

Florida Naturalist

**What is troubling
Florida Bay?**



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EXECUTIVE DIRECTOR'S MESSAGE

It is not a particularly impressive room. Tucked downstairs from the main offices, the mismatched chairs are worn and the conference table has seen better days. But a close look at the bookshelves reveals the story of a very special place. There's a bound collection of every Florida Naturalist magazine ever printed and a complete set of The Auk Journal of Ornithology, including a rare Volume One, dated 1884. Old notebooks are stacked in the shelves, some dog-eared and salt-crusted, others pristine and meticulously catalogued.

It is no exaggeration to describe the conference room at Audubon Tavernier Science Center as hallowed ground in the history of American bird science. Many species, including the California condor, whooping crane, and roseate spoonbill, owe their existence to Audubon scientists who worked out of Tavernier.

I bring this up for two reasons. One, as you'll read in this edition of Florida Naturalist, we are at a crossroads for saving special species and habitats. And, as has happened often during its 70-year history, Tavernier Science Center and its staff of researchers have identified key indicators that tell us we must move faster to restore fresh water flows through the Everglades, Taylor Slough, and into Florida Bay. For the bay and the wildlife it supports are undergoing an ecological collapse. The poor nesting season of roseate spoonbills, the persistent algae bloom and its impacts, all point to one conclusion: we must begin now implementing short-term, or incremental, restoration plans that will help us measure the ecosystem's response and implement longer-term restoration projects.

The second reason I bring up Tavernier is because I am pleased to announce that one of its earliest Directors of Ornithological Research, John Ogden, has rejoined our Audubon family. One of science's most respected experts on wading bird populations and ecological restoration of the Everglades, John returns to Audubon following 12 years with the South Florida Water Management District. There he was one of the lead scientists of the inter-agency team, RECOVER, which stands for Restoration Coordination and Verification. This group of experts from state and federal agencies provides scientific and technical support to Comprehensive Everglades Restoration Plan (CERP) projects.

I invite you to read, in this issue, about situations contributing to the ecological collapse of Florida Bay and the great River of Grass, and about the history of Tavernier Science Center. With guidance by our excellent science and policy professionals, and our newest colleague, John Ogden, I know that Audubon—as it has for 100 years—has what it takes to make a significant contribution to solving what is ailing Florida Bay and the Everglades.

A handwritten signature in black ink, appearing to read "David E. Anderson". The signature is fluid and cursive.

David E. Anderson
Executive Director, Audubon of Florida



Audubon of Florida's 2008 Legislative Agenda

The 2008 Legislative Session began March 4 and Audubon advocates began focusing on a legislative agenda to protect Florida's natural lands, wildlife, water, and climate. In January 2008, the Board of Directors approved an ambitious agenda based on the organization's statewide Conservation Priorities, and approved by the membership at the 2007 Audubon Assembly. Here is a summary of that agenda.

For the full document, visit www.audubonofflorida.org. And while you are there, join the Audubon Florida Conservation Network to receive timely updates.

Land Conservation: Audubon will support increased funding for Florida Forever conservation land acquisition and the creation of a successor program when Florida Forever sunsets in 2010. We will oppose legislation if it allows siting of electric power generation and transmission lines on public lands because these diminish the ecological value of lands purchased for conservation.

Environmental Funding: Audubon is pursuing \$100 million for Everglades restoration and \$100 million for the Northern Everglades (Lake Okeechobee and Estuary Recovery) from either general revenue or bonds. Simultaneously, Audubon opposes new property tax reform that may cause hundreds of millions of dollars now allocated for Everglades restoration to be cancelled or postponed. We are working to secure \$10 million appropriation for the State's share of Florida Keys wastewater treatment upgrades, and we oppose cuts in environmental trust funds, established to ensure that revenues for conservation are spent for that purpose.

Water Policy: Audubon supports various legislative proposals to further the Northern Everglades bills passed last year to restore Lake Okeechobee and the estuaries. We are working to amend state laws to make water conservation a mandatory condition of receiving consumptive use permits and requiring water management districts to prescribe water conservation practices. Audubon also seeks to create pilot regulations to protect springs, and to amend the 1994 Florida Bay Restoration Act to require the South Florida Water Management District to begin a program to better manage freshwater flows into Florida Bay. Audubon supports passage of legislation to close five wastewater ocean outfalls in South Florida and require reuse of up to 500 million gallons per day of wastewater.

Growth Management and Ecosystem Planning: Audubon seeks to create a planning and conservation area for the Biscayne Bay Coastal Wetlands and require that all land uses in the area support restoration goals. We are also working to pass legislation requiring each county in the greater Everglades ecosystem to amend its comprehensive land use plan to include an Everglades protection and restoration element. Audubon opposes preemption by the state of local ordinances that provide stronger wetland protection, reduce fertilizer pollution, and weaken local governments' ability to approve or deny mining projects. Finally, Audubon supports Department of Community Affairs Secretary Tom Pelham's proposal to increase citizen participation in land use decisions.

Climate Change: Audubon will support recommendations of Governor Crist's Climate Action Team's, including targets for reductions of greenhouse gas emissions, and reducing the need for new power plants by pushing legislation that calls for aggressive energy conservation programs and renewable energy sources.

Wildlife Policy: In addition to reductions in the Florida Fish and Wildlife Conservation Commission's base budget request, Audubon anticipates and will oppose legislation that would undermine the agency's constitutional authority. Audubon staff contributed to a working group that drafted original language for seagrass protection last year, and continues to advocate for its passage in 2008. Audubon opposes proposals that would allow inland navigation districts to dredge new channels in aquatic preserves. Audubon also focuses efforts on ensuring that Florida's coastal habitats and bird species are protected.

CHANGING THE TIDE on Huguenot Beach



Photo by Mark Middlebrook.

On Jacksonville's northeast coast, Huguenot Memorial Park is owned by the federal and state governments and leased to the City of Jacksonville. This popular beach-driving park in Duval County is the last of its kind, and on busy weekends the peninsula is ringed with cars, several deep. At the same time, Huguenot has abundant wildlife populations trying to find space between the cars. The park includes a state Critical Wildlife Area to protect the thousand-fold colony of royal terns,

laughing gulls, and black skimmers that nest there in spring and summer. Other parts of the park provide critical habitat for federally endangered piping plovers, gull-billed terns and rapidly-declining red knots.

The city's lease on the park has expired and, as a term of the lease renewal, the city must create a management plan that will ensure public safety and protect the park's natural resources. Past management failures have resulted in the U. S. Fish and Wildlife Service's closing part of the beachfront to driving. Situations alleviated by the closing included the crushing of chicks from the park's interior colony, endangerment of children crossing lanes of beach traffic to reach the water, and the annual loss of cars washed out to sea when more vehicles than the beach could accommodate were admitted.

An initial draft of the plan made important strides towards balancing the resource needs of the park with the demands of public use, but outcry from the beach-driving community has resulted in a second draft that is less protective of the resources and public safety.

Audubon of Florida will continue to partner with Duval Audubon to seek a meaningful management plan for this site of statewide significance. Want to get involved? Visit Audubon of Florida's advocacy center and sign up for the Coastal Strand, our Northeast Florida advocacy newsletter: <http://audubonaction.org/florida>

AUDUBON OF FLORIDA LEADS PUBLIC LANDS VISIONING IN NORTHEAST FLORIDA



On January 21, Audubon of Florida co-hosted a Florida Forever Concert with the Will McLean Foundation in Northeast Florida. This was followed by a Florida Forever listening session with Northeast Florida's political and conservation leaders on January 22. Because Florida Forever, the state's highly successful conservation land buying program, is coming to a close, Audubon is collaborating with its partners in the Florida Forever

Coalition to urge the Legislature to create a successor program that will meet Florida's ongoing land conservation needs.

To get involved, join Audubon's Florida Conservation Network at <http://audubonaction.org/florida> or email flconservation@audubon.org.



Photo of zebra swallowtail by Randy Snyder.

WHAT CAN YOU DO?

Water-saving tips you may have overlooked.

The tip of the ice cube

- Throw the leftover ice from your take-out drink on a plant instead of putting it in the trash.
- When ice cubes fall in the sink by mistake, toss them on houseplants.

Pet Pointers

- When you give your pet fresh water, pour the old water on trees or shrubs.
- Bathe pets outdoors in an area that needs watering.
- When you clean a fish tank, use the drained water on plants. Rich in nitrogen and phosphorus, it's a good free fertilizer.

Outdoors

- Use sprinklers that cast big drops of water close to the ground, because smaller drops can evaporate before they reach plants.
- Retain lower branches on trees and shrubs and let leaf litter accumulate. This keeps soil cooler and reduces evaporation.
- Use a broom, not a hose, to clean sidewalks and driveways.

Grow a Beard

- Turning off the water while you shave can save more than 100 gallons a week.



This grass-filled lock on the east side of Lake Okeechobee would, under normal conditions, be completely surrounded by water. Photo courtesy of South Florida Water Management District.

Balancing Human Needs with Nature's Necessities:

Audubon's Work to Protect Lake Okeechobee during Florida's Worst Drought

In 2006-07 South Florida received a record-breaking low rainfall of 83.6 inches. The previous record was in 1955-56, when 84.6 inches of rain fell. What is truly remarkable about these numbers is that the South Florida Water Management District (SFWMD) has predicted that Lake Okeechobee will be between two and three feet lower, following the 2006-07 record, than it was after 1955-56 season. That means that a one-inch decline in rainfall will result in a water-level drop of two to three feet in the lake.

Clearly, as human population has grown in the last 50 years, increased water use and water waste via drainage canals has significantly affected the lake's ability to maintain healthy water levels. While South Florida is prone to variations in rainfall from the wet season to the dry season, human activity has decreased the natural system's ability to adapt to volatile weather patterns. That

is why we must learn to understand our impact on water supply for the natural system and alter our behavior to contribute to a sustainable South Florida.

Lake Okeechobee is at the heart of reported news about the drought. The lake's water levels are posted daily in the main conference room of the SFWMD's headquarters, where public meetings are held. While the ramifications of dwindling water supply for human use are undeniable, the repercussions on the natural system also must be evaluated if we are to gauge the true scope of the drought's harm to South Florida.

The lake's water levels have been so low for so long that wildlife has suffered devastating effects. For example: fish have very few spawning locations, the endangered snail kite is unable to nest in Lake Okeechobee, and the lake's wetland wildlife has been deprived of habitat there for a year or more; most

will not survive until the rains return. Snail kites cannot rely on Water Conservation Area 3 (WCA3) for alternative habitat—its water has been diverted to the Everglades Agricultural Area for irrigation and so it, too, is too low for nesting. The effects on flora are similar: almost all the lake's aquatic plant zones are dry, preventing aquatic plant recovery. The Caloosahatchee Estuary cannot get supplemental fresh water and suffers from over-salinity. In addition, dry boat ramps and navigation problems caused by the water deficit have kept tourists away from businesses that depend on a healthy lake for their livelihood.

Low water levels can result in some benefits for the lake. These include allowing mudflat habitat for migratory shorebirds, the drying and possible removal of organic mud now covering desirable sand bottoms, and the treatment of 10 - 20 square miles of exotic torpedo grass. We may also see 75 square miles of previously-drowned plant communities re-seed, if water levels rise adequately. However, these potential benefits are being diminished by the cumulative harm caused when extreme low water levels persist too long.

Audubon of Florida is working diligently to ensure that the drought's impacts on the natural environment are not overlooked in agency decision-making processes. Audubon has a seat on the SFWMD Water Conservation Panel, which will make recommendations to protect water supply for the natural environment by ensuring efficient, not wasteful, use of water. It is imperative that we remain respectful and cognizant of the increased harm faced by wildlife and their habitat during these difficult times. By using our precious natural resources wisely and implementing restoration plans that help Nature adapt to extreme weather events, we can minimize our impact on the natural environment.

Each of us has an important role to play in the recovery of South Florida. Please continue your dedication to water conservation. Share what you learn with your friends and family. Join Audubon's Conservation Network at www.audubonofflorida.org. By working together, we can ensure that life-sustaining natural resources remain abundant.



FLORIDA BAY AND THE EVERGLADES SHOWING SYMPTOMS

Florida Bay—and the plants and wildlife that are indicators of its ecological health—is extremely sensitive to salinity levels and fluctuations in freshwater flows from the Everglades. Efforts that began in the 1920s to drain wetlands, build roads, allow development, and control flooding have seriously altered—and continue to threaten—the bay. Events such as recurrent and persistent algae blooms and declines in nesting success by roseate spoonbills are clear signs that Florida Bay is experiencing an ecological collapse.

ALGAE BLOOMS: A CAUSE FOR CONCERN

Algae blooms in Florida Bay since the mid-1980s likely led to a collapse of the ecosystem beginning in 1989. These blooms contribute turbidity to the water column and effectively prevent adequate sunlight from penetrating the bay's shallow waters to reach the seagrasses below. Since 2007, the bay has again been plagued by a persistent algae bloom, leading to concern that not enough fresh water is reaching the southern-most edge of the Everglades ecosystem at the right times of year.

Research conducted by Audubon scientists in Florida Bay over the last 50 years has shown that roseate spoonbills also respond markedly to changes in hydrology and corresponding changes in prey abundance and availability. Shifts in nesting distribution and declines in nest success are directly related to water management systems and practices. That is why monitoring roseate spoonbill populations is critical for measuring the health of the Everglades system and the success of efforts to restore it.

SPONBILLS: NESTING TOTALS TELL THE STORY

This year Audubon scientists documented the worst nesting season for spoonbills since the 1960s, a decade when the birds were finally recovering from plume hunting and other assaults on their population. A total of 266 roseate spoonbill nests were identified in 1963. The count increased to 1,260 pairs in 1979, but commensurate with the operation of water management infrastructure in 1984, nest numbers began to plummet. Seven hundred nests were counted in 1991, but by 2006 were down to 460. This year only 292 nests have been identified, a 37 percent decline in spoonbill nests in just one year.

The decline in nesting has been even more dramatic in the northeastern basin, where Florida Bay is most affected by water management practices. In 1963, there were 65 nests in the basin. An increase to 688 nests by 1978 indicated that the ecosystem was healthy during this period. As in other Florida Bay nesting sites, the trend shifted significantly following the initiation of modern water management practices in 1984. By 1992, nest numbers were half their 1978 peak (333 nests). This dropped to about 100 nests in the mid-1990s and remained fairly constant through 2007. However, only 41 nests were initiated in the northeastern basin for the 2008 nesting season. Audubon scientists have observed a concurrent increase in spoonbill nests in other areas of Everglades National Park, suggesting that Florida Bay's northeastern basin no longer meets the birds' nesting needs. Audubon believes this indicator species is telling us that Florida Bay is on the brink of a monumental ecological collapse.

Declines in spoonbill nesting attempts and success have corresponded with the alteration of natural water flow through the Everglades. With operation beginning in 1968, the C-111 canal complex drained more than half the headwaters basin of Taylor Slough, the primary source of fresh water delivery into Florida Bay, and converted the area to farmland and urban locales. Additions to the C-111 complex, the South Dade Conveyance System, began operation in 1984, diverting massive quantities of fresh water into the C-111 canal system.

SIMPLE STEPS TOWARD SOLUTIONS

Simple steps taken immediately to help reduce seepage from the C-111 basin into the C-111 canal hold the promise of generating a positive ecological response. For example, holding the water at higher stages in the lower C-111 canal would create a liquid barrier to push water back toward Taylor Slough, its historical entry point into the bay. While this will not solve all of Florida Bay's problems, it is certainly a step in the right direction.

Audubon is encouraged by the South Florida Water Management District's recent commitment to pursue incremental steps toward achieving immediate restoration benefits, and looks forward to working together in this direction. As the roseate spoonbills reveal critical clues to the success of these steps and the completion of restoration projects, Audubon will be there monitoring populations as the pink birds begin to herald a healthier Florida Bay.

OF ECOLOGICAL STRESS

Small steps taken now can help longer term restoration of these precious ecosystems



Photos by Andre Van Rensburg www.andrephoto.net

IN DEFENSE OF THE FLAME BIRD



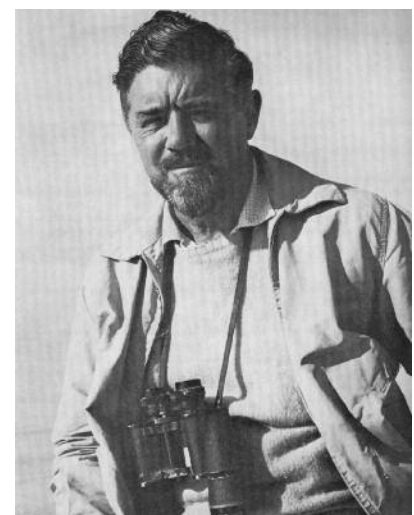
Robert Porter Allen's "office" on Bottlepoint Key (now called Bottle Key), 1939

When there is a problem with Florida Bay, the first place people look for solutions is the Audubon Tavernier Science Center. For over 70 years, scientists there have catalogued and analyzed details about the bay that have helped guide policy and enact protections fundamental to preserving this unique ecosystem.

The story of the Tavernier Science Center begins during the Great Depression, almost 40 years after Audubon helped stop plume hunting in Florida. While other birds were recovering in numbers, one of Florida's most identifiable and beloved bird species, the roseate spoonbill, was not. By 1935, it was believed that Florida's spoonbill breeding population had been reduced to only five nests on Bottle Key in Florida Bay. This prompted National Audubon Society (NAS) Director John Baker to ask biologist Robert Porter Allen to move, with his wife and two small children, from their home in Long Island to the small, mosquito-infested town of Tavernier to find out why.

At the time, scientists would typically study birds' eating habits by killing them and examining their stomach contents. However, the spoonbill was so scarce by this time that Allen had to find another way to research them. He began a full-time study of the rosy birds, living among them in a tent for weeks at a time. "No snail that crawled, no worm that squirmed, no leaf that grew would escape my ardent attentions," Allen wrote in his 1947 book "The Flame Birds." Among Allen's more notable discoveries was that spoonbills fed primarily on fish, as opposed to mollusks, as was previously thought. He also discovered the reason for the spoonbills' scarcity—the locals, suffering through the Great Depression, were still shooting them and harvesting their eggs for food. This predation was largely eliminated when Florida Bay was added to Everglades National Park in 1950.

The success of the roseate research led to Tavernier's rise as one of the nation's preeminent avian research centers. Shortly after the roseate spoonbill population was stabilized in the late 1940s, Allen was joined in Tavernier by Alexander "Sandy" Sprunt. In addition to studying the birds' behavior, nesting, and feeding habits, the two men directed over 70 researchers across the U.S., Caribbean, and Mexico, spurring the recovery of the bald eagle, the whooping crane, Atlantic puffins, and wood storks. In addition, Dr. Sprunt served as Audubon's longtime liaison with the Bahamas National Trust in the southern Bahamas, making regular visits to monitor greater flamingo colonies on Great Inagua, where he was known as "De Fillymingo Mon."



Robert Porter Allen, Audubon's first Director of Research

*Jerry Lorenz, Ph.D., with a
banded juvenile spoonbill*



Photo of roseate spoonbill chick by Brennan Mulrooney.

In 1974, John Ogden came on board at Tavernier as Director of Ornithological Research for NAS. As such, he conducted long-term ecological studies of wetland vertebrates, including wood storks and other wading birds, American crocodiles, bald eagles, and ospreys. Ogden also co-directed the California Condor Research and Recovery Program for NAS and U.S. Fish and Wildlife Service.

In 1987, NAS shifted its focus away from hard-core bird research, and Tavernier was no longer the hub of Audubon's national research efforts. Shortly thereafter, fisheries biologist Jerry Lorenz, Ph.D., joined the Center to build on the roseate research begun 50 years earlier. Since then, Lorenz has demonstrated how the destruction of wetlands for urban and agricultural uses has endangered not only spoonbills, but myriad other creatures and entire ecosystems. Lorenz's work in the area is critical for understanding how water management decisions affect birds and

other wildlife. The roseate spoonbill is now one of the standard "indicator species" for measuring the success of Everglades restoration efforts in Florida.

Today the Tavernier Science Center is again being asked to provide guidance on ways to heal a bay facing monumental collapse. Lorenz and his staff, using data collected over the Center's 70-year history, are playing a pivotal role in formulating the restoration recommendations that will dispense the greatest, most immediate benefits to the bay's health—and to the welfare of the flame bird.

"... seldom have I experienced greater pleasures than when on the Florida Keys, under a burning sun, after pushing my bark for miles over a soapy flat, I have striven all day long, tormented by myriads of insects, to procure a heron new to me, and have at length succeed in my efforts. And then how amply are the labours of the naturalist compensated, when, after observing the wildest and most distrustful birds, in their remote and almost inaccessible breeding places, he returns from his journeys, and relates his adventures to an interested and friendly audience."

—John James Audubon

SAVING ENERGY TO PROTECT OUR CLIMATE

FLORIDA AUDUBON ADVOCATES TO STRENGTHEN ENERGY EFFICIENCY AND CONSERVATION



This photo by Bruce Brough won first place in the No Birds Allowed category, 2007 Chertok Nature Photography Contest. See page 13 for 2008 contest details.

One of the most effective ways to immediately reduce global warming pollution is to start creating state policies that eliminate obstacles to effective energy efficiency and conservation programs. This is an important focus for Audubon advocates in Florida this year.

As the 2008 Florida legislative session began, House and Senate committees set about preparing to deal with recommendations from the Florida Energy Commission and from the Governor's Climate Action Team. Audubon, working with conservation allies, recommended that Florida adopt an energy efficiency package that would save consumers money, stimulate the economy, and set Florida on an early path to reducing greenhouse gas pollution.

Meaningful energy efficiency policies can reduce consumers' costs by more than \$28 billion over the next 15 years and create more than 14,000 new jobs in Florida, according to a study

by the American Council for an Energy Efficient Economy. Not only is efficiency cost-effective and non-polluting, it is also a powerful engine for the economy, creating jobs in building maintenance and infrastructure.

Florida Governor Charlie Crist has set a goal for the state to reduce greenhouse gas pollution by 80 percent below 1990 levels by 2050. To achieve this, a whole suite of strategies will be necessary, particularly those that provide immediate benefits.

The United Nations Framework Convention on Climate Change has this to say about energy efficiency: "Most of the immediate progress that can be made to reduce greenhouse-gas emissions involves using fossil fuels more efficiently. The savings realized this way will buy time for the global climate system while alternative-energy technologies can be developed and made cost effective. It is hoped that emissions-free sources

ultimately will replace fossil fuels as the main category of energy supply."

To promote energy efficiency and conservation, Audubon is advocating for passage of legislation to eliminate current barriers, such as the outdated Rate Impact Measure or RIM test, to cost-effective energy efficiency. States with the most successful energy-efficiency programs use a cost-benefit test called the Total Resource Cost (TRC), which considers costs to society as a whole. Because revenue losses are not included, programs with relatively higher kilowatt hour reductions are more likely to be cost-effective under TRC.

For more information on Audubon's ongoing work to address climate change and protect Florida's wild lands and wildlife, visit www.audubonofflorida.org. Click on Take Action to receive regular electronic newsletters on priority issues.

To “**SAVE OUR SWAMP**” and many other wetlands, Audubon targets wetland rules

The State of Florida has approved destruction of more than 1,000 acres of wetland in the Cocohatchee Slough near Corkscrew Swamp Sanctuary over the past year. While Audubon and its allies are challenging the federal versions of these permits, clearly the Cocohatchee permits are not isolated cases. Each year, thousands more acres of wetlands and endangered species habitat are permitted to destruction, with negligible mitigation, by state and federal agencies. This occurs despite supposedly-strict national and state policies of “no net loss of wetlands,” in effect since 1989.

Studies have recognized declines in water quality and water supply, and significant loss of shallow wetlands such as wet pinelands throughout Florida. Audubon has embarked, with help from colleagues, on a detailed effort to reform the state's permitting process, and then to tackle the federal process. Senior agency officials have been receptive in preliminary discussions of the problem. Audubon's wood stork and wetland expert, Jason Lauritsen, just completed a rigorous review of the state's principal wetland value assessment method. He concluded that the fundamental cause of poor wetland protection in state permitting is the bias of permit applicants, who are doing the wetland value scoring themselves, even though the law requires this to be done by state agencies' staff. As Upton Sinclair said, “It is difficult to get a man to understand something when his job depends on not understanding it.”

The areas most impacted, now and in the past, are shallow seasonal wetlands like the pinelands at the Mirasol and other Cocohatchee Slough projects, that also harbor melaleuca and other invasive exotic plants. The abundance of melaleuca trees in Southwest and South Florida has led to a scientifically baseless discounting in the regulations, and subjective scoring, of almost all functional values of such wetlands. A growing body of scientific documentation indicates that such assumption of devaluation is faulty. Yet the policies continue to jeopardize populations of wood stork and other imperiled species, and also affect water quality, supply, and flood protection.

Lauritsen and Audubon staff will present his wetland permit analysis results, and evidence of the threat to water and habitat resources statewide, to the Governing Board of the South Florida Water Management District in early March, and then to Florida Department of Environmental Protection Secretary Michael Sole and his staff. Audubon encourages a vigorous dialogue and aggressive efforts to amend relevant policies. It also hopes to involve all the permitting agencies and stakeholders, and looks forward to positive federal action on this issue.

WHERE HAVE ALL THE HYDRIC PINE FLATWOODS GONE?

Hydric pine flatwoods are pine-dominated forested wetlands that have standing water for only a portion of the year, typically less than four months. Because they are dry much of the year, these wetlands have been developed almost to extinction from the landscape. Research by Audubon and others, however, has confirmed an important link between these seasonal wetlands and the breeding success of endangered wood storks.

Storks need the forage food from shallow “early dry season” wetlands (formerly available for stork feeding from October to December) to help trigger nest initiation. With landscape-scale loss of these wetlands, the birds must wait two months for deeper wetlands to dry down, pushing nesting starts until after January. This delay reduces nesting success rates by more than 70 percent. The remedy is to protect and restore as many seasonal wetlands as possible, or risk losing wood storks in Southwest Florida.

Melaleuca Doesn't Mar Storks' Foraging Feast

Documentation of wood storks feeding in forests of melaleuca has demolished the popularly-held (but false) idea that wetlands where these invasive trees flourish are of no value to native birds and animals.

Kenneth Meyer, Ph.D., Avian Research and Conservation Institute, following a wood stork in an ultralight aircraft, documented the bird swooping low over heavily vegetated forest, saw it circle back upon seeing a group of well-concealed birds on the forest floor, then proceed to tuck its wings in and dive right through the canopy to forage with the other waders. Audubon biologist Jason Lauritsen witnessed similar stork behavior on three occasions last year in and around Corkscrew Swamp Sanctuary.

Tom Murphy, wildlife biologist for the South Carolina Department of Natural Resources, has photographed the inland habitat that forms most of the wetland foraging opportunity in the South Carolina coastal wood stork range. Hilly terrain and thick forests make it difficult to see exactly where the storks forage inland, but the inference is that they feed in forested areas.

Rena Borkhataria, doctoral student at the University of Florida, analyzed satellite tag positions of wood storks nesting in South Florida. She found that even after removing data points within 500 meters of their nest locations, these storks spent approximately 50 percent of their time in forested wetlands.

Following the suggestion of Peter Fredricks, Ph.D., professor at the University of Florida, the Wood Stork Working Group, whose members include those mentioned above, will relay their findings and other vital aspects of wood stork ecology and recovery concerns to regulatory agencies. Audubon plans to do so in the form of workshops around the state.

BIGGER THAN A BAKE SALE - *Audubon of Martin County is up to the challenge*



Members of Audubon of Martin County unload mulch to be placed around native plants at the Possum Long property. Photos by Greg Braun.

In the 1970s Audubon of Martin County (AMoC) received an offer it couldn't refuse. A several-acre tract in Stuart (later named after plant nursery owner and high school science teacher Clifton "Possum" Long) could be theirs for a third of its appraised value if the chapter agreed to manage the property as a nature preserve. In the beginning they raised money with blood, sweat and tears (not to mention a little baking powder). Bake sales, plant sales, an annual pancake breakfast, and other typical fundraisers generated money to pay the mortgage and eventually buy a couple of adjacent parcels, including the corner lot where the chapter's office now sits.

During the last several years, particularly after being pummeled by Hurricanes Frances, Jeanne and Wilma, Audubon of Martin County board members have had to make some difficult decisions in order to keep up with escalating property values and management costs. Where others might have shied away from the financial pressures, they got creative and pursued partnerships that have generated thousands of dollars in grants and services. Here are just a few examples.

Overall long range planning for this six-acre urban site in Stuart was facilitated with pro-bono services of Lucido and Associates, a local professional landscape planning firm. Volunteers labored hundreds of hours removing pest plants, and a \$1000 grant from National Audubon, administered through the Audubon of Florida Collaborative funding program, jump-started the revegetation component of the project with bird-friendly plants.

Maintenance of the property is a major commitment. Volunteers continue to work on their own and during regularly-scheduled works days to remove invasive plants and plan restoration areas. The Garden Club of Stuart, a long-time partner with Audubon, optimizes the remnants of the former nursery in their touching memorial garden, and holds monthly meetings in the original "Possum Long House."

A dramatic example of creativity is the chapter's relationship with the University of Florida IFAS Extension service. Faced with the need to eradicate invasive melaleucas on the Possum Long property, the chapter collaborated

with Agricultural Extension Agent Fred Burkey to implement a "Tame Melaleuca" grant. The funds were used to remove and chip the trees, provide labor, expertise (and machinery) for the composting process, and create several dozen beautiful signs identifying newly-planted native species around the main office.

Though much remains to be done at the Possum Long Nature Center, the vision is clear. Opportunities for partnerships with other entities through this unique urban forest, and the possibility of connecting the Stuart community with nature, keep passion for the project alive.

On another AoMC-owned property (approximately 380 acres west of Stuart) the chapter obtained a Wetland Restoration Program grant to restore historic wetlands that had been degraded by agricultural activities. The approximately half-million-dollar project included invasive exotics removal, removal of old drainage ditches, and installation of water control structures to restore former hydrologic conditions. The chapter is now charged with continued management of the property. Is it luck or skill that secures grants like these? Maybe a little of both, together with a lot of work by dedicated volunteer board members.

This "can-do" attitude got the attention of Audubon of Florida and, after a meeting with Executive Director David Anderson, five small parcels adjacent to another chapter-owned conservation parcel were deeded to Audubon of Martin County. It is logical that the local organization, already demonstrating responsible stewardship of its properties, would become the guardian of these properties too.

According to Greg Braun, AoMC's executive director, next on the chapter's agenda is the creation of stewardship fund accounts for each property that will generate funds to manage these valuable assets. This effort, although a huge challenge, will help protect the legacy that the dedicated volunteers and friends of Audubon of Martin County will leave their community. There is no end to the beneficial, productive partnerships you can create when you start thinking beyond the bake sale. For more information visit <http://audubonmartincounty.org>.

NATURE PHOTOGRAPHY CONTEST CALL FOR ENTRIES

Orange Audubon Society is accepting entries for its 20th annual Chertok Open Nature Photography Contest. Themes for the two categories for the digital contest are "Florida's Avian Wonders" and "Florida—Beyond Birds." Entries cannot show humans, human-made structures or artifacts, or fauna or flora non-native to Florida. Images should not be excessively manipulated and should conform to "truth in Nature" standards.

Only digital images in *jpg format (file size: 1MB or less) supplied on CDs readable by PC-based applications are acceptable. Entrants may convert prints, negatives or slides (transparencies) to digital images before submitting. Final deadline for entries is May 15, 2008 (postmark date). Optional pre-screening deadline is April 17, 2008 (receipt date).

Cash and other awards totaling \$1,050 will be announced at an awards program June 19, 2008. Entry fees are \$3 per image for ages 17 or younger, \$5 per image/Audubon members, \$7 per image/nonmembers. For complete details and entry forms, visit www.orangeaudubonfl.org or call 407-644-0796.

Jake Paredes won first place in the Florida Birds category of Orange Audubon Society's 2007 contest with this shot of a purple gallinule. Photos by other 2007 Chertok Contest winners appear on pages 4 and 10.



Financial information about National Audubon Society can be obtained by writing to us at 700 Broadway, New York, NY 10003 or as stated below: NATIONAL AUDUBON SOCIETY FLORIDA REGISTRATION # CH281: A COPY OF THE OFFICIAL REGISTRATION AND FINANCIAL INFORMATION MAY BE OBTAINED FROM THE DIVISION OF CONSUMER SERVICES BY CALLING TOLL-FREE, 1-800-435-7352 WITHIN THE STATE. REGISTRATION DOES NOT IMPLY ENDORSEMENT, APPROVAL, OR RECOMMENDATION BY THE STATE.



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At Audubon, we have always understood the vital connection between people and nature.

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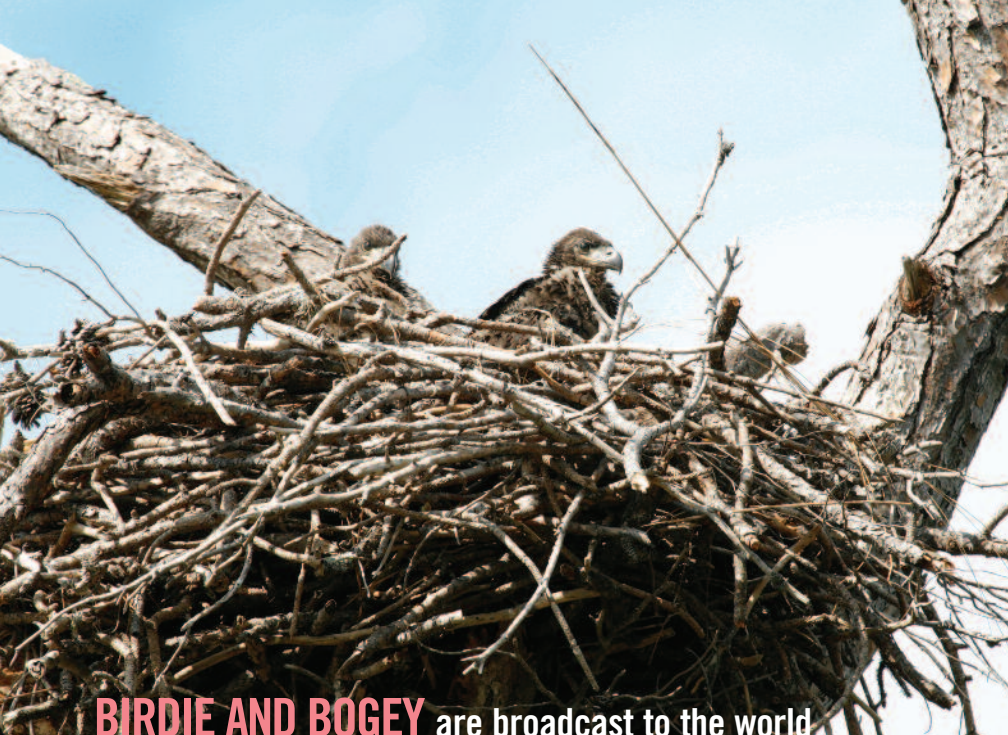
Make your bequest by asking your lawyer to use the following language in your will:

I bequeath to the National Audubon Society, Inc., a not-for-profit organization located at 700 Broadway, New York, NY 10003, _____% of my residuary estate for the benefit of Audubon of Florida.

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To learn more, call for a free brochure.

Wayne Mones, Vice President, Planned Giving, National Audubon Society,
700 Broadway, New York, NY 10003, 212-979-3033. plannedgifts@audubon.org



BIRDIE AND BOGEY are broadcast to the world

Two eaglets that hatched in January on the Ginn Tesoro property in Port St. Lucie have become the darlings of the eagle world for hundreds of thousands of people. Thanks to an Audubon of Florida partnership with Ginn Resorts Company, the birth of the eaglets was captured in real time on a webcam and broadcast to the world.

Their arrival resulted in an astonishing 143,274 visitors to the Eagle Cam web page and generated national media coverage. The Palm Beach Post ran a contest inviting readers to name the two eaglets. They are now known as Birdie and Bogey.

"Thank you so much for the joy and education you have brought the students in my classes," one a teacher wrote. "Here at Binks Forest Elementary in Wellington, Florida, the 60 third graders I teach absolutely adore watching the eaglecam. I use the 'big screen' and we get to see every movement. We were lucky enough to see the premiere of the babies in early January. Our favorite moment is when an adult 'cooperates' and visits the nest, stands still and seems to salute the skies as the national anthem is played. It's breathtaking to me and the students 'get it.' They realize how magnificent the bird is and just how privileged they are to see this firsthand. Thanks for helping the students create these special memories."

Audubon of Florida is grateful to Ginn Resorts Company for their immensely generous support of Eagle Cam and the Audubon Center for Birds of Prey. To watch Eagle Cam, visit audubonofflorida.org.

Photo of eaglets by Jim White.

IN MEMORIAM Leah Schad

Leah G. Schad, former chairman of the board of directors of the Florida Audubon Society (FAS), and an FAS board member for almost two decades in the 1980s and 1990s, passed away at the age of 71 in February. In addition to serving as an officer of FAS, Schad was also a member of the board of directors of the National Audubon Society, served as president of Audubon Society of the Everglades in Palm Beach County, and was appointed by Governor Lawton Chiles to the Governing Board of the South Florida Water Management District (SFWMD).

An avid birder and environmentalist, Schad moved to Florida in 1961 from Kentucky. Almost immediately she became active in birdwatching and conservation, devoting long hours to numerous campaigns to improve the protection of Florida's environment. She was active in initiatives to establish and sustain Preservation 2000, Forever Florida, and other efforts to conserve environmental lands.

Notably, Schad served on the SFWMD board at a time when crucial decisions were being made about the future of the Everglades, and she led efforts to secure commitments toward that ecosystem's restoration. Above all, Schad was a loyal friend to everyone at Audubon and in the environmental movement in general. Her smile, sense of humor, and dedication will be missed by all who knew her.

SPRING IS HERE, AND THE ADOPT-A-BIRD PROGRAM NEEDS YOU.



Spring is the busiest season at Audubon Center for Birds of Prey, with up to 20 percent of our annual patient load arriving during these months. Many of these patients are babies, orphaned when storms blow their nests out of trees or cause limbs to weaken and break. Won't you help us help them? An adoption is an annual investment in the care, feeding and medical treatment of birds brought to the Center for care, and for those permanently housed at the Center for community education programs. For details call 407-644-0190, or check out the web site at http://www.audubonofflorida.org/who_centers_CBOP_adoptabird.html.

ADOPT-a-BIRD

Photo of baby barred owls by Susie Warren.

AUDUBON WELCOMES

John C. Ogden, III Director of Bird Conservation

Ornithologist John C. Ogden is one of the world's most experienced scientists when it comes to addressing issues that affect endangered bird species and habitats. As Director of Bird Conservation for Audubon of Florida, he will work with staff and chapter members to develop and implement effective bird conservation strategies statewide. Co-editor of a 1994 book "Everglades, the Ecosystem and Its Restoration" that he is now updating, Ogden was until 2008 a chief scientist for the South Florida Water Management District (SFWMD).

While growing up in Tennessee, Ogden was a fanatical birdwatcher. He came to Florida to do graduate studies in ornithology at Florida State University. From 1965 to 1974, he worked as a research biologist for the National Park Service at Everglades National Park in Homestead. In '74 he began a 14-year stint as National Audubon's senior research biologist and director of the Ornithological Research Unit in Tavernier. There he conducted long-term ecological studies of wetland vertebrates while overseeing NAS's national avian research programs in Maine, New York, Florida, Texas, and California. He made 40 trips to Mexico as leader of birding tours, and as coordinator of long-term science cooperation with wetland biologists south of the border.

Ogden spent the first half of the 1980s in California, where he co-directed the California Condor Research and Recovery Program for NAS and the U.S. Fish and Wildlife Service. From 1988 to 1995, he was senior research scientist for the National Park Service at Everglades National Park, serving on multi-agency technical planning teams dealing with Everglades restoration. He signed on with the SFWMD in '95, working as an ecosystem restoration scientist there for twelve years. Audubon of Florida is delighted to have him onboard once again to direct its bird conservation initiatives.

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To email a staff member, use: first initial of first name + last name @ audubon.org
For example, the email address of a staff member named Red Knot would be rknot@audubon.org.

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AUDUBON ACADEMY APRIL 4 - 6, 2008, IN VERO BEACH



Audubon chapters throughout Florida are helping to transform the state into a place where natural lands, clean air and water are protected, where birds and other wildlife are a welcome part of everyday life. Audubon Academy strengthens those chapters by giving active members a knowledge base to draw upon, and a forum in which to acknowledge the experience and personal commitment of active, dedicated individuals.

Don't miss this important weekend of top-notch workshops, exciting field trips, and fun social events. Participation is recommended to all Florida chapter officers and directors, committee chairs, other volunteers, and future leaders.

WHEN: Friday, April 4 - Sunday, April 6, 2008
WHERE: Vero Beach Community Center and Old Court House, 2266 14th Avenue, Vero Beach

Photo of screech owl by R. J. Wiley

COST: Registration is \$25 for all three days, thanks to support by the Florida chapters, Audubon of Florida, and NAS. (Lunch and dinner on Saturday can be purchased for a small fee upon registration.) **Participants are responsible for their own travel, meals, and accommodations. Special rates provided.**

To download registration forms for Audubon Assembly, to see full program details, and for information on lodging, visit www.audubonofflorida.org

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Audubon'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.*



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SPRING 2008

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