

Cypress Creek National Wildlife Refuge

Annual Narrative

Ullin, Illinois
1999



A Joint Venture Project

Marguerite Rosenthal 9/1/00
Refuge Manager Date

Jan Kauffeld 9/27/00
Refuge Supervisor Date

Geographic Assistant Regional Director Date

Mita M. Zuber 9.15.00
Programmatic Assistant Regional Director Date

Dedicated to a Friend of the Refuge
Ned Trovillion

March 7, 1920 to October 19, 1999



The Refuge lost Ned Trovillion, a very important friend, supporter, and volunteer. Ned was dedicated to the protection and restoration of lands within the Cache River Watershed. With a career as an agricultural teacher and 30 years of experience with the Soil Conservation Service, Ned enlightened and inspired many landowners to become responsible stewards of the land. Ned was also known for his award-winning photographs of the Cache River Wetlands and surrounding area. Once retired, he devoted his time and skills to conservation and promoted protection of the area through his photos.

Table of Contents

Forward
Introduction
Highlights
Climate Data

Monitoring and Studies

- 1a. Surveys and Censuses
- 1b. Studies and Investigations

Habitat Restoration

- 2a. Wetland Restoration
- 2b. Upland Restoration
- 2c. Deepwater/Riverine Restoration

Habitat Management

- 3a. Water Level Management
- 3b. Moist Soil Management
- 3c. Graze/Mow/Hay
- 3d. Farming
- 3e. Forest Management
- 3f. Fire Management
- 3g. Pest Plants Control

Fish and Wildlife Management

- 4a. Bird Banding
- 4b. Disease Monitoring and Treatment
- 4c. Reintroductions
- 4d. Nest Structures
- 4e. Pest, Predator and Exotic Animal Control

Coordination Activities

- 5a. Interagency Coordination
- 5b. Tribal Coordination
- 5c. Private Land Activities

Resource Protection

- 6a. Law Enforcement
- 6b. Permits & Economic Use Management
- 6c. Contaminant Investigation
- 6d. Contaminants Cleanup

- 6e. Water Rights Management
- 6f. Cultural Resources Management
- 6g. Land Acquisition

Public Education and Recreation

- 7a. Provide Visitor Services
- 7b. Outreach

Planning and Administration

- 8a. Comprehensive Conservation Planning
- 8b. General Administration

Credits

Appendix

Figures

1. Map of Cache River Wetlands Joint Venture boundaries
2. The Cache River basin lies at the junction of 4 physiographic regions.
3. Forty acre wetland restoration project on the Amyx tract
4. Staff from the Refuge and State Tree Nursery planted 38 acres of native hardwood seedlings at the Refuge Seed Orchard
5. Contractor removed a large log jam on the Cache River, south of the Bellrose Waterfowl Reserve.
6. A seven inch rain caused the Cache River to back flow into the Bellrose Waterfowl Reserve causing damage to water control structures.
7. Interagency team developed to evaluate and rank sites for the Wetland Reserve Program.
8. Refuge staff and students explore macroinvertebrates collected from the Cache River Wetlands.
9. Volunteers are trained as Citizen Scientists to monitor rivers and forests in the Cache River watershed.
10. Joint Venture staff guided visitors on canoe tours to the State Champion bald cypress and Eagle Pond.
11. Refuge Volunteer of the Year, Glenda Prosser.
12. Volunteers, Les Honey and Lyn Rufener assist with tree planting.
13. Kim Horoschak, Volunteer Intern, assisted with school programs, and maintenance projects during the fall and spring.
14. A highlight of the Expo was Insect Theater conducted by staff from the Illinois Natural History Survey.
15. D.Prosser (USFWS) and M.Hutchison (TNC) told tall tales and other stories during a spring program
16. Refuge staff constructed 2 boat ramps on the Old Cache Channel.
17. Refuge staff installed a vault toilet at the Hickory Bottoms Access.
18. Refuge staff at White River NWR (L to R: L.Jones, D.Prosser, A.Novara, J.Hinkle, M.Hills)
19. Refuge staff (L to R: D.Fry, L.Jones, D.Prosser, M.Hills, J.Hinkle, A.Novara)

Tables

1. Weather Data for the Southern Illinois Region
2. Estimated Peaks for Ducks and Geese on the Refuge
3. Cypress Creek Refuge 1999 Cooperative Farming Program
4. Fire Protection Districts
5. Refuge property purchased in 1999
6. Cypress Creek Refuge Acquisition Activity 1990-1999
7. Funding for Fiscal Year 1991-1999
8. Refuge Revenue Sharing Payments
9. Refuge Permanent and Temporary Staff
10. The Nature Conservancy Staff

Introduction

Few wild places exist in North America today that exhibit such a wide diversity of flora, fauna, and geomorphic conditions as the Cache River basin in southern Illinois. Moreover, few such areas have withstood the on-going onslaught of humanity's attempts to "tame" the land. Still fewer wild places are given the opportunity to return from the brink of elimination. The Cypress Creek National Wildlife Refuge, located in the heart of the Cache River watershed, is one of the last remnants of a uniquely diverse environment that can, to a large extent, be returned to a functioning ecosystem.

Cypress Creek National Wildlife Refuge was established June 26, 1990 in the southern Illinois counties of Alexander, Johnson, Pulaski, and Union. A temporary headquarters is located on the campus of Shawnee Community College, nine miles east of Ullin, Illinois. Approximately 14,000 acres of the 35,529 acres delineated within the Refuge boundary have been purchased. Land acquisition with Land and Water Conservation Funds has been from willing sellers.

The Refuge was authorized under the Emergency Wetlands Resources Act of 1986 (Public Law 99-645) for the primary purpose of wetlands protection and restoration: "...intensifying cooperative efforts among private interests and local, State and Federal governments for the management and conservation of wetlands;.....". 16 U.S.C. 3901. Located within the Cache River Watershed, the Refuge is part of the New Madrid Wetlands Project of the Lower Mississippi Valley Joint Venture of the North American Waterfowl Management Plan and is part of the Lower Mississippi River Ecosystem. Other cooperators in the Cache River Wetlands Joint Venture project include: Illinois Department of Natural Resources (IDNR), The Nature Conservancy (TNC), and Ducks Unlimited (DU).

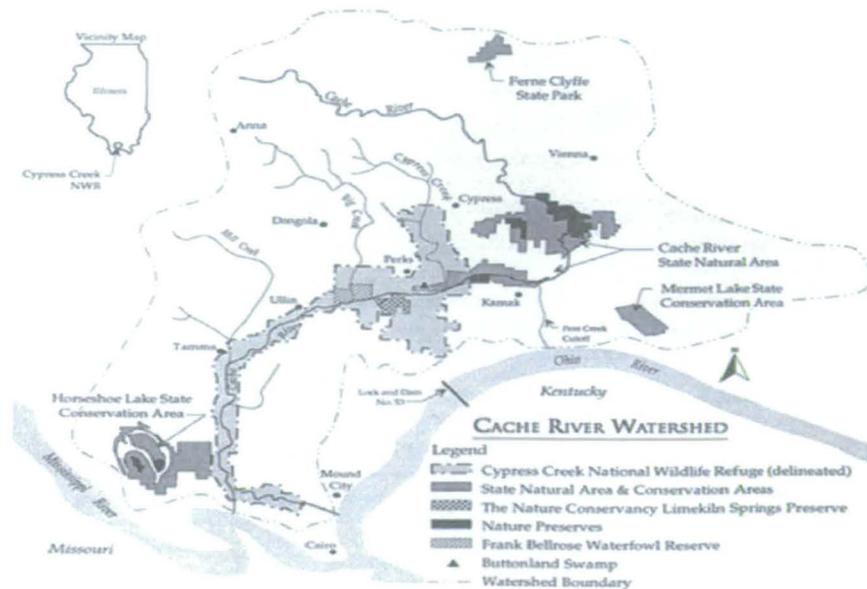


Figure 1. Map of Cache River Wetlands Joint Venture boundaries

A Comprehensive Conservation Plan (CCP) was completed for the Refuge in 1996. The planning process involved focus groups, public meetings and input from other agencies and organizations. The CCP sets long-term direction for management, biology, and wildlife-oriented public use, outlines educational uses and services, and responds to the site's natural and cultural resources. It also highlights the Refuge's Vision *to be a 35,000 acre contiguous tract of land pieced together by connecting remnants of cypress-tupelo swamps, oak barrens, buttonbush groves and vast stands of bottomland forests. The foreseeable future is one of preservation, acquisition of land, reforestation, intensive management, and people enjoying the bounty of this rare resource. In addition, wildlife abundance and high quality facilities will attract thousands of visitors each year. Partners will collaborate to provide a wide range of environmental education programs and activities. Local communities will enthusiastically identify and promote the area as a regional tourist destination that contributes to economic development and enhances the quality of life in southern Illinois.*

Today, the Cache River Watershed includes three National Natural Landmarks, is a bio-reserve, an "Important Bird Area" and in 1994 was designated a "Wetland of International Importance" by the Ramsar Convention. The area also features a number of ecologically sensitive flora and fauna species and includes eight federally listed and 102 state listed threatened and endangered species. Broad habitat types within the Refuge include: wetlands, bottomland forests, and upland forests.

The richness and diversity of plant and animal communities that makes the Cache River Watershed unique is a result of the following physical characteristics: continental location and climate (temperature and rainfall extremes); low point on the continent where major rivers converge; diversity of bedrock types and soils; glacial history that pushed northern species south; ancient paleozoic periods of flood from southern seas that pushed southern species north; and geologic uplifts, faulting and erosion. Based on these factors, four physiographic regions of the United States can be identified and converge here in southernmost Illinois.

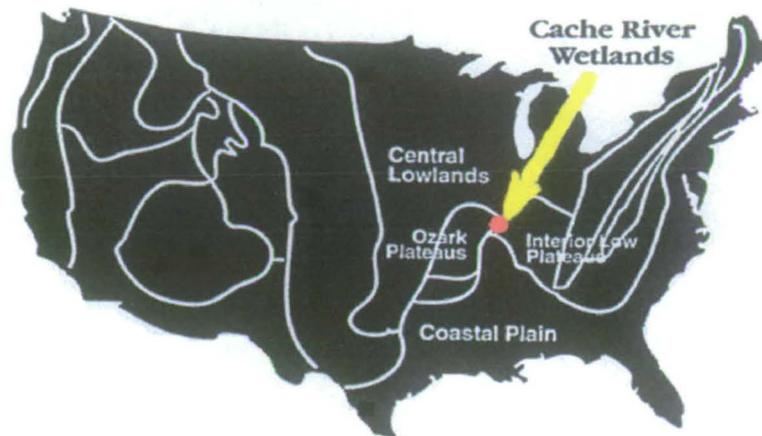


Figure 2. Four Physiographic Regions of the U.S.

The most dramatic region is the Gulf Coastal Plain; its northern reach includes the southern tip of Illinois providing conditions that support bald cypress and tupelo gum swamps. Historically, vast tracts of naturally flooded bottomland hardwoods and wetlands provided resting, nesting and feeding habitat for ducks and a variety of other migratory birds and resident wildlife.

Topography of the 475,000 acre Cache River Watershed varies from 890 feet above mean sea level in the northern hills to 280 feet mean sea level at the Mississippi River. Climate consists of warm, humid, summers and cool to cold winters. Average annual precipitation is 45 inches, average annual snowfall is ten inches, and frost free days average 230 annually.

Highlights

- Record number of bird species recorded during the Christmas Bird Count (Section 1a.)
- To date 28 landowners enrolled in Wetland Reserve Program throughout the Cache River Watershed (Section 2a.)
- To date 7,973 acres are enrolled in Wetland Reserve Program throughout the Cache River Watershed (Section 2a.)
- Refuge staff restored 300 acres with 120,000 native hardwoods (Section 2b.)
- An additional thirty-five acres of native hardwood seedlings was added to the Refuge Seed Nursery (Section 2b)
- Over 730 youth and adults assisted with the 11th Annual Acorn Collection event (Section 2b)
- Counties with Cache River Watershed designated as one of 4 Empowerment Zones in the U.S. (Section 5a)
- Friends of the Cache River Watershed receives \$23,250 from Conservation 2000 for restoration and education projects on the Refuge (Section 7b)
- Three thousand students from 10 counties participated in Insect Expo 1999 (Section 7b)
- One hundred and fifty-nine youth and their parents participated in the 4th Annual Youth Waterfowl Program (Section 7a)
- Over 150 volunteers assisted with a variety of events, work projects, and wildlife surveys throughout the Refuge (Section 7b)

Climate Data

Table 1. Weather Data for Southern Illinois Region - 1999

MONTH	TEMPERATURE		PRECIPITATION Inches	SNOWFALL Inches
	High	Low		
January	67	2	10.96	1.55
February	70	17	2.81	0.50
March	70	18	3.14	6.00
April	79	34	5.45	0
May	84	42	3.87	0
June	92	49	5.11	0
July	100	57	1.64	0
August	98	50	0.97	0
September	98	36	0.49	0
October	83	18	0.68	0
November	82	18	0.68	0
December	65	13	6.29	Trace
		*no reading equipment malfunction	44.18	8.05
High and Low Temperature 100 degrees* on July 29 and 30 were the high temps. 2 degrees* on January 5 was the low temperature for the year.			Total 44.18"	Precipitation 8.05"

*Temperatures in F and Precipitation in inches (provided by Dana Cross of Jonesboro).

1 Monitoring and Studies

1a. Surveys and Censuses

Waterfowl

- Waterfowl were counted periodically during the 1998-99 period; however, the biweekly counts paled in comparison to the results obtained during the annual Christmas Bird Count (CBC). Average weekly counts amounted to 15,000 ducks and 3,000 geese. An early closure of the Illinois Goose season combined with a fierce blizzard in northern Illinois helped to bring more geese to the area during late January.

Table 2. Estimated Peaks for Ducks and Geese on the Refuge

Year	Ducks	Geese
1990-91	5,000	80,000
1991-92	13,000	10,000
1992-93	12,000	20,000
1993-94	22,000	162,000
1994-95	25,000	45,000
1995-96	60,000	11,900
1996-97	45,000	28,000
1997-98	88,629 (CBC)	16,000 (MWC)
1998-99	61,487 (CBC)	4,460

Source - Mid-winter waterfowl counts (MWC); Christmas Bird Count (CBC); weekly waterfowl survey; weekly IDNR aerial goose survey.

- Midwinter Waterfowl Survey: The survey (1999-00 season) included 2,718 ducks and 3,120 geese. The northern migration appeared to be much earlier this year.

Shorebirds:

- During 10 independent surveys (conducted over a period of 18.5 survey hours) 3,072 individual shorebirds consisting of 15 different species were enumerated. The total count represents an increase (when averaged) of approximately fifty percent over results obtained during a similar period in 1998. Pectoral sandpipers were the most numerous species encountered followed by lesser yellowlegs.

Raptor Surveys:

- Volunteers, Ron and Pat Brown (graduate student from Southern Illinois Univ.), collected data on raptors throughout the Refuge. This survey involved 10 stops and was conducted a total of five times during the fall. A good variety of raptors including eagles, red tailed hawks, northern harriers, American kestrels, Swainsons hawks and both species of vultures common to the area were seen.

Amphibians

- For the fifth year, ten volunteers assisted with frog surveys on three survey routes. Five times between February and June, surveys were conducted in cooperation with the IDNR and Southern Illinois University. Although long-term trends are not discernable at this point, species diversity has been good with regular occurrence of 13 of the 19 species known to be present in this area.
- A regional amphibian monitoring project took place in June in an effort to assess potentially serious environmental problems affecting amphibians. Staff and five volunteers conducted a survey on July 8, 1999 and collected 134 frogs (Fowlers toad, cricket frogs and southern leopard frogs). Frogs were examined for abnormalities and released; no abnormalities were recorded.

Threatened/Endangered Species

Nothing to Report

Christmas Bird Count

- The 1999 Christmas Bird Count was the most successful yet with many new records for the count. We recorded 102 species this year beating the previous high of 98. The late Todd Fink, the originator of the Cypress Creek Christmas Bird Count, would have been pleased as his goal was to reach the magic number of 100 species (this ones for you, Todd). Pine warbler and vesper sparrow along with 6 Eurasian collared doves were firsts this year and a record 11 bald eagles were also counted. A total of 30 new records were set for Cypress Creek's count. Along with the 102 species, a total of 246,107 total birds were counted. The 2000 Christmas Bird Count is scheduled for December 18 with hopes of another great effort.

Geographic Information System Soil Survey Project

- The Natural Resource Survey of the Cypress Illinois Quadrangle was completed by the Natural Resources Conservation Service with assistance from Cypress Creek NWR, Illinois Department of Natural Resources, The Nature Conservancy, US Forest Service, and Southern Illinois University. This valuable tool provides an inventory of the soil, water, plant, and human resources for part of the Cache River Watershed. The Cypress Quadrangle includes a large portion of the Refuge and was selected to test the concept of building a natural resource GIS. Natural Resource data layers were acquired and developed by the project partners and will help resource agencies and communities understand and conserve resources found within the Cache River Basin.

Rainfall Monitoring

- Volunteers continue to monitor rainfall gauges. This information will be used to track water flows from different parts of the watershed and monitor how reforestation affects river flows and flooding. Volunteers are responsible for checking gauges and filling out data sheets after rain events. Due to many having trouble with cracked gauges, The Nature Conservancy furnished everyone with new gauges for the new year.

1b. Studies and Investigations

Neotropical Bird Study

- Under the direction of Dr. Scott Robinson, Illinois Natural History Survey, research on neotropical migrant songbirds has been completed throughout the Refuge and Cache River State Natural Area. Research included two different components.

1. The first year of a winter bird study was completed; the purpose was to compare changes in food availability over a number of years with any corresponding fluctuations in densities of wintering birds. University of Illinois and the Illinois Natural History Survey staff conducted several 10 minute point counts at pre-existing census points in floodplain forests along the Cache River and at several upland sites.

2. A second component of neotropical migrant research submitted by Jeff Hoover and Scott Robinson of the Illinois Natural History Survey includes, "The Influence of Hydrology and Nest Predation on the Site Fidelity and Population Dynamics of a Neotropical Migratory Bird: Implications for Floodplain Restoration". As the acquisition, restoration, and management of land in the Cache River Wetlands project progresses, immediate and long-term changes in the avifauna will be documented. The study focuses on the Prothonotary Warblers abundance, productivity, nest predation, and brood parasitism.

The results of this research are invaluable because they provide baseline data for tracking the success of the ongoing restoration efforts in the Cache River Wetlands area.

- In addition, the Refuge contracted this study to investigate Tree Species Preference by Foraging Insectivorous Birds. University of Illinois Graduate student, Arron Gabbe, compiled data and completed his thesis this year. His findings show that the floristic composition of forests can be an important component of the habitat requirement for birds. Twelve of the 13 species of birds in this study foraged selectively with respect to tree species. The yellow-throated warbler and Cerulean warbler were the most foragers. The yellow-throated vireo, red-eyed vireo and the eastern tufted titmouse were the least selective foragers. Three of the 19 tree species were strongly preferred by most birds; kingnut hickory, silver maple, and bittersweet hickory. Recommendations from this research included planting heavy-seeded hickories and other species that are slow to recolonize that provide quality habitat for birds in restored forests.

Water Quality Monitoring Along the Lower Cache River

- Data was collected as part of an ongoing water quality monitoring/stream survey that will provide information which will allow resource staff to measure the success of restoration projects throughout the watershed. Water quality data from 12 sample locations the Cache River, Cypress Creek, Big Creek, and the diversion ditch are collected by Gary Birch, TNC contractor. Monitoring includes turbidity, dissolved oxygen, conductivity, nutrient loading, pH, flow velocity, and biological sampling. The parameters selected provide a good indication of aquatic ecosystem health. To date, the results document conditions typical of small perennial rivers located in a predominately agricultural watershed in the SE United States. In addition the benthic macroinvertebrates were sampled at 6 study sites during the spring and the fall and staff gauges are monitored weekly at nine locations along the Cache River between Rose Farms and the Sandusky bridge; Data is used to track flood pulses on the river. Overall, this study will document changes in water quality and aquatic resources and may well become the yardstick by which future large scale restoration projects are measured.
- Illinois EcoWatch Network : Cypress Creek Refuge staff and volunteers have participated in the Illinois EcoWatch Network since 1995. The network is made up of individuals and organizations trained to conduct scientific monitoring of rivers, forests prairies and wetlands. The Refuge works specifically with RiverWatch and ForestWatch in the Cache River Watershed. Long-term monitoring data achieved by this program will be applied to reforestation and wetland restoration efforts implemented by the Refuge and other Joint Venture Partners. A new program, WetlandWatch is currently under development and will be piloted in the Cache River watershed. The partnership is highlighted on a the EcoWatch Partnership Page and can be accessed at <http://dnr.state.il.us/ecowatch/partner>.



Figure 3. Volunteers are trained as Citizen Scientists to monitor rivers and forest in the Cache River Watershed. Photo by: M.Hills

Alexander and Pulaski County Study - U.S. Army Corps of Engineers

- The U.S. Army Corps of Engineers (Corps) continues to conduct a Feasibility Study of Alexander and Pulaski Counties, Illinois. This work involves the Joint Venture partners and focuses on the Cache River between Vienna, Karnak, and Ullin. Two major problems are being addressed by the Corps - sedimentation in the lower Cache River and the tremendous amount of incision in the Post Creek Cut-off which threatens Heron Pond/Little Black Slough. This study will provide an analysis of action items to address hydrological restoration, including reducing sedimentation and entrenchment of the Cache River and associated tributaries.

2 Habitat Restoration

2a. Wetland Restoration

Refuge Restoration

- A forty acre wetland restoration was completed on the Amyx/Poole tract. Ducks Unlimited provided funding assistance of \$6,000. This newly restored wetland is adjacent to Cypress Creek swamp and will be managed for wood ducks and a variety of wading birds.



Figure 4. Forty acre wetland project at the Amyx/Poole tract. Photo by: A.Novara

Wetland Reserve Program

- Between 1995 and the present, 28 landowners have enrolled 7,973 acres into the WRP program in the Cache watershed. This included 7001 acres in permanent easements and 972 acres in the 30 year category. There are also an additional 1110 acres of easement applications in process and 1370 acres of applications are being reviewed.

2b. Upland Restoration

- Reforestation: During 1999, 300 acres of upland and wetlands were reforested by mid-March using over 120,000 seedlings. Reforested tracts included the Juncker north (250 acres) and Greenburg areas (50 acres).

National Tree Trust

- The Refuge has been involved with National Tree Trust since 1996. On alternating years the Refuge collects acorns and provides stock to a designated nurseries. After one growing season the seedlings are shipped back to the Refuge for planting. This approach insured the genetic integrity and variation of planting stock for reforestation. Through the Tree Trust Agreement, International Paper Company in Arkansas contributed staff time and resources to germinate seed stock to seedlings for the Refuge's reforestation program.
- The Refuge and The Nature Conservancy held the 11th annual Acorn Round-up. Over 700 scouts and volunteers participated in the weekend event. The collection took place at Horseshoe Lake Conservation Area. Following the collection, staff sorted and used viable acorns to grow seedlings that will later be planted on TNC, State, and Refuge property.

Boyd Seed Orchard

- The seed orchard, a cooperative venture with the IDNR Forestry Division, will eventually supply seed for reforestation. Seedlings are monitored and maintained by Refuge staff and volunteers; the project has been a great success with 90-93% of the trees surviving over the last four years. Eighty percent of the seedlings are 6-8 feet high.
- An additional 38 acres were incorporated into the orchard during 1999 by Refuge staff and State Tree Nursery staff. Species planted include native floodplain hardwood species.



Figure 5. Staff from the Refuge and State Tree Nursery planted 38 acres of native hardwood seedlings.

2c. Deepwater/Riverine Restoration

Open Flow on the Cache

- Log jams were removed on the Cache River adjacent to Bellrose Waterfowl Reserve for approximately 100 linear feet.



Figure 6. Contractor removes large log jam on the Cache river, south of Bellrose Waterfowl Reserve. Photo by: D.Prosser

Deepwater Habitat Restoration Project

- The Cache River Wetlands Joint Venture partners received grants from the National Fish and Wildlife Foundation and Region 3 Fisheries Assistance program to restore deepwater habitat throughout a section of the Lower Cache River. The proposed project includes removal of silt in the old Cache River bed of Long/Short Reach (property owned by IDNR). The project location was once characterized by a wide expanse of open water that were generally too deep for trees and shrubs. Within the last century a significant portion of the Cache River watershed has been cleared and converted to cropland; at the same time segments of the Cache River and its tributaries were being channelized to increase drainage. One of the results of this massive land clearing and drainage effort was a dramatic increase in erosion and sedimentation. Silt will be removed from Short Reach of the Cache River bed with a Mudcat suction dredge contracted through IDNR. Illinois Department of Natural Resources has applied to the Corps and Illinois EPA for a joint permit to conduct this project.

Objectives for the project include:

- a). restore, protect, and manage deepwater habitat to maintain a self-sustaining fishery in the Lower Cache River Swamp.
- b). restore swamp bottom and stream bed heterogeneity.
- c). increase public opportunities for outdoor recreation on the Cache through an improved fishery and conditions for boating and canoeing.
- d). address sedimentation and monitor/document actions that improve water quality and restore natural hydrologic functions.

Big Creek Pilot Watershed Project

- Heavy sediment loads from Big Creek are entering Buttonland Swamp, which have detrimental impacts to native flora and fauna. Big Creek, which drains a basin that covers 52 square miles, was once entirely forested. Over the last 100 years, conversion of forested land to cropland and pasture, together with the channelization of the middle and lower reaches of Big Creek, has resulted in dramatic hydrologic changes.

3 Habitat Management

3a. Manage Water Levels

Nothing to report.

3b. Manage Moist Soil Units

Frank Bellrose Waterfowl Reserve

- The Bellrose Waterfowl Reserve includes 380 acres of moist soil wetlands divided into four different managements units. A summary of work completed:
 - a). A screw gate structure with a 60' x 30" culvert was installed in the Unit #2 to allow for independent drainage; previously Units #2 and #3 used the same outlet.
 - b). One-fourth mile of new dike was built to connect the Unit #3 dike with Unit #2 dike joining at the newly installed screw gate structure. The ability to conduct surveillance and waterfowl surveys on the entire area were made possible with this addition.
 - c). In an effort to improve waterfowl usage, willows were removed from units #1,#2, and #3, consisting of approximately 80 acres.
 - d). One mile of dike was repaired on Unit #3 (from the stoplog structure east). This was the first repair since construction in 1989; wave action had eroded 10-12 feet of the dike from the toe to the top surface. The dike was repaired with a 3:1 slope and the side armored with rock.
 - e). Unit #1 dike and water control structure were repaired after heavy flooding from a 7 inch rain.



Figure 7. A seven inch rain caused the Cache River to back flow into the Bellrose Waterfowl Reserve. Photo by: D.Prosser

3c. Graze/Mow/Hay

Hay Leases

- Hay leases were maintained at the Hileman, Fowler, and Lieb tracts to control noxious weeds, primarily Johnson grass, and to maintain scenic vistas. A total of 148 large round bales were harvested. The revenue generated, \$688, was forwarded to the Denver Finance Center. Hay prices were based on fair market value in the local area.

3d. Farming

Cooperative Farming

- Farming is used to control noxious weeds and to improve soil fertility (nitrogen levels) prior to reforestation. Basically, the farming program holds habitat "as is" until restoration can be implemented. The government share of the crop offsets the cost of additional fertilization to these areas and crops left in the field provide a valuable winter food resource for wildlife such as cottontail rabbits, white-tailed deer, bobwhite quail, and other resident and migratory wildlife.

Table 3. Cypress Creek Refuge 1999 Cooperative Farming Program

Cooperator	Tract Name	Crop Acres	Acres Retired/or to be Retired
B. Harris	Earnhart/Harris	143	43 in FY 1998
D. Eddleman	V. Eddleman	152	34 in FY 1999
B. Owens	Bellrose/Delta	840	100 in FY 1999
B. Bass	Boyd	70	38 in FY 2000
B. McIntosh	Cross	221	
Earnhart	Churchill	90	
Williams	Williams	235	235 in FY 2000
Helms	Knapp Oil	50	50 in FY 2000

3e. Forest Management

Nothing to report.

3f. Fire Management

Fire Protection

- A cooperative agreement protection plan for the Refuge was secured with adjacent fire protection districts. Six different agreements were put into effect which varied according to Refuge acreage within each district.

Table 4. Fire Protection Districts

Fire Protection District	Annual Fee
Dongola Fire Department	\$700.
Horseshoe Lake Fire Department	\$700.
Karnak Fire Department	\$700.
Pulaski Fire Department	\$1000.
Tamms Fire Department	\$700.
Ullin Fire Department	\$1000.

Fire Management Plan

- The fire control management plan from 1995 was submitted for approval. Prescribed burning is not conducted due to extensive reforestation.

3g. Control Pest Plants

Noxious Weeds

- Johnson grass, musk thistle, and cocklebur are present on approximately 3,000 acres within the Refuge. Chemical and mechanical treatments include applying Round-up, Fusilade, 2-4-D and mowing. Approximately 2,500 acres of Johnson grass were controlled and 500 acres were sprayed for musk thistle.

4 Fish and Wildlife Management

4a. Bird Banding

- Refuge staff assisted Union County Wildlife Refuge staff in meeting the wood duck banding quota (1600).

4b. Disease Monitoring and Treatment

Nothing to report.

4c. Reintroductions

Nothing to report.

4d. Nest Structures

Nothing to report.

4e. Pest, Predator and Exotic Control

Beaver Control

- Ten beavers were removed from the Cache River in the vicinity of the Bellrose Waterfowl Reserve. The animals were trapped under an Illinois Department of Natural Resources nuisance wildlife permit. Trapping was necessary to prevent flooding on adjacent private land.

5 Coordination Activities

5a. Interagency Coordination

Special Wetland Reserve Program

- In an effort to restore wetlands and bottomland forests, Refuge staff work closely with the Natural Resource Conservation Service (NRCS), as well as the Illinois Department of Natural Resources (IDNR). Refuge staff serves on an interdisciplinary team to evaluate and rank potential sites for enrollment into the Wetland Reserve Program (WRP). The Cache River Wetlands, designated a Special WRP area, received funds from IDNR's C2000 program for restoration practices implemented on-site. This three-year designation is valued at over \$6 million.



Figure 8. Interagency team developed to evaluate and rank sites for the Wetland Reserve Program. (LtoR: M.Guetersloh-IDNR Heritage Biologist, Dick Miller-NRCS District Conservationist, J.Pirtle-IDNR Forester, T.Wachter-WRP Coordinator, E.Starr-NRCS Soil Conservationist) Photo by: A.Novara

Southern Illinois Empowerment Zone

- Johnson, Alexander, and Pulaski counties were designated one of the four Empowerment Zones in the U.S. During the Celebration, elected officials signed a Memorandum of Agreement for a Rural Development Empowerment Grant. Refuge staff are working closely with county representatives and citizens to develop wildlife oriented recreation and tourism opportunities in this economically depressed area.

Darby Creek National Wildlife Refuge

- District Representative Scott Corbitt met with Joint Venture staff to gather information on the Joint Venture partnership and the communities' positive and negative perspective of the Refuge. Staff provided a tour of the Refuge and set-up a one-on-one interview with local community members that were both for and against the Refuge. These different perspectives are to help Senator DeWine's office (Ohio) in supporting the establishment of Darby Creek NWR in Ohio.

Environmental Quality Incentives Program

- EQIP consolidates the functions of four existing conservation programs into one. This program targets locally-identified conservation priority areas where agricultural improvements will help meet water quality goals. Refuge staff work closely with NRCS staff in the Cache River Watershed on EQIP and WRP. For 1999, Refuge staff provided assistance on 75 habitat management/enhancement projects that include 2,200 acres in the Cache River Watershed.

5b. Tribal Coordination

Nothing to report.

5c. Private Land Activities

Private Lands - Partners for Fish and Wildlife

- This year 320 acres of wetlands, 7 landowners, were restored under the Private Lands Partners for Fish and Wildlife program which will provide excellent migration habitat during spring and fall periods.

6 Resource Protection

6a. Law Enforcement

Nothing to report.

6b. Permits and Economic Use Management

Special Use Permits

- A total of 19 Special Use Permits were issued this year. These consisted of permits for haying, disability hunting, soil sampling, cultural resource inventory, swamp rabbit/cotton mouse research by SIU, removal of scrap material, and sediment samples with a vibracorer.

6c. Contaminant Investigation

Asbestos/Lead Inspections

- Lead and asbestos inspections were completed on the Dodd, Brown, and Hoffman homes; Mitigation will need to take place before these buildings are available to put up for bid for disposal.

6d. Contaminant Clean-up

Nothing to report.

6e. Water Rights Management

Nothing to report.

6f. Cultural Resources Management

As part of a land exchange, the Refuge planned to divest of 74 acres Hileman tract located outside the Refuge boundary. Under Section 106 of the National Historic Preservation Act, the Service contracted with the Center for Archaeological Investigations at Southern Illinois University to conduct the Phase 2 evaluation study on the Hileman tract in Union County (E SE, Sec. 21, T.13S, R1E). Five known sites were investigated. No significant features or artifacts were found resulting in a recommendation for no further work.

6g. Land Acquisition

Realty Staff

- Hal Graff replaced Betty Jarous as the Realty Specialist for the Refuge.

Acquisition Funds

- No acquisition funds expended during FY1999. By the end of the year, 10 willing sellers had active options or appraisals being completed.

- The number of willing sellers has declined significantly over the last couple of years. One million dollars were appropriated in FY 1999. \$307,000 were reprogrammed for Pelican Island acquisition.

Table 6. Cypress Creek Refuge Acquisition Activity - 1990 through 1999

FISCAL YEAR	ACRES PURCHASED	DOLLARS SPENT	APPROPRIATION
1990	736	\$ 328,000	
1991	3,263	\$2,175,863	\$994,760
1992	1,904	\$1,371,858	\$1,974,770
1993	4,050	\$3,087,115	\$1,795,770
1994	1,988	\$2,006,100	\$3,000,000
1995	484	\$336,200	\$749,000
1996	282	\$192,927	\$800,000
1997	873	\$767,400	\$1,000,000
1998	202	\$121,000	\$750,000
1999	-0-	-0-	\$1,000,000

- House Demolition and Clean-up
In 1998, three houses were acquired with the purchase of land within the Refuge boundary. Following necessary inspections, the houses were put up for bid and sold to the highest bidder. The Pittman house was moved offsite and the Honey and Pecord houses were sold for scrap material. The removal occurred in 1999.

7 Public Education and Recreation

7a. Provide Visitor Services

Environmental Education Program

- Over 8,000 students participated in school programs throughout the year; March through May and September through mid-December were the most popular months for school field trips. Joint Venture staff conducted a variety of programs both on-site and off-site. Students were involved with a variety of units that highlighted the Cache River Wetlands; activities included sampling soil, testing water quality, collecting macroinvertebrates, conducting plant transects and identifying plants, sensory hikes, wildlife watching, canoe trips and reforestation tours.

Partnerships in Education

- As part of the partnership with Egyptian School, Refuge staff assisted with the Wham Bam Doodle Hands-on Natural Resources Museum. The Museum, developed by educator Jackie Meadows, featured the Cache River Wetlands. Refuge staff provided exhibit materials and conducted hands-on programs. A school classroom was transformed to immerse K-6 grade students in the sights and sounds of the swamp. Opening day, 275 students were introduced to the program which ran for 6 weeks at the school.



Figure 9. Refuge staff and students explore macroinvertebrates collected from the Cache River Wetlands. Photo by M.Hills

- The Refuge coordinated a land management project with Partner school, Anna-Jonesboro High School. Students were assigned 20,000 acres of wetland, upland forest, and agricultural land to manage over a five year period. Students were required to develop goals, strategies, and outcomes and manage their property in an economically feasible and environmentally balanced way. As part of the project, students learned about the Comprehensive Conservation Planning process, investigated best management agricultural practices, and conservation programs available through FWS, NRCS, and IDNR that would off-set their cost in managing their property.

Cache River Wetland Center

- Refuge and The Nature Conservancy staff serve on the Exhibit and Audio-visual Committee for the Henry N. Barkhausen Cache River Wetland Center. The committee, which also includes members of the community and Citizens Committee to Save the Cache, has developed a storyline for the exhibits. Preliminary building designs and a site plan have been developed. The Center will serve as a focal point for those who come to southern Illinois to experience the biologically significant Cache River Wetlands and provide interpretive and educational programs for visitors and school groups. The center is named after Henry N. Barkhausen, former Director of the Illinois Department of Conservation and a local citizen who has championed preservation efforts throughout the Cache watershed. The proposed opening is set for the Fall of 2001.

Special Events in the Cache River Wetlands

- National Rivers Month - Canoe Tours on the Cache - June 12, 1999
In celebration of National River Month, canoe tours and interpretive hikes were led by Joint Venture staff throughout the day from the Lower Cache River Access. Activities and exhibits highlighted the swamp, resource issues and associated wildlife.
- Swamp Ecology - June 22-24, 1999
A three day Swamp Ecology course was held for 20 participants in the Cache River Wetlands. The Refuge sponsored the course along with the Missouri Department of Conservation and Illinois Department of Natural Resources. The course targeted teachers in the watershed and included activities and information about wetlands, wildlife, and resource issues. Teachers received the Cache River Educator's Guide, an abundance of teaching materials, and the opportunity to received graduate credits from Southeast Missouri State.
- Cache River Days - September 18-19, 1999
Over 1,500 visitors participated in the 5th Annual Cache River Days sponsored by the Village of Ullin and the Cache River Wetlands Joint Venture. The event highlighted canoe tours on the Lower Cache and van tours of the Frank Bellrose Waterfowl Reserve. The Village of Ullin and Refuge staff initiated this event 5 years ago as a way to draw visitors to their town; the town has been pleased with a turn-out from a multi-state area. The Village provides music, food vendors and a variety of activities throughout the weekend.



Figure 10. Joint Venture staff guided visitors on canoe tours to the State Champion bald cypress and Eagle Pond.
Photo by: N.Trovillion

- National Wildlife Refuge Week at Cypress Creek NWR - October 9-11, 1999 This event was celebrated with a bike, hike, and canoe event in the Cache River Watershed. Much needed rain kicked off the Refuge event on Saturday forcing staff and volunteers to cancel the biking event. However, despite cloudy weather, over 200 visitors participated in the canoe tours and guided hikes on Sunday and Monday.

Teacher Workshops

- Regional Teacher Institute - October 8, 1999
Thirty-six teachers participated in a guided canoe trip on the Lower Cache and hike to Heron Pond. The guided trips provided teachers opportunities to explore ancient cypress/tupelo swamps and learn about field trip possibilities and educational resources. Guided tours highlighted resource issues and wildlife that exist within the Cache Watershed.

Hunting and Fishing

- The 2nd Annual Waterfowl Academy, sponsored by Cypress Creek National Wildlife Refuge and the Mermet Conservation Area (IDNR) was held October 23, 1999. The attendance included over 160 young hunters and 60 adults this year. The session highlighted hunter ethics, hunting techniques, identification, and law enforcement as well as a drawing for blinds for the following week's "Youth Duck Hunt".
- The 2nd Annual Cache River Wetlands Hunter Orientation program was held at the Refuge office. Joint Venture staff provided maps and highlighted area regulations and property that is open to hunting.

- Dove hunting continues to draw area hunters. Ninety hunters harvested 680 doves on the 38 acre sunflower patch at Hickory Bottoms. This represents an average success of 7.15 doves per hunter and is one of the highest success rates of the last 10 years. Hunting on the remaining areas open to hunting on the refuge were above average as per hunter comments.
- Geese: Goose hunting on the Bellrose Waterfowl Reserve resulted in 45 hunters harvesting 13 Canada geese and 7 snow/blue geese for a success ratio of 33%. Success on other areas of the refuge were reported as poor due to warm weather and poor concentrations of geese.

7b. Outreach

Volunteer Program

- The Refuge held a staff/volunteer picnic on September 25, 1999 to recognize the many individuals that contribute time to the Refuge. One hundred and fifty volunteers have assisted Refuge staff with tree planting, maintenance projects, school programs, wildlife surveys (frog/toad, raptor, shorebird surveys) and water quality monitoring. There are many opportunities throughout the year for residents, students, and organizations to help the Joint Venture Partners.
- Special awards were given to individuals that contributed many hours to the Refuge. Glenda Prosser was named Refuge Volunteer of the Year for her contributions of time and organizational skills. Glenda contributed more than 500 hours and assisted the staff with answering the phone, mailings, greeting visitors, assisting with end of year budget reports, filing, land acquisition needs and the list goes on and on.



Figure 11. Refuge Volunteer of the Year, Glenda Prosser. Photo by: W. Jackson

- Over 120 volunteers assisted with nine Stewardship Saturdays; work projects included trail building, clean-ups at old house sites, reforestation, acorn collecting, mowing and maintenance of public use sites.



Figure 12. Volunteers, Les Honey and Lynn Rufener assist with tree planting.

- The Refuge sponsors a internship program throughout the year and provides students with field experience and exposure to the Service and careers in the natural resources. Two individuals were involved with the program. Kim Horoschak came to the Refuge from Pennsylvania. She assisted staff with school programs, maintenance projects, administrative work, and headed up the Joint Venture recycling effort. Kim worked with Refuge staff October 1999 through April 2000.

Warren Jackson, began an internship in 1998. He spends a large portion of his time at the computer redesigning the Refuge Web Page. He also assists in the office answering the phone, greeting visitors and providing them with necessary information about the Refuge. Warren is interested in environmental law and pursuing a bachelors degree from the University of Illinois at Springfield. Warren is an invaluable member to our staff.



Figure 13. Kim Horoschak, Volunteer Intern, assisted with school programs and maintenance projects.

Volunteer Support Groups

- The Friends of the Cache received \$23,250 from the Illinois Department of Natural Resources' Conservation 2000 (C2000) program. Funds were targeted on restoration and education projects within the Refuge. The C2000 program provides technical and financial assistance to landowners and organizations to enhance natural resources in environmentally sensitive watersheds in Illinois. Projects that were funded include wetland restoration on 150 acres and the implementation of a teacher institute.

Insect Expo '99

- Three-thousand students from southern Illinois enjoyed Insect Expo '99. The event was sponsored by the Refuge and the Illinois Natural History Survey and held at Shawnee



Figure 14. A highlight of the Expo was Insect Theater conducted by staff from the Illinois Natural History Survey. Photo by: M.Hills

Community College. The event included 25 interactive exhibits and activities, Insect Theater, and lots of bugs. Throughout the day 3,000 K-8th grade students from 11 counties and 2 states flowed through the expo to learn about the value of insects and habitat. Seventy Refuge volunteers and staff assisted with hands-on activities and learning stations. The event will be offered biannually.

Stewardship Week - Celebrate Earth Day

- Refuge staff assisted with Stewardship Week, an educational event for school groups, sponsored by the University of Illinois Forest Resource Center. The event was held the week of April 28, 1999 for elementary schools within the southern counties of Illinois. Joint Venture staff ran 20 minute sessions on wetlands throughout the 4-day event. Participation included over 678 students kindergarten through sixth grade.

Calendar of Events

- Refuge staff developed the Cache River Wetlands Calendar of Events which highlights a variety of programs throughout the year. Joint Venture staff (FWS, IDNR, TNC) and volunteers assisted with leading 25 public programs.



Figure 15. D.Prosser (USFWS) and M.Hutchison (TNC) told tall tales and other stories during a spring story-telling program. Photo by: K.Rufener

Conservation Day

- Refuge staff assisted the Pulaski/Alexander County Soil & Water Conservation District with Conservation Day. The event was held for 300 5th grade students. Groups of 25-30 students rotated through learning stations which highlighted different natural resource topics. Staff ran 20 minute sessions on endangered species.

Ecology Week

- Refuge staff assisted with Ecology Week which was sponsored by Johnson County Soil & Water Conservation District. This program was held for 5th grade students in Johnson County schools. Over the two days 150 students were guided on hikes to Heron Pond. The hikes included hands-on activities that focus on natural history of the area and resource issues associated with the Cache River Wetlands.

Visitor Facilities

- With assistance from the Illinois Department of Natural Resources' GIS equipment and funding from private citizens, Refuge staff developed a four color, large scale (24 X 36) map of the Refuge to assist visitors and area residents with finding their way around the Refuge. The map highlights the acquisition boundary, current ownership, public accesses, roads, and topographical features. The map was printed by the Citizens Committee to Save the Cache River and are being sold for \$2.50/each. Copies of the map are available at the Refuge Office, Maintenance Shop and the Cache River SNA.
- Two boat accesses have been developed on the Old Cache Channel. The Old Channel Access, located off Highway 51, south of Mounds, includes an entrance drive, parking lot, and 70 foot concrete ramp. The Cache Levee Access off Highway 3, south of Cache, includes a parking area and 30 foot ramp. The Pulaski and Alexander County Highway Departments, the Citizens Committee to Save the Cache River, and USFWS Fisheries Division have provided financial support for the development of these projects.



Figure 16. Refuge staff constructed 2 boat ramps on the Old Cache Channel. Photo by: M.Hills

- A third access includes the Hickory Bottoms Public Access which is located off Mount Olive Road in the north central portion of the Refuge. This site is well underway due to the

support of Union County Highway Department, the Friends of the Cache River Watershed, the Conservation 2000 program through the Illinois Department of Natural Resources. Site development includes an interpretive trail, shelter, outdoor privy, parking and signage.



Figure 17. Refuge staff installed a vault toilet at the Hickory Bottoms Access. Photo by: D.Prosser

- Guide/Information/Entrance Signs - Signs were received from the USFWS sign shop. Refuge staff and the Illinois Department of Transportation have been putting up guide signs and Entrance signs along Shawnee College Road and State Highways 37, 51, and 3. The Entrance Signs serve the purpose of increasing Cypress Creek National Wildlife Refuge's visibility so residents and visitors can better utilize the Refuge. Guide Signs have been set-up to direct visitors to public access sites.

8 Planning and Administration

8a. Comprehensive Management Planning

Nothing to Report

8b. General Administration

- Refuge staff visited White River and Cache River National Wildlife Refuges January 19-21, 1999. The trip provided an opportunity to tour both Refuges, share information with Region 4 staff on restoration, reforestation, and wetland management techniques, as well as, resource and realty related issues.



Figure 18. Refuge staff at White River NWR (L to R: L.Jones, D.Prosser, A.Novara, J.Hinkle, M.Hills).

Refuge Funding

- Acquisition Funding - Land and Water Conservation Funds for FY 1999 was \$1,000,000.

Special Funding

- In 1996 high water on the Ohio River backed up the Cache River causing flood damage throughout the Refuge. Flood funding was used to reconstruct approximately 1,000 yards of levee and to repair three miles of roadway at the Bellrose Waterfowl Reserve. Rip rap was placed along the Cache River where entrenchment had occurred during high water flows. In addition parking lots and roads were repaired in the Old Cache Channel Unit on

the south end of the Refuge. Trees were replaced where flooding adversely affected survival in the Sandusky area (southern portion of the Refuge).

Table 7: Cypress Creek Refuge Funding for Fiscal Years 1993 through 1999

Program	Fiscal Year						
	'93	'94	'95	'96	'97	'98	'99
Realty (8421)	60,000	60,000	30,000	82,000	-0-	26,500	-0-
Base (1261)	207,960	260,770	320,967	320,000	338,775	341,822	413,027
MMS (1262)	20,600	75,000	30,000	30,000	22,500	52,800	119,000
Fire (9120)(9110) (9251)	110	4,000	6,150	6,150	6,150	5,700	5,700
Private Lands (1121)	5,000		5,000	7,207	13,000	18,000	64,000
Law Enforcement (1221)				500	-0-	-0-	-0-
Special Funding 1261			50,000		72,152	15,850	12,000
Special Funding Flood 2957-E3HD			(CMP)		(97-98)	97,000	-0-
1231 Migratory Bird						10,000	8,000
TOTAL	\$298,670	\$399,770	\$442,117	\$445,857	\$452,667		\$576,672

Refuge Revenue Sharing

- 1998 Revenue Sharing Payments made during 1999 totaled \$48,940. These payments represent 3/4 of one percent of the assessed value of the land acquired for Cypress Creek Refuge through fiscal year 1998. Payments were 62% of the full entitlement amount.

Table 8. Cypress Creek Refuge Revenue Sharing Payments

COUNTY	REVENUE
Alexander	\$8,617
Johnson	\$2,986
Pulaski	\$23,474
Union	\$13,863
Total	\$48,940

Refuge Staff

Diana Giannettino was hired to develop the geographic information system for the Refuge. Her skills with Arc Info and Arcview are invaluable to the entire Joint Venture staff. Products involve a GIS application that address resource concerns and issues, restoration and acquisition priorities and hydrologic mapping.

Table 9. Cypress Creek NWR Permanent and Temporary Personnel

NAME	TITLE	SERIES/GRADE
Fry, Donald	Tractor Operator	WG-5705-02
Hinkle, Jean	Administrative Technician	GS-303-07
Hills, Marguerite	Refuge Manager	GS-485-13
Jones, Elizabeth	Refuge Operation Specialist	GS-485-11
Novara, Al	Wildlife Biologist	GS-486-11
Prosser, Dave	Maintenance Worker	WG-4749-10
Adams, Gene	Temp. Laborer	WG-3502-2
Giannettino, Diana	Computer Asst. Temp. Int.	GS-0335-6



Figure 19. Refuge staff (L to R: D.Fry, L.Jones, D.Prosser, M.Hills, J.Hinkle, A.Novara) Photo: M.Hutchison

The Nature Conservancy Staff

- The Joint Venture staff welcomed Jill Evers, from Grand Chain Illinois, as the new administration/resource specialist for TNC.

Table 10. The Nature Conservancy Personnel - 1998

NAME	TITLE
Jill Evers	Program Administrator
Hutchison, Max	Ecologist
Maginel, Dave	Land Steward
Nelson, Matt	Southern Illinois Area Director
Bartolo, Salvador	Seasonal Preserve Worker

Illinois Department of Natural Resources Staff

- Mark Guetersloh is a Biologist with the Division of Natural Heritage - IDNR; Mark shares an office with the Refuge and TNC at Shawnee Community College.

Credits

Hills: 6g, review and edit; Hinkle: Climate data, 6b, 8a, 8b, edit, type; Jones: Introduction, Highlights, 1a, 1b, 2c, 5a, 6c, 6f, 6g, 7a, 7b, 8b, edit, type, assemble; Novara: 1a, 1b, 2a, 2b, 2c, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 4a, 4e, 5a, 5c, 6a, 6c, 6d

Cache River Wetlands Recreational Activities

F Linkage Trail (Cache River SNA)

This trail links Heron Pond trail with the Little Black Slough trail and offers a chance to observe the State Champion cherrybark oak tree. Access is through Heron Pond, Wildcat Bluff or Marshall Ridge access. *Trail length: 2.4 miles. Difficulty: Easy.*

G Tupelo Trail (Cache River SNA)

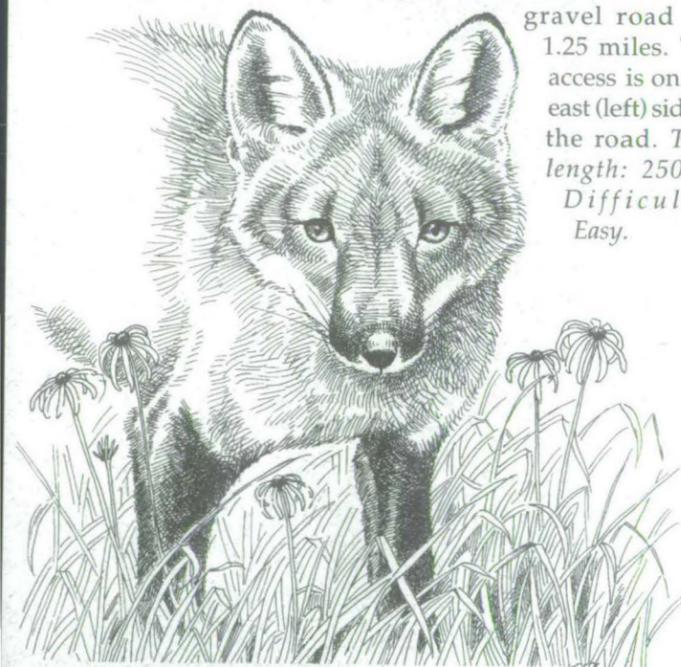
Beginning 1/4 mile north of Marshall Ridge Access, this trail meanders through rolling upland forest to the southern edge of Little Black Slough. It provide excellent views of tupelo gum trees and Little Black Slough swamp. This trail is accessed through the Marshall Ridge access. *Trail length: 2.5 miles. Difficulty: Moderate.*

H Marshall Ridge Trail (Cache River SNA)

Winding through reforested fields north of Marshall Ridge, this trail connects with the Linkage Trail and provides access to Heron Pond and Little Black Slough. *Trail length: 2.8 miles. Difficulty: Easy.*

I Big Cypress Tree Access (Cache River SNA)

This lowland, wooded area highlights giant cypress and tupelo trees among the largest in the area. The access is located on the west edge of Karnak. Due to the bridge closure off Porter Bottoms Road, go 2.25 miles west of Belknap on the Belknap-Dongola Road, then south on the gravel road for 1.25 miles. The access is on the east (left) side of the road. *Trail length: 250 ft. Difficulty: Easy.*

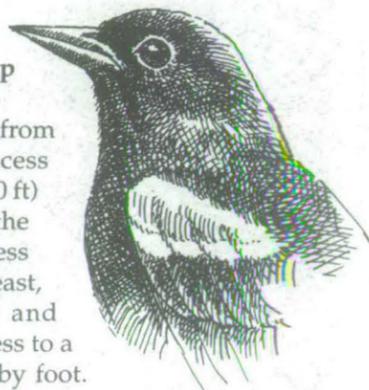


J Limekiln Springs Preserve Trail (TNC)

Park at the end of the Cache Chapel Road, 2.5 miles east of exit 18 off Interstate 57 near Ullin. Or, go four miles west of Shawnee College and turn north on Cache Chapel Road. Drive north about one mile to the bridge and follow signs. *Trail length: 2.25 miles. Difficulty: Easy.*

K Lower Cache River Swamp Trails (Cache River SNA)

Two trails can be accessed from the Lower Cache River Access Area parking lot. A short (250 ft) forest trail allows a view of the State Champion Bald Cypress tree. A second trail, to the east, parallels the Cache River and Cypress Creek allowing access to a cypress and tupelo swamp by foot. Periods of flooding may render this impassable. The access is between Route 37 and Perks; follow signs off the Perks Blacktop. *Trail Length: 2.5 miles. Difficulty: Easy.*



Canoeing and Boat Access

Boating the Cache River offers opportunities to hunt, fish and observe wildlife. The Refuge, SNA and a private (fee) boat launch near the Cache-Perks bridge (south of Perks, Illinois) provide access.

K Lower Cache River Canoe Trail (Cache River SNA)

A 3 to 6 mile marked canoe route winds through backwater sloughs to the State Champion bald cypress tree which is over 1000 years old with a buttress circumference of 34 feet. The Cache River and canoe trails can be accessed from this site.

L Tamms Cache River Access (Refuge)

This site offers hunting, wildlife observation opportunities, seasonal canoeing and bank fishing along the Cache. The parking area is off Route 127 at Tamms; take the Pumphouse Road to the east, opposite Grapevine Trail Road.

Area Rules and Regulations

The following regulations were established to protect the area's natural resources and insure a safe and enjoyable experience for visitors. More specific regulations and maps are available at headquarter sites.

Motor Vehicles

Motorized vehicles, including off-road vehicles, trail bikes, horses and ATVs can destroy fragile habitat and are not permitted within Refuge, TNC, or SNA boundaries.

Collecting

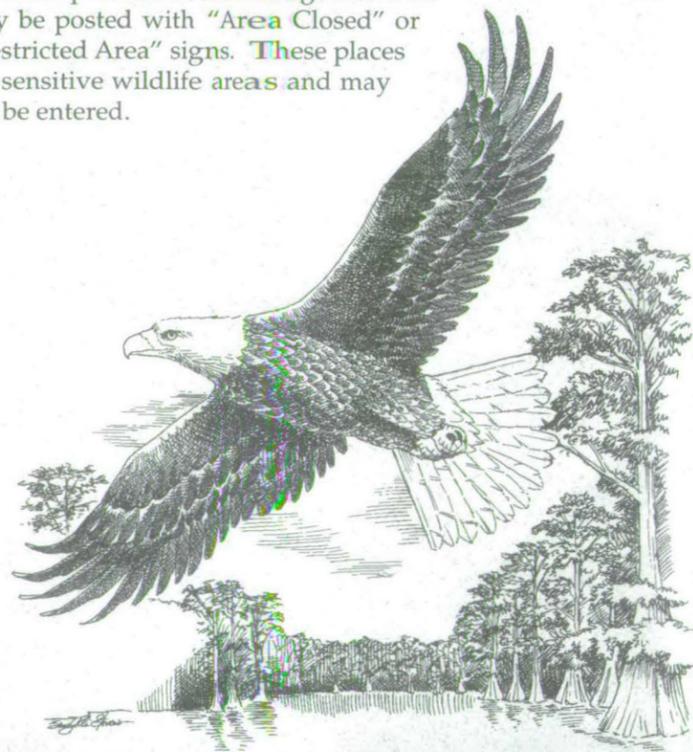
Collecting mushrooms, nuts, and berries for personal use is permitted (except within dedicated State Nature Preserves). Removal of any other plants, animals, artifacts or materials from the Refuge, TNC, or SNA lands is not permitted.

Camping and Fires

Camping is provided at Horseshoe Lake Conservation Area, Ferne Clyffe State Park and other nearby areas within a 30 mile radius. Camping or building fires on the Refuge, SNA and TNC is not allowed.

Closed Areas

Certain portions of the Refuge and SNA may be posted with "Area Closed" or "Restricted Area" signs. These places are sensitive wildlife areas and may not be entered.



For More Information Contact:

The Refuge and The Nature Conservancy Headquarters, located at Shawnee Community College, is open 7:00a.m. to 4:00p.m. Monday through Friday.

The Cache River State Natural Area, located one mile northwest of Belknap, is open daily from 8:00a.m. - 4:00p.m.



Cypress Creek National Wildlife Refuge
U.S. Fish & Wildlife Service
Rt. 1, Box 53D
Ullin, IL 62992
(618) 634-2231



The Nature Conservancy
Rt. 1, Box 53E
Ullin, IL 62992
(618) 634-2524



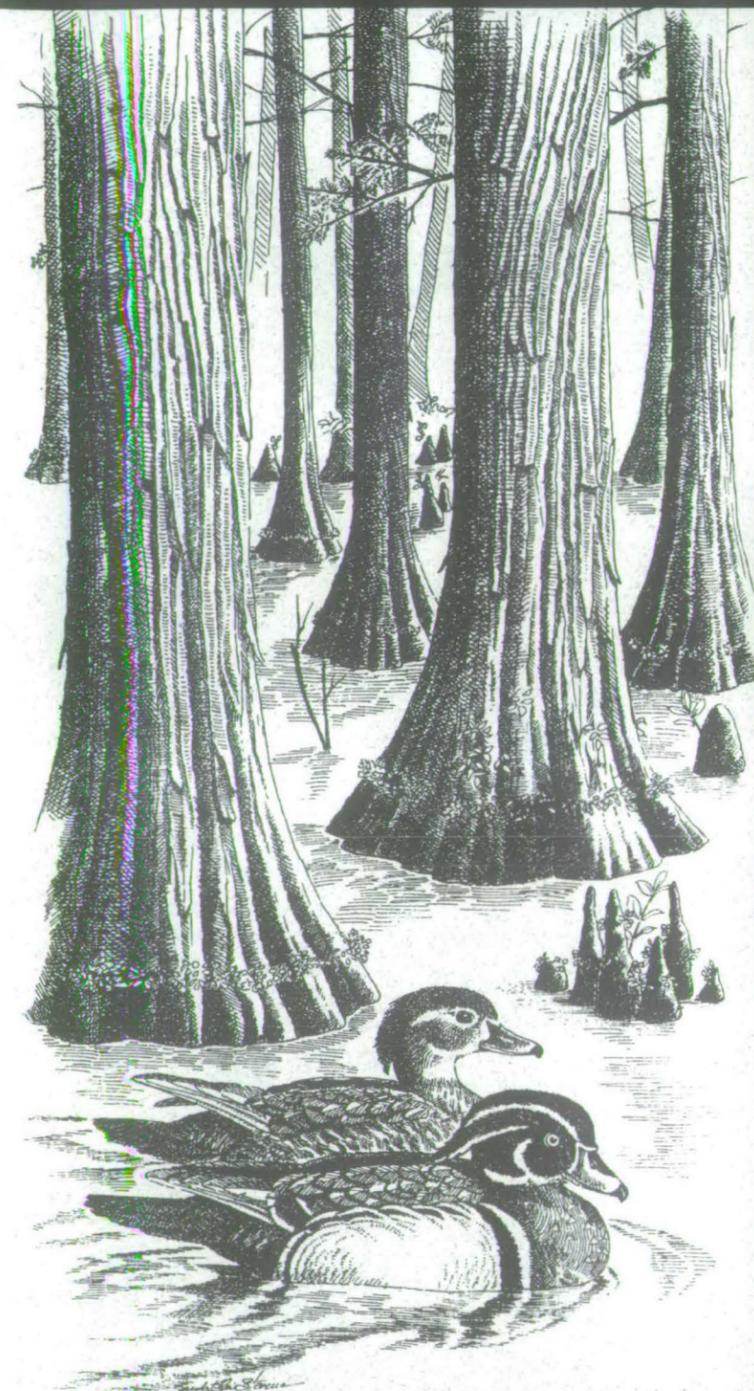
Cache River State Natural Area
Illinois Department of Natural Resources
930 Sunflower Lane
Belknap, IL 62908
(618) 634-9678



Equal opportunity to participate in, and benefit from, programs of the U.S. Fish and Wildlife Service is available to all individuals regardless of age, race, color, national origin, religion, sex or disability. Persons who believe they have been discriminated against in any program, activity or facility operated by the U.S. Fish and Wildlife Service should contact:

U.S. Department of Interior
Office for Equal Opportunity
1849 C Street, N.W.
Washington, DC 20240

Cypress Creek National Wildlife Refuge



This unique area is a diverse and complex web of life comprised of bald cypress and tupelo swamps, bottomland forests, and rolling upland. The Cache River Wetlands harbors over 250 species of migratory waterfowl, wading birds, and neotropical migrant songbirds. This richness and diversity of life is a result of four converging regions of differing climate and topography. One of the regions is the Gulf Coastal Plain; it extends to the southern tip of Illinois providing conditions that support tupelo and cypress swamps and wildlife associated with areas a lot further south (such as Louisiana and Florida)!

This "Illinois bayou";

- is the largest remaining wetland in the state,
- shelters over 50 state endangered and threatened species,
- includes two National Natural Landmarks,
- protects 1000 year old cypress trees - *claims a number of state champion trees!* - and
- is designated a wetland of international importance by the RAMSAR Convention.

Bringing it Back

During the past 90 years, 230,000 acres, more than half of the former wetlands in southern Illinois, have been drastically destroyed and changed. Native Americans found the Cache River Valley rich with resources and did very well trapping, hunting and fishing. The first European settlers arrived in 1803 and brought sawmills, farming and finally drainage and land clearing to the region. Although bottomland soils were rich, they were too wet for farming, eventually turning many settlers' efforts to harvesting timber.

In the early nineteenth century, market hunting and sawmills fueled the local economy. Pilings were cut from huge cypress trees to rebuild Chicago after its devastating fire in the late 1800s. In the early 1900s, the Cache River was straightened and ditched, diverting the river to separate directions. New technology and equipment of the 1920s brought extensive land clearing and conversion of the newly drained wetlands to croplands. Today, after nearly a century of intensive use, the tide of wetland destruction is being reversed.

A cooperative preservation and restoration effort called the **Cache River Wetlands Joint Venture** is working together to protect and restore a 60,000 acre wetland corridor along 50 miles of the Cache River. Partners in this effort include the **Cypress Creek National Wildlife Refuge (Refuge)**, the **Illinois Department of Natural Resources (IDNR)**, **The Nature Conservancy (TNC)**, and **Ducks Unlimited**, with support from the **Citizens Committee to Save the Cache River**. These efforts will repair natural ecosystems and provide hunting, fishing, hiking, canoeing and other recreational experiences while expanding the region's economic diversity. Through this Joint Venture and citizen involvement, restoration and protection of the Cache River Wetlands is well under way.

Cypress Creek National Wildlife Refuge (U.S. Fish and Wildlife Service)

Cypress Creek National Wildlife Refuge (Refuge) is one of over 500 Refuges across the nation and was established in 1990. The Refuge will eventually encompass 35,000 acres of the Cache River Wetlands. It consists of valuable forests and wetlands along the Cache River and Cypress Creek. The emphasis at the Refuge is on land acquisition, restoration and the construction of a wetlands education center.



Cache River State Natural Area (Illinois DNR)

This state-owned and managed area includes 11,249 acres of the Cache River Wetlands. In addition to two National Natural Landmarks, the Cache River State Natural Area (SNA) has three dedicated nature preserves:

- Heron Pond/Wildcat Bluff,
- Little Black Slough and
- Section 8 Woods.

It is composed of two distinct management units:

- Little Black Slough and the
- Lower Cache

The area is situated on the Cache River in Johnson and Pulaski counties. The SNA is best known for 1000 year old cypress trees and remnant examples of high quality wetlands.



The Nature Conservancy

The Nature Conservancy (TNC) is an international, conservation organization which strives to protect habitat for native plants and animals. The Illinois Chapter of TNC has been active in preservation and restoration efforts along the Cache River since 1970. The organization shares a headquarters with the Refuge, and owns and manages Limekiln Springs Preserve.



Ducks Unlimited

Once the owner of 1,000 acres within the Joint Venture area, Ducks Unlimited developed shallow water areas on the Frank Bellrose Waterfowl Reserve. The organization no longer owns land within the project, but remains a strong supporter of the Cache River Wetlands.



Citizens Committee to Save the Cache River

The Citizens Committee, a community-based organization, was established in 1979 for the purpose of promoting conservation practices in the Cache River drainage basin. The Joint Venture exists due to their efforts over the past 25 years.



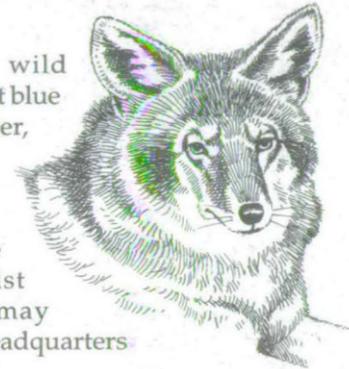
The Refuge, SNA and TNC lands are accessible year round. Compatible outdoor recreation uses include hunting, fishing, canoeing, birdwatching and wildlife observation. Areas within the Cache River Wetlands are also available for educational use.

Hunting and Fishing

Hunting and fishing is permitted in designated areas throughout the Refuge, TNC and SNA (outside dedicated Nature Preserves) land within the Cache River Wetlands. Information and specific regulations are available at the Refuge Office or SNA Headquarters.

Wildlife Observation

Waterfowl, barn owls, wild turkeys, songbirds, egrets, great blue herons, bald eagles, river otter, bobcats, coyotes, fox, and white-tail deer are a few of the species found within the Cache River Wetlands. Wildlife viewing opportunities exist throughout the area; you may contact the Refuge or SNA Headquarters for best observation sites.



A Brushy Unit (Refuge)

This 320 acre wetland highlights waterfowl, shorebirds, owls and a diversity of wetland species. Access into the Brushy Unit is off the Shawnee College Road; take the first road to the south, east of Century High School.

B Frank Bellrose Waterfowl Reserve (Refuge)

Dedicated to internationally-known waterfowl biologist, Dr. Frank Bellrose, this 1,000 acre reserve provides important habitat for waterfowl and shorebirds. Please call the Refuge for access to this site.

Hiking

Over 20 miles of hiking trails offer the best way to experience the rich diversity of the Cache River Wetlands. Limekiln Springs, Heron Pond, Wildcat Bluff and a variety of other natural sites along the Cache offer scenic hiking opportunities. Trail length is based on a round trip.

C Lookout Point Trail (Cache River SNA)

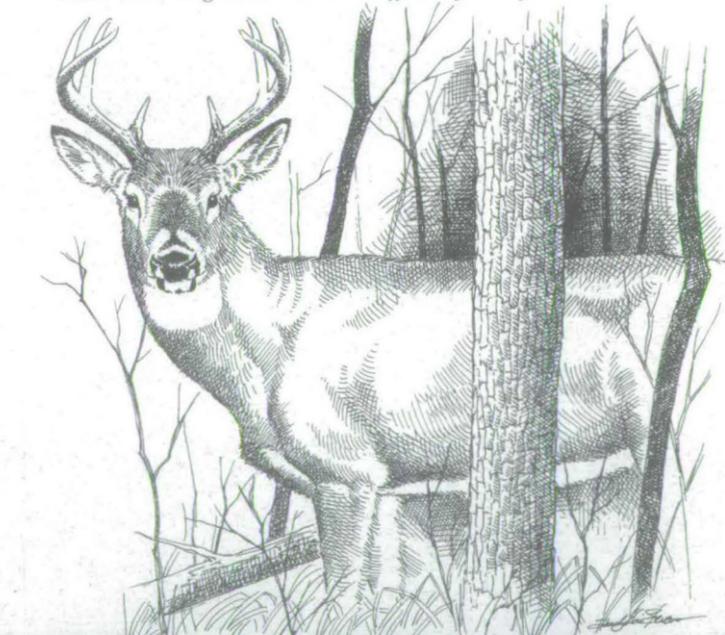
Just east of Wildcat Bluff, this trail winds along the edge of a hillside barren and provides an overview of the Cache River, its swamps, and floodplain forest. The trail may be accessed off Route 146 west of Vienna. Trail length: 1 mile. Difficulty: Easy.

D Little Black Slough Trail: (Cache River SNA)

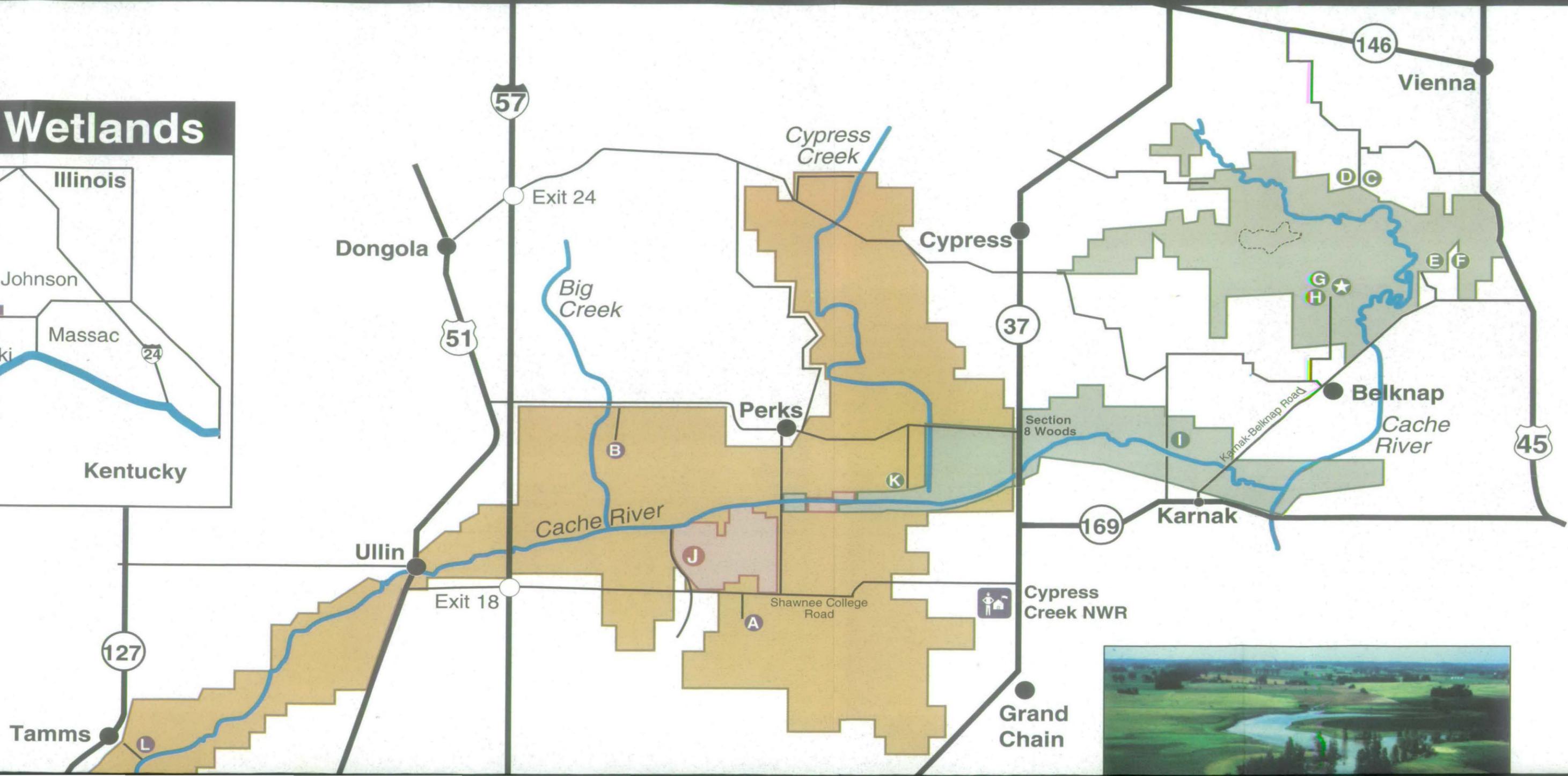
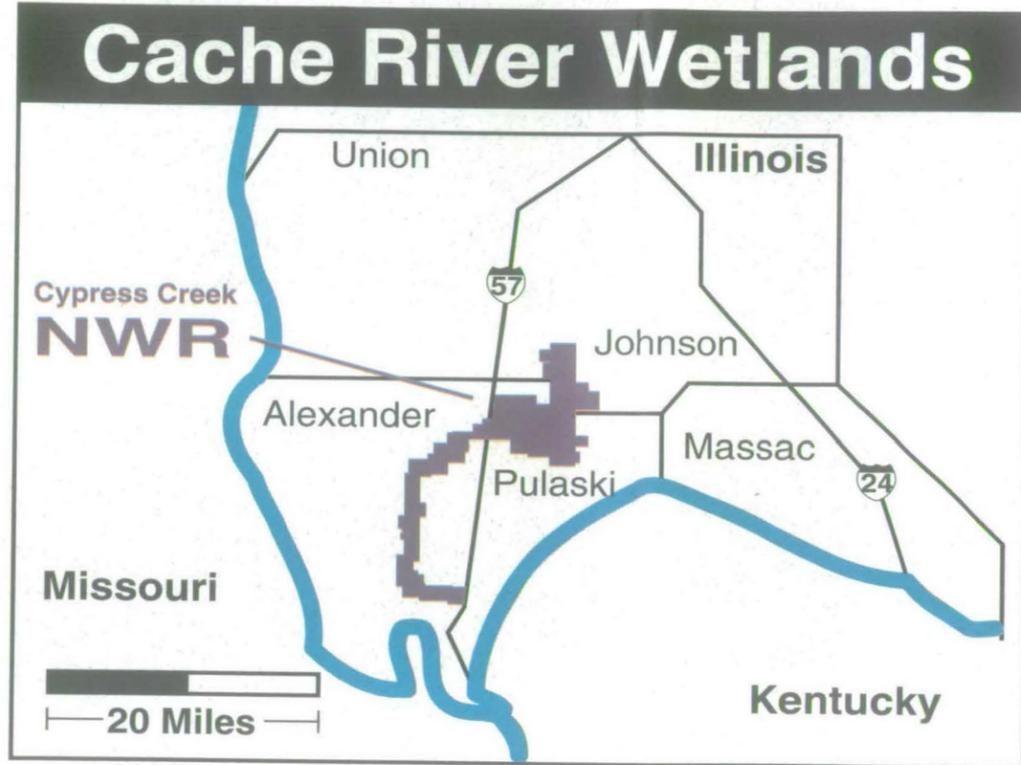
This trail can be accessed via the Wildcat Bluff, Marshall Ridge or the Heron Pond trails. Bald cypress and tupelo swamps, sandstone bluffs, floodplain forests and hillside glades highlight this trail. A rock ford 1.5 miles west of Wildcat Bluff access allows crossing the Cache River to Boss Island; however, this crossing is seasonal due to high water. Trail length: 5.5 miles. Difficulty: Moderate.

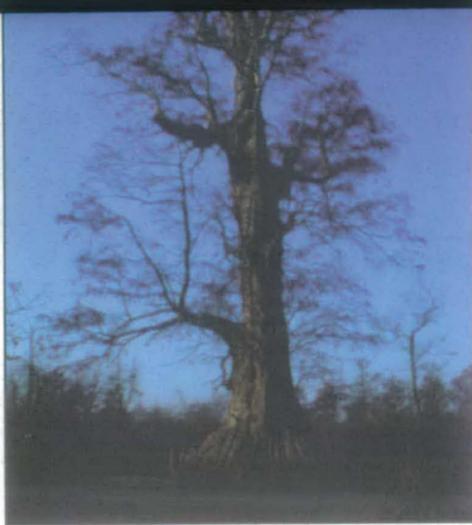
E Heron Pond Trail (Cache River SNA)

This trail crosses the Cache River on a suspended bridge and meanders to a floating boardwalk which allows access into the middle of Heron Pond (a cypress swamp). A self-guided interpretive brochure is available at the parking lot. Follow signs off the Karnak-Belknap road north to parking area. Trail length: 1.5 miles. Difficulty: Easy.



Cache River Wetlands





Map Legend

- | | |
|--|--|
| Boundary for Cache River SNA | Acquisition Boundary for Cypress Creek NWR |
| Headquarters for Cypress Creek NWR and TNC | Boundary for The Nature Conservancy |
| Cypress Creek NWR | Cache River SNA |
| The Nature Conservancy | Cache River/SNA Headquarters |

Cache River Wetlands Recreation Areas

- | | |
|----------------------------------|--------------------------------|
| Brushy Unit | Marshall Ridge Trail |
| Frank Bellrose Waterfowl Reserve | Big Cypress Tree Access |
| Lookout Point Trail | Limekiln Springs Preserve |
| Little Black Slough Trail | Lower Cache River Swamp Trails |
| Heron Pond Trail | Lower Cache River Canoe Trail |
| Linkage Trail | Tamms Cache River Access |
| Tupelo Trail | |



along
the
Mississippi
Flyway



Tony Gerard



Southern bird watching guide

1 Johnson Creek Recreational Area (Kinkaid Lake)

From Murphysboro, W. 6 miles on Rt. 149, then N. 4 miles on Rt. 151, to recreation area entrance, and turn right. Access the trail system from two trailheads: one is located on the east side of Rt. 151 just before the recreation area entrance and the other at the east side of the Hike-in campground.

◆ Catbirds use the edges of clearings within the mature forests. The mature oak-hickory forest along the shore of the lake attracts 'water edge' species like Great Blue Heron, Kingfishers and in the fall, several shorebirds.
Information: Shawnee National Forest 800-699-6637

2 Lake Murphysboro State Park

One mile west of Murphysboro off of Rt. 149.

◆ Many forest birds are common here, a few Pine Warblers can be found here as well as Chuck-will's widow. Waterfowl, such as scaup and goldeneye, can sometimes be seen on the lake, as well as an occasional loon.
Information: 618-684-2867



Great White Egret

3 Oakwood Bottoms/ Greentree Reservoir/ Fountain Bluff

Drive on Rt. 3 south of the intersection with Rt. 149 about 6 miles. There will be a sign for Oakwood Bottoms on the east side of the road. The entrance to Fountain Bluff .75 miles north of Oakwood Bottoms and is on the west side of Rt. 3. (Fountain Bluff is an undeveloped site.)

◆ Considered the jewel of Southern Illinois for birding this site contains boardwalks, viewing blinds and miles of interconnecting levees that provide exceptional birding opportunities. This area has numerous migratory waterfowl, shorebirds, raptors and resident lowland forest birds. Ideal season for viewing mallards and wood ducks are fall and winter.
Information: Shawnee National Forest 800-699-6637



Canada Geese

4 Devil's Backbone Park (Grand Tower on Mississippi River)

The Big Muddy River and the Mississippi River floodplains meet in southwest Jackson County. Get on the Big Muddy levee and follow it south, it eventually meets Rt. 3; you can either continue across the highway and follow the levee to Grand Tower, or head north and take Rt. 3 to Grand Tower.

◆ Along the levee you can find Vesper Sparrows and Brewer's Blackbirds in the fields. Least Terns nest nearby on Sandbars in the Mississippi River, and can be seen as they fly up and down the River.
Information: 618-565-8380

5 Pomona Natural Bridge

From Murphysboro, S. 9 miles on Rt. 127 to Pomona Rd., then W. 3 miles, follow directional signs to the site.

◆ A short loop trail (1/3 mile) leads hikers through an upland forest where chirping sparrows, American redstart, cerulean warbler, vireos, thrushes, and tanagers inhabit the area from spring through Fall. The cooper's hawk and Mississippi Kite have been found here in the past.
Information: Shawnee National Forest 800-699-6637

6 Little Grand Canyon Trail

From Murphysboro, S. 6 miles on Rt. 127 to Etherton Rd., then W. 5 miles, follow directional signs to site.

◆ This National Landmark site features a 3.6 miles loop trail with excellent viewing opportunities for birding along the bluffs and within the canyon itself. This site is a haven during the spring and fall for neotropical migratory songbirds. Walk the less strenuous portions of the trail to overlook the canyon and Mississippi floodplain. Keep an eye out for year round species such as Bald Eagle, Turkey Vulture, Red Shouldered Hawk and Pileated Woodpecker.
Information: Shawnee National Forest 800-699-6637

7 LaRue Pine Hills

On Rt. 3, turn east at Wolf Lake and drive .6 miles to a gravel road (look for sign to Pine Hills) turn N. onto Pine Hills Rd.

◆ This well reknowned ecological site has numerous upland forest birds: thrushes, Scarlet Tanagers, Worm-eating Warblers, Kentucky Warblers, and Red-eyed Vireos. Other notable birds include: great blue heron, great egret, bald eagle, red-shouldered hawk, and Mississippi kite.
Information: Shawnee National Forest 800-699-6637

00/20M

This brochure was developed in partnership with Southernmost Illinois Tourism Bureau, Carbondale Convention and Tourism Bureau, Great River Road Heritage project and the Shawnee National Forest.

877-GRR-7007

Great River Road travel information:

www.cctb.org
e-mail: cctb@globaleyes.net

800-526-1500

and Tourism Bureau
Carbondale Convention

e-mail: sitb@midwest.net

www.southernmostillinois.com

800-248-4373

Southernmost Illinois Tourism Bureau

For Lodging and Tourism
Information:

Illinois Wildlife and Nature Viewing Guide
by Mary Kay Judd Murphy, Ph.D. and John W. Mellen, Ph.D. and printed by the State of Illinois.

Southern Illinois Birds
An Annotated List and Site Guide, by W. Douglas Robinson and printed by the Southern Illinois University Press.

There are innumerable places to go birding in southern Illinois. Any woodland, field, roadside hedgerow, or lake should be home to some interesting birds. It would take an entire book to detail all the exciting locations to visit. The information in this guide was compiled from the following two books, which are well worth reading:

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

◆ Woodland birding is excellent during spring and fall. During summer you'll find Broad-winged Hawks, Louisiana Waterthrushes, Arcadian Flycatchers, Summer Tanagers and Prairie Warblers. During winter, Ferne Clyffe is a good place to find Ruby-crowned Kinglets, Yellow-rumped Warblers, Winter Wrens and Hermit Thrushes. Be sure and check the lake, waterfowl and an occasional loon or Osprey can be seen.
Information: 618-995-2411

**Ferne Clyffe
State Park**
Ferne Clyffe is located in Johnson County, just south of Coreville.

◆ Huge sandstone bluffs and hidden springs attract birds to this area's extensive trail system. Primarily a bottomland forest Bell Smith is home to several vireos, tanagers, sparrows, pileated woodpeckers and eastern phoebe.

Bell Smith Springs
From Harrisburg, S. 9 miles on Rt. 145 to Delwood, then W. 4 miles on Blacktop Rd. to fork. Then turn left and go approx. 1.5 miles to recreation area's entrance road and turn right.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

**War Bluff Valley
Wildlife
Sanctuary**
From Colconda, go north on Il. Rt. 146 about 3 miles. Turn left (west) on Bushwack Rd. (the first road after the Eddyville Blacktop). Go 2.5 miles to the sanctuary sign.

26

25

24

8

Giant City State Park

Giant City State Park is south of Carbondale, near the town of Makanda.

◆ There are numerous trails that wind throughout the park. The oak and hickory forests are especially good for spring migrants and summer breeding passerines. Wild Turkeys, broad-winged Hawks and Coopers Hawks are regularly found here.

Information: 618-457-4836

9

Trail of Tears State Forest

Trail of Tears State Forest is located in west-central Union County between Rts. 3, 146, and 127. The State Forest Road intersects Rt. 3 at Wolf Lake.

◆ This forest is an excellent place to visit during spring migration, when warblers, vireos, thrushes and tanagers are common. This state forest may have the highest concentration of breeding Worm-eating Warblers. Hooded Warblers and Ovenbirds are also here. Check the Pines along the main blacktop road for Pine Warblers, Red-breasted Nuthatches and white-winged Crossbills.

Information: 618-833-4910

10

Mississippi Levee

(Jackson/Randolph Co. line South to McClure)

◆ During winter and spring migration, you can view shorebirds, waterfowl, and eagles. Summer months bring turkey, herons, egrets and woodpeckers.

Information: Levee district Rep. Mitchel McLane 618-833-5992

11

Atwood Ridge (Union Co.)

From Rt. 3 at Ware take Hwy. 146 toward Jonesboro. In about 4 miles, turn south at the historical marker road. At the fork, turn right. Go a couple of miles and take the first right, you should cross a concrete bridge over Dutch Creek. The road soon turns west and fords a shallow creek before it turns back south and starts up a long hill. When the road levels off, park and begin birding.

◆ This upland forest has concentrations of warblers, vireos, thrushes and other passerines. Hooded and Cerulean Warblers breed here.

Information: Shawnee National Forest 800-699-6637

12

Union County Refuge

The refuge is located east of Rt. 3 in western Union County.

◆ Spring and winter are the most exciting times to visit. The main road is open all year, but other areas have restrictions. Please contact the site office. Pileated and Red-headed woodpeckers are very common. Watch the wet areas for shorebirds and waterfowl. Mississippi Kites are present most of the summer, as well as fish crows and red-shouldered hawks.

Information: 618-833-5175



Lesser Yellowlegs

13

Thebes Park and Courthouse

Off Rt. 3 at Thebes, overlooking the Mississippi River.

◆ Take a drive up to the Thebes courthouse where Dred Scott was briefly held before his landmark Supreme

Court case in 1857. If you stand on the upper veranda facing the river, you can watch Mississippi Kites at eye level as they fly along the river in the summer. The riverside park at the north end of Thebes is a pleasant place for a picnic. During the spring and summer months, Mississippi kite hawk for insects along the river. In winter months, gulls and ducks may be seen long the shores of the river, and Bald Eagles frequently roost in the trees between Route 3 and the river.

Information: 618-764-2248



Yellow Headed Blackbird

14

Horseshoe Lake Conservation Area

Probably the best tactic for birding Horseshoe is to drive and stop as you go around the lake. Go south on the Miller City blacktop from Olive Branch, which is located on Rt. 3 between Cairo and Thebes.

◆ This area has been billed the Canada Goose Capital of the world. Besides geese, quite a few ducks and even a swan or two winter here. Bald Eagles are winter regulars. A few rare finds have turned up here: Cinnamon Teal, Purple Gallinule, Wood Stork and Golden Eagles. Fish Crows are a sure bet during the spring and summer, and look for songbirds too; there should be plenty of Northern Mockingbirds and Eastern Bluebirds.

Information: 618-776-5689

15

Fort Defiance Park

Located at the end of Rt. 3 in Illinois.

◆ If you spend some time here, you may see least terns, migrating herons, and waterfowl. The spectacle of the Ohio and Mississippi Rivers merging is very impressive.

Information: City of Cairo 618-734-4127

16

Heron Pond

Take Rt. 45 south of Vienna about 5 miles to Belknap Rd. and turn west, follow the blacktop about 1.5 miles to the first right-hand road. Follow the signs to Heron Pond Parking Lot.

◆ Along the way, check the power poles for both Turkey and Black

Vultures. On the trail you may find warblers, gnatcatchers, vireos, and thrushes. Yellow-throated and prothonotary warblers are common during spring and summer. During winter, there should be Brown Creepers and maybe a Yellow-bellied Sapsucker.

Information: Cache River State Natural Area 618-634-9678

17

Wildcat Bluff

Can be reached from Rt. 146 or Rt. 45 in Johnson County. (follow signs)

◆ Bald Cypress and Tupelo swamps, sandstone bluffs, floodplain forests and hillside glades are found along this 5.5 miles moderately difficult trail. This gives hikers access to Little Black

Slough Nature Preserve and Boss Island. A rock ford on the Cache River, difficult to cross in high water, must be negotiated 1.5 miles west of the access. This preserve is a good place to observe black vultures, great blue heron, red shoulder hawk, pileated woodpecker, barred owls, parula, yellow-throated, Kentucky and prothonotary warblers.

Information: Cache River State Natural Area 618-634-9678

18

Hickory Bottoms

Can be reached from Bailey Road off Mount Olive Rd. south of the Dongola blacktop in Union County.

◆ A 200 acre forest and popular wildlife watching area. The area is important to birds of mature forest, reforested uplands, and wetland

habitats.

Information: Cypress Creek National Wildlife Refuge 618-634-2231

19

Lower Cache River Canoe Access & Swamp Trails

Off of Perks Rd. between Hwy. 51 and IL. Rt. 37 in Pulaski County.

◆ During spring and fall migration, more than 100 types of birds are common in the area. Notable birds include: great blue heron, pileated and hairy woodpeckers, barred owl, black vulture and prothonotary warbler.

**Information: Cache River State Natural Area 618-634-9678
Cypress Creek National Wildlife Refuge 618-634-2231**

20

Bellrose Reserve

Located between Ullin and Perks, along the Cache River in Pulaski County. Viewing is available off the Cache Chapel Rd.

◆ This area of shallow ponds and sloughs attracts many waterfowl, herons, and shorebirds. 21 different species of ducks have been observed here.

Information: Cypress Creek National Wildlife Refuge 618-634-2231

21

Mermet Lake Conservation Area

Located in western Massac County along Hwy. 45.

◆ Mermet Lake's shallowness and its many snags provide ample feeding and roosting sites for

herons, cormorants, Osprey and swallows. Purple Gallinules have bred here in the past and may still occur regularly. May and June are the best time to search the marsh for them, as well as the Least Bittern. In spring, the sheer numbers of warblers, swallows, flycatchers and herons can be quite impressive. In the fall, view shorebirds and ducks. Eagles are on site each winter through spring.

Information: 618-524-5577

22

Fort Massac State Park

On the shores of the Ohio River in Metropolis, IL.

◆ This is habitat for Northern Orioles, Pileated Woodpeckers, Red-headed Woodpeckers, and a variety of warblers, flycatchers

and Vireos. Look out over the Ohio River for passing herons, terns, gulls and swallows.

Information: 618-524-4712

23

Dixon Springs State Park

Located in Pope County, just east of the intersection of Rts. 145 and 146.

◆ Home to nesting Black Vultures, which breed in cavities in the bluffs and can be viewed in and near the

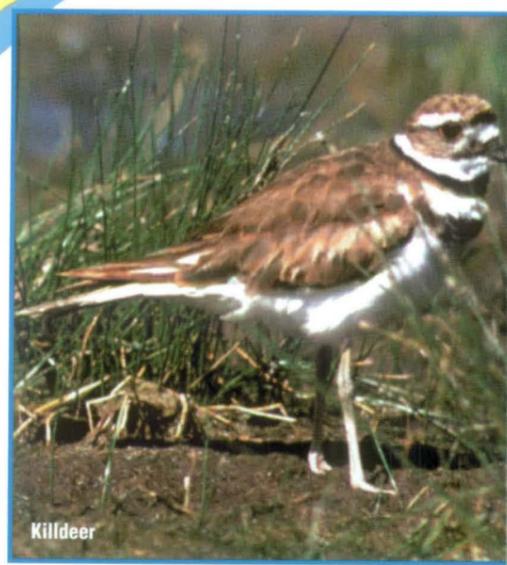
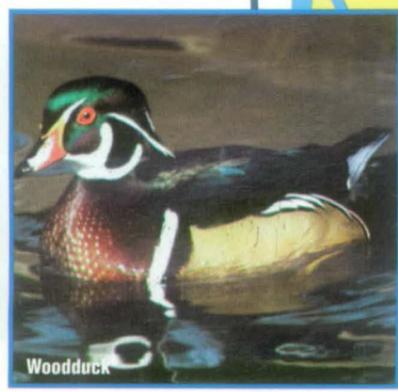
park at almost any time of year. During breeding season, Summer Tanagers, Pileated Woodpeckers and Eastern Phoebe are common. Occasionally a Black-and-white Warbler may summer here. Blue Heron can be seen along the creeks.

Information: 618-949-3394

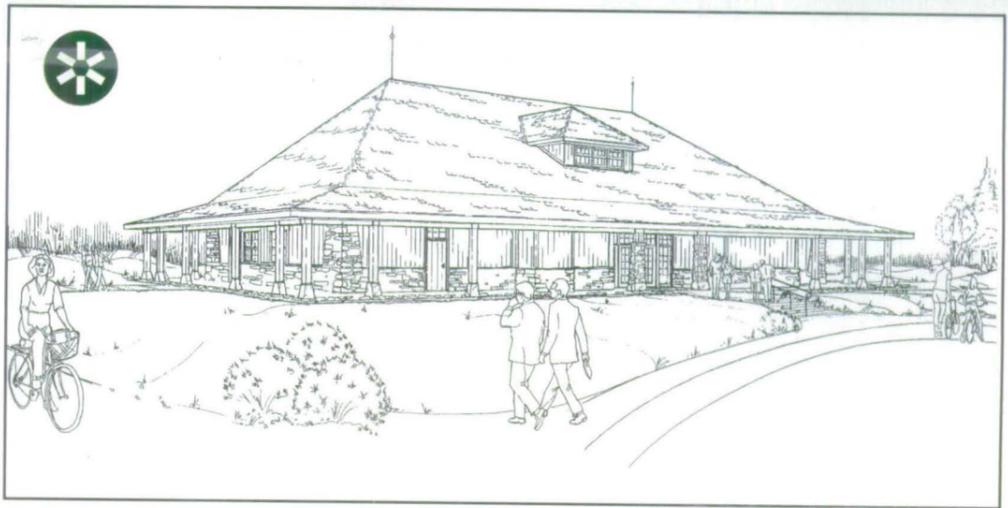
bird watching guide

PLEASE NOTE: This guide is NOT to be used as a detailed road map. Birding locations are only approximations. Site restrictions apply. Please contact individual site managers for further information.

-  Picnic Shelter
-  Picnic Area
-  Scenic Point
-  Boat Ramp
-  Camping Area
-  Canoeing
-  Tourist Info. Center
-  Hiker- Only Trail
-  U.S.D.A. Forest Service Office
-  Information
-  Parking
-  Point of Interest
-  Great River Road



-  Illinois State Highway
-  Interstate Highway
-  Paved Road
-  Unpaved/Gravel Road



Henry N. Barkhausen Cache River Wetlands Center

The Illinois Department of Natural Resources plans call for the center to be complete by 2002. The facility will feature 2000 square feet of exhibit space, an auditorium which will seat 60 people, a wildlife viewing area and a full time site interpreter. The center will have trails connecting to the Tunnell Hill Bike Trail and a boardwalk leading to the wetlands.



Location Key

- 1 Johnson Creek Recreational Area (Kinkaid Lake)
- 2 Lake Murphysboro State Park
- 3 Oakwood Bottoms/Greentree Reservoir/Fountain Bluff
- 4 Devil's Backbone Park
- 5 Pomona Natural Bridge
- 6 Little Grand Canyon Trail
- 7 LaRue Pine Hills Ecological Area
- 8 Giant City State Park
- 9 Trail of Tears State Forest
- 10 Mississippi Levee
- 11 Atwood Ridge
- 12 Union County Refuge
- 13 Thebes Park and Courthouse
- 14 Horseshoe Lake Conservation Area
- 15 Fort Defiance Park
- 16 Heron Pond
- 17 Wildcat Bluff
- 18 Hickory Bottoms
- 19 Lower Cache River Canoe Access & Swamp Trails
- 20 Bellrose Reserve
- 21 Mermet Lake Conservation Area
- 22 Fort Massac State Park
- 23 Dixon Springs State Park
- 24 Bell Smith Springs Recreational Area
- 25 Ferne Clyffe State Park
- 26 War Bluff Valley Wildlife Sanctuary