



Corkscrew
Swamp Sanctuary

Along the Boardwalk

July, 2007

www.corkscrew.audubon.org

Positive decisions offset by Corps permit

Coal power plants denied

On Tuesday, June 5, the Florida Public Service Commission (PSC) voted unanimously to deny the need for the Glades Power Park, two coal-fired power plants proposed by Florida Power & Light Company (FPL) in Hendry County.

City of Naples signs on to climate protection agreement

After debate and testimony on the science of global warming and inspiring speeches by Mayor Bill Barnett and Vice Mayor Johnny Nocera, the Naples City Council voted 4-3 on June 6 to sign the U.S. Mayors Climate Protection Agreement.

Corps approves Mirasol project

A golf-course development that will wipe out over 650 acres of wetlands west of Corkscrew, including stork foraging areas, was approved by the Army Corps of Engineers.

“At the end of the day we made a determination that Mirasol was not contrary to the public interest,” said David Hobbie, head of the regulatory division for the Corps in Florida. “All we do is enforce the rules and regulations given to us by Congress.”

He acknowledged a possible conflict between approving wetlands destruction in the Everglades while the Corps is spending billions of dollars to restore the Everglades.

First volunteer funds campaign begins

The Volunteer Fundraising Committee’s first campaign is underway. The committee hopes to raise \$45,000 to purchase new interpretative signs, new carts for the scopes, and new wheelchairs for visitor use.

During the first two weeks of the campaign, approximately \$11,000 has been raised with 10% volunteer participation. A special “thank you” to all who have contributed, and to the other volunteers, please consider donating.

Bobwhite tops NAS list of birds in decline

National Audubon Society has released its list of Common Birds in Decline in the United States.

Data is compiled from 40 years of Christmas Bird Counts plus the Breeding Bird Survey. For a list of the top 20 birds, go to www.audubon.org/bird/stateofthebirds/CBID/ and click on “Browse Species.”

Quick ID Guide

Confusing butterflies: Distinguishing between Palamedes Swallowtails & Black Swallowtails

Field guides suggest that the common Palamedes Swallowtail is often confused with the Giant Swallowtail. However, many people have difficulty distinguishing it from the less common Black Swallowtail.

A major difference between the two is the body. Palamedes Swallowtails have a horizontal yellow stripe on the body while Black Swallowtails have a series of almost whitish spots on the body (*top photos next column*).

Other differences are more subtle, especially when the two are in flight. The Palamedes is a brown-black, which appears as a slightly faded black. The Black is a solid, vivid black.

The Palamedes is also a slightly larger butterfly.

When at rest, the underwings of the Palamedes show all yellow highlights

Palamedes Swallowtail



Black Swallowtail



with traces of orange-red toward the lower tips; the Black Swallowtail colors are more orange with a little blue.

From above when the wings are spread, the Palamedes Swallowtail shows all yellow markings with a solid stripe toward the center. The Black Swallowtail shows a broken stripe of yellow spots with blue and orange-red toward the swallowtails.

Location also helps with identification. Black Swallowtails prefer open areas, especially fields. Their host

plants are those in the carrot family – fennel and water dropwort.

Palamedes Swallowtails will be in treed areas or nearby. Their host plants are red bay trees.



What kind of wood is this, and when was the boardwalk built?

Visitors often ask questions about the boardwalk and the wood. Most questions come after they've already read the large interpretive sign by the wildlife crossing, so they want more details or clarification.

Construction of the main boardwalk was begun in the fall of 1995 and completed in the late spring of 1996.

The wood is Ipe (*Tabebuia serratifolia*). It has twice the strength and five

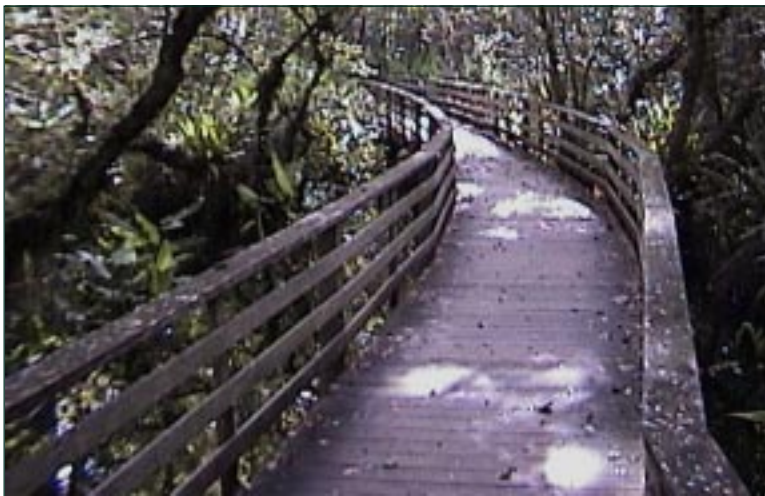
times the hardness of pine and is extraordinarily fire resistant.

Unlike pine, Ipe (pronounced *ee'-pay*) does not rot, decay, or succumb to termites, and it needs no chemical treatment. It is extremely attractive. The tropical jungle did millions of years of research and development to produce what may be the strongest and most durable wood on the planet.

Other alternatives for the boardwalk were first considered and tested.

One was "play wood," composed of a mixture of recycled plastic and fiberglass; however, it was also very flammable, which would have made future prescribed burning a challenge.

Pressure-treated pine was much less expensive, and although the risk of leaching arsenic into the soil and water was minimal, its short life span



And second, it shows the native people that they can live better by preserving the forest rather than cutting it.

Ipe is imported into the United States under the trade name Pau Lope (*pa low'-pay*). Pau Lope originates from a massive sustainable tree farm in Brazil owned by CEMEX (Commercial Madeiras Exportaca'õ, or Commercial Wood Exporters – not to be confused with the Florida

presented the problem of what to do with the old, arsenic-treated wood when it needed to be replaced.

Tropical hardwoods have been in use many years. Portions of the Coney Island boardwalk use Ipe and have withstood over 50 years of use and exposure with no apparent wear.

The Ipe boardwalk should last at least 80-90 years, while pine might last 8-10 years and cypress 12-15 years. So while it costs a time and half more than traditional woods, it more than pays for itself in the long run.

The purchase of Ipe from a reputable supplier using sustainable forestry practices rewards and promotes sustainable forestry in the Amazon. That serves two purposes. First, it preserves the structure, biodiversity and ecological functions of the tropical rain forest.

cement company). It is one of the most reputable timber companies in the Amazon region.

CEMEX only uses about a third of the forest it owns, which it divides into 50 sections. In a section, it harvests about 6 trees per 15 acres every 25 years and then leaves that entire section to grow and mature naturally. Harvested trees are removed by a rubber-tired articulating loader, eliminating the need for bulldozed logging roads. Additionally, thinning the canopy actually promotes an increase in growth rate of the remaining trees.

Old growth trees in each section are protected and used for natural regeneration (seeding).

It's a win-win situation for everyone — Corkscrew, the lumber company, and especially the rain forest.

June Sightings



Green Treefrogs began reappearing as soon as the rains began to return (June 19).



An immature Red-shouldered Hawk feeds on a small Alligator (June 1).



Ruddy Daggerwings and their caterpillars were common around Strangler Fig trees (June 15).

Friends in the Night

Corkscrew's Bats: A Species Profile Series

Big Brown Bat

Eptesicus fuscus

Big Brown Bats are found throughout North America from Canada to southern Mexico.

Normally forest dwellers, they do not hesitate to utilize attics and crevices in buildings, caves, and rocks for daytime retreats. Favorite roosts are under the loose bark of dead trees and in cavities of trees.

Big Brown Bats are just that ... big (13-16 inch wingspan) with brown, long fur ranging in color from dark to golden brown. Their undersides are a lighter shade. They have dark brown, almost black ears. Their teeth are impressive because these beneficial bats eat a variety of hard-bodied insects.

The Big Brown Bat is largely crepuscular, becoming active at just after sunset. Like most other bats, *E. fuscus* does not feed in heavy rain. It forages



by flying slow, straight courses over water, forest canopies, wooded clearings, and even around city lights. They prey primarily on beetles using their robust skull and powerful jaws to chew through the beetles'

hard chitinous exoskeleton. They also eat other flying insects including moths, flies, wasps, flying ants, lacewing flies, and dragonflies. They eat until full, and then often make use of a "night roost" (hanging under a porch or in a barn to rest while digesting the meal). Then, they feed some more before returning to their daytime roost before dawn.

During autumn and winter, Big



Brown Bats are busy mating. In the eastern United States, females will typically have twins. The actual timing of birth varies with latitude, and in Florida, the pups are probably born from May to mid-June.

The Big Brown Bat has a recorded life-span of 19 years. Known enemies include barn owls, horned owls, and rat snakes.

In Florida, the Big Brown Bat doesn't have a large population, so entire colonies could be wiped out with a single improper eradication. Education is one key to maintaining this valuable and beautiful bat.

Rafinesque's Big-eared Bat

Corynorhinus rafinesquii

Rafinesque's Big-eared Bat distribution covers the southeastern United States. Collier County is at the southernmost extent of its range. In Florida, this species uses tree cavities and loose bark as well as abandoned or little used buildings for nesting and roosting. Despite being considered colonial (roosting in groups), these bats are often found alone or in pairs.

The big-eared bats are readily distinguished by their big ears, which measure about an inch long. When they rest or hibernate, they coil their ears back against their heads like rams' horns to reduce the ear surface area and conserve body moisture. When disturbed, they unfold their ears.

They have bicolored (individual hairs are dark at the base and light at the tip) grayish brown fur. Additionally, they have long toe hairs that extend beyond their claw tips.

Rafinesque's Big-eared Bats are



purely nocturnal, only foraging when it is completely dark. While their diet is mostly moths, they will eat other softer bodied insects such as mosquitoes. They are the only Florida bats to use gleaning (taking insects directly off of a surface) as a primary foraging technique. But they are capable of grabbing a meal "on the wing." They are extremely maneuverable flyers.

Not much is known about the reproduction of Rafinesque's big-eared bats. In Florida, the females typically give birth to one pup in May or early June. The pups are able to fly three weeks after birth and reach adult size in about three months. They can live



up to 10 years in the wild.

Historically, their range followed the great cypress swamps. As these areas have been destroyed or modified, this species has adapted and begun to use old buildings or attics, bringing them into more contact with humans. Their populations have declined over the past century.

In Florida, habitat loss, pesticides, and ignorance are their biggest threats.

Biologists age bats by looking at the finger bones in the outstretched wings over a bright light. Juvenile bats' bones have clear spaces between the joints; adult bats have ossified joints.

Green & Brown Anoles

We may take them for granted because we're so used to them, but visitors are frequently curious and fascinated by our two most common small lizards.



Green Anole

Anolis carolinensis

APPEARANCE



max. length to 8 inches; solid color; *female*– light stripe down back (*left*); *male*– no stripe

DEWLAP

creamy white in Southwest Florida but pink elsewhere

COLORATION

bright green to light brown, even colors; green on vegetation or light background; brown on bark or dark background; tend to stay green when temperatures over 70°; in cold weather tend to stay brown

LIFESPAN

2–3 years

HABITAT

native to North America and West Indies; in West Indies, coexists with Brown Anole by staying in canopies of forests; cold tolerant and found to southern Tennessee

BREEDING

mate late spring to early summer; several clutches with 2 eggs each; eggs laid in decaying vegetation higher *in trees*; 60-90 days to hatch

ESCAPE

usually flees by running up

DIET

mostly insects but other small invertebrates; also will prey upon young Brown Anoles



A Green Anole dines on a honey bee.

Brown Anole

Anolis sagrei sagrei

APPEARANCE

max. length to 8.5 inches; *female*– diamond pattern with stripe on back (*right*); *male*– spots/patterns but no diamond-like shapes



DEWLAP

bright orange with yellow border

COLORATION

brown to very dark brown; varied colors; large males become really dark during territorial displays but quickly fade to dull brown when approached by anything other than another male brown anole

LIFESPAN

about 3 years

HABITAT

native to West Indies; in West Indies, coexists with Green Anole by living on ground or within a few feet of ground; not cold tolerant and found only in peninsular Florida

BREEDING

mate late spring to early summer; several clutches with 2 eggs each; eggs laid in decaying vegetation *on ground*; 60-90 days to hatch

ESCAPE

usually flees by running down

DIET

mostly insects but other small invertebrates; also will prey upon young Green Anoles

Anole Factoids

- Anoles belong to the genus *Anolis*, the same family as iguanas. Even though they can rapidly change color, anoles are not in the same family as chameleons, which are native to Africa and Madagascar.
- Three pronunciations are common and acceptable: *uh-no'-lee*, *an'-ole*, or *uh-nole'*.
- Anoles have long toes with claws and adhesive toepads, enabling them to climb up almost any surface.
- Both male and female anoles have dewlaps, but the male's is larger. Dewlaps are used for threats, courtship, and defending territory. Doing "push-ups" is another threat display.
- Mature male anoles may display a crest, called a *roach*, that runs down their backs and is used to impress other males when competing for territory or for females (*below*).



- Anoles shed skin in pieces, like people peeling after a sunburn, rather than all at once like snakes. Anoles recycle (eat) the flakes, a good source of minerals.
- There are over 200 species of anoles found in North and Central America; 11 are found in Florida but only two are regularly found in Corkscrew (so far).
- Anoles do not change color for camouflage but because of temperature or as a form of communication; for Green Anoles, *green is keen and brown is down* – when two males fight, the winner turns bright green while the loser turns brown
- Green and Brown Anoles are not natural enemies; until the 1970's, Greens were the only anoles in Southwest Florida and expanded to ground habitats; with the introduction of Browns, they are returning to their natural canopy habitat