)							
Typha domingensis Pers.; 21246				X ^m	X	X	X
Typha latifolia L.; 38742					X	X	
XYRIDACEAE (1, 6)							
Xyris ambigua Beyr. ex Kunth; 37928		X					
Xyris brevifolia Michx.; Rare ; 38663		X,X					X
Xyris caroliniana Walter; 39526		X					
Xyris elliotii Chapm.; 38552		X	X				
Xyris flabelliformis Kral; Rare ; 38277		X					
Xyris jupicai Rich.; 38865		X				X	

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
DICOTYLEDONS SENSU LATO (256, 427; 259, 434)							
ACANTHACEAE (5, 7)							
Dicliptera sexangularis (L.) Juss.; Rare ; 38666							X
Dyschoriste angusta (A. Gray) Small; 38407		X					X
Dyschoriste oblongifolia (Michx.) Kuntze (purple-flowered forma plus a white-flowered forma); Rare ; 38442		X					
♯Elytraria caroliniensis (J.F. Gmel.) Pers. var. angustifolia (Fernald) S.F. Blake; Rare ; 38605		X,X ^r					
Justicia angusta (Chapm.) Small; 38818			X		X		X ^{pf-c} ,X ^{pf-h}
*Ruellia blechum L. [Blechum pyramidatum (Lam.) Urb.]; FLEPPC II; 38366							X
♯Ruellia succulenta Small; Rare ; 38797		X,X ^r					
ADOXACEAE (1, 1)							
Sambucus nigra L. [Sambucus canadensis L.]; 38014	X,X ^{pf} ,X		X	X	X		X
AMARANTHACEAE (5, 8; 5, 9)							
*Alternanthera philoxeroides (Mart.) Griseb.; Rare ; FLEPPC II; 38802					X	X	
*Alternanthera sessilis (L.) R. Br. ex DC.; 38684			X	X ^r		X	
Amaranthus australis (A. Gray) J.D. Sauer; 38804				X		X	
*Amaranthus blitum L.; 38367							X
*Amaranthus spinosus L.; M.J. Barry s.n.; no date (CSS)							
*Amaranthus viridis L.; Rare ; 38990							X
Chenopodium berlandieri Moq.; Rare ; 39749							X
*Gomphrena serrata L.; Rare ; 38015							X
Iresine diffusa Humb. & Bonpl. ex Willd.; 38576				X		X ^r	X
ANACARDIACEAE (3, 3)							
Rhus copallinum L.; 38408	X ^{pf}	X,X ^r					
*Schinus terebinthifolia Raddi; FLEPPC I; 38095	X,X ^{pf} ,X	X,X ^c ,X ^r	X ^c	X,X ^r	X	X	X
Toxicodendron radicans (L.) Kuntze; 38301	X,X ^c ,X ^{pf}	X,X ^c ,X ^r		X,X ^m			
ANNONACEAE (2, 2)							
Annona glabra L.; 38016	X ^c ,X	X,X ^c ,X ^r	X,X ^c	X,X ^m	X	X	X
Asimina reticulata Shuttlew. ex Chapm.; 38608		X,X ^r					X,X
APIACEAE (4, 6)							
Cicuta maculata L.; 38848				X	X		
Eryngium aromaticum Baldwin; 39239		X,X ^r					
Eryngium baldwinii Spreng.; 38819		X					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Eryngium yuccifolium</i> Michx.; 38150		X					
<i>Ptilimnium capillaceum</i> (Michx.) Raf.; 38151	X		X	X,X ^m		X	X
<i>Tiedemannia filiformis</i> (Walter) Feist & S.R. Downie subsp. <i>filiformis</i> [<i>Oxyopolis filiformis</i> (Walter) Britton subsp. <i>filiformis</i>]; 38096		X,X ^c	X	X	X		
APOCYNACEAE (3, 6)							
* <i>Asclepias curassavica</i> L.; Rare ; 38338							X
<i>Asclepias incarnata</i> L.; 39005	X ^r		X				
<i>Asclepias lanceolata</i> Walter; 38823		X,X ^c	X				
<i>Asclepias longifolia</i> Michx.; 38847		X,X ^p					
<i>Cynanchum</i> sp. sensu lato (sterile); Rare ; 39621	X,X ^r	X		X			
<i>Funastrum clausum</i> (Jacq.) Schltr. [<i>Sarcostemma clausum</i> (Jacq.) Roem. & Schult.]; 38368		X,X ^c ,X ^p ,X ^r	X ^c	X,X ^m	X	X	X
AQUIFOLIACEAE (1, 2)							
<i>Ilex cassine</i> L.; 38017	X,X ^c ,X ^r ,X	X,X ^c	X	X,X ^m		X,X ^r	
<i>Ilex glabra</i> (L.) A. Gray; 38331		X					
ARALIACEAE (2, 4)							
<i>Centella asiatica</i> (L.) Urb.; 38668	X,X ^{pf}	X,X ^c	X,X ^c	X,X ^r	X	X	X
<i>Hydrocotyle umbellata</i> L.; 38522		X	X	X,X ^r	X	X	X
<i>Hydrocotyle verticillata</i> Thunb. var. <i>triradiata</i> (A. Rich.) Fernald; Rare ; 38820				X			
<i>Hydrocotyle verticillata</i> Thunb. var. <i>verticillata</i> ; 38821	X		X ^r	X		X	X
ASTERACEAE (49, 73; 49, 74)							
<i>Acmella oppositifolia</i> (Lam.) R. K. Jansen; Rare ; 38182		X ^r	X	X			
* <i>Ageratum conyzoides</i> L.; 38019						X	X
<i>Ambrosia artemisiifolia</i> L.; 38302	X ^{pf}	X ^r				X	X
<i>Baccharis glomeruliflora</i> Pers.; 38410		X,X ^c ,X ^r		X	X	X ^r	
<i>Baccharis halimifolia</i> L.; 38303		X,X ^r			X		X
<i>Bidens alba</i> (L.) DC.; 38183		X,X ^r		X		X,X ^r	X
<i>Bidens laevis</i> (L.) Britton et al.; Rare ; 39476				X ^m			X(flooded)
♯ <i>Bigelovia nudata</i> (Michx.) DC. subsp. <i>australis</i> L.C. Anderson; 39529		X,X ^r					
<i>Boltonia diffusa</i> Elliott; 38152		X,X ^c ,X ^p	X,X ^r	X,X ^r	X		X
<i>Carphephorus corymbosus</i> (Nutt.) Torr. & A. Gray; Rare ; 39531		X					
♯ <i>Carphephorus odoratissimus</i> (J.F. Gmel.) H. Hebert var. <i>subtropicanus</i> (DeLaney et al.) Wunderlin & B.F. Hansen; 38184		X					
<i>Carphephorus paniculatus</i> (J.F. Gmel.) H. Hebert; Rare ; 39240		X ^r					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Chaptalia tomentosa</i> Vent.; Rare ; 38609		X					
<i>Chromolaena odorata</i> (L.) R.M. King & H. Rob.; Rare ; 39925							X
<i>Cirsium horridulum</i> Michx. (pink-flowered forma plus a white-flowered forma); 38611		X,X ^c ,X ^r					
<i>Cirsium nuttallii</i> DC.; 38021	X	X	X,X ^{aq}	X ^m		X	X
<i>Conoclinium coelestinum</i> (L.) DC. (blue-flowered forma plus a white-flowered forma); Rare ; 38992	X ^{pf}	X ^r				X ^r	
<i>Conyza canadensis</i> (L.) Cronquist; 38332							X
<i>Coreopsis leavenworthii</i> Torr. & A. Gray; 37984		X,X ^c ,X ^r					X
* <i>Crassocephalum crepidioides</i> (Benth.) S. Moore; FLEPPC II; 39438				X ^m		X	X
* <i>Cyanthillium cinereum</i> (L.) H. Rob. [<i>Vernonia cinerea</i> (L.) Less.]; 38185		X					X
<i>Eclipta prostrata</i> (L.); 38577	X			X		X,X ^r	X
<i>Elephantopus elatus</i> Bertol.; 38473		X,X ^r					
* <i>Emilia fosbergii</i> Nicolson; 37934		X,X ^r		X		X,X ^r	X
* <i>Emilia sonchifolia</i> (L.) DC.; Rare ; 38186				X,X ^m			X
<i>Erechtites hieraciifolius</i> (L.) Raf. ex DC.; 38578		X		X	X	X,X ^r	X
<i>Erigeron quercifolius</i> Poir.; 38187		X ^r	X,X ^c	X,X ^r		X	X
<i>Erigeron vernus</i> (L.) Torr. & A. Gray; 38444		X,X ^r					
<i>Eupatorium capillifolium</i> (Lam.) Small ex Porter & Britton; 38412	X,X ^{pf}	X,X ^r	X	X,X ^m	X	X,X ^r	X
<i>Eupatorium leptophyllum</i> DC.; 38413		X	X	X			X
♯ <i>Eupatorium mikanioides</i> Chapm.; 38973		X	X				X,X ^{pf-c}
<i>Eupatorium mohrii</i> Greene; 38671		X					X
<i>Euthamia caroliniana</i> (L.) Greene ex Porter & Britton [<i>Euthamia minor</i> (Michx.) Greene]; 38101		X,X ^p	X				X
<i>Flaveria linearis</i> Lag.; Rare ; 38612		X,X ^c					
<i>Gamochaeta antillana</i> (Urb.) Anderb. [<i>Gamochaeta falcata</i> (Lam.) Cabrera]; 38686			X,X ^c	X		X,X ^r	X
* <i>Gamochaeta pensylvanica</i> (Willd.) Cabrera; 38334						X	X
<i>Helenium pinnatifidum</i> (Schwein. ex Nutt.) Rydb.; 38613		X,X ^r					X
<i>Helianthus agrestis</i> Pollard; 38768		X ^r	X				X
<i>Heterotheca subaxillaris</i> (Lam.) Britton & Rusby; Rare ; 39224							X
<i>Hieracium megacephalon</i> Nash; Rare ; 38769		X					
<i>Iva microcephala</i> Nutt.; 39451		X					X(flooded)
<i>Lactuca graminifolia</i> Michx.; Rare ; 38806						X ^r	
<i>Liatis garberi</i> A. Gray; Rare ; 39006		X,X ^r					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Liatrix gracilis</i> Pursh; Rare ; 39107		X,X'					
<i>Liatrix tenuifolia</i> Nutt.; 39475		X					
<i>Lygodesmia aphylla</i> (Nutt.) DC.; Rare ; 38770		X,X'					
<i>Melanthera nivea</i> (L.) Small; 38414		X,X'					X
<i>Mikania scandens</i> (L.) Willd.; 37936	X	X,X ^c ,X'	X	X,X ^m	X	X,X'	
<i>Packera glabella</i> (Poir.) C. Jeffrey; Rare ; 38672							X
<i>Pectis glaucescens</i> (Cass.) D.J. Keil; 38523							X
<i>Pectis prostrata</i> Cav.; 38524							X
<i>Pityopsis graminifolia</i> (Michx.) Nutt.; 38614		X,X'					
<i>Pluchea baccharis</i> (Mill.) Pruski [<i>Pluchea rosea</i> R.K. Godfrey]; 38615		X,X ^c ,X'	X,X ^c	X,X'	X	X	
* <i>Pluchea carolinensis</i> (Jacq.) G. Don; Rare ; 39532				X'			
<i>Pluchea odorata</i> (L.) Cass.; 38022		X,X'	X	X,X'	X	X	X
* <i>Pseudelephantopus spicatus</i> (B. Juss. ex Aubl.) C.F. Baker; 38688							X
<i>Pterocaulon pycnostachyum</i> (Michx.) Elliott; 38190		X					X
<i>Rudbeckia hirta</i> L.; 38616		X					
<i>Solidago fistulosa</i> Mill.; 38165		X,X'					X
<i>Solidago leavenworthii</i> Torr. & A. Gray; Rare ; 39447							X
<i>Solidago odora</i> Aiton; Rare ; 38474							X
<i>Solidago sempervirens</i> L.; 38617		X'					
<i>Solidago stricta</i> Aiton; W.S. Judd 5898; 1989 (CSS)							
* <i>Sonchus asper</i> (L.) Hill; Rare ; 38673						X'	
* <i>Sonchus oleraceus</i> L.; Rare ; 38335				X'		X	X
* <i>Sphagneticola trilobata</i> (L.) Pruski [<i>Wedelia trilobata</i> (L.) Hitchc.]; FLEPPC II; 38415							X
<i>Symphyotrichum carolinianum</i> (Walter) Wunderlin & B.F. Hansen; 38579	X,X ^c ,X	X,X ^c	X,X ^m	X	X	X'	X
<i>Symphyotrichum dumosum</i> (L.) G.L. Nesom; 38370		X					
<i>Symphyotrichum elliotii</i> (Torr. & A. Gray) G.L. Nesom; 38304		X	X		X	X,X'	X
<i>Symphyotrichum simmondsii</i> (Small) G.L. Nesom; 38526		X,X'			X		
<i>Symphyotrichum subulatum</i> (Michx.) G.L. Nesom sensu lato; Rare ; 38580						X	
* <i>Tithonia diversifolia</i> (Hemsl.) A. Gray; Rare ; 38336							X
<i>Vernonia blodgettii</i> Small; Rare ; 38824		X					
* <i>Youngia japonica</i> (L.) DC.; 38337				X'			
BIGNONIACEAE (1, 1)							
<i>Campsis radicans</i> (L.) Seemann; 38416							X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
BORAGINACEAE (2, 2)							
<i>Euploca polyphylla</i> (Lehm.) J.I.M. Melo & Semir [<i>Heliotropium polyphyllum</i> Lehm.]; 38618		X,X ^c ,X ^p ,X ^r	X				X
<i>Heliotropium angiospermum</i> Murray; 38371		X					X
BRASSICACEAE (4, 4)							
<i>Cardamine pensylvanica</i> Muhl. ex Willd. (possibly <i>Cardamine flexuosa</i>); 38339				X ^m			X
<i>Descurainia pinnata</i> (Walter) Britton; 38527							X
<i>Lepidium virginicum</i> L.; 38372							X
<i>Rorippa teres</i> (Michx.) Stuckey; 38619				X	X	X	X
BURSERACEAE (1, 1)							
<i>Bursera simaruba</i> (L.) Sarg.; Rare ; 38234	X						
CAMPANULACEAE (2, 5)							
♯ <i>Campanula floridana</i> S. Watson ex A. Gray; Rare ; 38674		X ^r					
<i>Lobelia feayana</i> A. Gray; 38199		X,X ^r					X
<i>Lobelia glandulosa</i> Walter; 38105		X,X ^c ,X ^r					X
♯ <i>Lobelia homophylla</i> E. Wimm.; 38200							X
<i>Lobelia paludosa</i> Nutt.; 38831		X					
CANNABACEAE (1, 1)							
<i>Celtis laevigata</i> Willd.; 38260	X,X ^r						
CARICACEAE (1, 1)							
<i>Carica papaya</i> L.; Rare ; 38235	X						
CARYOPHYLLACEAE (2, 2)							
* <i>Drymaria cordata</i> (L.) Willd. ex Schult.; 38236							X
<i>Stipulicida setacea</i> Michx. var. <i>lacerata</i> C.W. James; 39533		X					X
CERATOPHYLLACEAE (1, 1)							
<i>Ceratophyllum demersum</i> L.; Rare ; 39192					X		
CHRYSOBALANACEAE (2, 2)							
<i>Chrysobalanus icaco</i> L.; 38373	X	X,X ^c ,X ^r		X,X ^r			X
<i>Geobalanus oblongifolius</i> (Michx.) Small [<i>Licania michauxii</i> Prance]; Rare ; 38771		X					X
CISTACEAE (2, 2)							
<i>Crocanthemum corymbosum</i> (Michx.) Britton [<i>Helianthemum corymbosum</i> Michx.]; Rare ; 38772							X
<i>Lechea torreyi</i> (Chapm.) Legg. ex Britton; 39108		X					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
CLUSIACEAE (1, 9)							
<i>Hypericum brachyphyllum</i> (Spach) Steud.; Rare ; 39717		X	X				
<i>Hypericum cistifolium</i> Lam.; 38103	X ^{pf}	X					X
<i>Hypericum fasciculatum</i> Lam.; 38155		X,X ^c ,X ^r	X	X,X ^r			
<i>Hypericum gentianoides</i> (L.) Britton et al.; Rare ; 39536		X	X				
<i>Hypericum hypericoides</i> (L.) Crantz; 37940	X,X ^{pf}	X ^r					
<i>Hypericum mutilum</i> L.; 38156			X,X ^r			X	X
<i>Hypericum myrtifolium</i> Lam.; Rare ; 38481		X,X ^p					
<i>Hypericum tenuifolium</i> Pursh [<i>Hypericum reductum</i> (Svenson) W.P. Adams]; Rare ; 38383		X					
<i>Hypericum tetrapetalum</i> Lam.; 38422		X,X ^r					X
COMBRETACEAE (1, 2)							
* <i>Terminalia catappa</i> L.; Rare ; FLEPPC II; 39263							X
* <i>Terminalia muelleri</i> Benth.; FLEPPC II; Rare ; 38305	X ^r						
CONVOLVULACEAE (4, 7; 4, 8)							
<i>Cuscuta compacta</i> Juss. ex Choisy; Rare ; 39296	X					X ^r	
<i>Cuscuta indecora</i> Choisy; G.F. Guala 666; 1987 (UF)							
<i>Dichondra carolinensis</i> Michx.; Rare ; 38475							X
<i>Evolvulus sericeus</i> Sw.; 38935		X					
<i>Ipomoea alba</i> L.; 38374				X		X ^r	
<i>Ipomoea hederifolia</i> L.; Rare ; 38024		X ^r					
<i>Ipomoea sagittata</i> Poir.; 38825	X ^{pf}	X,X ^c	X	X,X ^{aq}	X		
* <i>Ipomoea triloba</i> L.; 38375							X
CORNACEAE (1, 1)							
<i>Cornus foemina</i> Mill.; 38528	X,X ^c , X						X
CUCURBITACEAE (2, 2)							
<i>Melothria pendula</i> L.; 38191		X,X ^r	X	X,X ^m ,X ^r			X
* <i>Momordica charantia</i> L.; FLEPPC II; 38306				X			X
DROSERACEAE (1, 2)							
<i>Drosera brevifolia</i> Pursh; 38445		X					
<i>Drosera capillaris</i> Poir.; 38340		X					X
EBENACEAE (1, 1)							
<i>Diospyros virginiana</i> L.; Rare ; 38417		X ^r					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
ERICACEAE (3, 4)							
<i>Gaylussacia dumosa</i> (Andrews) Torr. & A. Gray; Rare ; 38446		X ^r					
<i>Lyonia fruticosa</i> (Michx.) G.S. Torr.; 38192		X,X ^r					
<i>Vaccinium darrowii</i> Camp; Rare ; 38476		X,X ^r					
<i>Vaccinium myrsinites</i> Lam.; 38341		X					
EUPHORBIACEAE (7, 21)							
* <i>Acalypha arvensis</i> Poepp.; Rare ; 38237							X
<i>Acalypha gracilens</i> A. Gray; Rare ; 37979		X					X
<i>Caperonia castaneifolia</i> (L.) A. St.-Hil.; Rare ; 38418					X	X	
* <i>Caperonia palustris</i> (L.) A. St.-Hil.; Rare ; 38846							X
<i>Chamaesyce blodgettii</i> (Engelm. ex Hitchc.) Small; 38583							X
<i>Chamaesyce hirta</i> (L.) Millsp.; 38584						X ^r	X
<i>Chamaesyce hypericifolia</i> (L.) Millsp.; 38153							X
<i>Chamaesyce hyssopifolia</i> (L.) Small; 38807		X ^r					
* <i>Chamaesyce lasiocarpa</i> (Klotzsch) Arthur; Rare ; 39480							X
<i>Chamaesyce maculata</i> (L.) Small; Rare ; 39926							X
* <i>Chamaesyce mendezii</i> (Boiss.) Millsp.; Rare ; 38529							X
<i>Chamaesyce ophthalmica</i> (Pers.) D.G. Burch; Rare ; 39008							X
<i>Chamaesyce thymifolia</i> (L.) Millsp.; 38376							X
<i>Croton glandulosus</i> L. var. <i>septentrionalis</i> Müll. Arg. [<i>Croton glandulosus</i> L. var. <i>glandulosus</i>]; 38675							X,X
* <i>Euphorbia graminea</i> Jacq.; Rare ; 38377							X
▫ <i>Euphorbia inundata</i> Torr. ex Chapm. var. <i>garrettii</i> E.L. Bridges & Orzell; Rare ; 38809		X					
▫ <i>Euphorbia polyphylla</i> Engelm. ex Chapm.; 39534		X					
<i>Poinsettia cyathophora</i> (Murray) Bartl.; Rare ; 38342							X
<i>Poinsettia heterophylla</i> (L.) Klotzsch & Garcke ex Klotzsch; Rare ; 38381							X
<i>Stillingia aquatica</i> Chapm. (forma with green spikes and fruits plus forma with reddish spikes and fruits); 38621		X,X ^c ,X ^r	X		X,X ^r		X
<i>Stillingia sylvatica</i> L.; 38497		X					
FABACEAE (23, 37; 24, 38)							
* <i>Abrus precatorius</i> L.; Rare ; FLEPPC I; 38498							X
* <i>Acacia auriculiformis</i> A. Cunn. ex Benth.; Rare ; FLEPPC I; 38477		X					X
<i>Aeschynomene americana</i> L.; 38622		X					X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
*Aeschynomene indica L.; Rare ; 39535						X	
*Albizia lebbbeck (L.) Benth.; Rare ; FLEPPC I; 40100							X
*Alysicarpus ovalifolius (Schumach. & Thonn.) J. Léonard; Rare ; 39185							X
*Alysicarpus vaginalis (L.) DC.; Rare ; 38585							X
Apios americana Medik.; 38239	X			X			
Centrosema virginianum (L.) Benth.; 38826		X					
Chamaecrista fasciculata (Michx.) Greene; Rare ; 39010							X
Chamaecrista nictitans (L.) Moench var. aspera (Muhl. ex Elliott) H.S. Irwin & Barneby; 38623		X					X
Chamaecrista nictitans (L.) Moench var. nictitans; Rare ; 39505		X ^r					X
*Crotalaria lanceolata E. Mey.; Rare ; 39251		X					X
*Crotalaria pallida Aiton; 38382		X ^{aq}					X
Crotalaria rotundifolia J.F. Gmel.; 38624	X ^{pf}	X,X ^r					X
Dalbergia ecastaphyllum (L.) Taub.; Rare ; 38478		X ^r					
Dalea carnea (Michx.) Poir. var. carnea; 39114		X					
*Desmodium incanum DC.; 38479				X		X ^r	X
Desmodium paniculatum (L.) DC.; Rare ; 39265		X,X ^r					
*Desmodium triflorum (L.) DC.; 38195							X
Erythrina herbacea L.; R. Bantz s.n.; 1978 (CSS)							
Galactia elliotii Nutt.; Rare ; 39001		X ^r					
Galactia purshii Desv. [Galactia michauxii A.R. Franck]; Rare ; 39252		X					
Galactia volubilis (L.) Britton; 39364		X ^r				X ^r	X
*Indigofera hirsuta L.; 38419							X
*Leucaena leucocephala (Lam.) de Wit; Rare ; FLEPPC II; 38343							X
*Macropitium lathyroides (L.) Urb.; FLEPPC II; 38480	X ^{pf}	X,X ^r		X			X
Mimosa quadrivalvis L. var. floridana (Chapm.) Barneby; Rare ; 39597							X
Mimosa strigillosa Torr. & A. Gray; Rare ; 38692							X
*Mucuna pruriens (L.) DC.; Rare ; 38433		X ^r					
Piscidia piscipula (L.) Sarg.; Rare ; 38345		X					
Senna ligustrina (L.) H.S. Irwin & Barneby; Rare ; 38025							X
Senna obtusifolia (L.) H.S. Irwin & Barneby; Rare ; 38240							X
*Senna occidentalis (L.) Link; Rare ; 39149							X
*Senna pendula (Humb. & Bonpl. ex Willd.) H.S. Irwin & Barneby; FLEPPC I; 38586		X	X		X	X	

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Sesbania herbacea</i> (Mill.) McVaugh; 38827					X	X	X
<i>Vicia acutifolia</i> Elliott; 38344				X ^m	X	X,X ^r	X
<i>Vigna luteola</i> (Jacq.) Benth.; 38241		X,X ^c	X ^c	X	X	X	X
FAGACEAE (1, 3)							
<i>Quercus laurifolia</i> Michx.; 38421	X,X ^r ,X	X,X ^c ,X ^r		X	X		X
<i>Quercus minima</i> (Sarg.) Small; 38094		X					
<i>Quercus virginiana</i> Mill.; 38587	X,X ^{pf}	X					X
GENTIANACEAE (2, 6)							
<i>Bartonia virginica</i> (L.) Britton et al.; Rare ; 38676		X					
<i>Sabatia brevifolia</i> Raf.; 38196		X					
<i>Sabatia calycina</i> (Lam.) A. Heller; 38346	X ^c ,X ^r			X			
<i>Sabatia decandra</i> (Walter) R.M. Harper [<i>Sabatia bartramii</i> Wilbur]; Rare ; 38828		X,X ^c	X	X			X ^{pf-c}
<i>Sabatia grandiflora</i> (A. Gray) Small; 38447		X	X				
<i>Sabatia stellaris</i> Pursh; 38197		X ^r					X
GERANIACEAE (1, 1)							
<i>Geranium carolinianum</i> L.; Rare ; 38677						X	X
HALORAGACEAE (2, 3)							
? <i>Myriophyllum</i> sp. (sterile); Rare ; 39687							X(flooded)
<i>Proserpinaca palustris</i> L.; 37985	X	X,X ^c ,X ^r	X	X	X	X	X
<i>Proserpinaca pectinata</i> Lam.; 39115		X,X ^c ,X ^r	X				X
HYDROLEACEAE (1, 1)							
<i>Hydrolea corymbosa</i> J. Macbr. ex Elliott; 38102		X	X		X		
ITEACEAE (1, 1)							
<i>Itea virginica</i> L.; 38026	X,X ^c			X			
LAMIACEAE (10, 10)							
<i>Callicarpa americana</i> L.; 38104	X,X ^{pf}	X,X ^r					X
* <i>Cantinoa americana</i> (Aubl.) Harley & J.F.B. Pastore [<i>Hyptis spicigera</i> Lam.]; 38589		X					X
* <i>Condea verticillata</i> (Jacq.) Harley & J.F.B. Pastore [<i>Hyptis verticillata</i> Jacq.]; Rare ; 38531							X
<i>Hyptis alata</i> (Raf.) Shinners; 38448	X ^{pf} ,X	X,X ^c ,X ^r	X,X ^m	X	X		
<i>Lycopus rubellus</i> Moench; 38027		X,X ^c	X ^c	X,X ^r			
* <i>Mesospaerum pectinatum</i> (L.) Kuntze [<i>Hyptis pectinata</i> (L.) Poit.]; Rare ; 39187		X,X					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Physostegia purpurea</i> (Walter) S.F. Blake; 38625		X					
<i>Piloblephis rigida</i> (W. Bartram ex Benth.) Raf.; 38532		X,X ^r					
<i>Scutellaria integrifolia</i> L.; Rare ; 39599							X
<i>Teucrium canadense</i> L.; 38845		X ^{aq}					
LAURACEAE (2, 2)							
<i>Cassytha filiformis</i> L.; 38028		X,X ^c	X				
<i>Persea palustris</i> (Raf.) Sarg.; 38423	X,X ^c , X	X,X ^c ,X ^r	X	X	X	X ^r	
LENTIBULARIACEAE (2, 12)							
<i>Pinguicula caerulea</i> Walter; Rare ; 38627		X					
<i>Pinguicula pumila</i> Michx. (white-flowered, blue-flowered, and yellow-flowered forms); 38628		X,X ^c					X,X ^{pf-c}
<i>Utricularia cornuta</i> Michx.; 38829			X	X,X ^r			X
<i>Utricularia foliosa</i> L.; 38198		X	X	X	X	X	X(flooded)
<i>Utricularia gibba</i> L.; 38773					X	X	
<i>Utricularia inflata</i> Walter; Rare ; 38702						X	
<i>Utricularia juncea</i> Vahl; 39267		X,X ^r					X(flooded)
<i>Utricularia purpurea</i> Walter; 39231		X	X	X	X		X(flooded)
<i>Utricularia radiata</i> Small; 38533			X		X		
<i>Utricularia resupinata</i> B. D. Greene ex Bigelow; Rare ; 38678				X ^r	X		
<i>Utricularia simulans</i> Pilg.; 39268		X,X ^r					
<i>Utricularia subulata</i> L.; 38535		X					X
LINACEAE (1, 2)							
<i>Linum floridanum</i> (Planch.) Trel.; Rare ; 38812		X	X				
<i>Linum medium</i> (Planch.) Britton; Rare ; 38626		X		X			
LINDERNIACEAE (3, 5)							
<i>Lindernia dubia</i> (L.) Pennell var. <i>anagallidea</i> (Michx.) Cooperr.; Rare ; 39153							X
<i>Lindernia dubia</i> (L.) Pennell var. <i>dubia</i> ; Rare ; 39154							X
<i>Lindernia grandiflora</i> Nutt.; 38161		X,X ^c		X,X ^r		X	X
▣ <i>Micranthemum glomeratum</i> (Chapm.) Shinnerr (terrestrial forma plus the submerged-aquatic forma with frequent whorled phyllotaxy); 38162	X			X ^r			X
* <i>Torenia crustacea</i> (L.) Cham. & Schltld. [<i>Lindernia crustacea</i> (L.) F. Muell.]; 38815		X,X ^r					X
LOGANIACEAE (1, 2)							
<i>Mitreola petiolata</i> (J.F. Gmel.) Torr. & A. Gray; 38486		X ^c ,X ^r	X	X,X ^r	X ^r	X	X
<i>Mitreola sessilifolia</i> (J.F. Gmel.) G. Don; 39116		X,X ^r					

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
LYTHRACEAE (4, 5)							
<i>Ammannia coccinea</i> Rottb.; Rare ; 39481							X
<i>Ammannia latifolia</i> L.; 38029		X ^r	X	X		X	X
* <i>Cuphea carthagenensis</i> (Jacq.) J.F. Macbr.; 39002		X ^r	X			X	X
<i>Lythrum alatum</i> Pursh (pink-flowered forma plus a white-flowered forma); 38813		X,X ^r	X,X ^r		X	X	X,X
<i>Rotala ramosior</i> (L.) Koehne; 38425		X,X ^r					X
MAGNOLIACEAE (1, 1)							
<i>Magnolia virginiana</i> L.; 38030	X ^{pf}	X,X ^c	X,X ^m	X			
MALVACEAE (6, 10)							
<i>Hibiscus coccineus</i> Walter; 38844	X ^c			X	X		
<i>Hibiscus grandiflorus</i> Michx.; 38774			X,X ^c	X	X	X	
<i>Kosteletzkya pentacarpos</i> (L.) Ledeb. [<i>Kosteletzkya virginica</i> (L.) C. Presl ex A. Gray]; 38590		X	X		X	X	
* <i>Melochia corchorifolia</i> L.; Rare ; 39253					X		X
<i>Melochia spicata</i> (L.) Fryxell (purple-flowered forma plus a white-flowered forma); 39190	X ^{pf}	X,X ^r	X				X
* <i>Sida cordifolia</i> L.; Rare ; 39189							X
<i>Sida rhombifolia</i> L.; 38307		X ^r	X			X ^r	X
<i>Sida ulmifolia</i> Mill. [<i>Sida acuta</i> Burm. f., <i>Sida antillensis</i> Urb.]; Rare ; 38591							X
* <i>Urena lobata</i> L.; FLEPPC I; 38308	X,X ^{pf} ,X	X,X ^c ,X ^r	X	X		X ^r	X
<i>Waltheria indica</i> L.; 39191		X,X ^r					
MELASTOMACEAE (1, 3)							
<i>Rhexia cubensis</i> Griseb.; Rare ; 38776			X				
<i>Rhexia mariana</i> L.; 38592		X,X ^r					X
<i>Rhexia nuttallii</i> C.W. James; 38350		X					
MENYANTHACEAE (1, 1; 1, 2)							
<i>Nymphoides aquatica</i> (J.F. Gmel.) Kuntze; Rare ; 38242			X		X		
* <i>Nymphoides</i> sp.—possibly <i>Nymphoides peltata</i> (Gmel.) Kuntze; (photograph); S. Stein; 39960. (SWF)							
MORACEAE (2, 3)							
<i>Ficus aurea</i> Nutt.; 38031	X,X ^c ,X ^r ,X	X,X ^c	X ^c	X,X ^m		X	X
* <i>Ficus microcarpa</i> L. f.; Rare ; FLEPPC I; 38385				X			
<i>Morus rubra</i> L.; Rare ; 39485	X						

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
MYRICACEAE (1, 1)							
Morella cerifera (L.) Small [Myrica cerifera L.]; 38426	X,X	X,X ^c ,X ^r	X,X ^c	X,X ^m ,X ^r	X	X,X ^r	X
MYRSINACEAE (3, 4)							
Anagallis minima (L.) E.H.L. Krause; 38489			X,X ^r			X ^r	X
Anagallis pumila Sw.; Rare ; 38455		X ^r					
Ardisia escallonioides Schiede & Deppe ex Schltdl. & Cham.; Rare ; 38244	X						
Myrsine cubana A. DC. [Rapanea punctata (Lam.) Lundell]; 38106	X,X ^c ,X ^{pf} ,X ^r ,X	X,X ^c ,X ^r		X,X ^m		X ^r	X
MYRTACEAE (6, 7)							
Eugenia axillaris (Sw.) Willd.; Rare ; 38246	X						
*Melaleuca quinquenervia (Cav.) S.T. Blake; FLEPPC I; 38593		X,X ^r			X		X
Myrcianthes fragrans (Sw.) McVaugh; 38201	X						
*Psidium cattleianum Sabine; Rare ; FLEPPC I; 39677	X ^{pf}						
*Psidium guajava L.; Rare ; FLEPPC I; 39074				X ^r			
*Rhodomyrtus tomentosa (Aiton) Hassk.; Rare ; FLEPPC I; 37942		X,X ^r		X			X
*Syzygium cumini (L.) Skeels; FLEPPC I; 38487	X,X ^{pf}	X,X ^c ,X ^r		X	X		X
NYMPHAEACEAE (2, 5)							
Nuphar advena (Aiton) Aiton f.; Rare ; 38594						X	
Nymphaea elegans Hook.; 39075		X(flooded)	X,X ^c	X		X	X(flooded)
Nymphaea jamesoniana Planch.; 37903		X(flooded)	X,X ^c	X ^r	X	X	X(flooded)
Nymphaea mexicana Zucc.; Rare ; 39232					X		
Nymphaea odorata Sol.; Rare ; 39235					X		
OLEACEAE (1, 1)							
Fraxinus caroliniana Mill.; 38247	X,X ^c ,X	X ^c		X	X		
ONAGRACEAE (2, 12)							
Ludwigia alata Elliott; Rare ; 39379		X ^c			X		
Ludwigia curtissii Chapm.; 38451		X	X				X
Ludwigia erecta (L.) H. Hara; 39380							X
Ludwigia leptocarpa (Nutt.) H. Hara; Rare ; 39381						X	
Ludwigia linifolia Poir.; Rare ; 39571			X				
Ludwigia maritima R.M. Harper; 38680		X,X ^r					
Ludwigia microcarpa Michx.; 39722		X,X ^r	X			X ^r	X
Ludwigia octovalvis (Jacq.) Raven; 38630		X			X	X ^r	X
*Ludwigia peruviana (L.) H. Hara; FLEPPC I; 38595	X	X,X ^c ,X ^p	X	X,X ^m	X	X,X ^r	X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
Ludwigia repens J.R. Forst.; 39382		X	X	X	X	X	X
Ludwigia suffruticosa Walter; Rare ; 38351		X ^p					
Oenothera simulans (Small) W.L. Wagner & Hoch [Gaura angustifolia Michx.]; 39003		X ^r					X
OROBANCHACEAE (2, 4)							
Agalinis fasciculata (Elliott) Raf.; Rare ; 39958		X					
Agalinis harperi Pennell; 38982		X ^r	X,X ^r				
Agalinis linifolia (Nutt.) Britton; Rare ; 38839				X			
Buchnera americana L. (blue-flowered forma plus a white-flowered forma); 38256		X					X,X ^{pf-c}
OXALIDACEAE (1, 2)							
Oxalis corniculata L. sensu lato; 38386		X ^r					X
*Oxalis debilis Kunth; Rare ; 38387							X
PAPAVERACEAE (1, 1)							
Argemone mexicana L.; Rare ; 39689							X
PASSIFLORACEAE (1, 1)							
Passiflora suberosa L.; 38388	X	X					X
PHYLLANTHACEAE (2, 5)							
*Bischofia javanica Blume; Rare ; FLEPPC I; 39264	X						
Phyllanthus caroliniensis Walter; 37939		X ^r					
*Phyllanthus debilis J.G. Klein ex Willd.; Rare ; 39225		X,X ^r					X
*Phyllanthus tenellus Roxb.; Rare ; 38238							X
*Phyllanthus urinaria L.; 38194		X,X ^r					
PHYTOLACCACEAE (2, 2)							
Phytolacca americana L.; Rare ; 38352						X ^r	X
Rivina humilis L.; 38248	X						X
PLANTAGINACEAE (8, 12)							
Bacopa caroliniana (Walter) B.L. Rob.; 38814		X	X	X,X ^r	X,X	X	X
Bacopa innominata (M. Gómez) Alain; 39013							X
Bacopa monnieri (L.) Pennell; 39016	X,X ^c			X		X	X
*Bacopa repens (Sw.) Wettst.; 39018							X
Callitriche peploides Nutt. (?) (flowering material); 37993							X
Gratiola ramosa Walter; 38597		X,X ^c	X	X ^r			
*Limnophila sessiliflora Blume; FLEPPC II; 38392		X,X ^r	X	X		X	X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Linaria canadensis</i> (L.) Chaz.; 38393				X			X
♯ <i>Mecardonia acuminata</i> (Walter) Small subsp. <i>peninsularis</i> (Pennell) Rossow; 38457		X,X ^r					X
<i>Mecardonia procumbens</i> (Mill.) Small; 38394							X
<i>Scoparia dulcis</i> L.; 38430		X					X
<i>Sophranthe hispida</i> Benth. ex Lindl. [<i>Gratiola hispida</i> (Benth. ex Lindl.) Pollard]; 39580		X					
POLYGALACEAE (2, 9)							
<i>Asemeia violacea</i> (Aubl.) J.F.B. Pastore & J.R. Abbott [<i>Polygala violacea</i> Aubl.]; 38203	X ^{pf}	X,X ^c	X			X,X ^r	X
<i>Polygala balduinii</i> Nutt.; 38631		X,X ^r	X				
<i>Polygala cruciata</i> L.; 38679		X					
<i>Polygala incarnata</i> L. (pink-flowered forma plus a white-flowered forma); 38596		X					
<i>Polygala lutea</i> L.; 38389		X,X ^r					
<i>Polygala nana</i> (Michx.) DC.; Rare ; 38453		X					
<i>Polygala ramosa</i> Elliott; 38632		X ^r					
♯ <i>Polygala rugelii</i> Shuttlew. ex Chapm.; 38353		X,X ^r					X
<i>Polygala setacea</i> Michx.; Rare ; 38454		X ^r					
POLYGONACEAE (2, 8)							
<i>Persicaria glabra</i> (Willd.) M. Gómez [<i>Polygonum glabrum</i> Willd.; <i>Polygonum densiflorum</i> Meisn.] (pink-flowered forma plus a white-flowered forma); 38488	X			X,X ^m	X	X,X ^r	X
<i>Persicaria hydropiperoides</i> (Michx.) Small [<i>Polygonum hydropiperoides</i> Michx.]; 38633		X,X ^r	X		X	X	X(flooded)
<i>Persicaria lapathifolia</i> (L.) Delarbre [<i>Polygonum lapathifolium</i> L.]; 38705							X
<i>Persicaria punctata</i> (Elliott) Small [<i>Polygonum punctatum</i> Elliott]; 38205		X	X	X,X ^m	X	X	X
<i>Persicaria setacea</i> (Baldwin) Small [<i>Polygonum setaceum</i> Baldwin]; 38833		X		X	X		
* <i>Rumex obovatus</i> Danser; Rare ; 39603							X
* <i>Rumex paraguayensis</i> Parodi; Rare ; 38834						X	X
<i>Rumex verticillatus</i> L.; Rare ; 38835				X			
PORTULACACEAE (1, 3)							
* <i>Portulaca amilis</i> Speg.; Rare ; 38778							X
<i>Portulaca oleracea</i> L.; Rare ; 39004							X
<i>Portulaca pilosa</i> L.; 38249							X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
RANUNCULACEAE (1, 1)							
♯ <i>Clematis baldwinii</i> Torr. & A. Gray; Rare ; 39768		X					
RHAMNACEAE (1, 1; 2, 2)							
<i>Berchemia scandens</i> (Hill) K. Koch; Rare ; 38836	X	X,X ^c					
Sageretia minutiflora (Michx.) C. Mohr; Anonymous s.n.; 1982 (CSS)							
ROSACEAE (1, 1)							
<i>Rubus trivialis</i> Michx.; 38251	X,X ^{pf}	X,X ^p ,X ^r					X
RUBIACEAE (11, 17)							
<i>Cephalanthus occidentalis</i> L.; 38034	X ^c ,X		X,X ^m	X,X ^m	X	X	
<i>Chiococca alba</i> (L.) Hitchc.; 38837		X,X ^r					
<i>Diodia teres</i> Walter; Rare ; 39540		X					
<i>Diodia virginiana</i> L.; 37987	X	X,X ^c	X	X	X	X	X
<i>Galium tinctorium</i> L.; 38159		X ^c		X		X	X
<i>Hamelia patens</i> Jacq.; 38428	X	X ^r					X
<i>Houstonia procumbens</i> (J.F. Gmel.) Standl.; Rare ; 38634		X					
* <i>Oldenlandia corymbosa</i> L. [<i>Hedyotis corymbosa</i> (L.) Lam.]; 38537							X
<i>Oldenlandia uniflora</i> L. [<i>Hedyotis uniflora</i> (L.) Lam.]; 38490		X,X ^r					X
<i>Pentodon pentandrus</i> (Schumach. & Thonn.) Vatke; 39770				X(in opening)		X	X
<i>Psychotria nervosa</i> Sw.; 38390	X			X			
<i>Psychotria sulzneri</i> Small; Rare ; 38252	X						
* <i>Richardia brasiliensis</i> Gomes; 38035							X
* <i>Richardia grandiflora</i> (Cham. & Schtdl.) Schult. & Schult. f.; FLEPPC II; 38206		X ^r					X
* <i>Richardia scabra</i> L.; Rare ; 39512							X
<i>Spermacoce remota</i> Lam. [<i>Spermacoce assurgens</i> Ruiz & Pav.]; 38207		X,X ^r				X ^r	X
* <i>Spermacoce verticillata</i> L.; FLEPPC II; 38208	X ^{pf}	X,X ^r	X,X ^c			X ^r	X
RUTACEAE (2, 3)							
* <i>Citrus reticulata</i> Blanco; Rare ; 38036							X
* <i>Citrus</i> sp. (sterile, with conspicuously winged petioles); Rare ; 38492	X,X						
<i>Zanthoxylum fagara</i> (L.) Sarg.; 38253	X					X ^r	
SALICACEAE (1, 1)							
<i>Salix caroliniana</i> Michx.; 38635	X,X	X ^c ,X ^r	X,X ^m	X,X ^m	X	X	X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
SAMOLACEAE (1, 2)							
<i>Samolus ebracteatus</i> Kunth; 38456		X,X ^r					
<i>Samolus valerandi</i> L.; 38706							X
SAPINDACEAE (2, 2)							
<i>Acer rubrum</i> L.; 37929	X,X ^c ,X ^{pf} , X	X ^c ,X ^r	X,X ^m	X,X ^m	X	X,X ^r	X
* <i>Cupaniopsis anacardioides</i> (A. Rich.) Radlk; Rare ; FLEPPC I; 39685				X			
SAPOTACEAE (2, 3)							
<i>Chrysophyllum oliviforme</i> L.; Rare ; 38254	X						
<i>Sideroxylon foetidissimum</i> Jacq.; 38209	X						
<i>Sideroxylon reclinatum</i> Michx. subsp. <i>reclinatum</i> ; 38210	X, X	X,X ^p	X	X		X ^r	
SAURURACEAE (1, 1)							
<i>Saururus cernuus</i> L.; 39625	X,X ^c , X			X	X		
SCHOEPIACEAE (1, 1)							
<i>Schoepfia schreberi</i> J.F. Gmel. [<i>Schoepfia chrysophylloides</i> (A. Rich.) Planch.]; Rare ; 38255	X						
SOLANACEAE (2, 7)							
<i>Physalis angulata</i> L.; Rare ; 39236		X,X ^r				X	X
<i>Physalis angustifolia</i> Nutt. (possibly <i>Physalis angustifolia</i> Nutt. x <i>Physalis walteri</i> Nutt.); Rare ; 38683		X ^r					X
<i>Physalis pubescens</i> L.; Rare ; 39881						X ^r	X
<i>Physalis walteri</i> Nutt.; 38354		X ^r					X
<i>Solanum americanum</i> Mill.; 38395		X		X	X	X,X ^r	X
* <i>Solanum capsicoides</i> All.; Rare ; 39607	X ^{pf} (in opening)						
* <i>Solanum lycopersicum</i> L. [<i>Lycopersicon esculentum</i> Mill.]; Rare ; 39626				X			
TETRACHONDRAACEAE (1, 1)							
<i>Polypremum procumbens</i> L.; 38581		X ^r					X
TURNERACEAE (1, 1)							
<i>Piriqueta cistoides</i> (L.) Griseb. (yellow-flowered forma plus a white-flowered forma [Rare]); 38111		X	X				X
ULMACEAE (1, 1)							
* <i>Ulmus</i> sp. (sterile; possibly <i>Ulmus crassifolia</i> Nutt.); D. Workman s.n.; 1997 (USF)							
URTICACEAE (4, 5)							
<i>Boehmeria cylindrica</i> (L.) Sw.; 38637	X,X ^c , X	X,X ^c	X	X,X ^m ,X ^r	X	X,X ^r	X

APPENDIX cont.

	Hardw	Pinefl	Prairie	Cypr	Marsh	Aq-rud	Rud
<i>Parietaria floridana</i> Nutt.; 38163				X		X	X
<i>Parietaria praetermissa</i> Hinton; Rare ; 39683							X
<i>Pilea microphylla</i> (L.) Liebm.; 38816		X ^r					
* <i>Pouzolzia zeylanica</i> (L.) Benn.; 38257	X						X
VERBENACEAE (4, 4)							
* <i>Lantana strigocamara</i> R.W. Sanders [<i>Lantana camara</i> L.]; Rare ; FLEPPC I; 38636							X
<i>Phyla nodiflora</i> (L.) Greene; 38309		X	X,X ^c	X	X	X	X
<i>Stachytarpheta jamaicensis</i> (L.) Vahl; Rare ; 38396		X ^r					X
<i>Verbena scabra</i> Vahl; 38356				X			X
VIOLACEAE (1, 3)							
<i>Viola lanceolata</i> L.; 38148	X ^{pf}	X	X				X
<i>Viola palmata</i> L.; Rare ; 38707		X					
<i>Viola</i> sp. (sterile); Rare ; 39629	X						X
VITACEAE (4, 5)							
<i>Ampelopsis arborea</i> (L.) Koehne; 38431	X,X ^c ,X	X,X ^r	X	X	X	X	X
<i>Cissus verticillata</i> (L.) Nicolson & C.E. Jarvis; 38164	X			X			X
<i>Parthenocissus quinquefolia</i> (L.) Planch.; 38310	X,X ^r ,X ^{pf}	X,X ^r		X,X ^m		X	X
<i>Vitis cinerea</i> (Engelm.) Engelm. ex Millardet; 38037	X	X	X				
<i>Vitis rotundifolia</i> Michx.; 38432	X	X,X ^c ,X ^r		X		X ^r	X
XIMENIACEAE (1, 1)							
<i>Ximenia americana</i> L.; 38258	X,X ^{pf} ,X ^r	X ^r				X ^r	

ADDENDUM

An additional species, *Stachytarpheta cayennensis* (Rich.) Vahl, was documented for CSS after submission of the manuscript of this paper (Wilder and McCombs 40345; 23 Nov 2017). Plants of that species grew as escapes within, and on ruderal land surrounding, an old flower bed.

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¹For purposes of organization the previously compiled, unpublished checklists for the flora and/or fauna of CSS are grouped together at the end of this section.

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²J. Butler was at CSS from 1970 to 1971; thus, he probably compiled this checklist during that time period.

^{3,4,5}The checklists of Hammer, Judd, and Mackie are emendations of checklists compiled by previous workers; hence, we cite them as Hammer et al., Judd et al., and Mackie et al., respectively.