The purpose of the Florida Native Plant Society is to preserve, conserve, and restore the native plants and native plant communities of Florida.

Official definition of native plant: For most purposes, the phrase Florida native plant refers to those species occurring within the state boundaries prior to European contact, according to the best available scientific and historical documentation. More specifically, it includes those species understood as indigenous, occurring in natural associations in habitats that existed prior to significant human impacts and alterations of the landscape.

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Editorial Content
We have a continuing interest in articles on native plant species and related conservation topics, as well as high-quality botanical illustrations and photographs. Contact the editor for guidelines, deadlines and other information. Editor: Marjorie Shropshire, Visual Key Creative, Inc. palmetto@fnps.org • (772) 285-4286 • 1876 NW Fork Road, Stuart, FL 34994
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Fringed Orchids of August –
A Journey to North Florida

Article and photos by Roger Hammer

What’s nice about North Florida is that it is the least-developed part of the state. There is still a relative abundance of Old Florida to be seen and enjoyed, and a plenitude of undisturbed natural habitats protected within a number of state parks and national preserves that dot the region. And, there may be no prettier vistas in all of Florida than the longleaf pine flatwoods that stretch for endless miles across the rolling hills in the northern parts of the state.

Above, top to bottom: Michelle Briois-Hammer stands beside a waist-high flowering plant of the yellow fringed orchid in Jefferson County, Florida; the glistening flowers of the white-fringed orchid (Platanthera blephariglottis var. conspicua) stand out among the yellow-flowered species.
Unless you’re in tune with native plants, people don’t think of orchids when they envision North Florida, yet nearly half of Florida’s more than 100 native orchids occur in the northern third of the state.

The genus *Platanthera* (meaning “wide anther” in Latin) is represented in Florida by seven species and three naturally occurring hybrids, and typically in August each year the flatwoods, bogs, and even roadside ditches become emblazoned with their flowers. They are without a doubt among the prettiest flowering orchids one can find anywhere.

Because none of them occur further south than the central peninsula, in the summer of 2011 my wife, Michelle, and I went on a 4-day road trip to admire and photograph these floral beauties. I had not seen them since August 1973 when I drove my 1965 Volkswagen van to southeastern Georgia, along with detailed directions from Dr. Carlyle Luer, where I photographed them in the beautiful pine forests of Charlton County, about fifty miles north of the Florida border. I only stayed a few days, sleeping in my van at night, because in 1973 they’d not seen many hippies sporting a long ponytail in those parts before, and I was refused service in every single motel and restaurant that I entered. Even at a roadside marketplace, the tobacco-chewing country lady behind the counter asked if I was just passing...
through, and when I answered affirmatively, she replied in a long southern drawl, “Well, that’s good!” Luckily, times have changed since those days because I’m still a hippie with a long ponytail.

On this trip we stayed in the quaint little town of Thomasville, Georgia, north of Tallahassee, where we met up with Gil Nelson, Wilson Baker, Virginia Craig, and Carol Lippincott, all well versed in North Florida botany and other wild things, so we were in exemplary company.

The first morning we drove south to Jefferson County, Florida and visited a privately owned, 400-acre longleaf pine forest that is managed for quail hunting. The owners very graciously gave us special permission to botanize on their property. Because they manage the land to create prime quail habitat, the property is on a prescribed burn regimen, which also creates superlative habitat for native wildflowers, including an impressive array of wild orchids that benefit from the understory fires that thin out competing vegetation. Just standing in one spot, while quail whistled bob-WHITE all around us, we could see three species of Platanthera orchids, with their flowering spikes standing above the surrounding vegetation. They are commonly called “fringed orchids” because of their fringed lips, but another poetic colloquial name is “bog torch,” and the orange-flowered species do resemble fiery torches protruding from the wet ground.

The first species we saw was arguably the prettiest, and is called the yellow fringed orchid, Platanthera ciliaris (the species name is Latin for “eyelashes,” in reference to the fringed lip). The flowers of this handsome species range from rich apricot to pale orange, depending on the individual plant. Spicebush swallowtail butterflies (Papilio troilus) were seen visiting the flowers of some plants. Close by was the white fringed orchid, Platanthera blephariglottis var. conspicua, with conspicuous snow-white blossoms sporting their characteristic frilly lips (the species name is Greek, meaning “tongue like an eyelid,” alluding to the frilly lip that resembles eyelashes). Because they were flowering close to one another, there was a good chance we would find the natural hybrid between these two orchids and, sure enough, it wasn’t long before the troupe of intrepid botanists discovered several of them interspersed with the two parent species. The hybrid is typically two-toned yellow and white, and is called Platanthera x bicolor (the ‘x’ in the botanical name indicates a hybrid, and bicolor refers to the two-toned flowers). According to Paul Martin Brown (2002), flowers of the hybrid can either be lemon, pale coffee, or bicolored. Wunderlin (2011) reports it as rare in the counties of Bradford, Clay, Escambia, Madison, and Nassau, but we were in Jefferson County, where it apparently has never been vouchered. Wherever the two parents flower in close proximity, hybrids can be expected throughout their range across the East Gulf and Atlantic Coastal Plain. Other members of this genus hybridize as well.

We were also elated to find several flowering plants of the crested fringed orchid, Platanthera cristata (the specific epithet means “crested” in Latin, and refers to the crest of a bird, alluding to the fringed petals that resemble a cock’s comb). The flowers of this species are orange, and decidedly smaller than the other species growing nearby.

Although native orchids were the objects of our desire, it was impossible to ignore the eloquent turk’s cap lilies (Lilium superbum) scattered around in the understory, with bright orange-and-yellow, speckled, eye-catching blossoms towering above our heads. At another location later that afternoon, we were treated with some flowering roadside plants of Chapman’s fringed orchid, Platanthera chapmanii, named to honor the noted Florida botanist, Alvan Wentworth Chapman (1809–1899).

Historically, unbroken stands of pine flatwoods blanketed the southeastern United States, but today one must seek out state parks, national forests, and private land holdings to see samples of this richly diverse and important habitat. Next August, pack up your camera and head for North Florida’s beautiful piney woods. You won’t be disappointed, even if you don’t find any flowering orchids. The first two weeks of August are best for fringed orchids.

### Author’s Note

Paul Martin Brown (2005) gives Platanthera blephariglottis var. conspicua species status, as Platanthera conspicua, and refers to the hybrid between P. conspicua and P. ciliaris as Platanthera x luert. Charles Sheviak, in the Flora of North America (2002), recognizes the taxon as P. blephariglottis var. conspicua, and maintains the hybrid as P. x bicolor, as does Wunderlin (2011). The author would like to thank Dr. Richard Wunderlin and Dr. Bruce Hansen for taking the time to review this article prior to publication.

### About the Author

Roger L. Hammer is a retired professional naturalist and author of Everglades Wildflowers, Florida Keys Wildflowers, Exploring Everglades National Park, and Florida Icons – 50 Classic Views of the Sunshine State (Globe Pequot Press). He was the keynote speaker at the Florida Native Plant Society’s 17th Annual Conference, and was the recipient of the Marjory Stoneman Douglas Award from the Dade Chapter of the Florida Native Plant Society, and the Green Palmetto Award in Education from FNPS. In April 2012 he received an honorary Doctor of Science degree from Florida International University. Roger lives in Homestead, Florida with his wife, Michelle. He will be a keynote speaker at this year’s FNPS Annual Conference in Jacksonville.

### References Cited


William Bartram, the Search for Nature’s Design
arrived on my doorstep not long after I heard it reviewed on our local public radio station. Although I was not prepared for the arrival of a book this size, I decided to work my way through it a bit at a time, and after the first few pages, it became difficult to lay William aside. This is a wonderful book for anyone interested in the nature, landscapes, Indians, and early settlements of Georgia, Florida, South Carolina, and Tennessee in Bartram’s time.

William Bartram (1739-1823) was America’s first native born naturalist/artist and the first author to portray nature through personal experience as well as scientific observation. His life was a multi-faceted adventure uncovered here through previously unpublished material, including art, letters, journal entries, botanical illustrations and unpublished manuscripts. All of these expand our knowledge and understanding of Bartram as the complex and unorthodox person that he was. Often regarded as a recluse or eccentric, Bartram emerges as deeply engaged with the major scientific and cultural ideas and issues of his time.

Part 1 of William Bartram, the Search for Nature’s Design includes Bartram’s correspondence to family, friends and peers. Bartram was a botanist first, and his language is sometimes redundant, difficult to follow, and tedious. We are reading about the man as he was, as he spoke and wrote. His personal narrative forms a singular treasure for those who value American history, native plants, and the natural world and culture as he experienced it.

William Bartram, The Search for Nature’s Design
Selected Art, Letters, and Unpublished Writings
Edited by Thomas Hallock and Nancy E. Hoffmann

Hardcover: 520 pages
Publisher: University of Georgia Press
ISBN-10: 0820328774

Review by Sally Robson

Part 2, William Bartram’s “Commonplace Book”, is a compilation of selections from 13 or more of Bartram’s small sewn booklets. Some of the booklets have missing pages and non-continuous text, and that we have them at all is due to the care of his descendants, who treasured and preserved them. These selections show us Bartram’s unorthodox thinking on discussions of the day, including environmental protection, slavery, and the interconnectedness of all life forms.

Bartram’s essay “On Gardening”, gives us insight into the prevailing and the “new taste” of garden design. As Florida native plant gardeners, we may want to remember that our thoughts and efforts to change prevailing ideas were also experienced by Bartram who argued that “gardens should please the imagination with scenes of the sublime, the beautiful, and the melancholy.”

Native plant aficionados will appreciate the book’s lengthy index of plants organized by the historic names used by Bartram and others. A side by side index lists historical plant names, scientific names, and modern common names, along with page numbers, making it easy locate plant information.

We are extremely fortunate that Bartram’s travels throughout the Southeast (1772-1776) are described in great detail, with much written about Florida. We can accompany him from the “innocent green Camelions climbing up our backs” to the “The Thundering Crocodile Alligator.” Through the “low rich swamps, up the shelly bank which is covered with spreading red cedars, the fruteful Orange Trees, Hibiscus and the sweet Lantana camarara.” And, we can pause with him to listen to the “Winged Choir.”

William Bartram, The Search for Nature’s Design should be required reading for all who care about the environment and the interconnectedness of all life forms. It is an adventure full of surprises, humor and persistence that will take you on an exciting exploration of the primordial landscapes of the southeastern United States 200 years ago.
The grace to be a beginner is always the best prayer for an artist. The beginner’s humility and openness lead to exploration. Exploration leads to accomplishment. All of it begins at the beginning, with the first small and scary step.”
~ Julia Cameron (The Artist’s Way)

I wish I could draw. This is what most people tell me when they avoid putting pencil to paper. My reply is “You can, but your expectations are in the way.” Too often, we focus on the product – what we want to create. Our culture values the end result: the finished item, the goal reached, the happy ending. Instead, think about the process of drawing, not the product. A few pencil marks can reflect an observation and a connection. For me, the process of keeping a visual journal is a pathway. Every time I sketch something, I deepen my relationship with nature; I get to know my subject on an intimate level, I ask questions, reflect, and explore.

Those of us who draw and write about the natural world carry on a long historical tradition of curiosity, exploration, and investigation. Explorers documented discoveries from their travels, herbalists described useful plants, and gardeners recorded specimens for their beauty. Their drawings and observations expanded our knowledge of useful and beautiful flora, and
Elizabeth Smith’s nature journals are beautiful and informative.
taught us about the world we live in. Florida’s unique flora and fauna encouraged study and journal-keeping by many notable naturalists and artists including William Bartram, John James Audubon, Mark Catesby, Martin Johnson Heade, and John Muir.

My first journals were like notes to myself – about what I planted and where, about the butterflies that visited nectar and larval plants, and the birds I saw in my yard. When I visited parks or hiked in the woods, I’d write down the plants I was able to identify, and what flowers were blooming. Then I started to add small sketches and photos, maps, and pressed leaves. I also kept a separate sketchbook for ideas, studies, and color mixes, because I paint in watercolors. At some point, separate journals blended into one nature art journal composed mainly of sketches and quick paintings, with notes and observations.

My subject matter varies – one day it might be a flowering shrub, the next day a snail shell. I particularly enjoy drawing our native plants and wildlife, and observing them through the seasons. I’ve been inspired to add calligraphy and poetry to my images to express the emotional response I felt by a particular setting or situation. I find it helpful to add the date, weather, and temperature information, sometimes incorporating it into my art. The entries I make are an exploration of serendipitous sightings rather than a more detailed study of a species or ecological system; specific types of records are important, however.

Written accounts by American naturalists Henry David Thoreau and Aldo Leopold comprise the backbone of a recent study comparing historical and current spring blooming times of native plants in the United States. Scientists have determined that current flowering times are occurring much earlier than those reported 50 to 100 years ago. A collaboration between researchers from Boston and Harvard Universities and the University of Wisconsin in Madison, the study was published online at plosone.org (Public Library of Science One), and was only possible because Thoreau and Leopold kept meticulous notes about the natural world around them. Today, citizen scientists around the world contribute observations via the Internet for natural science organizations such as YardMap (yardmap.com), sponsored by the Cornell Lab of Ornithology, and Project Noah (projectnoah.org), backed by National Geographic.

No matter the purpose, sketching and note-taking sharpens our observation skills, improves sketching abilities, and helps create new sorts of connections. I’d like to encourage you to keep a visual journal as a personal journey of exploration, a documentation of yard or garden, or as a learning tool. Think about how you might want to use the information in the future, and how you might organize the material for reference. Your journal might start with simple drawings augmented with photos and descriptive words. It might be a chronicle of wildlife or birds.

I’ve discovered what that makes these journals valuable to me: my drawing and painting skills have sharpened, especially when I draw on a weekly basis. Observation has improved – I find myself specifically seeking out details in order to capture them on the fly or to write them down later. My knowledge base has become more dimensional; not only have I learned more, my emotional connection to nature has become more specific and I have a deeper sense of how individual parts fit into the whole.

Consider incorporating other disciplines and different art techniques in your journal. Write a Haiku poem. Add anecdotes or maps: historical connections add meaning and sometimes explain present day circumstances. Leaf and bark rubbings, leaf prints, or pressed flowers make interesting additions, especially if we’re stumped on how to reproduce a texture or leaf shape. Mathematics has a place in our journals in the form of time, measurements, and patterns. Many plant lovers are familiar with the Fibonacci sequence, seen in the spiral patterns of pinecones, pineapples, and sunflower heads.

Remember to keep in mind the process, and not get over-involved with the outcome of each page. As you practice, you’ll find your skills improving in every area. Don’t be discouraged if you start and then stop. When you’re ready, you’ll pick up your journal again and the words and pictures will flow onto the page. Remember that it all “begins at the beginning” with that first small and scary step. This is your exploration of the beauty of life around you!
Early naturalists who kept written and visual journals as they visited Florida

William Bartram – Bartram traveled to Florida in 1774, as part of a commissioned trip to explore, collect, and draw plants throughout what is now the American South. He first visited British East Florida, traveling the St. John’s River inland to the area that is now Payne’s Prairie. His observations of the natural world, as well as that of native cultures, were recorded in words and drawings, and eventually published as Bartram’s Travels, an important contribution to the scientific and literary worlds.

John James Audubon – Working on his masterpiece, Birds of America, Audubon traveled to St. Augustine in 1831. He explored the Halifax and St. John’s River surroundings, collecting and drawing bird specimens. In 1832 he expanded his bird documentation, voyaging by boat to Florida Bay, the Florida Keys, and the Dry Tortugas. Audubon’s legacy appears everywhere in America – most notably with the establishment of the National Audubon Society, one of our oldest environmental organizations.

Mark Catesby – Catesby traveled throughout the southeastern areas of North America, collecting and recording what he observed. His notes and paintings were published in 1731 and 1733 in separate volumes titled The Natural History of Carolina, Florida and the Bahama Islands, the first printed account of North America's flora and fauna. This self-taught artist strove to catalog the relationships between species on a scientific basis, work that Linnaeus referred to as a basis for his binomial system of classification.

Martin Johnson Heade – Heade moved to St. Augustine in 1883, at the age of 64, and later opened a studio under the patronage of Henry Flagler. Although an oil painter best known for his luminous landscapes and exquisite portraits of tropical hummingbirds and orchids, Heade (under the pseudonym Didymus) was also an outspoken advocate for the conservation and preservation of natural resources. Fascinated by the vistas of Florida's marshes and swamps, he continued to paint light-filled subtropical landscapes as well as detailed studies of tropical flowers and plants.

John Muir – Many people are familiar with the writings of John Muir, but may not realize that he also sprinkled his journals with pencil drawings of landscapes and plants spotted on his walks and hikes. He visited Florida for several months in 1867 as the culmination of a 1,000-mile hike from Indiana. Muir is beloved as the founder of the Sierra Club, and considered the father of our National Parks. In 1903 he accompanied President Theodore Roosevelt to Yosemite Valley, an experience which inspired the president to lay the groundwork for our national park system.
Whether you are a resident of coastal or inland Florida, most of us live no more than an hour or two drive from a fascinating area of coastal shoreline. The attractions are as varied as the visitors themselves: occasional visitors who may only make the trek to see the monstrous waves and churning surf associated with tropical storms and hurricanes; frequent visitors like surfers and fishermen who are looking for just the right conditions to make their day; teenagers with earbuds soaking up rays; birders scanning the water’s edge in search of shorebirds and seabirds; and beachcombers eager to find a treasure deposited by a recent storm or uncovered by beach erosion. For plant enthusiasts however, beaches and barrier islands have a particular appeal. In general, plant diversity is low enough that one needn’t be overwhelmed with dozens of options – the harsh environmental conditions of intermittently heavy salt spray, sterile and saline sandy soils and highly variable water availability make conditions suitable for only a hardy assemblage of species that are adapted for life in this hostile environment. Radiant dune sunflowers (*Helianthus debilis*), edible shoreline seapurslane (*Sesuvium portulacastrum*), waving seaoats (*Uniola paniculata*) and others with individual adaptations for life on the beach all add to the enjoyment of botanizing at the seaside.

Beaches are Wonderful Places

Florida and other states with sandy coastlines are faced with an interesting ecological, social and financial dilemma – deciding how to protect beaches and barrier islands and their flora and fauna in the current climate of increased demand for beach access, frequent damaging beach erosion events, and dwindling federal and state budgets for beach management activities.

The presence of several species of plants that exist solely on our beaches and dunes and which are designated by the federal government and/or Florida as endangered or threatened species add a botanically interesting aspect to beach management. Although enticing and descriptive names such as sea lavender, beachstar and burrowing four o’clock, may conjure up thoughts of tropical islands, romantic evenings on starlit nights and naps on a breeze-cooled beach chair, in reality, these species are plants that are highly-adapted for life on the harsh environment of Florida’s beaches and dunes.

Examples of Notable Threatened and Endangered Beach and Dune Species

Some of Florida’s threatened and endangered barrier island plants inhabit maritime hammock, coastal strand or back-dune areas that are usually on private property and difficult to access. Several others though, have the interesting habitat of growing on otherwise un-vegetated areas of the beach. Although environmental stressors (e.g., lack of available fresh water, high amounts of salt spray) may be higher on the beach than in more well-protected back-dune communities, several of these plants, including the state-listed beachstar (Cyperus pedunculatus) thrive in pioneer zone areas where competition from other plants is limited (photos 1, 2). Rhizomatous strands of beachstar may extend for dozens of feet onto areas of open beach, where their low profile helps stabilize beaches by trapping wind-blown sand. A tiny plant, typically less than five inches tall, beachstar was designated by the state of Florida as a threatened species after it became apparent that a combination of natural (e.g., beach erosion) and human-related (e.g., beachfront development, foot-traffic) impacts were severely reducing the population and distribution of this species. Beachstar is restricted to southeast Florida, from Brevard through Miami-Dade counties, and is best seen on areas of extensive publicly-owned beaches where there is little or no active beach management. A scourge of pioneer plants is beach raking, an unfortunate and increasingly common technique through which beaches are swept clear of “unsightly debris” (photo 3).

Another state-listed endangered plant is burrowing four o’clock or beach peanut (Okenia hypogaea), a sprawling vine-like plant that never reaches over a couple inches in height (photos 4, 5). It can also be found as a pioneer plant on open beaches in southeast Florida, where it often extends waterward from a tap root located near the base of the primary dune. This member of the Nyctaginaceae, with small aesthetically-appealing lavender-pink flowers, blooms primarily during rainy season months. It gets its common names from its tendency to have flowers that bend down after being pollinated, allowing the young fruit to ripen underground. An annual whose seeds appear to be primarily distributed by wind, populations of this species are highly variable from year to year.

Not all of Florida’s threatened and endangered beach plants are restricted to freeze-resistant coastal areas of the southern peninsula. Two closely-related members of the Verbenaceae, coastal mock vervain (Glandularia maritima) (photo 6), and Tampa mock vervain (Glandularia taccada) range further north at least as far as Volusia and St. Johns counties on the east coast and Levy County on the west. Both are designated by the state as endangered, and may be found in foredune, primary dune or back-dune communities. Further north, Cruise’s goldenaster (Chrysopsis gossypina), state-listed as endangered, is present on coastal dunes in the Panhandle from Walton to Escambia counties.

Not all of Florida’s threatened and endangered beach plants are diminutive groundcover species. Sea rosemary or sea lavender (Argusia gnaphalodes) is a robust shrub that may reach heights of 5 – 6 feet or more, in spite of the nearly sterile soil conditions in which it grows. During February 2012, members of the Cocoplum Chapter of FNPS (Martin County) found several of these showy plants during a field trip on Hutchinson Island (photos 7, 8). State-listed as endangered, sea rosemary is a visually-attractive member of the Boraginaceae that is readily identifiable due to its unusual silvery-gray tomentose leaves and circinate flowers. Generally a species of tropical distribution, individual sea rosemary plants are intermittently distributed to the central peninsula on Florida’s east coast and on the west coast at least as far north as Lee County. This species is attractive enough to be used as an ornamental, but is not presently available from most native plant nurseries.

Competition Between Natives and Non-natives on the Beach

Although beachfront development and beach erosion are the primary threats to some protected plants, even beaches aren’t immune from threats from invasive exotics. Two closely related species of Scaevola occasionally demonstrate the competition between native species and non-native INVASIVES. Beachberry or inkberry (Scaevola plumieri) has a tropical distribution and is listed by the state of Florida as threatened (photo 9). A close relative, beach naupaka (Scaevola taccada) (photo 10) is a non-native that is designated as a Category I invasive by the Florida Exotic Pest Plant Council (FLEPPC). Introduced as an ornamental landscape plant that could survive Florida’s hostile beachfront environment, beach naupaka is out-competing the native inkberry at some beach-front locations from Cape Canaveral to Tampa Bay.

Like many other low-growing species, populations of some state and federally-listed beach and dune species are also being compromised as they get shaded out by more aggressive native
and/or non-native species. Beach clustervine (*Jacquemontia reclinata*) is a creeping vine that is designated as endangered at both the state and federal levels (photo 11). Documented in the U.S. only on beaches and dunes on barrier islands on Florida’s east coast from Miami-Dade through Martin counties, the disappearance of this low-growing species may be related to the spreading of sea grape and other native dune species that has taken place in recent years, and as the effectiveness of protecting dune vegetation from being trampled has increased.

Protecting Biodiversity While Managing Beaches

An interesting challenge that has presented itself in recent years is how to deal with the presence of protected plants when they are situated in the footprint of beach nourishment projects. In some instances, governmental entities have been proactive in working around populations of protected species when they would otherwise be buried during state-funded or federally-funded beach nourishment. Relocation of beach plants is a problematic endeavor, and *in-situ* preservation of protected individual plants presents logistic challenges.

Beach plants are nonetheless protected by state and federal laws, and add to the floral diversity and enjoyment of beach goers. Let’s all hope there is some middle ground through which these gems of biological diversity can be retained, in spite of the one-two punch of natural and human-related threats to their continued existence.

Beaches are wonderful places. The next time you visit one, take a closer look at the plants around you – there just may be an endangered plant at your feet!

About the Author

Greg Braun is a professional ecologist and owner of Sustainable Ecosystems International, an environmental consulting company that specializes in avian and estuarine ecology and protected species management. He serves on the Board of Directors of the Cocoplum Chapter of FNPS (Martin County), and can be reached at dgregbraun@aol.com.

Further Reading

For more information about state-listed and federally-listed threatened and endangered plants see the *Field Guide to the Rare Plants of Florida*, by Linda G. Chafin, available from the Florida Natural Areas Inventory (fnai.org/fieldguide/), and *Notes on Florida’s Endangered and Threatened Plants*, by Richard Weaver and Patti Anderson.

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Volunteer needed for Okaloosa/Walton County area.

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