



THE NIGHT FLYER

NEWS FROM THE FLORIDA BAT CONSERVANCY



OUR MISSION

To preserve & protect native bat populations within the state of Florida.

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FLORIDA BATS RECEIVE COMMUNITY SUPPORT IN TEMPLE TERRACE

Besides being a nice place to live, the city of Temple Terrace is well-known for its historic bat tower on the Hillsborough River. In the 1920's, this city was one of a few in Florida that installed large bat houses in hopes of controlling mosquitoes. The Temple Terrace structure stood for many years on the banks of the Hillsborough River and is reported to have once been occupied by a colony of bats (species unknown). In 1979, vandals burned the historic bat tower down.

Last year, Dana Carver, a planner with the Temple Terrace Parks and Recreation Department, began a new bat house project for the city. "We feel wildlife makes our existence richer, and bats are part of wildlife," Dana says.

The project has two phases, including installation of a number of small bat houses along the river in hopes of attracting bats to the area and to construct a replica of the 1920's bat tower with a redesigned interior based on today's bat house technology. Phase one was completed in January when Dana, along with other employees from the Parks and Recreation Depart-

ment, installed seven bat houses around the area of the river and a nearby golf course. The bat houses were built by FBC volunteer George Fenner. George meticulously constructs, caulks, and coats each house for durability, and includes a vinyl roof to extend the life of the unit.

FBC donated one of the houses to the project, and the city purchased the other six for this phase of the project. The bat houses are four-chambered and designed to house about 500 bats each.

The residents of Temple Terrace support the project and have donated \$1,000 thus far to fund phase one.

Grant Rimbey, president of the Temple Terrace Preservation Society and local architect, estimated that rebuilding the bat tower will cost \$40,000 to \$50,000. The hope is that various community groups will help with funds for the project.

Look for more about the historic bat towers of the 1920's in an upcoming issue of the Night Flyer.



Photo courtesy Tampa Tribune



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FBC IN THE COMMUNITY: UPCOMING EDUCATION PROGRAMS / WILDLIFE FESTIVALS

March 10: Mackle Park Community Conservation Celebration - Marco Island - FBC booth open 10 am—4 pm. This event will focus on ways to conserve the community's many natural resources and explore a wide variety of environmental disciplines from science to the arts. *More information:* (239) 389-5003.

March 11: Boyd Hill Nature Center Wildlife Weekend - St. Petersburg - FBC booth open 10 am—4 pm. 2900 31st Street South. Event includes a petting zoo, crafts, and butterfly program for kids; a variety of educational presentations and programs highlighting birds, birdscaping, butterflies, and native plant gardening; guided tours and more. Environmental exhibitors, a native plant sale, food and entertainment round out this popular two-day event. *More information:* (727) 893-7326.

March 15: Bat Education Program, Orange Audubon Society Meeting - Leu Gardens, Orlando - 7 pm. *More information:* (407) 553-0028.

March 21: Bat Education Program, Florida Native Plant Society Meeting - Hillsborough County Extension Office, Seffner - 7 pm. *Directions:* Take I-4 to Exit 10 (just east of I-75); go south for two blocks to the corner of Old Hillsborough Road and County Road 579.

April 5: Bat Education Program, West Florida Avian Society, Spring Hill - 7:30 pm. *Location:* Rhadbouy Road Senior Citizens Club.



April 12—15: First Coast Birding & Nature Festival, St. Augustine. FBC will deliver two, one-hour bat information programs (Saturday 9:30 am; Sunday 1 pm, in the Legacy Conference Room). Program registration is \$6. *More information:* www.getaway4florida.com/bird_festival_2007

April 16: Bat Education Program, Hernando Library, Spring Hill - 1 pm. 9220 Spring Hill Drive, Spring Hill (between Mariner Blvd. and Waterfall Drive). *More information:* (352) 540-6374.

April 17: Bat Education Program, Ridge Audubon Center, Babson Park - 7 pm. 200 North Crooked Lake; Covered Dish supper starts at 6:00pm (all are welcome, come & bring a dish!). *More information:* (863) 638-1355.

April 21: Earth Day Celebration, Naples. FBC booth open 9 am—3 pm. Held at the Conservancy of Southwest Florida's 21-acre oasis in the heart of downtown Naples; 1450 Merrihue Drive. *More information:* www.conservancy.org



April 24: Bat Education Program, Boyd Hill Nature Center - 6:30 pm. Program includes short hike to listen for bats with bat detectors *More information:* (727) 893-7326.

For more information or directions to any of these programs, please call us: 727-710-2287

FWC BAT HOUSE SUCCESS IN HERNANDO COUNTY

By Kristin Wood

The Florida Fish and Wildlife Conservation Commission (FWC) placed a bat house at the Chinsegut Nature Center in April 2006. Brazilian free-tailed bats were already found using the box by September. The triple-chambered bat house was purchased through Bat Conservation International. FWC technician Mike Simmons installed the bat house on top of a 21-foot galvanized steel pipe and cemented the pipe in the ground for stability. Approximately three feet of the pipe was placed in a cemented sleeve in the ground. The bat house was erected in a grassy parking lot adjacent to the edge of the woods, facing east.



Chinsegut Nature Center offers a variety of educational programs and walks to the public. A visit to the bat house is frequently incorporated as part of the program. The annual Chinsegut Birding and Wildlife Festival will take place April 13-14, 2007. Bat, bird, butterfly, wildflower and dragonfly walks and talks will be part of the two-day festival. Visit MyFWC.com/Chinsegut to learn more about the nature center or call (352) 754-6722.

BABCOCK-WEBB WILDLIFE MANAGEMENT AREA REPORTS FIRST BAT HOUSE OCCUPIED

In the last issue of the *Night Flyer*, FBC highlighted the conservation and management efforts of the Florida Fish and Wildlife Conservation Commission at their Babcock-Webb Wildlife Management Area in Punta Gorda. They installed sixteen bat houses in early December, 2006: eight of the single-chambered design in the hopes of attracting the endangered bonneted bat, and eight of the triple-chambered, a design suitable for all of Florida's other colonial species.

Brian Scofield, FWC wildlife biologist, reports that one of the triple-chambered bat houses is already occupied. While it hasn't yet been determined which species has moved into the house, FBC hopes to visit there soon and record echolocation calls as the bats emerge from the house. FBC uses the AnaBat II bat detector coupled with a laptop computer to record bat calls. The files are then analysed to identify each species recorded. The AnaBat II converts the ultrasonic echolocation signals of bats into electronic signals which can be recorded and processed.

Our thanks to Brian Scofield for heading up the project and to Brooke George, Rob Hawsey, Heath Sutherland, and Cason Pope for helping with the installation of the bat houses.



Bat Facts

Big Brown Bat (*Eptesicus fuscus*)

This bat has long, silky fur that varies in color from chocolate-brown to reddish- or golden-brown. The ears and wing membranes are dark brown to nearly black.

The big brown bat is similar in appearance to the evening bat, but is larger in size.

Dead tree cavities provide the normal roosting habitat for this colonial bat, but one colony was found roosting in the base of a royal palm leaf stem in south Florida. They also move into buildings, bridges, and bat houses.

- ◆ Insectivorous. They feed on beetles, planthoppers, true bugs, flies, mosquitoes, flying termites, flying ants, and a number of other insects.
- ◆ Females usually give birth to two pups in May or June.
- ◆ Though it may be found throughout most of Florida, this species is uncommon in north and central Florida, and rare in south Florida; not found in the Keys.

CHALLENGE FOR 2007: BATS & BRIDGES

Past research: In 1995, The Florida Fish and Wildlife Conservation Commission (FWC) undertook a survey of bats in bridges to determine which types of bridges were being used by bats, which bat species were using them, and the frequency of use. FWC wildlife biologists Jeff Gore and Julie Hovis headed up the survey which focused on bridges in northeast and northwest Florida (FDOT districts 2 and 3). 263 bridges were surveyed for the presence of bats. These bridges represented a 10% random sample of all bridges in those Districts, and bats were documented in 10 bridges (3.8%). Also, 37 of 44 additional bridges, surveyed throughout Florida in 1995, were found to be inhabited by bats.



In 2000, Jeff Gore, along with Karl Studenroth, began a survey of tree-hollows in the Choctawhatchee River Basin to determine the amount of usage by bats. Outside Florida, tree hollows are known provide important roosting habitat for Rafinesque's big-eared bats and southeastern myotis, and are occasionally used by other species. But after having little success, the survey was expanded to include bridges in the area. They surveyed 72 bridges within the Choctawhatchee River watershed. Of these, 38 bridges contained suitable roosting crevices and bats were documented in 30 bridges (79%). This was interesting information. Were the bats abandoning their natural roosts in favor of bridges?

In 2003, FWC conducted a statewide survey of highway bridges. Highway bridges are ones that are maintained by the FDOT and may cross roads, railways, or water. From this survey, a final report was produced titled "The Status and Management of Bats Roosting in Bridges in Florida." During this survey, a total of 487 bridges were surveyed statewide including 301 randomly selected bridges, and 185 bridges that had been reported by various sources to be occupied with bats. A total of 152 bridges were documented as bat roosts throughout Florida. Four species of bats were documented using bridges in this survey: Brazilian free-tailed bats, big brown bats, evening bats, and southeastern myotis.

Karl Studenroth, a wildlife biologist and founder of the Northwest Florida Environmental Conservancy (NWFLEC), conducted the majority of the field work and data collection for these surveys. Karl has published a summary of the information gathered from the surveys, along with the final report; visit www.nwflec.com/id26.html

Future needs: Like much of Florida's wildlife, bats are suffering from loss of habitat. When they move into buildings they usually find they are unwanted and are excluded, harassed, or worse, illegally destroyed. Bridges, on the other hand, appear to offer bat colonies a safe place to roost. Usually they bother no one, and no one bothers them. However, this is not always the case. Bridges need to be maintained and inspected, and workers often consider bats to be a nuisance. FBC hopes to work with the FDOT this year to protect bat roosts and educate workers about regulations and recommendations regarding bats. In some states, bridges have been designed to include roosting areas for bats. Our hope is to work with the FDOT to begin experimenting with artificial roosting habitat in Florida bridges, either by retrofitting existing bridges, or creating crevices for bats in new bridge designs.

FBC will create a database to track locations of bridges occupied by bats. Let us know if you observe bats in bridges in your area. But be advised, walking around bridges maintained by the FDOT could be considered trespassing.



Big brown bats roosting under bridge (Photo by Karl Studenroth)

ANNUAL REPORT

FLORIDA BAT CONSERVANCY

YEAR 2006 IN REVIEW

NEW NAME: After establishing non-profit, 501(c)(3) status in 1994, the Florida Bat Center grew into a statewide organization dedicated to the conservation of bat populations within Florida. Education, outreach, advocacy, rescue, rehabilitation, and conservation efforts stretch from the panhandle to the Keys each year. To better reflect the statewide scope of the organization, in early 2006 the Florida Bat Center board of directors voted to change the name of the organization to the *Florida Bat Conservancy*.

EDUCATION & OUTREACH

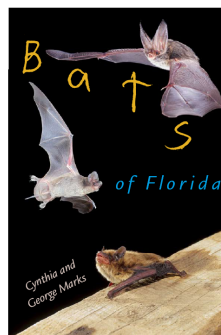
FORMAL & INFORMAL COMMUNICATIONS

One of the most important things the Florida Bat Conservancy (FBC) can do to conserve bat populations is to educate the public about the benefits of bats and dispel fears and misconceptions. Volunteers presented 41 educational programs to people of all ages and hosted an exhibit booth at eight environmental festivals, yielding educational contacts with thousands of people in 2006.

Ongoing Communications Outreach is another opportunity to provide the public with our conservation message. To help protect bats, FBC answers questions and addresses concerns that people throughout the state have about bats. During 2006, FBC handled over 450 phone calls on the bat hot line (727-710-2287) and responded to over 1,000 emails regarding bats. Most of these communications addressed bats in buildings, bat exclusions, injured bats found by the public, and bat conservation projects.

PUBLICATION OF AUTHORITATIVE GUIDE

It is important that accurate information about Florida's bats be made available to the general public, governmental agencies, educators, and wildlife professionals. *Bats of Florida* is the first publication dedicated solely to the topic of bats in Florida. Authored by Florida Bat Conservancy founders, Cynthia and George Marks, this book provides up-to-date information about bat species found in Florida, bat conservation in Florida, bats in buildings, and bats and human health. Published by the University Press of Florida, it was released in September of 2006. By the end of 2006, over 1,000 copies had been sold.



MEMBER NEWSLETTER & NEW WEB PRESENCE

The FBC received a total of 70 new memberships and renewals during 2006. *The Night Flyer* Newsletter, re-launched in 2006 after a three year hiatus, was published in the spring, summer, and fall. Electronic copies are archived and available for the general public online, along with facts about native bat species, conservation practices, constructing bat houses, and more. Web design and hosting is provided as an in-kind donation from Silicon Prairie Web Solutions and its principal, Scott Walker. Scott offered his services in honor of his mother, long-time FBC volunteer and board member Ann Walker.

FLORIDA BAT



CONSERVANCY

OUR MISSION

To preserve & protect native bat populations within the state of Florida.

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Cyndi Marks



VOLUNTEERS

The Florida Bat Conservancy is an all volunteer organization.

Volunteers contributed over 7,000 hours during 2006.

The services volunteers provided included:

- ◆ Rescuing and caring for injured and orphaned bats
- ◆ Presenting programs
- ◆ Staffing the exhibit booth at festivals
- ◆ Conducting bat surveys
- ◆ Administration

Based on the national average of hourly earnings of non-supervisory employees, as reported by the Independent Sector, the **value of these hours exceeds \$126,000.**

Without volunteer support, the FBC would be unable to provide services critical to its mission—helping Florida’s bats.

For more information on the in-kind value of volunteer time, visit:

www.independentsector.org

FINANCES

BALANCE SHEET - 12/31/2006

ASSETS	
Checking Account	4,015.13
Savings Account	12,807.51
Petty Cash	65.91
Total Cash	16,888.55
Inventory - Merchandise for resale	4,214.90
Total Assets	21,103.45
LIABILITIES	
Credit Cards	236.03
Total liabilities	236.03
EQUITY	20,867.42
TOTAL LIABILITIES & EQUITY	21,103.45

IN-KIND GIFTS

In addition to volunteer time, in-kind donations of services and materials helped meet our mission during 2006.

For example, George Fenner constructed a total of 35 bat houses which he donated for resale and other projects. Scott Walker, son of volunteer Ann Walker, donated a new graphics design for the website and provided hosting for the website through Silicon Prairie Web Solutions as a donation in honor of his mother. Ann continued to purchase the food and supplies care of FBC bats.

Dr. Peter Helmer, DVM, of the Avian & Animal Hospital of Bardmoor in Largo, FL, donated veterinary services, including two wing pinning surgeries and one cesarean section.

On behalf of Florida’s bats, thanks to all FBC donors, members, and volunteers.

FINANCIAL STATEMENT 2006

REVENUE	
Contributions	2,503.05
Grants	100.00
Sales (net)*	3,771.15
Programs	3,873.00
Memberships	3,025.07
Survey work	9,215.07
Other income	<u>108.93</u>
TOTAL REVENUE	22,596.27

EXPENSES	
Program	
Bat care	1,628.16
Educational programs	2,819.97
Exclusion materials	60.32
Bat house projects	1,246.67
Survey supplies & equipment	1,208.72
Telephone (Bat-hot line)	856.62
Newsletters	936.99
Conferences and events	327.39
Travel	5,758.77
Other	<u>97.20</u>
Subtotal	14,940.81

Administrative & General	
Office supplies & services	429.22
Telephone	95.02
Postage & shipping	101.08
Insurance	303.00
Governmental (permits & filings)	246.25
Storage space rental	1,169.00
Bank fees & interest	88.44
Volunteer programs	123.06
Other	<u>158.24</u>
Subtotal	2,713.31

TOTAL EXPENSES 17,654.12

REVENUE LESS EXPENSES 4,942.15

** Sales is the net after sales expense and the cost of goods*

RESEARCH, ADVOCACY, AND CONSERVATION

Photo by Ralph Arwood



BONNETED BAT RESEARCH

In 2006, The US Fish and Wildlife Service engaged the Florida Bat Conservancy to conduct a study to determine the status of the Florida bonneted bat (*Eumops floridanus*). The Florida bonneted bat was classified as a unique species in 2004 rather than a subspecies of *Eumops glaucinus*.

The entire extent of its range includes only the southern portion of the state of Florida. Originally, it was thought to exist only in southeast Florida; but in 1979 a small colony was found in the Babcock/Webb Wildlife Management Area in Charlotte County. Acoustical surveys conducted by the Conservancy in 2000 found the species also existed in the Ten Thousand Islands National Wildlife Refuge and Fakahatchee Strand Preserve State Park (both in Collier County).

FBC surveys conducted in 2006 documented the species in Babcock Webb, Fakahatchee Strand, and both Homestead and Coral Gables in Miami-Dade County. The surveys indicate the species is quite rare. Although currently listed as *Endangered* by the Florida Fish and Wildlife Conservation Commission, the U.S. Fish and Wildlife Service is also reviewing the status of this species. FBC continues to advocate stringent protection for this species.



BAT HOUSE PROJECTS

With habitat loss from development, providing safe roosting and nursery spaces has become critical to the protection and conservation of bat species. FBC works with federal, state, and local governments and community groups to provide replacement roosting locations throughout the state. The following summarizes projects completed during 2006:

University of Florida, Gainesville (Alachua County): The University of Florida bat house is the most successful community bat house in Florida, and possibly, the world. It was constructed on the campus of the University of Florida in 1991 to serve as an alternative roost site for thousands of bats that were being evicted from sports stadiums. Over the past few years, an excessive number of young bats (pups) had fallen out of the U of F bat house. It was concluded that the roosting surfaces inside the bat house had become slick with use over the years. A new roosting module was installed under one-fourth of the bat house in 2005 and greatly reduced pup fallout. In the spring of 2006, a second module was installed under an additional one-fourth of the bat house. Materials for both modules were funded by the FBC. There is a growing need for the addition of a second bat house at the University so the existing one can be renovated, and the FBC board of directors has committed resources to the continued progress of this project for 2007.

Temple Terrace (Hillsborough County): This community was the site of a large bat house constructed in the 1920s along the Hillsborough River for mosquito control. The bat house was an historic landmark until it was destroyed by fire in 1979. The City of Temple Terrace is planning to construct a replica of the bat tower at a future date, but in the meantime is locating smaller bat houses along the river. FBC worked with city employees on the design, construction, and location for these bat houses.

Babcock-Webb (Charlotte County): As a result of surveys confirming the presence of Florida bonneted bats in the Babcock/Webb Wildlife Management Area, the Florida Wildlife Commission embarked upon a bat house project to strengthen the population of these and other bats in the area. Conservancy staff worked with them to determine the size and location of these bat houses. The FWC purchased eight single-chambered bat houses specifically for Florida bonneted bats, and eight triple-chambered bat houses for other colonial species in the area.

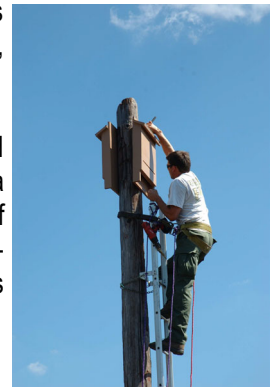


Photo courtesy FWC

There are thirteen resident species of bats found in Florida. There are also seven other species that have been reported on rare occasions. The native species are all insectivorous, and feed on a variety of night-flying insects. Florida's bats use a diversity of roosting sites, including tree foliage, dead trees, palm fronds, Spanish moss, buildings, and caves.

Big Brown Bat
(*Eptesicus fuscus*)

Brazilian Free-Tailed Bat
(*Tadarida brasiliensis*)

Eastern Pipistrelle
(*Pipistrellus subflavus*)

Eastern Red Bat
(*Lasiurus borealis*)

Evening Bat
(*Nycticeius humeralis*)

Florida Bonneted Bat
(*Eumops floridanus*)
ENDANGERED

Gray myotis
(*Myotis grisescens*)
ENDANGERED

Hoary Bat
(*Lasiurus cinereus*)

Northern Yellow Bat
(*Lasiurus intermedius*)

Refinesque's Big-Eared Bat
(*Corynorhinus refinesquii*)

Seminole Bat
(*Lasiurus seminolus*)

Southeastern Myotis
(*Myotis austroriparius*)

Velvety Free-Tailed Bat
(*Molossus molossus*)

ABOUT OUR FOUNDERS

Cyndi Marks first became interested in bats in 1989. Intrigued by a small ad in a magazine to join Bat Conservation International to help protect bats, she became convinced bats were misunderstood and unjustly mistreated. When she and her husband, George, received the membership package, they were amazed at how little they, and the general public, actually knew about bats. A few months later they attended a one day bat workshop in Washington, D.C. There they heard presentations about the amazing characteristics of bats, saw their first live bats up close, and sat in a darkened room, bat detectors in hand, as live bats flew around the room. Needless to say, they gained a great appreciation for this amazing animal. They both went on to other workshops, and Cyndi began giving programs on bats, caring for injured bats, and working with people who had bats in their buildings. George, a graduate electrical engineer, purchased an ANABAT bat detector and began studying bat sonar.

Public requests for programs and services brought Cyndi and George in contact with a number of other conservation-minded bat enthusiasts, including Sarah and Bill Kern. The four recognized a compelling need for conservation and services in their home state, and formed the Florida Bat Center (now the Florida Bat Conservancy), a non profit organization with a mission to conserve and protect bats in Florida. Cyndi and Sarah served as the organization's first volunteers, presenting education programs and caring for injured and orphaned bats. The organization grew as other volunteers joined them.

- ◆ Cyndi was born in Clearwater, Florida and attended Florida State University. She traveled extensively and lived in Italy, Great Britain, Australia, and New Zealand. Her interests in wildlife biology subsequently inspired her to attend courses at the University of South Florida, Eckerd College, and Florida Gulf Coast University. Cyndi has presented more than 1,500 educational programs, set the bat exhibit up at hundreds of environmental festivals, helped hundreds of home owners with bats in their buildings, and along with Conservancy volunteers, rescued and cared for hundreds of Florida bats.
- ◆ George's family moved to Florida when he was seven years old. He holds a degree in electrical engineering from the University of Florida, and a master's degree in engineering from the University of South Florida. He worked for Florida Power for 32 years, retiring in 1998 as a Vice President. He now utilizes that managerial experience to handle many of the administrative functions of the organization, and the engineering know-how to conduct acoustical surveys for bats.
- ◆ Sarah is a native Floridian. She began delivering educational programs on bats in 1991, and was recognized as the Pinellas County School Volunteer of the Year in 1996 for the large number educational programs she presented on bats that year. In 2000, she and her husband Bill worked in Nicaragua conducting training programs on how to control vampire bat populations without injuring beneficial bat species in the area. The venture was filmed by National Geographic Explorer and aired that same year.
- ◆ Bill received Bachelor's and Master's degrees from Indiana State University, and a Ph.D. from the University of Florida (entomology and zoology). He has served as a Research Associate, Assistant Extension Scientist, and Associate Professor for the University of Florida. He also served as a Pest Control Technician and is expert on the topics of pest control, entomology, and nematology. He has worked with bats in Florida since his arrival, and participated in the University of Florida bat house project.



Photo by Ralph Arwood

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HIGHLIGHTS FROM THE SOUTHEASTERN BAT DIVERSITY NETWORK MEETING

The goal of the Southeastern Bat Diversity Network (SBDN) is to conserve bats and their habitats in southeastern North America through collaborative research, education, and management.

This year's meeting was held in Destin, Florida February 14-16th and was hosted by the Florida Fish and Wildlife Conservation Commission (FWC). Prior to the meeting this year, a special half-day session was held to form the Rafinesque's Big-eared Bat Working Group. During this session, presentations were given on the status and conservation of the big-eared bat, which is a rare and vulnerable species found in the southeastern U. S., including north and central Florida.

SBDN meetings are held each year in conjunction with the Colloquium on Conservation of Mammals in the Southeastern United States. The SBDN meeting included presentations on acoustical monitoring of bats and the conservation of eastern bats, which included a presentation by Jeff Gore on Florida's bats (the abstract is printed below), followed by the annual business meeting. The Colloquium had 17 presentations which were mostly on bats, plus presentations on cotton rats, Perdido Key beachmice, and Ord's kangaroo rats. Melissa Tucker presented the results of FWC's 2006 cave survey.

Abstracts of all presentations are available on the SBDN webpage: www.sbdn.org/2007meeting.html

CONSERVATION AND MANAGEMENT OF BATS IN FLORIDA

J. A. Gore and C. S. Marks, Florida Fish and Wildlife Conservation Commission, Panama City, FL 32409 (JAG); Florida Bat Conservancy, Bay Pines, FL 33744 (CSM)

Florida is home to 13 species of bats, including 1 species that is a seasonal resident only. Seven other species are known from <3 specimens; 3 of these species typically range north of Florida and 4 occur in the Caribbean. Conservation in Florida has focused on protecting roosts of colonial bats. Cave roosts of *Myotis austroriparius* were surveyed in 1991-92 and again in 2006. At least 3 new maternity roosts were found in 2006, but 2 caves had entrances blocked after 1992 and 2 former roost caves were vacant. The southernmost roosts of the gray bat (*M. grisescens*) are in Florida, but the status of the 2 maternity colonies is uncertain and the sole wintering colony has declined to <10 animals. Concrete highway bridges in Florida are frequently used by roosting bats. A random sample of 299 concrete bridges in 2003 found 5.4% supported 1-4 species of bats, and bats are estimated to roost in 296 bridges in Florida. No *Corynorhinus rafinesquii* were found using bridges in 2003 and identification and protection of *Corynorhinus* roosts remains a priority. A survey is in progress to determine the range and abundance of the Florida bonneted bat (*Eumops floridanus*). This species has been found on both coasts of south Florida in recent years, but the current survey indicates the species is less abundant than originally thought. Jamaican fruit-eating bats (*Artibeus jamaicensis*) were documented in the Florida Keys (two specimens) in the mid-1990s, but subsequent searches have found no additional specimens. Three other phyllostomid species have been documented recently: *Phyllonycteris poeyi* and *Phyllops falcatus* in Key West and *Erophylla sezekorni* in Miami. Only a few individuals were found and there is no evidence of breeding populations. In contrast, the velvety free-tailed bat (*Molossus molossus*) is confirmed now as a permanent resident throughout the Keys.



Bat Facts

*Rafinesque's Big-eared Bat
(Corynorhinus rafinesquii)*

As you might guess, this bat has very large ears for its size, measuring about an inch in length. It also has two large facial glands on its muzzle and because of this has occasionally been called the eastern lump-nosed bat. Its silky fur is grayish-brown.

This colonial bat is usually found roosting in pairs or small groups and prefers forested areas. It roosts in the hollows and loose bark of dead trees, though it also roosts in caves. They are occasionally found in abandoned or seldom used buildings in wooded areas.

- ◆ Insectivorous. Moths make up the majority of the diet for this species, but they also feed on other soft-bodied insects. This is the only bat species in Florida that uses gleaning (picking insects up off of foliage or the ground) as a primary means of foraging, although it captures insects in flight as well.
- ◆ Females give birth to a single pup in May or early June.
- ◆ Uncommon in the northern portion of the state and rare in the southern portion. Found in scattered locations, mainly in the Florida panhandle and the northern and central portions of the Florida peninsula.



Bat Facts

Evening Bat
(*Nycticeius humeralis*)

The evening bat is one of five species commonly found within the Enchanted Forest Sanctuary.

A Florida native species, the fur of the evening bat is usually a dark brown, but may also have a bronze to reddish tint (see the photo on page 11). It has short dark ears and the muzzle is broad, unfurred and nearly black. This species closely resembles the big brown bat, but is smaller in size.

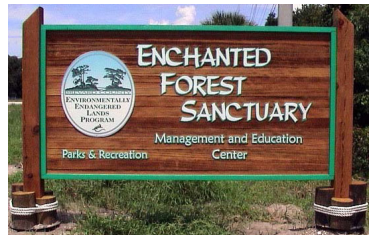
This colonial bat is found in colonies from just a few individuals up to seventy or more bats. They roost behind loose bark and the crevices and cavities of dead trees. On a few occasions they have been found in Spanish moss. They also roost in buildings, bridges, the brackets on utility poles, and bat houses.

◆ Insectivorous. They feed on beetles, planthoppers, true bugs, flies, mosquitoes, moths, flying termites, flying ants, and other insects.

◆ Females usually give birth to two pups in late April or May.

◆ Evening bats are common throughout Florida, except the Florida Keys.

MEMBER SPOTLIGHT: THE ENCHANTED FOREST SANCTUARY



...A place of beauty and wonder for visitors of all ages.

FBC would like to welcome the Enchanted Forest Sanctuary to our roster of members for 2007.

Located in the southern limits of the City of Titusville, the Enchanted Forest Sanctuary preserves the diversity of the natural habitats found in Brevard County. Several miles of hiking trails allow visitors to enjoy the natural beauty of the area. There is a wonderful wealth of plant life, as both temperate (northern) and subtropical (southern) species grow there together.

Enchanted Forest is the "flagship" sanctuary and first property purchased by Brevard County's Environmentally Endangered Lands (EEL) Program. The 428-acre Sanctuary includes five basic habitat types: oak, scrub, mesic and hydric hammock, wet prairie, and pine flatwoods. Wildlife species found there include the Eastern Indigo snake, Florida scrub lizard, gopher tortoise, white-tailed deer, bobcat, and, of course, bats!



For more information about the Enchanted Forest Sanctuary, visit: www.eelbrevard.com

IN MEMORY: NATURALIST DONNA HEINRICH

FBC joins with the family and friends of long time Boyd Hill Nature Park ranger Donna June Heinrich in remembering the life of this dedicated and tireless environmental educator. Donna was named St. Petersburg Audubon Society's *Conservationist of the Year* in 1996.

Donna was diagnosed with acute myeloid leukemia in December 2006. After a brief remission following treatment at H. Lee Moffitt Cancer and Research Institute in Tampa, Donna passed away January 3.

Jeff Klinkenberg of the *St. Pete Times* wrote of her:

"Ranger Donna - that's what we all called her - never met a nature she didn't nurture." Her work educating children included encouraging them to leave their comfort zones to experience nature by hiking at night, exploring fresh scat, embracing snakes and spiders, and seeing the beauty in every creature, even those long maligned and misunderstood.



Ranger Donna and students from Bay Point Elementary Magnet School explore the Boyd Hill Nature Park in St. Petersburg, Florida; Photo courtesy St. Pete Times

Florida's bats have lost a true friend.

MEMBERSHIP

Since its beginnings in 1990, through the acquisition of 501(c)(3) status in 1994, to the present day, FBC's focus has been the conservation of one of the state's most unique and vital natural resources: native bats. Rather than serving this mission in a single location, volunteers are needed from the panhandle to the keys, and everywhere in between. Educators, researchers, rescuers, rehabilitators, and advocates all over the state must be actively involved in the all-volunteer organization in order to reach our goals. Member support helps fund these critical activities. From rescue and rehabilitation to education, advocacy, and research, every dollar donated directly impacts Florida's bats.

THANKS TO OUR CONTINUING MEMBERS:

Bat Patrons: David Redfield, Ann Walker

WELCOME NEW MEMBERS!

Bat Patrons: Mark Patterson, DeAn B. Winton

Bat Supporters: Viki Werner Edson, Susan Trokey

Bat Friends: Rick Potter, Jonnie Swann, Victor Young

Regular: Jan Baily, Enchanted Forest Sanctuary

SPECIAL THANKS to Ralph & Gisella Arwood and Ann Walker for gifts of support above and beyond annual membership levels.



Evening Bat (*Nycticeius humeralis*)



Join us and help protect these fascinating, beneficial mammals!

Please consider helping Florida's bats by becoming a member. We are a non-profit 501(c) (3) organization working hard to protect bats by means of public education, conservation projects, rescue, rehabilitation, and research.

- New* Regular \$15 Bat Friend \$30 Bat Supporter \$50
- Renewing* Bat Patron \$100 Bat Conservationist \$250 or more

Name: _____ Email: _____

Address: _____ Phone: _____

City: _____ State _____ ZIP _____

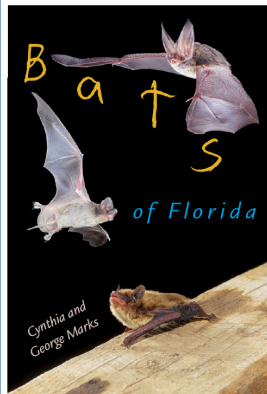
Make checks payable to: Florida Bat Conservancy, P.O. Box 516, Bay Pines, FL 33744



HELPING FLORIDA'S BATS

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NEWS FROM THE FLORIDA BAT CONSERVANCY



ORDER YOUR COPY OF *BATS OF FLORIDA* FROM US!

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