

2020

# Corkscrew

THE ANNUAL MAGAZINE FOR CORKSCREW SWAMP SANCTUARY



**It's All  
About The  
Neighborhood**

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 Audubon

Corkscrew Swamp  
Sanctuary

The **Corkscrew Swamp Sanctuary Sustainability Board** serves as an important advisory group to the Sanctuary's staff. They assist the organization with increasing support for Corkscrew's programs and engaging the people and businesses of Southwest Florida.

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**Mission:** To protect the natural resources of Corkscrew Swamp Sanctuary, its surrounding watershed, and the Western Everglades, and to influence Everglades restoration for the benefit of birds, other wildlife, and people through land management, science, education, restoration, and public policy advocacy.

Cover Image:  
Peter Houlihan photographs Super Ghost Orchid. Photo: Mac Stone

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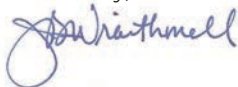
Since its founding in 1954 by a few courageous individuals seeking to save its old growth cypress from the saw, Audubon's Corkscrew Swamp Sanctuary has been an emblem of what conservation-minded Floridians can accomplish together. In 2019, we celebrated 65 years of devoted staff and volunteers, hosting more than 100,000 visitors to marvel at this ancient wetland, as well as unravel the scientific mysteries of its wildlife and pioneer restoration techniques to benefit the larger watershed. From the heretofore unknown pollinators of the Super Ghost Orchid, to the ecology of Florida Panthers, to the changing water regimes of the region, Audubon engages people in the science of understanding and protecting this magical place.

This year a new cadre of staff joined the Corkscrew team, from Sanctuary Director Lisa Korte, Ph.D., to Associate Director of the Blair Visitor Center Shawn McCrohan, to Development Manager Sarah Lathrop. Each has already fallen in love with Corkscrew, and will continue to make the sanctuary more resilient now and into the future.

As we move into a new decade, we are committed to making the Corkscrew Swamp Sanctuary the best neighbor we can be, not only addressing the challenges facing the Sanctuary but applying Corkscrew's conservation science to Audubon's policy efforts in Tallahassee and Washington, D.C. From our multi-faceted education programs and fulfilling volunteer opportunities, to our boardwalk experience and cutting-edge research, we strive for Corkscrew be a place of exploration, adventure, and conservation leadership for Floridians and visitors alike.

Please join us celebrating and protecting this 13,000-acre treasure in the heart of the Western Everglades. In 1954, the magic of the swamp moved ordinary folks to do extraordinary things. We're fortunate to be the keepers of this tradition. Thank you for your support.

Sincerely,



**Julie Wraithmell**

Executive Director, Audubon Florida



I am delighted to be leading the team at Corkscrew Swamp Sanctuary. I chose Corkscrew out of my passion for natural places and interest in wildlife conservation. The swamp has not disappointed, and my colleagues and volunteers have surpassed my expectations.

Like those who halted logging in 1954 to build Corkscrew Sanctuary into today's experience, our team continues a dedicated tradition of conservation. Every day of the year, staff and volunteers contribute to our mission, from managing land and conducting research to sharing knowledge with visitors. Their enthusiasm and passion are the heart and soul of Corkscrew.

I am dedicated to finding ways for people to understand, appreciate, and live with nature. At Corkscrew Sanctuary, we work to be a model for good land management and the protection of our natural resources. We share our lessons learned so that visitors can be inspired to be good neighbors wherever they live. We know that we're on the right track because the Society of Wetland Scientists recognized Corkscrew Sanctuary as a Wetland of Distinction in April 2019 ([www.wetlandsofdistinction.org/](http://www.wetlandsofdistinction.org/)). With this honor, we will build on our strong foundation and maintain our leadership role in wetland management.

I am thrilled to be a part of the Corkscrew Sanctuary community and look forward to working with you to protect Florida's birds and bird friendly habitats. Look for me on the boardwalk and join me in our mission to protect the natural resources of Corkscrew Swamp Sanctuary.

Warm regards,



**Lisa Korte, Ph.D.**

Director of Corkscrew Swamp Sanctuary



# It's All About the Neighborhood

## CORKSCREW'S NATIVE PLANT AND POLLINATOR GARDEN AIMS TO INSPIRE OTHERS

By Renee Wilson, Communications Associate

It is a sunny summer morning at Corkscrew Sanctuary and it feels warm even in the shade. Sally Stein, Director of Public Programs, works up a sweat as she carefully waters down some newly-installed native plants in the Native Plant and Pollinator Garden.

“The area at the entry of the visitor center was very overgrown,” said Stein, wiping her brow. Since the summer of 2017, staff had been looking for a way to enhance the space that hid the Blair Audubon Visitor Center from view. The area offered few resources for birds and pollinators, many of which are becoming imperiled due to changes in our climate in addition to loss of habitat.

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**“We’ve destroyed so much natural habitat... anything we can do to replace it in our yards is helpful.”**  
– Sally Stein

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Southwest Florida looked very different 100 years ago. Rampant urbanization has transformed natural areas into manicured landscapes with the introduction of turf-grass and ornamental plants. While these transformations may be easy on the human eye, they often leave native species hungry for what has been lost.

Restoring native habitats, even on a small scale, can have big impacts. To inspire nearby homes and businesses to create their own initiatives, as well as teach the public about the importance of pollinators and native plants, water conservation, and small scale clean energy use, staff launched the new garden as part of Audubon’s Plants for Birds initiative.

A grant from the Naples Garden Club made it all possible. The garden mimics many of the habitat types found in the Sanctuary, with species like pond apple, goldenrod, and swamp dogwood. These plants are beneficial to birds and pollinators, as well as numerous other animals, while requiring less water, fertilizers, and pesticides than many ornamental plants introduced to our landscape. A water feature with a solar-powered pump houses emergent plants, small fish, and aquatic invertebrates.

“Even if people don’t have a garden at home, they can still put nectar plants in pots where butterflies and hummingbirds can benefit,” said Stein.

A sculpted pair of Great Blue Herons stands sentry as the garden’s centerpiece, welcoming visitors – human and otherwise – to this little slice of heaven that encourages environmentally sustainable landscaping practices and makes Corkscrew an even better neighbor.

**Native plants provide nectar sources for local pollinators.**



**Sally Stein, Director of Public Programs, waters in new plants.**



**Mark and Darlene Johnson donated “Interlude,” a sculpture by Gary Lee Price, to Corkscrew Sanctuary.**

# The Importance of Prescribed Fire

By Allyson Webb, Senior Resource Manager



Fire crackles as it burns through saw palmetto and a carpet of pine needles, leaving nutrient-laden ash and clearing a path for new growth in the Corkscrew Swamp Sanctuary. I watch the smoke curling upwards, dispersing high into the air, satisfying my need to know that our smoke will have minimal to no impact on our neighbors.



Fire is vital to and has been shaping the Florida landscape for hundreds of years. Of the 13,000 acres in the Sanctuary, our goal is to burn roughly 1,500 acres of fire-dependent habitat per year. We conduct prescribed fires here to reduce fuel loads (thus minimizing the risk of wildfires), regenerate marshes and wet prairies, perpetuate fire-dependent plant species, and ensure healthy habitat for animals such as Northern Bobwhite Quail, Wild Turkey, and White-tailed Deer.

During prescribed fire season, we constantly monitor the weather for the opportune time to get fire on the ground. In preparation, firebreaks are cleared, snags are dropped, and dense vegetation is trimmed to minimize risk of fire jumping out of the burn unit.

When ideal conditions prevail, dawn finds me already on the phone with the local Florida Forestry Office, pulling a permit. An important part of the permitting process is performing a smoke screen. The smoke screen tells me where the smoke will go, and we select winds to minimize smoke impacts to our neighbors.



While prescribed fire is an extremely effective management tool, it is also a dance of people and equipment that must fluidly adapt to changes in weather conditions throughout the day. As a burn boss for Corkscrew Swamp Sanctuary, I am responsible for this choreography, as well as the safety of the land and people. It can be a daunting task.

Meanwhile, my crew performs final operational checks on fire equipment and gears up in appropriate protective clothing. After a crew briefing, we head out to our unit, and once all equipment and personnel are staged, we conduct a test fire to better gauge conditions on the ground.



But what is a “prescribed fire?” According to Florida Forest Service, it is the “controlled application of fire to existing naturally occurring fuels under specified environmental conditions, following appropriate precautionary measures, which allows the fire to be confined to a predetermined area and accomplishes the planned land management objectives.” A great deal of planning and preparation goes into each and every fire we conduct at Corkscrew Swamp.

By sunset, ignition has long since stopped, and the crew has moved into “mop-up” mode to extinguish any lingering flames or hotspots of material around the perimeter of the unit. As burn boss, I stay on site overnight, making routine checks of the unit along the perimeter. We continue to monitor the units for days afterwards.

These are long, grueling days, but rewarding to see the new growth and response of wildlife to these fire-maintained areas.



ABOVE: Corkscrew Sanctuary uses prescribed fire to maintain healthy native ecosystems.

# Restoration Update

By Shawn Clem, Ph.D., Research Director

Conserving and protecting land from development is critically important, but managing and maintaining native habitat remains a long-term endeavor.

Corkscrew Sanctuary's old-growth bald cypress forest, marshes, wet prairies, and pine flatwoods – and the wildlife that call these habitats home – were protected through the era of plume-hunting and the widespread logging of the Big Cypress Swamp. After being acquired by National Audubon Society in the early 1950s, the nonprofit protected Corkscrew from the development boom that swept across Southwest Florida, particularly the intense development we've seen in our region in recent decades. While the Sanctuary's boundaries ensure our 13,000 acres won't be lost to development, our land managers continue to fight a daily battle to maintain our native habitats in the face of increasing pressures placed on Corkscrew from outside our boundaries.

Southwest Florida's native habitats are maintained by the annual rise and fall of water levels and frequency of wildfire. In 2018, Audubon began an ambitious effort to remove Carolina willow and other shrubs that have spread across Corkscrew Sanctuary in order to restore 1,000 acres of wet prairie and marsh. The spread of these shrubs has exacerbated Corkscrew's water loss and prevented efforts to use fire as an effective management tool. Additionally, conversion of grassy wetlands to shrubs has reduced small fish availability and resulted in poor foraging habitat for wading birds.



Endangered Everglades Snail Kites take advantage of new habitat at this restored site.

**In 2018, Audubon began an ambitious effort to remove Carolina willow and other shrubs that have spread across Corkscrew Sanctuary in order to restore 1,000 acres of wet prairie and marsh.**

The removal is a multi-year process that requires our team to act both nimbly and efficiently. In the short window of time that marshes dry in the spring, we bring in large machinery to mechanically remove the shrubs, mulching and leaving the vegetation to decompose and return the nutrients to the marsh. For the next three to five years, our land management team is on the ground within these plots, removing opportunistic non-native plants that are quick to colonize the newly-created habitat so that native plants can become established. Finally, our team brings prescribed fire back into these restored wetlands, and fire is used long-term as the primary management tool (see page 4).

**From mid-April to early June of 2019, we cleared 229 acres of important marsh and prairie habitat, bringing this restoration project to a total of 570 acres.** In the coming year, we hope to bring the first fire back into our restored wetlands.

By quantifying the change in plant communities and wildlife use, we can evaluate the effectiveness of the restoration process. Our goal is for Corkscrew to serve as a model for wetland management and restoration throughout our state.

White Ibises, Roseate Spoonbills, and Wood Storks fly over Corkscrew Sanctuary. Photo by David Korte.



# Once Again, “Super” Ghost Orchid is Focus of Attention

By Steve Parker,  
Communications and Volunteer Engagement Coordinator

Ever since its accidental discovery in July 2007 by visitors looking for owls, the “Super” Ghost Orchid at Audubon’s Corkscrew Swamp Sanctuary has attracted a lot of attention. Within weeks, visitors from around the world arrived to see the rare and endangered orchid, and four spotting scopes lined the boardwalk to give visitors a good look.

A new discovery in July 2018 and its announcement this past July have again focused worldwide attention on the “Super” Ghost Orchid. Their mystery pollinators? The Fig Sphinx Moth!

Ground-breaking findings at Audubon’s Corkscrew Swamp Sanctuary about Ghost Orchids and their pollination by moths was published September 6, 2019 in *Scientific Reports*, an open-access journal from the publishers of *Nature*. “Publication in *Scientific Reports* means that our work on Ghost Orchids passed the test of rigorous review by technical experts,” said Sanctuary Director Lisa Korte, Ph.D. “We’re pleased to join the ranks of international scientists sharing their discoveries with the world. This publication highlights our openness to collaboration and credibility as a research lab.”

The *Scientific Reports* article follows a presentation at Corkscrew this past July at which National Geographic explorers Mac Stone and Peter Houlihan revealed photographs showing a Fig Sphinx Moth pollinating the orchid. Before their discovery, scientific conjecture had long held that only the Giant Sphinx Moth could pollinate Ghost Orchids due to the extreme length of its proboscis. Their photographs suggest that other hawkmoths with proboscises shorter than that of the Giant Sphinx Moth might also be able to pollinate Ghost Orchids.

Stone and Houlihan, co-authors of the *Scientific Reports* paper, also photographed a Giant Sphinx Moth visiting the “Super” Ghost Orchid to feed, but not necessarily functioning as a pollinator, leading to the hypothesis that Giant Sphinx Moths could actually be Ghost Orchid nectar robbers. “Corkscrew Swamp Sanctuary protects a slice of Wild Florida that is increasingly rare as development continues throughout our state. Discoveries that turn our understanding of how things work upside-down highlight how truly important it is for us to conserve these



A Giant Sphinx moth visits the Super Ghost Orchid.  
Photo by Mac Stone.

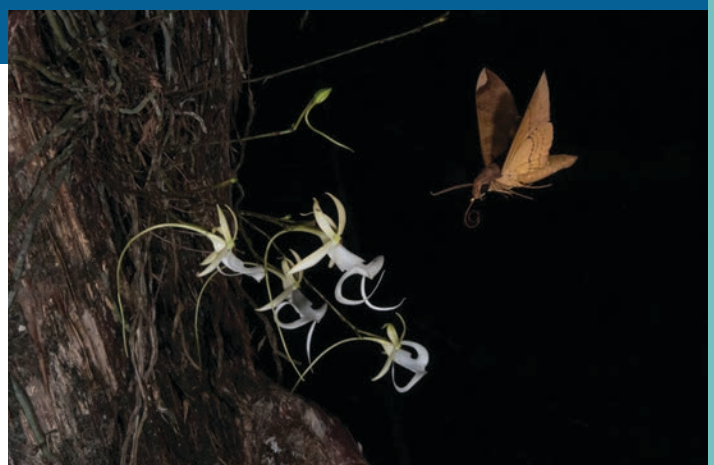
ecosystems,” said Shawn Clem, Ph.D., one of the paper’s authors and Research Director of Audubon Florida’s Western Everglades Research Center, located at Corkscrew.

The paper highlights increased risk for Ghost Orchids as a result of water loss from regional land use changes, and notes: “Small and large scale wetland restoration projects within the Greater Everglades can help maintain and restore climatic stability for both Ghost Orchids and their hawkmoth pollinators.” Wetlands restoration is one of the ongoing conservation projects at Audubon’s Corkscrew Swamp Sanctuary.

The study also calls for elevating protection of Ghost Orchids from state to federal status, saying that “poaching, historical logging, sprawling development and habitat degradation, and climate change” all threaten the existence of Ghost Orchids.

The “Super” Ghost Orchid produced its first 2019 flower on June 27 and remained in bloom for 93 consecutive days! Because it is 100 feet off the boardwalk and 50 to 60 feet up in an ancient bald cypress tree, it is difficult to see with the naked eye or even photograph with a standard lens. Corkscrew positions a spotting scope on the boardwalk for the public to view the flowers. Visitors are encouraged to bring binoculars or a camera with a powerful lens. Corkscrew rents binocular for \$3.

The Fig Sphinx moth is a pollinator of the Super Ghost Orchid.  
Photo by Mac Stone.

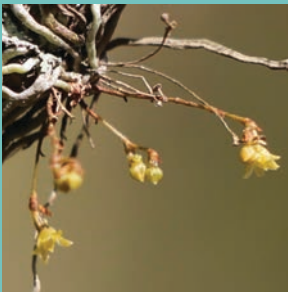


## CORKSCREW IS HOME TO MANY RARE SPECIES OF ORCHIDS

This summer, Corkscrew's "Super" Ghost Orchid stole the headlines when researchers published jaw-dropping news about the identify of its pollinators. The Ghost Orchid, however, is not the only gorgeous species of threatened and endangered orchid that calls the Sanctuary home.

Located in a climate zone that mixes temperate and tropical ecosystems, Corkscrew enjoys a rich diversity of plant life. Corkscrew sits at or near the southern limit for many temperate species, as well as at or near the northern limit for some tropical species. The humidity of the swamp protects many of the tropical species from frost and cold weather.

Plants at Corkscrew also enjoy the protections of the Sanctuary, which was founded in 1954 to preserve the largest existing stand of old-growth bald cypress in the world. Plants outside the Sanctuary are vulnerable to habitat destruction, logging, development, and over-collecting.



### ***Dendrophylax porrectus* THREATENED**

The Jingle Bell Orchid, also known as Needleroot Orchid, grows mostly on small twigs and branches in semi-sunny locations, and is found in Florida, the Caribbean, and much of Central America. Usually blooms in November.

***Epidendrum amphotomum* ENDANGERED**  
The Dingy-flowered Star Orchid is found in south Florida, the Caribbean, Central America, and northern part of South America. Usually blooms January through April.



### ***Polystachya concreta* ENDANGERED**

The Yellow Helmet Orchid is found in south Florida, the Caribbean, Mexico, Central America, and northern South America. Usually flowers August to December, but sometimes other times of year.

***Prosthechea cochleate* ENDANGERED**  
The Florida Clamshell Orchid is found in south Florida and can flower year-round, but usually September through May.



### ***Epidendrum floridense* ENDANGERED**

The Florida Star Orchid is found in south Florida and Cuba.

# Sustainable Neighborhood, Sustainable Neighbors

By Renee Wilson, Communications Associate

## THE LIVING MACHINE

Corkscrew Swamp Sanctuary strives to be a good neighbor by setting examples for sustainability and resiliency across its 13,000 acres. As far back as the 1980s, when the boardwalk gained popularity and began receiving as many as 100,000 visitors in a single year, staff were pressed to replace their ordinary septic tank with a sewage system.

Our selection? The Living Machine, an innovative system that uses sunlight, bacteria, green plants, and aquatic animals as filtration, mimicking the cleansing functions of wetlands. As one of the very first of such systems ever built, Corkscrew's Living Machine purifies human waste without additives and recycles 90 percent of the purified water back into the restrooms for reuse in the toilets. As an added benefit, installing this unique system costs substantially less than conventional technology.

## REDUCE, REUSE, RECYCLE

Elsewhere in operations, Corkscrew uses solar panels to power part of the Center's lighting, utilizes green cleaning products, and disposes of less plastic. Roswitha Zeindlhofer-Marold, Retail and Sales Manager for the Blair Audubon Visitor Center at Corkscrew, has taken a lead role in eliminating single-use plastics from their operations: plastic water bottles have been replaced with paper-based "Just Water" bottles with caps made from corn starch, and visitors are offered reusable shopping totes made from recycled bottles and 80 percent post-consumer materials instead of single-use plastic bags.



Taste of Immokalee products are made with local ingredients.



Many items in the store are made by local artists or with sustainable products.



The Living Machine is a green, wastewater treatment facility.

## NATURE STORE STOCKS HANDCRAFTED ITEMS FROM LOCAL ARTISANS

Moreover, many visitors come to the Nature Store looking for handcrafted merchandise and items made by local artisans. "Locally-made products provide special meaning to visitors from afar," says Marold, who also stocks many items made with recycled materials.

Locally-grown products require less gas and refrigeration to transport from farm to table, thus resulting in a lower carbon footprint than products that travel great distances to store shelves. One of Corkscrew's local vendors, Taste of Immokalee, was created by high school students in 2014. A youth entrepreneurship program, Taste of Immokalee empowers students to break the cycle of poverty in one of Florida's poorest communities. With tomatoes from nearby farms, Taste of Immokalee products, including salsa and barbecue sauce, are currently available for purchase at Corkscrew Swamp Sanctuary.

"We think it is important to offer sustainable products and support local craftsmanship," says Marold, who reminds visitors that all store sales support Corkscrew's mission: to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity.





## Programming Designed to Educate and Engage Visitors



Family Fun Friday 2019 included hands-on activities and swamp buggy tours.

Both adults and children alike are drawn to the beauty of Corkscrew. Many guests simply enjoy the solitude of being on the boardwalk, mesmerized by the sunlit stretch of wet prairie and bending grasses that seem to wave them in on their approach to the darkness of the swamp. With breathtaking sights and sounds of solitude, everyone takes away something different when they visit this special place, but the people who participate in public education programs take away a deeper understanding of the sanctuary.

Early Birding Walks, Swamp Meditation, Lunch & Learn, and Ancient Forest Tours are just a few of the programs provided by Corkscrew educators and volunteers across the seasons.

✿ Only offered a few times per year, Swamp Walks literally immerse guests in a wet walk through the cypress. Like most of Corkscrew's education programs, the slow, one-half mile meander teaches people about the watershed, the importance of the old-growth cypress trees, plants such as rare orchids, wildflowers, bromeliads, ferns, birds, and other wildlife.

✿ Participating in a guided walk on Corkscrew's famous boardwalk, led by boardwalk volunteers, is the best way to learn about and experience the Western Everglades any time of year.

✿ Visitors are also encouraged to take part in any number of community science programs, including Corkscrew's North American Butterfly Association survey. Anyone can become an expert at butterfly identification through this effort while contributing important information about the geographic distribution and relative population sizes of the butterfly species counted.



**"We recently moved to Southwest Florida from the east coast (Delray Beach). We visited Corkscrew for the first time... and we are thrilled to find such a great nature center close by. We immediately became members and look forward to many future visits! I am an avid photographer and it offers so many opportunities, not just the wildlife, but also the many different plants, etc. Go early and experience the solitude, coupled with the subtle sounds of nature awakening to a new day."**

**- Jim Rabenstine**

**"I've been a member of the Audubon Society for many years, but never more proud of the affiliation than during my trip to Corkscrew Swamp. What a splendid thing be in a cypress and pond apple slough, surrounded by nature in all her glory with orchids and tillandsias all around - without being waist-deep in swamp water! A wonderful experience. Will be back!"**

**- Sabrina Olson Carle**

## Meet Lisa Korte, Ph.D., Sanctuary Director, Corkscrew Swamp Sanctuary

### **Q: Where were you before you took over the helm at Corkscrew Swamp Sanctuary?**

**Korte:** Prior to Corkscrew Sanctuary, I was a Natural Resource Management Specialist with the U.S. Forest Service. In this position, I spent two years working with the Agency for International Development (USAID). Based in the capitol city of Monrovia, in the west African country of Liberia, we worked with local communities to develop forest management skills to conserve tropical rainforests. This included biodiversity conservation of the forest, building local institutions to govern forest use, and developing economic opportunities to generate revenue from forest activities.

From 2010-2016, I was the director of the Smithsonian Institution's Gabon Biodiversity Program. In the central African country of Gabon, I collaborated with nonprofit organizations, large multinational corporations, and government representatives. We addressed complex conservation issues, from human-wildlife conflict to implementing biodiversity action plans in critical conservation areas.

### **Q: What sets Corkscrew Swamp Sanctuary apart from other conservation lands in Florida?**

**Korte:** The Sanctuary is a model for how people can work together to protect and manage wetlands. It has a long history of conservation, from protecting birds hunted for their feathers to community members pooling funds to purchase our land in order to save old-growth cypress from logging. Today, the Sanctuary is the heart of the Corkscrew Regional Ecosystem Watershed, where people continue to purchase and manage land to conserve water resources.

Corkscrew Sanctuary is a mosaic of wetland habitat from old growth cypress to restored marshes. We are managing wetlands in ways that people can apply to wetlands in their backyards, communities, counties, and across Florida. Our goal is to be good neighbors with our fellow citizens in the Corkscrew Island Neighborhood, Collier County, Lee County, and Florida. Our ability to maintain wetlands is a positive influence on the entire watershed, from immediate benefits of water sources to setting an

example for how people can manage resources in their communities. We would like to be a model in Florida, in the United States, and across the globe.

### **Q: What do you see as Corkscrew's top priorities?**

**Korte:** The top priority is land management. We want to manage Corkscrew habitat to benefit birds, wildlife, and people. To be a model for conservation, we need to start with good management of habitat in the best way possible. In 1954, Audubon was entrusted with the care and responsibility of the land that the Naples community came together to protect. We need to manage this land well.

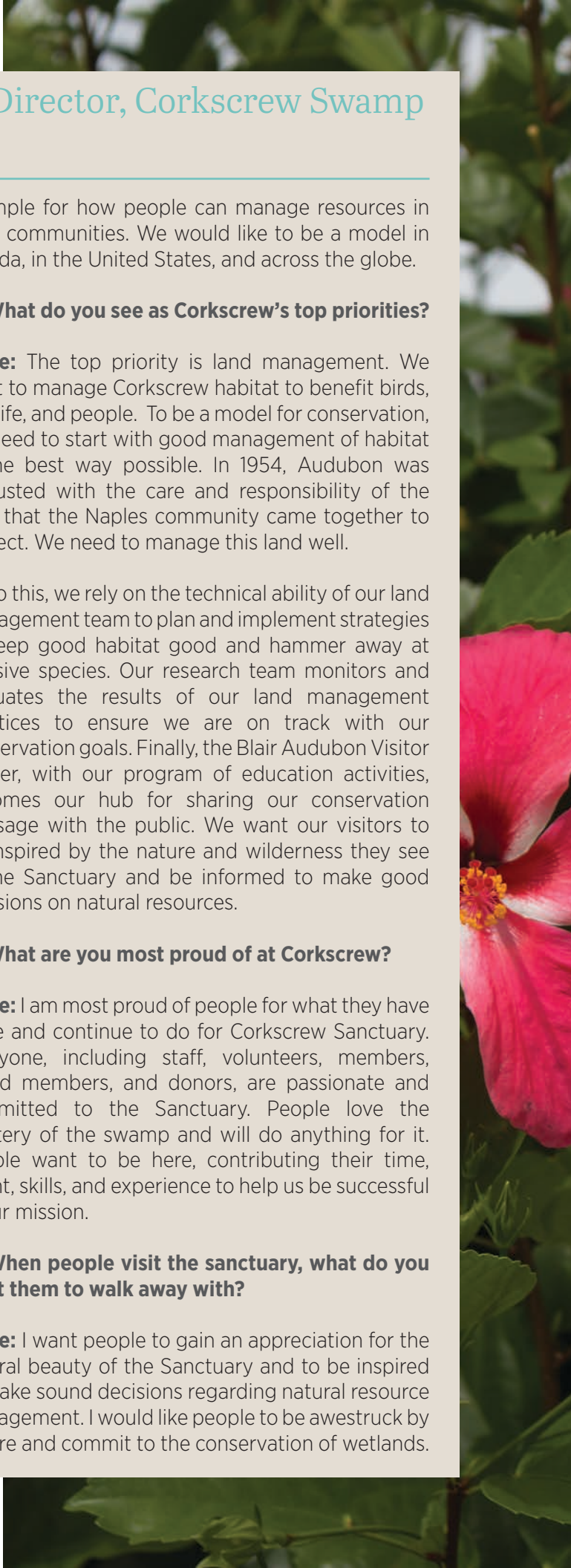
To do this, we rely on the technical ability of our land management team to plan and implement strategies to keep good habitat good and hammer away at invasive species. Our research team monitors and evaluates the results of our land management practices to ensure we are on track with our conservation goals. Finally, the Blair Audubon Visitor Center, with our program of education activities, becomes our hub for sharing our conservation message with the public. We want our visitors to be inspired by the nature and wilderness they see at the Sanctuary and be informed to make good decisions on natural resources.

### **Q: What are you most proud of at Corkscrew?**

**Korte:** I am most proud of people for what they have done and continue to do for Corkscrew Sanctuary. Everyone, including staff, volunteers, members, board members, and donors, are passionate and committed to the Sanctuary. People love the mystery of the swamp and will do anything for it. People want to be here, contributing their time, talent, skills, and experience to help us be successful in our mission.

### **Q: When people visit the sanctuary, what do you want them to walk away with?**

**Korte:** I want people to gain an appreciation for the natural beauty of the Sanctuary and to be inspired to make sound decisions regarding natural resource management. I would like people to be awestruck by nature and commit to the conservation of wetlands.



# Corkscrew's Cypress Council

Like the conservation pioneers of 1954 who saved Corkscrew's forest from the ax, the Corkscrew Cypress Council Members demonstrate to the community and the world how a small, committed group of people can make a lasting difference – before it is too late.

Corkscrew Swamp Sanctuary is a unique subtropical freshwater forested wetland located in a strategically important location in our community. The wetlands recharge the local aquifers, rivers, and estuaries, providing the right conditions for fishing and coastal recreation as well as clean drinking water and water for agricultural productivity. In addition, the mosaic of forested and graminoid wetlands store flood waters, deter saltwater

intrusion, and relieve drought stress, thus reducing the risk of wildfires. Corkscrew provides an important connection for wildlife and water to coastal habitat in the Estero Bay Aquatic Preserve and Delnor-Wiggins State Park via the Estero, Imperial, and Cocohatchee rivers. It also provides connectivity to important habitat in southeast Lee County as well as the Florida Panther National Wildlife Refuge and the Big Cypress National Preserve. Council Members commit five-year support to sustain Corkscrew Swamp Sanctuary for future generations.

**To join the Corkscrew Cypress Council contact Julie McCann at [Julie.McCann@audubon.org](mailto:Julie.McCann@audubon.org).**

## Finding Their Happy Place

*By Yvette Powell, Cypress Council Member*

About 15 years ago, Wes (my husband) and I made our first post-retirement stop in Naples. Arriving in the late afternoon, and realizing that what we craved the most was some peace and quiet, a Google search led us to Corkscrew Swamp Sanctuary. I remember sitting on a bench, looking out at the cypress swamp, and feeling the restorative power of the beauty that surrounded us.

Fast forward 10 years: we returned with plans to buy what we thought would be a winter home, but has now become our full-time residence. When we made that decision to move, we knew immediately that Corkscrew would become a part of our lives here. We are passionate about hiking, photography, and exploring nature, and Corkscrew provided us with a fabulous means for our passions. The Sanctuary was a place we could go and feel like we were truly connecting with our newly-adopted environment.

Very shortly after we moved to Naples, we began volunteering at Corkscrew, creating an opportunity for us to develop some new skill sets. The training was a crash course, especially for a couple of non-birding Coloradans who had lived at 6,000 feet for the past 15 years! Learning about the ecosystems, flora, and fauna has been a joy, and every single day that we are on the boardwalk, we both (still) try to learn at least one new thing.

Within a year of starting our volunteer work, we both realized how important Corkscrew had become to us. We started calling it our Happy Place, well before the "Happy Place" tee shirts appeared in the gift shop.

**No matter how much or how little there is to see on any given day, there is always some special interaction with a visitor, staff member, or volunteer that makes the day worthwhile.**

In our views, if it is worth our time, it is also worth our financial support. Our decision to become Cypress Council donors seemed like a logical transition toward increasing our level of commitment. We feel very good about that decision, and look forward to many more years of continued support.

**Yvette and Wes Powell, Cypress Council members.**





We gratefully acknowledge the generosity of all donors who made gifts to Audubon Corkscrew Swamp Sanctuary. Together we have made tremendous progress in the battle to save and restore Corkscrew's lands and watershed for the benefit of birds, wildlife, and future generations. We are grateful to all individual donors and foundations that support our mission.

**\$100,000 and above**

Blair Foundation  
SeaWorld and Busch Gardens

**\$50,000 - \$99,999**

Vincent J. Coates Foundation  
Florida Power & Light Company  
Heidi and Brian Miller  
Rathmann Family Foundation

**\$25,000 - \$49,999**

In Honor of Rob Berkley  
Felburn Foundation  
Freed Foundation, Inc.  
Allyn L. Golub, PhD  
Anna and Marvin Hamburg  
Remembrance  
Knopf Family Foundation  
Anthony and Judy Licata  
Stephen & Merrilee Nellis  
John and Virginia Rigsby  
The Robinson Foundation  
Joe and Jamie Steuer

**\$10,000 - \$24,999**

100+ Women Who Care of  
Southwest Florida  
Joseph T. Ambrozny  
Audubon of the Western Everglades  
The Batchelor Foundation  
John and Nancy Elting  
Deb Carrier and Harry Gaines  
Mark Gudeleski &  
JP Mulholland  
William and Lois Kelley  
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Martin Family Foundation  
Naples Garden Club  
Mary Jane and Frank Semcer  
Dick and Sharon Stilwell  
Anne Drackett Thomas  
Margy and Scott Trumbull  
Welchwood Foundation

**\$5,000 - \$9,999**

Arthrex, Inc.  
Dr. Richard H. Bailey Memorial  
Charles and Molly Becker Trust  
John C. Bock Foundation  
Leona Boldt  
Fred and Patricia Carle Memorial  
John and Georgia DallePezze  
Tom and Nancy Gallagher  
John R. and Ann L. Helmsderfer  
Memorial Fund  
Jinny and John Johnson  
Kate and Al Luzius  
Ritchie Foundation/MALLRD  
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Richard M. Schulze Foundation  
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Jack W. Thompson Trust  
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Frederick S. Upton Foundation  
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**\$2,500 - \$4,999**

The Ash and Cedar Foundation  
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The Boathouse Foundation  
Larry and Jeri Borgard  
Preston and Cherie Came  
Timothy G. Carroll  
Larry French Memorial  
Ellin Goetz and Mike Watkins  
Gracey Lockett Bradley Trust  
Sandy and Mike Hollenhorst  
Walter G. and Barbara Korntheuer  
Gerry and Darryl Manning  
Abbott Miller Memorial  
Penniman Family Foundation  
Wes and Yvette Powell  
Lou Ann and Buss Ransom  
Jim Rathmann & Anne Noonan  
Mary and Christopher Rayburn

**\$1,000 - \$2,499**

Lew & Dawn Allyn Family Fund  
Verla Adams Memorial  
Richard J. Brickwedde  
Paul and Linda Burnham  
Cerda, Llanos y Cia, Inc.  
Community Foundation of Collier  
County  
Conway Family Foundation  
The Corwith Fund  
Derek and Helen Day  
Desai Family Fund  
Joan Dunn  
Warren and Leslie Durling  
The Evelo Family Fund  
Michael Gaebel  
Sharon Grider and Jeff Millar  
Foundation  
Susan and Tom Hallin  
Elizabeth Hines  
Dale Kammerlohr  
Cathy Koch  
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Meredith Corporation  
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Phyllis Mueller  
David Parker and Janet Tiampo  
Leroy and Margarita Peterson  
Family Fund  
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Susan Schumann-Skehan  
Deborah Shultz  
Dr. Nancy Sulla  
John and Maureen Wurtz  
Mary Ida and Carl D. Yost

**Conservation Partners**

Naples Trust Company  
Panther Island Mitigation Bank

# Glimpses from the Trail Camera

By Shawn Clem, Ph.D., Research Director

Thanks to a network of motion-activated trail cameras that provide round-the-clock monitoring of panthers and other medium and large sized mammals, Corkscrew's research team can collect data on mammal habitat use, occupancy, and images of predator-prey interactions and other behaviors. These data serve a variety of purposes, from providing information about how wildlife respond to land management activities, to documenting prey populations prior to the establishment of Burmese pythons or other injurious non-native reptiles.

While Wood Stork populations tell us about the health of our wetlands and Ghost Orchids tell us about the value of our old-growth bald cypress forests, Florida Panthers tell us about the value of our wetlands and uplands and the critical role Corkscrew plays in the mosaic of protected lands throughout our region. Our team is focused on modelling responsible land stewardship in our region and fostering collaborative relationships with our state and federal partners for the benefit of our native ecosystems and their wildlife.

The Florida Panther is arguably one of the most captivating, yet elusive, of Corkscrew's wildlife. While a few visitors in recent years have been lucky enough to catch a glimpse of a panther from the boardwalk, visitor sightings of these solitary and shy large mammals are rare. Data on Corkscrew's panthers are important, however, as large tracts of protected land like our Sanctuary provide critical habitat and travel corridors for this federally-endangered species that is highly territorial and has a particularly large home range.

While Florida Panther sightings are rare on the boardwalk, they are a fairly common sight in Corkscrew's backcountry. Our network of trail cameras has revealed that Corkscrew provides habitat for a number of Florida panthers, including two different family groups in 2019. Images captured across space and through time often allow our team to identify individuals, mapping them as they move throughout the Sanctuary and even providing a glimpse into their diet, body condition, and production and growth of kittens.

Since the beginning of this effort our research team has consulted and collaborated with a number of partners at universities and state and federal agencies. Over the past two years, data collected at Corkscrew have provided Florida Fish and Wildlife Conservation Commission (FWC) with invaluable information about a recently-publicized neurological disorder affecting Florida panthers and bobcats in several areas in Southwest Florida. Our team frequently communicates with FWC's team of panther experts (wildlife biologists and veterinarians) to report sightings, share data, and facilitate on-the-ground efforts to better understand and respond to this disorder. This is all thanks in part to trail camera technology.



A camera trap caught this turkey on an early evening stroll in February.



Two Roseate Spoonbills in a restored wetland on a July afternoon.



Florida Panther with captured prey at night in August.

# Volunteer's Boardwalk Paintings Earn Special Service Award

By Steve Parker, Communications and Volunteer Engagement Coordinator



Leslie Burgess starts with a small piece of the Audubon's Corkscrew Swamp Sanctuary boardwalk, broken off during Hurricane Irma. Carefully, skillfully, she paints colorful images of wildlife on the wood pieces, bringing new life to memories of a hurricane's destruction that you can hold in your hand. Her work and creativity has earned Burgess this year's Sanctuary's Special Service Award.



Consistently one of Collier County's top tourism attractions, Corkscrew Swamp Sanctuary's historic boardwalk is the heart and soul of what draws 100,000 visitors annually. Burgess, volunteering at Corkscrew every Wednesday as a Naturalist, is keenly aware of the boardwalk's importance. After Hurricane Irma destroyed whole sections of the raised walkway, forcing it to close completely for several weeks, Burgess came up with a creative way to help support boardwalk repairs that continue to this day (the boardwalk reopened within weeks of the hurricane but some areas are still being repaired).

Burgess, an artist, asked Corkscrew management if she could paint pictures of birds and other swamp creatures on small pieces of broken boardwalk and then offer them to the Nature Store where visitors could take them home in exchange for a donation. **Her artwork sold out and raised more than \$8,000 in donations for Corkscrew.**

Because of her project, Burgess was named the top tourism volunteer in Collier County for 2019, winning the Paradise Coast Convention and Visitor Bureau Volunteer Star Award, on September 27. Through her dedication, Burgess has proved to be a true ambassador for Corkscrew Swamp Sanctuary and Audubon's vital mission. She was given the Sanctuary's Special Services Award at Corkscrew's Volunteer Appreciation Dinner in March 2019.

Volunteer of the Year Awards were presented in seven specific service areas:

Resource Management

**Joelvis Espinaco**

Research

**George Wilder**

Facilities

**Ron Holden**

Visitor Center

**Kari Rountree**

Youth Programs

**Arnie Collens**

Public Programs

**Art Blatt**

Boardwalk Naturalist

**Keith Johnson**



Audubon Florida named Rathmann Family Foundation as the Philanthropist of the Year for their visionary investment in the restoration of Southwest Florida wetlands.



## Volunteers of the Year Recognized at Assembly

Corkscrew Swamp Sanctuary Volunteers Sharon and Dick Stilwell were recognized as Audubon Florida 2019 Volunteers of the Year at the annual Audubon Assembly awards held October 25 in Gainesville. Staff, fellow volunteers, and visitors to Corkscrew consider it a joy to be around Sharon and Dick. There may be better birders – but if there are, we haven't come across them yet.

Sharon and Dick have been active volunteers at Corkscrew since March 2006. Although they are seasonal, splitting time between West Des Moines, Iowa, and Bonita Springs, together they have amassed more than 4,700 career service hours. Both have plates on the Sanctuary's Career Service Hours recognition plaque inside the Blair Audubon Visitor Center.

# 1954

**Corkscrew Swamp Sanctuary** was founded in 1954 but only began utilizing the help of volunteers on a large-scale basis in the early 1980s, according to Director Emeritus Ed Carlson, who has been with Corkscrew for 51 years. Today, the Sanctuary relies heavily on volunteers.

## 147

Corkscrew had 147 **active volunteers in 2019**, up from 130 the year before.

## 117

Of those 147 active volunteers, 117 were **Boardwalk Naturalists**.

## 3

**Student Interns**

## 22

**Florida Gulf Coast University students**

## 8

**RV Campers**

## 7

**Service Organizations**

### Did you know that Corkscrew Swamp Sanctuary:

- has been an Audubon-protected nature site for more than 100 years
- protects more than 13,000 acres, including the world's largest remaining, old-growth bald cypress forest
- boasts 2.25 miles of boardwalk through ancient forest and marsh habitat
- receives 100,000+ annual visitors

## Corkscrew Treasures our Great Volunteers

Audubon's Corkscrew Swamp Sanctuary depends on dedicated volunteers to keep the Sanctuary operating and to fulfill our shared conservation vision.

As a small thank you for everything that our volunteers do, we held some special events this past year just for the volunteers, including a Beginner Swamp Walk, an Advanced Swamp Walk, an Early Birding Walk, and three excursions to see juvenile Great Horned Owls in their nest. Those were in addition to our Volunteer Appreciation Dinner, Summer Ice Cream Social, and Welcome Back Potluck.

**We'd love for you to join our great team of volunteers. Pick up an application in the Blair Audubon Visitor Center or visit the Volunteering page on our website at <https://corkscrew.audubon.org/about/volunteering>.**

## 2019 In Memoriam

**Kendrick A. "Rick" Sears**

Boardwalk Naturalist

October 28, 1933 - March 13, 2019

**Richard J. "Dick" Brickwedde**

Sustainability Board

December 12, 1944 - August 27, 2019

**Guy Paul Fischer**

Community Science

September 19, 1950 - October 22, 2019



Corkscrew Swamp  
Sanctuary

Corkscrew Swamp Sanctuary  
Located 15 miles east of I-75, exit 111  
375 Sanctuary Road, Naples, FL 34120  
239-348-9151  
Corkscrew.Audubon.org

 facebook.com/CSS1954

 twitter.com/corkscrewswamp

 instagram.com/corkscrewswamp



Otter. Photo: RJ Wiley

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**Executive Director:** Julie Wraithmell

**Sanctuary Director:** Lisa Korte, Ph.D.

**Production:** NPC Printing, Inc. Editor: Erika Zambello Designer: Frances Roy Agency

**Cover Photo:** Mac Stone

**Contributors:** Shawn Clem, Lisa Korte, Julie McCann, Steve Parker, Yvette Powell, Allyson Webb, Renee Wilson, and Julie Wraithmell.

**Mission:** To protect the natural resources of Corkscrew Swamp Sanctuary, its surrounding watershed, and the Western Everglades, and to influence Everglades restoration for the benefit of birds, other wildlife, and people through land management, science, education, restoration, and public policy advocacy.

### Admissions:


Entrance fees cover two consecutive days of admission.

\$14 Adults

\$6 College Students with ID

\$4 Children 6 to 18 years old

\$10 National Audubon Society Members with Card

 Handicap Accessible

### Join Us!

Friends of Corkscrew enjoy FREE admission!

