



Corkscrew
Swamp Sanctuary

Along the Boardwalk

April, 2007

www.corkscrew.audubon.org

Volunteer Field Trip

Apr. 13 ... Reptile & Amphibian Hike
with Mike Knight

Details & sign up in the Bunting House

Fish may hold key to wading bird population recovery

New faces have joined the Corkscrew staff: biologists who are studying fish populations throughout Southwest Florida to better understand what conditions are necessary for the recovery of wading bird populations.

The idea is simple. If hydrologic conditions are right, fish populations will increase throughout the wet season; when water levels begin to fall in the dry season, fish will concentrate, providing essential food for nesting wading birds.

Unfortunately, the construction of canals and urban development throughout South Florida have disrupted the natural functioning of the Everglades ecosystem, leading in large part to a dramatic decline in wading bird populations.

Corkscrew's biologists, with funding from the US Army Corps of Engineers, the National Park Service, and the US Geological Survey (part of the multi-billion dollar Everglades restoration project), are hoping that if they can better understand how hydrology impacts fish populations, they can help water management officials create hydrologic conditions that will ultimately benefit wading birds, especially endangered wood storks.

Who are the biologists? Dr. Shawn Liston came to Corkscrew from Audubon's Tavernier Science Center and Everglades National Park. She supervises all fish sampling and leads a project monitoring fish and aquatic invertebrates throughout Big Cypress National Preserve.

David Green has been with Audubon of Florida for eight years, recently relocating to Corkscrew from the Tavernier Science Center. He is work-

ing on a project that uses the chemical composition of aquatic plants and animals (a process called stable isotope analysis) as clues to trace and better understand cypress and mangrove forest food webs.

Nicole Katin spent six years working in environmental education and is now responsible for the much of the field and laboratory work for the Big Cypress projects.

Bill Bessmer and Alex Mason have joined the team for several months this winter/spring to assist Jason Lauritsen with a study that combines aerial stork surveys and fish sampling to begin developing criteria to prioritize wetland restoration/protection for wood storks.

In order to share more about the projects and what is learned about the Big Cypress ecosystem, a Science Re-

search section will be added to the Corkscrew web site that will include details on the research and photos from the field. There will also be a "Tales from the Swamp" blog to share field experiences with school groups and others who are interested.

Already the fish species list on the web site has been updated and improved, and a section on aquatic invertebrates (crayfish, grass shrimp, apple snails, etc.) will be added.

The biologists are excited to be at Corkscrew and hope to get to meet everyone soon. Their offices and laboratory are in the old manager's house. Volunteers should feel free to stop by if they have any questions that the biologists might be able to answer, or just to say "hi" and see or hear about how the projects are progressing.

Quick ID Guide

How do you tell a Cottontail Rabbit from a Marsh Rabbit?

"Location! Location! Location!"

Cottontails are dry-area mammals; Marsh Rabbits are wet-area mammals.

Look for Cottontails around the parking areas, Guest Cabin, Blair Center, and pine flatwood. Look for Marsh Rabbits in wetter areas of the swamp.

Physically, Cottontails are a light grayish-brown; Marsh Rabbits are dark brown. Cottontails have large elongated ears; Marsh Rabbits have smaller more rounded ears. Cottontails have long legs with whitish fur on the inside of the legs and on the feet; Marsh Rabbits have short legs with brown fur, and not much of it on the feet. Cottontails have large tails with noticeable white; Marsh Rabbits have small tails that are all brown.



MARSH



COTTONTAIL

What's the best time to come and see things at Corkscrew?

The flippant answer, although the truthful one, is, "Anytime is a good time to come to Corkscrew."

However, that's not usually what the visitor is hoping to hear. So answer the question with a question: "What types of things interest you the most?"

The following give some very general guidance on optimal visiting times and may satisfy the visitor.

Alligators. Gators are most often seen in the afternoon and later in the day when they tend to be more active, and they are here all year long. They are easier to spot in the winter and spring when the air temperatures are cooler and they spend more time sunning themselves on banks rather than moving around in the water.

Wading birds. Most wading birds are here throughout the year. However, during the dry season – late winter and spring – the water and food is concentrated at the lettuce lakes, so there are more birds collected there both in terms of quantity and species. This coincides with their nesting season and is typically from March through May. Some other waders like Snowy Egrets don't arrive until the very end of the dry season. Limpkins, on the other hand, are most frequently seen in the late summer and early fall when the water and Apple Snails have returned.

Warblers. Smaller birds are often most active in the early morning and late afternoon, and September and April have the greatest variety of warblers during the fall and spring migrations. However, in the winter when the cypress trees lose their needles, the small warblers are easier to locate and observe.

Wood Storks. The best time to see storks up close and personal is during the latter part of the nesting season, generally April through early June, when they are in the areas of concentrated fish and are feeding their chicks.

Raptors. Mating season generally begins in January or February with nesting activity in March and fledglings in April and May. While owls and hawks can be seen throughout the year, it is easier to find them in the spring when they tend to stay near nesting sites and feeding areas.

Frogs and Turtles. Treefrogs and frogs are year round residents, as are many turtles. The treefrogs are seen throughout the year, but tend to retreat to sheltered areas in really cold weather. Pig Frogs and other species are most often seen and heard in the summer during their mating season and during the fall. Turtles can be seen year round, but are most often seen in the afternoon in the spring sunning themselves on dry banks.

Mammals. Most mammals are at the swamp year round. Raccoons, otter and deer are seen regularly, and it is "hit or miss" if you see them because they can really be anywhere. The best times to see bobcats and bears are early morning or late afternoon, but they are rare finds. Black Bears are most often seen at the swamp in May.

Butterflies. Most of the common butterflies are year round residents, but due to the unique biology of butterflies, they cannot fly if the temperature is too cold. So, the best time to see butterflies is when it is warm and when the nectar plants are blooming.

Blooming flowers. Numerous species of flowers bloom throughout the year. The best times for the most variety of blooming flowers are spring through early fall. Some of the more common flowers bloom: Blue Flag Iris (March through May), Swamp Hibiscus (May through August), Southeastern Sunflowers (September through November), and Swamp Lilies (year-round).

When in doubt or if the visitor asks about a specific bird species such as Painted Buntings, direct visitors to our website (www.corkscrew.audubon.org where they click on "Wildlife") or to the binder in the visitor center where they can see statistics on the frequency of bird sightings.

March Sightings



A male Wood Duck was a south lake resident until water levels dropped (March 20).



A Wood Stork circles for a landing at the south lake for a meal in the shallow water (March 23).



Delicate *Ionopsis* orchids (*Ionopsis utricularioides*) bloom near Sign 8 (March 9).

Nesting information for Corkscrew's common raptors

Barred Owl *Strix varia*

PAIRS

monogamous; may mate for life

BREED

breed at 2 years of age; one brood per year (if first brood fails, will start another in 3-4 weeks; typically begin nesting in mid February and chicks typically branch around end of March or first week of April

TERRITORY

male and female live alone in different overlapping territories when not breeding; their breeding territory is smaller

NEST

pairs prospect potential nest sites up to one year in advance; prefer dense forests, wooded swamps; prefer cavities in deciduous trees with well-developed understory, but will use abandoned hawk or squirrel nests (do not build their own nests); maintain nesting territories and nest sites for years

CLUTCH

usually 2-3 eggs; white, almost perfectly round; about two inches in diameter

INCUBATION

female begins incubating with first egg; laying takes 2-3 days; asynchronous hatching; incubation 28-33 days; female incubates/broods while male brings food to cavity

CHICKS

eyes open at 7 days; branch in 4-5 weeks (unable to fly); fledged at 6-7 weeks; parents care for young for 4-6 months; young from small cavity nests leave earlier than young in roomier cavities

INDEPENDENCE

fledglings independent at 6 months

Barred Owl

Top: A chick ready to branch peers out from the nesting cavity.

Bottom: A fledged chick watches visitors pass on the boardwalk below.



Red-shouldered Hawk

Top: An adult brings a suitable stick to the tree crotch to build the nest.

Bottom: Chicks peer out from the nest waiting for parents to bring food.



Red-shouldered Hawk *Buteo lineatus extimus*

PAIRS

monogamous

BREED

breed at 1 year of age; one brood per year; nesting season is January through May

TERRITORY

male and female live alone in different overlapping territories when not breeding; their breeding territory is smaller

NEST

nest in woodland habitats, especially cypress swamps; build nest in large mature trees with good canopy; look for sites in a major fork of the tree near the trunk, below the canopy but in the top half of the tree; re-use previous years' successful nests after renovation

CLUTCH

usually 2 eggs; white with brown or lavender blotches; a little over two inches in diameter

INCUBATION

female begins incubating with first or second egg; asynchronous hatching with up to seven days between first and last hatch; incubation 33 days, female incubates and broods for first week after hatching while male brings food; then, male brings food to nearby branch and calls female over

CHICKS

born with eyes open; altricial; leave nest at 6 weeks but are fed for an other 8-10 weeks; males bring food during nesting period but then both parents feed and protect chicks

INDEPENDENCE

fledglings independent at 4-5 months but linger in nest vicinity

April Calendar

For more informaton, including times, go to www.corkscrew.audubon.org/calendar/04_Apr.html

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
2	3 <i>BT</i>	4 DC-Sunset Walk <i>BT</i>	5 DC-Day Walk <i>BT</i>	6 <i>BT</i>	7	8
9	10 <i>BT</i>	11 New volunteer training <i>BT</i>	12 DC-Day Walk <i>BT</i>	13 Volunteer field trip—Reptile & Amphibian Hike <i>BT</i>	14	15
16	17 DC-Early Birds *CCAS program <i>BT</i>	18 DC-Sunset Walk <i>BT</i>	19 DC-Day Walk Operation Migration presentation (see below) <i>BT</i>	20 <i>BT</i>	21 DC-Early Birds Earth Day Festival at Koreshan Park in Estero	22
23	24 DC-FMNP (Master Naturalist Program) <i>BT</i>	25 DC-Night Walk <i>BT</i>	26 DC-Day Walk DC-FMNP <i>BT</i>	27 <i>BT</i>	28	29
30	<p>ART DISPLAY (all month) in the Blair Center foyer: Rod Busch watercolors</p> <p>* Collier County Audubon Society program: Burmese Pythons in the Everglades. True tales! Information at www.collieraudubon.org</p> <p>DC = Discover Corkscrew program.</p> <p>BT = adult or school boardwalk tour</p>					

Operation Migration Presentation



All volunteers are invited to attend a special presentation on Operation Migration by co-founder Joseph Duff on Thursday, April 19, at the Northern Trust Bank, 375 Fifth Avenue South, from 5:30-7:30 PM.

The presentation will be followed by a reception with wine and hors d'oeuvres. Volunteers will receive invitations in the mail.

Duff has accumulated more hours in flight alongside more species of birds than any other human. He has led migrations of Canada Geese, Sandhill Cranes, and Trumpeter Swans in an ultralight and currently heads the team leading a new generation of Whooping Cranes from Wisconsin to Florida.

For more information, contact Candace Forsyth, 348-9151, ext. 111.