

FINAL DRAFT

**Avian Conservation Implementation Plan
Cane River Creole National Historical Park and
Cane River National Heritage Area**

National Park Service
Southeast Region



Compiled by J. Keith Watson
U.S. Fish and Wildlife Service
In cooperation with

CARI Resource Management Staff, National Park Service
And Bird Conservation Partners
January 2005

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Introduction

This Avian Conservation Implementation Plan (ACIP) is provided to the staff at Cane River Creole National Historical Park (CARI) and Cane Rive National Heritage Area (Heritage Area) to help identify and prioritize bird conservation opportunities, and to provide information and guidance for the successful implementation of needed conservation activities. This plan may identify goals, strategies, partnerships, and perhaps specific projects for the park to participate in existing bird conservation planning and implementation efforts associated with the North American Bird Conservation Initiative (NABCI). Under the auspice of NABCI, appropriate bird and habitat conservation goals may be recommended as identified in the appropriate existing national or regional bird conservation efforts aligned with this initiative: Partners In Flight (PIF), North American Waterfowl Management Plan (NAWMP), US Shorebird Conservation Plan (USSCP), and Waterbird Conservation for the Americas (WCA). For example, parks in the Appalachians and the Cumberland Plateau will have few if any high priority waterbird conservation issues at a regional landscape or greater scale. As such, little information regarding waterbird conservation will be presented in the ACIP, unless there is an identified park need for this species group, or other mandates, such as federal laws. Similarly, because CARI/CRNHA's landscape primarily supports upland birds, most conservation recommendations provided in the ACIP will be for landbirds and their habitats. All high priority bird conservation issues for CARI/CRNHA will be discussed and integrated as appropriate.

Information and data presented in the ACIP have been obtained from several sources: 1) interviews with CARI/CRNHA staff 2) CARI/CRNHA bird conservation partners 3) and the PIF West Gulf Coastal Plain Bird Conservation Plan (Taulman 1999) 4) Southeast Waterbird Conservation Plan (Hunter et al. 2001), 5) National Park Service (NPS) databases, 6) peer reviewed bird conservation and management literature, and 7) personal communications with bird conservation specialists throughout North America, especially in the southeastern United States. This plan has been reviewed by CARI staff, Gulf Coast Inventory and Monitoring Network (GULN I&M) staff, and bird conservation partners and approved by CARI management. Optimally, this plan will be incorporated into the park's Resource Management Plan (RMP) and updated annually to reflect completed projects, newly identified needs, and shifts in bird conservation priorities in the region.

CARI/CRNHA is not obligated to undertake any of the proposed actions in this plan. The plan is provided to offer guidance to CARI/CRNHA to voluntarily support important park, regional, and perhaps national and international bird conservation projects for which CARI is primary participant in the proposed actions.

Background

During the past thirty years, monitoring programs across North America have documented declines of certain bird species populations and their habitats, often severe (Sauer et al. 2000). The decline has caused great concern among scientists, biologists, biodiversity proponents, ecologists, land managers, etc., and the bird conservation community in general. Birds are recognized as critical components of local and global genetic, species, and population diversity, providing important and often critical ecological, social, economic, and cultural values. Their overall decline has stimulated a worldwide focus on conservation efforts and North American interest in bird conservation is rapidly becoming a focus of government, non-government, industry, and private interests and expenditures.

Many state, federal, and non-governmental wildlife agencies and non-government organizations (NGO's) have recognized this alarming bird decline trend and have joined forces in several extensive partnerships to address the conservation needs of various bird groups and their habitats. The primary initiatives are:

- North American Waterfowl Management Plan
- Partners in Flight
- U.S. Shorebird Conservation Plan
- Waterbird Conservation for the Americas

The North American Bird Conservation Initiative: While efforts associated with these plans have generated some successes, it has been increasingly recognized that the overlapping conservation interests of these initiatives can be better served through more integrated planning and delivery of bird conservation. The *North American Bird Conservation Initiative (NABCI; <http://www.nabci-us.org/main2.html>)* arose out of this realization. The vision of NABCI is simply to see ***“populations and habitats of North America’s birds protected, restored and enhanced through coordinated efforts at international, national, regional, state and local levels, guided by sound science and effective management.”*** NABCI seeks to accomplish this vision through (1) broadening bird conservation partnerships, (2) working to increase the financial resources available for bird conservation in the U.S., and (3) enhancing the effectiveness of those resources and partnerships by facilitating integrated bird conservation (U.S. NABCI Committee 2000). Together, the four bird conservation initiatives mentioned above, as well as several other local and regional partnerships, work collectively to pursue this vision.

NABCI is guided by a set of principles that establish an operational framework within which the Initiative and its partners may conduct integrated bird conservation in the U.S. These will articulate a common understanding of the relationship between NABCI, the individual bird conservation initiatives, and all partner entities to ensure recognition of existing federal legislative and international treaty obligations, state authorities, and

respect for the identity and autonomy of each initiative. The fundamental components of the conservation approach to be used by NABCI are expressed within its goal:

To deliver the full spectrum of bird conservation through regionally-based, biologically-driven, landscape-oriented partnerships.

The Southeastern Bird Conservation Initiative: National Park Service: In 1999, the Southeast Region of the National Park Service (NPS) recognized the importance of coordinating existing bird conservation goals into planning and operations of national park units in the southeast, that is, integration of NABCI. In support of this recognition, the Southeast Regional Office NPS approved and allocated eighty-eight thousand dollars, cost sharing 1:1 with the US Fish and Wildlife Service (FWS) Region 4 (Southeast) to hire a biologist to conduct this two-year project (Interagency Agreement FS028 01 0368). This project is unique in the NPS, and perhaps the nation, and represents a potential model for better coordinating regional bird conservation programs and activities within and outside the NPS. It further represents a progressive action toward institutionalizing bird conservation as a programmatic priority in the Southeast Region of NPS, and potentially the nation.

As envisioned, the integration of NABCI into the Southeastern NPS involves:

- 1) Development and delivery of Avian Conservation Implementation Plans,
- 2) Coordination with NPS Inventory and Monitoring Program,
- 3) Development of a web based project site,
- 4) Establishment or enhancement of bird conservation partnerships,
- 5) Identification and exploration of potential funding opportunities, and
- 6) Technical guidance and assistance as needed or requested.

This ACIP fulfills one aspect of the plan outlined above, and serves as a basis for future bird conservation actions in CARI/CRNHA and with adjacent partners or landowners.

Concurrently, the development of a Memorandum of Understanding (MOU) between the FWS and the NPS to implement Presidential Executive Order (EO) 13186 (US Government 2000), Responsibilities of Federal Agencies to Protect Migratory Birds, calls for integration of programs and recommendations of existing bird conservation efforts into park planning and operations. Complementing each other, the MOU and the Southeastern Bird Conservation Initiative will advance bird conservation in the Southeast Region of the NPS beyond current regional NPS efforts.

Role of NPS in Avian Conservation

The interagency agreement that facilitates this partnership supports both FWS and NPS management policies. Specifically for the NPS, the agreement supports and advances the Strategy for Collaboration, a visionary document developed and signed by the Southeast Natural Resource Leaders Advisory Group (SENRLAG 2000), a consortium of 13 land and resource management agencies in the Southeastern United States

whose vision is to encourage and support cooperation in planning and managing the region's natural resources. Furthermore, the agreement is aligned with and implements a variety of NPS Management Policies (2001) including, but not limited to, External Threats and Opportunities, Environmental Leadership, Cooperative Planning, Land Protection, and especially Natural Resource Management that details policy and management guidelines which apply to bird conservation. Important policies in the Natural Resource Management chapter include:

- Planning for Natural Resource Management
- Partnerships
- Restoration of Natural Systems
- Studies and Collection
- General Principles for Managing Biological Resources
- Plant and Animal Population Management Principles
- Management of Native Plants and Animals
- Management of Endangered Plants and Animals
- Management of Natural Landscapes
- Management of Exotic Species
- Pest Management
- Fire Management and
- Water Resource Management

The NPS is the fourth largest landowner in the United States, consisting of over 380 national park units covering 83 million acres of land and water with associated biotic resources (www.nps.gov). The 64 units in the Southeast Region of the NPS represent 16% of the total number of park units in the national park system and cover approximately 5% of the total land base in the entire system. Park units in the Southeast Region include national seashores (Gulf Islands National Seashore, Canaveral National Seashore, national parks (Great Smoky Mountains National Park, Everglades National Park), national recreation areas (Big South Fork National River and Recreation Area), national preserves (Jean Lafitte's Barataria National Preserve), national battlefields (Cowpens National Battlefield, Chalmette National Battlefield), national monuments (Fort Matanzas National Monument, Ocmulgee National Monument), and others such as the Blue Ridge Parkway, Obed Wild and Scenic River, and Timicuan Ecological and Historic Preserve.

Southeast NPS units provide habitat for over 400 species of migrating, breeding, and wintering birds and include a wide range of Federal and State listed threatened and endangered species. Likewise, these units also provide nest, migration, and winter habitat for most of the eastern species identified in the national bird conservation plans in need of conservation attention.

Additionally, the NPS attracts over 280 million visitors to the parks each year, 120 million of these in the Southeast Region, affording excellent recreational bird watching and opportunities to strengthen bird conservation interpretation, outreach, and

education programs. These opportunities, the NPS mission, policies, and organization all lead to the conclusion that the NPS is an extremely valuable partner and contributor to bird conservation in the region.

Nationally, the status of birds in national parks is largely unknown, although many parks have adequate knowledge regarding bird occurrence in the parks (<http://www.npwrc.usgs.gov/resource/othrdata/chekbird/chekbird.htm>). Parks often play a role in ongoing regional bird conservation efforts. Indeed many of these parks are often important to regional, national, or international bird conservation, and many have been designated as Important Bird Areas (IBA's) by the National Audubon Society. To date, there are approximately 64 NPS units that are designated IBA's, 35 of which are considered of global importance (<http://abcbirds.org/iba/aboutiba.htm>). In the Southeast Region, the NPS has 13 global IBA's.

The **NPS Inventory and Monitoring (I&M) Program** has been developed to provide management driven scientific information to national park managers so that resources can be adequately protected within national parks. One of the first phases of this program is to inventory vertebrates, including birds, within the 260 national park units in the program. Once completed, data from the inventories will provide an account of the occurrence and abundance of birds in all the national parks in the program. These records will be stored in the NPS I&M NPSpecies database (<http://www.nature.nps.gov/im/apps/npspp/>). Coordination with I&M network staff is important to developing long-term bird monitoring programs that fulfill both park and NABCI objectives.

Park Flight is a NPS international partnership initiative that directs funding toward a variety of NPS programs that involve conservation of Neotropical migratory birds whose life history range covers a US national park and a Latin American protected area. A relatively new program, Park Flight offers parks the opportunity to partner with a Latin American national park or protected area to cooperate on developing bird conservation and education projects (USDI NPS 2002).

Recent increases in NPS base funded programs such as inventory and monitoring, exotic species management, habitat restoration, and fire management all indicate that national park managers recognize that park lands are increasingly subject to a variety of threats and conditions that must be improved to provide the quality of national park experience articulated in the NPS Organic Act (1916). Programmatic funding in these areas will increase the ability of national parks to provide quality habitat and conditions for increased wildlife conservation, including birds. Furthermore, private interests and non-profit conservation organizations have initiated programs, including grant programs, to provide much needed funding to national parks to meet backlogs of identified yet unfunded needs.

Park Description

Cane River Creole National Historical Park is a newly created unit (1994) of the National Park System in Natchitoches Parish, Louisiana. The park's two primary land units are comprised of 63 acres adjacent to the Cane River. The park's mission is primarily historical and cultural, focusing on management of two plantations dating back to the 18th Century. Nonetheless, baseline inventories of the park's avifauna are needed in order to fulfill NPS Policy requirements, to comply with NEPA, and to make sound management decisions during the planning and design phase of park start-up (USDI NPS 2000).

CARI is part of the 47,000 ha (116,000 acre) Cane River National Heritage Area. CARI has "advisory" responsibilities to the Heritage Area, although the park is just one small component of this area. The Heritage Area primarily consists of privately owned rural and agricultural lands and was designated by Congress for its nationally distinctive landscape. The Heritage Area is more diverse than the park itself, while suffering from a similar lack of data regarding the state of its natural resources (USDI NPS 2000). Park land acquisition was authorized by the enabling legislation.

Avian Resources of West Gulf Coastal Plain

The West Gulf Coastal Plain (WGCP) physiographic area occupies about 15 million ha (37 million ac) of southern Arkansas, southeastern Oklahoma, eastern Texas, and western Louisiana (see PIF and NPS locations maps below). In general, uplands are dominated by pines and bottomlands by hardwood forests. The pine is originally longleaf in the southern portion and shortleaf with a significant hardwood element in the northern portion. The southern edge of the physiographic area occurs where trees become less dominant and the grasslands of the Coastal Prairies begin. The West Gulf Coastal Plain extends east to the Mississippi Alluvial Valley and north to edge of the Ouachita highlands. Drier climate and changing soils to the west mark the edge of the distribution of pine in eastern Texas and the beginnings of the Oaks and Prairies physiographic region.

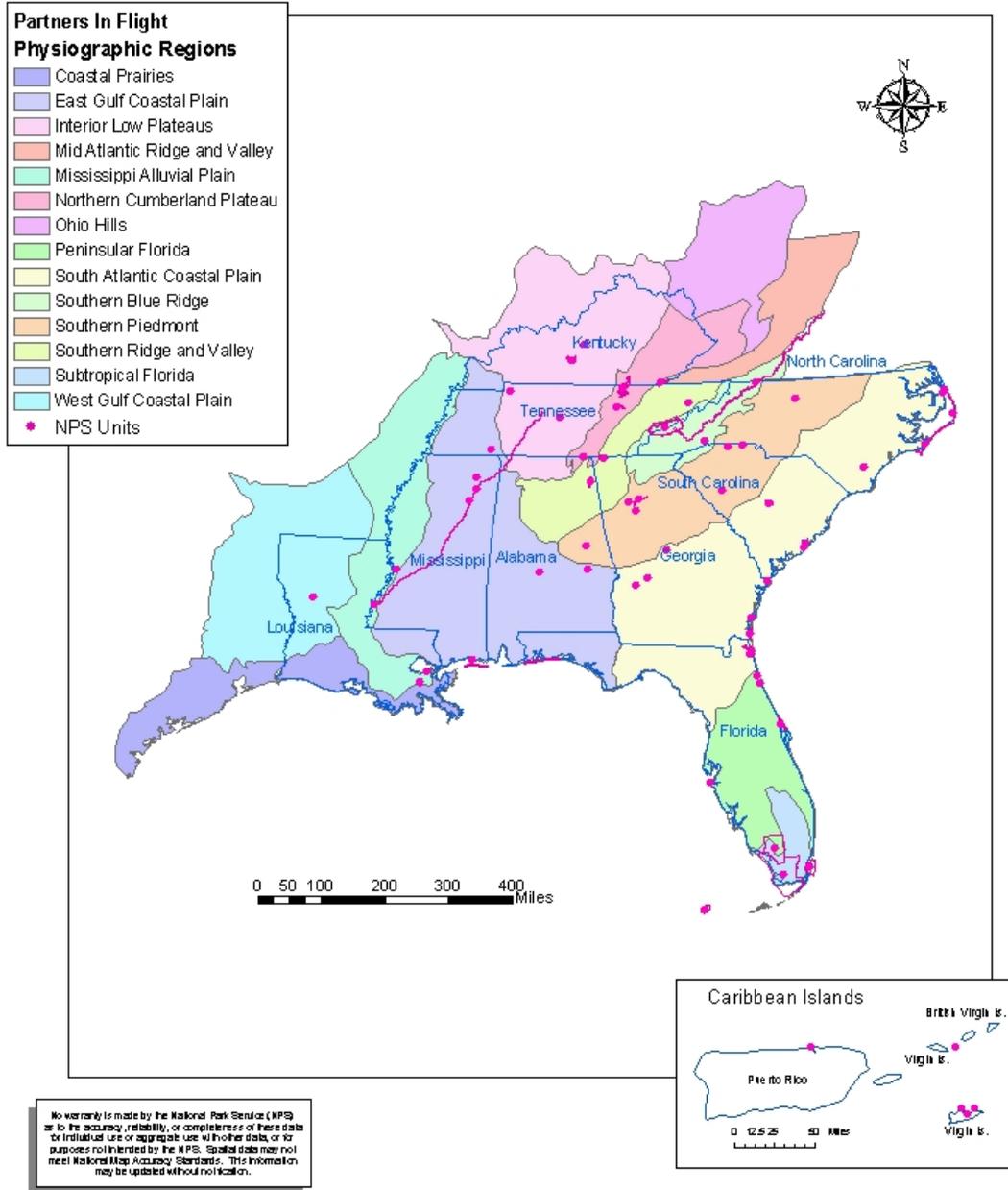
In the WGCP of Louisiana lowlands are only 15 m (50 ft) or less above sea level and the northwest uplands rise to 90 m (300 ft). Public-sector forests are contained in the Kisatchie National Forest. Bottomland hardwood forests were historically located in the floodplains of the Red, Sabine and Ouachita Rivers. Sweetgum is currently the dominant species in both bottomland hardwood and in oak/hickory forest remaining in the WGCP of Louisiana. The far northwest corner of Louisiana was formerly covered with a mixed oak/pine forest described as a "*Quercus alba* climax forest".

Pine habitat here, as in the rest of the Southeast, has undergone dramatic changes this century, even though some type of pine still dominates most of the landscape. The area was originally longleaf in the southern portion, with some loblolly in drainages protected from fire, grading into shortleaf pine with some intermixed hardwood to the north. All of

Partners in Flight (PIF) Regions

Southeast Region (SER)

National Park Service
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Partners in Flight (PIF) Regions and NPS Locations

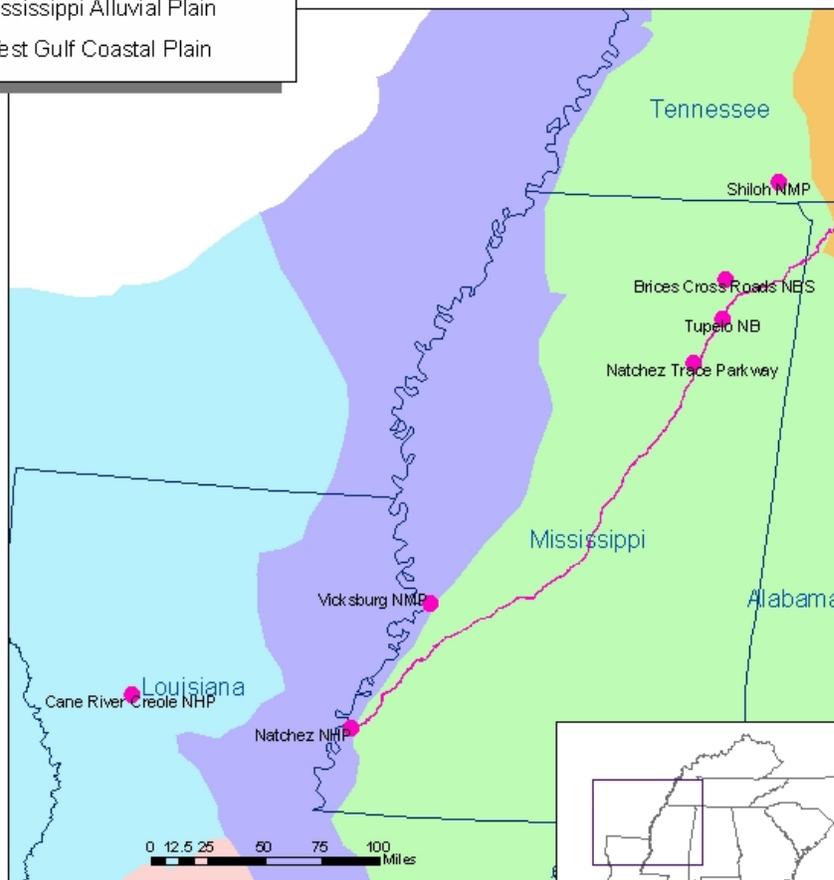
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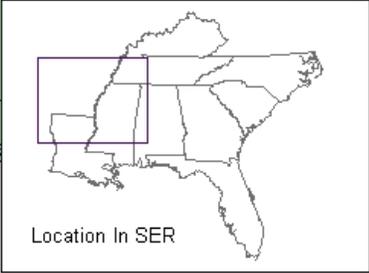
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PIF Physiographic Regions

- Coastal Prairies
- East Gulf Coastal Plain
- Interior Low Plateaus
- Mississippi Alluvial Plain
- West Gulf Coastal Plain



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Produced by Southeast Regional Office GIS, Atlanta, GA

February 2004

this was fire-maintained. Virtually all of it was cut in the early 1900's, which in itself would not have been a grave problem. However, fire suppression and either intentional or neglectful regeneration practices have resulted in replacement of the native on-site species with loblolly or introduced slash pine. More recently, these have been planted in short-rotation plantations. This has been particularly harmful to the Red-cockaded Woodpecker, which shows a strong preference for old longleaf stands, but has also had a negative effect on other pine birds that thrive best under native pine savannah conditions. Young pine plantations do support many birds, however, including species normally associated with mature hardwoods such as Worm-eating Warbler, as well as some birds more typical of early successional conditions like the White-eyed Vireo and Prairie Warbler. Maintenance of older growth fire-maintained longleaf stands must be a high priority for public and perhaps some private lands in the southern half of this physiographic area. Keeping as much of the region as possible in forest, even if short-rotation loblolly is better for birds than conversion to pasture or other uses. Meanwhile, bottomland hardwood habitat has also been reduced in extent and fragmented. This is due not only to typical conversion to agriculture and other uses, but also due to inundation by the numerous reservoirs, particularly in eastern Texas.

Bottomland hardwoods are not only important for many high priority, area-sensitive breeding birds, but may also be vital to spring migrants. Radar shows huge numbers of these birds descending into bottomland hardwoods relatively close to the coast upon completion of their Gulf of Mexico crossing. Maintenance of these forests may have conservation implications that extend well beyond the West Gulf Coastal Plain.

Management of landscapes for bird conservation priorities may include three strategies:

- 1) manage and maintain existing habitats identified as being of value to bird populations
- 2) restore or consolidate important habitats and
- 3) provide a combination of these two strategies (Hunter, unpublished manuscript).

The Partners in Flight Bird Conservation Plan for the West Gulf Coastal Plain (http://www.blm.gov/wildlife/pl_42sum.htm) is incomplete at this time. However, bird and habitat conservation priorities have been summarized in the draft plan (Appendixes A-C).

At least 132 bird species nest in the WGCP physiographic area. The most commonly recorded species (occurring in 10% or more of Breeding Bird Surveys) were Cattle Egret, Mourning Dove, Yellow-billed Cuckoo, Purple Martin, Barn Swallow, Blue Jay, American Crow, Carolina Chickadee, Tufted Titmouse, Carolina Wren, Northern Mockingbird, White-eyed Vireo, Red-eyed Vireo, Pine Warbler, Yellow-breasted Chat, Northern Cardinal, Indigo Bunting, Dickcissel, Red-winged Blackbird, Eastern Meadowlark, and Brown-headed Cowbird. These species represented 15.9% of all recorded breeding birds in the region. Sixty-nine species (52%) were observed in less than 1% of BBS records.

Twenty-one (15.9%) of species recorded in the WGCP are associated with water, ponds or lakes, and swampy areas. Grassy pasturelands are habitat for 13 (10%) species. About 16% of the species nest in brushy old fields and early successional regenerating forests. Bottomland hardwood forests and wooded streamsides are nesting habitat for about 13% of bird species in the region. The largest percentage of birds in the WGCP (33%) nest in upland forests. Urban and suburban environments are nesting areas for 11.4%.

Avian Conservation in CARI

Avian Biodiversity: CARI has an incomplete inventory based on work performed by NPS personnel from Jean Lafitte National Historical Park and Preserve and the GULN. Considering the diversity of habitats in CARI and the Heritage Area, species richness in the area is probably high.

Park Priorities: Park staff and consultants have identified the Rock Dove (pigeon) as a species of park management interest. Historical pigeoniers (pigeon houses) of the plantations housed pigeons for food and for carrying messages to and from fields and other farms. The park is restoring the pigeonairres, and will explore the possibility of housing Rock Doves upon further study and consideration of other resource management issues. Additionally, park staff is concerned about conserving all birds and their habitats in CARI. Several species that likely occur in CARI are high priority in the WGCP and conservation efforts in the park could focus on these species or groups of species.

Inventory: CARI has an incomplete inventory and needs additional effort to complete a baseline inventory. Muth (2004) and Conzelmann (2003) have a combined species list of near 100 birds for the area.

Threatened and Endangered Species: No Federally listed threatened or endangered species are known to nest in CARI. The Federally threatened Bald Eagle forages in the park.

The Lark Sparrow is the only Rare, Threatened, or Endangered Species of Louisiana known to occur in CARI. However, several high priority PIF birds occur in the park such as White-eyed Vireo, Orchard Oriole, Painted Bunting, Eastern Kingbird, Brown Thrasher, Yellow-throated Vireo, Pine Warbler, and Northern Bobwhite. Additional high priority species are likely to be identified following completion of the inventory.

Muth (2004) estimates that a modest inventory effort is likely to yield 200 or more species in the park and Heritage Area. Shorebird presence during migration is probably extensive in the area but has not been documented.

Monitoring: Currently no monitoring effort is conducted in CARI.

Research: Scientific research is permitted within the park, but no avian research currently occurs.

Outreach: No educational and outreach programs related to birds are currently undertaken at CARI.

Park Identified Needs for Avian Conservation

CARI has identified two projects that would increase the avian knowledge of the park. They are to:

- Complete the baseline inventory
- Complete bird checklist for public distribution
- Continue working with Red River National Wildlife Refuge as it develops

Coordination with Regional Conservation Initiatives

North American Bird Conservation Initiative: NABCI bird conservation planning units, referred to as Bird Conservation Regions (BCR), are often larger than other planning units associated with other plans, such as Partners In Flight. For example, CARI is within the NABCI WGCP BCR that covers an area of southern Arkansas, southeastern Oklahoma, eastern Texas, and western Louisiana (see NABCI BCR map below) (compare to PIF map).

Several NABCI BCR's have coordinators whose primary responsibility is to coordinate all bird conservation planning in the BCR, across all agencies and organizations. Currently, the WGCP does not have a designated coordinator. Additionally, the WGCP coordinator functions as the Lower Mississippi Valley Joint Venture (see explanation of Joint Ventures in Funding Opportunities below) coordinator and can provide valuable assistance to CARI with implementation of aspects of this ACIP.

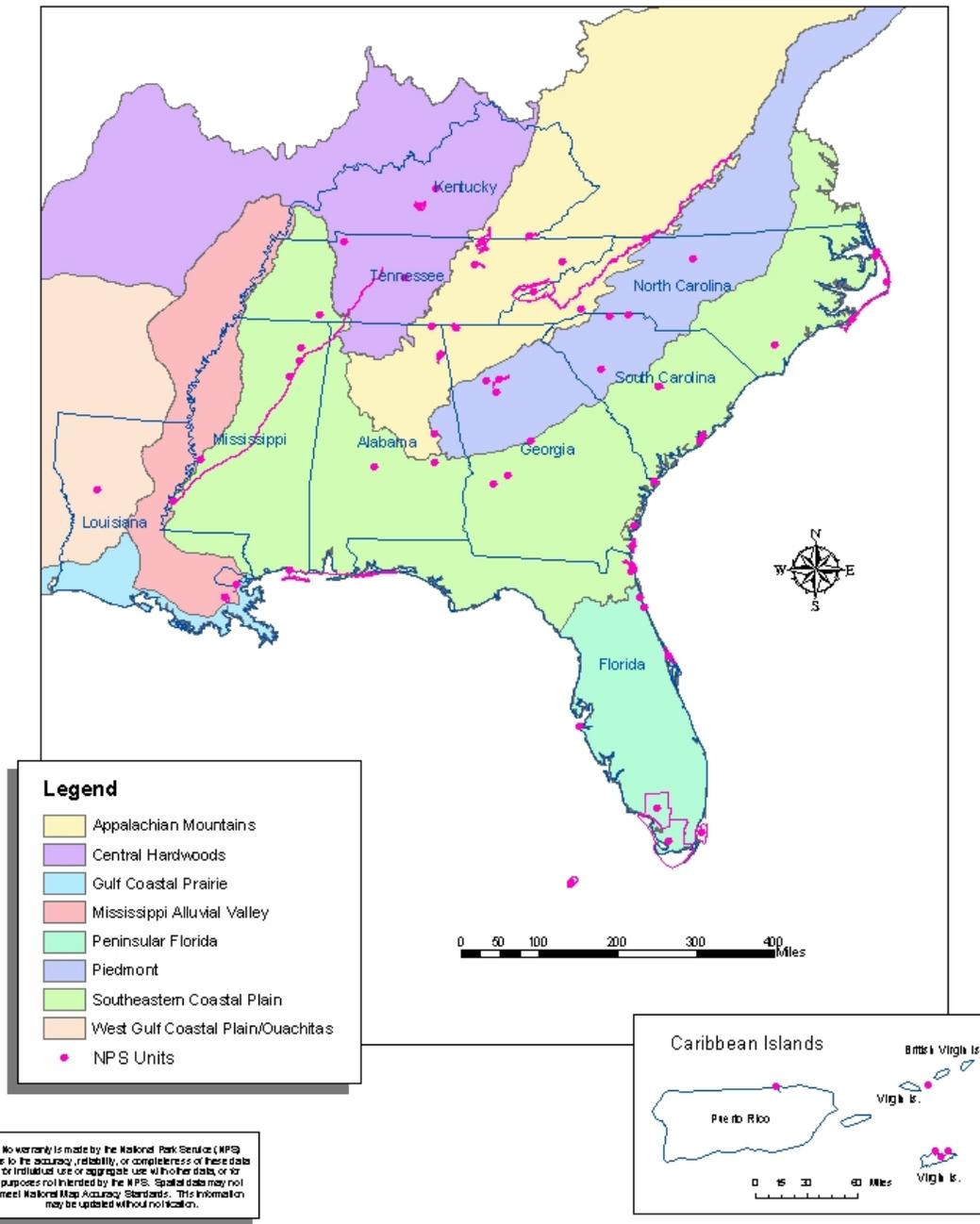
North American Waterfowl Management Plan (NAWMP): The NAWMP (<http://northamerican.fws.gov/NAWMP/nawmphp.htm>) is completed and has been revised several times, incorporating updated goals and strategies based on new information. This plan is one of the most successful bird conservation delivery programs in the United States, being monetarily supported by the North American Wetlands Conservation Act (NAWCA).

Partners In Flight: Goals and strategies for the WGCP can be found in the Executive Summary of the draft PIF Bird Conservation Plan for the West Gulf Coastal Plain (http://www.blm.gov/wildlife/pl_42sum.htm), previously submitted to the park. The draft plan identifies priority bird and habitat conservation goals for landbirds that must be implemented in the WGCP to achieve bird conservation success in this region.

Bird Conservation Regions

Southeast Region (SER)

National Park Service
U.S. Department of the Interior



The coordinator for the PIF West Gulf Coastal Plain Physiographic Area (J. Neal, see Contacts) and the PIF coordinator for the State of Louisiana (N. Higginbotham, see Contacts) can be instrumental in assisting CARI to implement recommendations identified in this ACIP and projects important to bird conservation relative to Louisiana's role in implementation of the WGCP PIF plan.

United States Shorebird Conservation Plan (USSCP): The USSCP has been completed and is available on the World Wide Web (<http://shorebirdplan.fws.gov/>). A regional step down plan is in preparation by FWS personnel and should be available in 2004. Since CARI has little habitat of regional importance to shorebird conservation, recommendations for shorebird conservation are not presented.

Waterbird Conservation for the Americas (WCA): The WCA plan has been completed and is available on the World Wide Web or can be ordered from the US Fish and Wildlife Service National Conservation Training Center (<http://www.waterbirdconservation.org/>). This national plan has been stepped down to the regional level and is available for CARI.

Integration of NABCI Goals and Objectives into Park Planning and Operations

NABCI Implementation Recommendations

To successfully achieve park-established goals and actively participate in NABCI, the park could implement a variety of projects in different NPS programs. Most of these projects would require some level of participation by many existing park programs and could either be achieved through NPS funding, or more likely, through establishing or improving partnerships with agencies and organizations that already have the necessary expertise to provide guidance, funding, and execution of these programs. Programmatic areas where bird conservation actions are likely to be focused are:

- Inventory
- Monitoring
- Habitat Restoration
- Threat Management (includes exotic species, air quality, water quality, etc.)
- Research
- Compliance
- Outreach
- Partnerships

To the extent appropriate, each of these program areas will be discussed separately and within each, specific opportunities identified that, when implemented, will enable the park to meet its mandates (current and expected) as well as integrate NABCI into its planning and operations. With emphasis added, the park is not expected to implement

any of these recommendations or be obligated to pursue any opportunity other than those the park is required to do by law or NPS program or policy. In other words, participation in this effort is currently voluntary. However, implementation of EO 13186 (US Government 2000), Responsibilities of Federal Agencies to Protect Migratory Birds, will require NPS to incorporate a wide range of bird conservation programs into planning and operations. The development of the MOU between the FWS and the NPS will establish a formal agreement to promote bird conservation within the agency by incorporating goals and strategies of existing bird conservation initiatives, plans, and goals into park planning and operations.

Should the park decide to implement any of these projects, further consultation with bird conservation contacts is encouraged to obtain updated information on the relevance of these opportunities in regional bird conservation.

High priority projects are identified in **bold** print. Priorities that the park is encouraged to seek NPS funding for are marked with an asterisk (*). These projects are those that are critical to the stabilization or improvement of a bird population in the planning region.

Inventory: The park has an incomplete inventory. Although the avifauna of CARI is not well understood, the park potentially provides habitat for birds of conservation concern. Distribution and abundance data are needed to fully understand the status of birds in the park so that conservation actions for birds can be implemented. In particular, information on the status and distribution within the park of high priority species (as identified in the WGCP bird conservation plan, the Rare, Threatened and Endangered Species of Louisiana, the Louisiana Natural Heritage Program list of Rare Birds, the Southeast Waterbird Conservation Plan, and the USFWS Species of Conservation Concern) is needed to effectively structure park management for the continued preservation and enhancement of the park's avifauna.

- **additional presence/absence, distribution, and abundance data are needed in most habitats throughout the park (and in public lands within the Heritage Area), particularly for high priority species**

Additionally, CARI is encouraged to:

- **verify other avian observational data collected in the park and enter into the appropriate database (NPSpecies, National Point Count Database, eBird; <http://www.ebird.org/about/index.jsp>, etc.)***
- **standardize inventory methodology to conform to NPS and/or FWS recommended standards (Fancy and Sauer 2000, Hunter 2000)**

Monitoring: The park does not have an active bird monitoring program but efforts should be made to develop appropriate monitoring programs based on completion of the inventory and regional conservation priorities and park needs, striving to conform to

established NPS or FWS surveys protocols. The park is encouraged to consider establishing permanent monitoring stations in main habitat types to systematically collect data on the distribution and relative abundances of priority species. This information will be useful for documented potential changes in park avifauna resulting from habitat change or management activities. Links to literature detailing inventory and monitoring methodologies for various avian groups (e.g. songbirds, shorebirds, raptors, etc.) can be found at: <http://biology.dbs.umt.edu/landbird/mbcg/groups.htm>. Close coordination with the WGCP coordinator and Louisiana PIF personnel is needed to identify and implement high priority projects on park lands and to ensure that park efforts contribute to park or regional bird conservation rather than undertake an action or actions that are not needed or are better conducted in other areas. Specific recommendations are to:

- **establish appropriate monitoring programs for high priority species based on results of completed inventory***
- **work with local area bird club to establish a Christmas Bird Count in the area***
- **standardize monitoring methodology to conform to NPS and/or FWS recommended standards (Fancy and Sauer 2000, Hunter 2000)**

Habitat Restoration: Landscape conditions in the Southeastern US have changed dramatically since early European explorers began documenting the area, its habitats, and its inhabitants. Historic landscapes were influenced by Native American burning, wildfire, bison, beaver, and elk, as well as by insect outbreaks and weather events (Hunter et al. 2001, Williams 2002), thus resulting in a landscape mosaic that supported a rich and diverse bird fauna in the Southeast (Barden 1997; Brawn et al. 2001). The arrival of Europeans and the subsequent change in landscape has dramatically effected bird habitat and bird populations. Bird conservationists have long recognized that habitat restoration is critical to restoration of bird populations, stabilizing or reversing bird declines, and removing birds from both State and Federal Threatened and Endangered Species lists.

Recently, habitat restoration efforts have increased on NPS lands due to the increased restoration emphasis of the Management Policies (USDI NPS 2001). Parks may use a wide range of management tools to restore wetland, grassland, woodland, and other habitats. Restoration tools include, but are not limited to, forest management practices (e.g. silviculture), prescribed fire, exotic species management, and public use and recreation management. In addition, parks can coordinate infrastructure development (e.g. roads and buildings) with restoration activities to mitigate potential adverse impacts.

Due to the protected nature of CARI lands, and generally those in the national park system, the condition of habitats for bird use may be of higher quality than other natural, developed, agricultural, or forest lands under other management regimes. However, national park lands can be greatly improved for wildlife, and particularly bird use, by restoring processes important for habitat formation, succession, and structural development. Largely, these processes have not been managed historically in the national park system, but current policy allows for active management of species, populations, and lands to provide for long-term conservation of park resources. Protection, restoration, and enhancement of habitats in CARI can contribute to established habitat goals identified in the WGCP and Southeast Waterbird Conservation plans.

The park is predominantly farm fields with scattered trees located where old fenced lines once existed. These remnant trees provide marginal vegetative cover for nesting landbirds. Although opportunities for avian conservation are limited by the park's small areal extent and mission to maintain its plantation landscape, overall habitat quality could be improved through invasive species management and efforts to restore and manage native vegetation (where appropriate). Specific recommendations are to:

- **convert old field exotic grasses to native warm season grasses, and manage these with prescribed fire (and mowing as necessary) using an appropriate burning/mowing regime***
- **work with private landowners and National Resource Conservation Service (NRCS) conservationists to implement conservation programs on CARI, Heritage Area, and adjacent private lands***
- **evaluate the potential to restore longleaf pine within the Heritage Area***
- **acquire as much land within the authorized boundary as possible***
- **protect existing snag trees, where not identified as a safety hazard, as important to cavity nesting birds***
- **restore riparian habitat along Cane River**
- **document all major habitat management activities, including the location (e.g. UTM coordinates) and a description of methods and of pre- and post-management habitat conditions. This information, when coupled with bird distribution and abundance data, is useful for assessing and replicating conservation actions**
- **assess historic landscape cover and determine feasibility of restoring landscape within the context of the park's enabling legislation**

Threat Management: The park is subject to a wide range of threats and activities that could negatively impact quantity and quality of habitat for birds and other wildlife. Although these threats are unquantified, loss of habitat due to development in the Heritage Area, use of agricultural chemicals, storm run off, exotic plants and animals, and personal watercraft and boats on the Cane River, are believed to be primary threats. The park is encouraged to:

- **maintain the ongoing program to monitor and manage exotic plants through coordination with the Big Thicket Exotic Plant Management Team***
- **work with the local community and private landowners to eliminate domestic and feral cats in the park and Heritage Area***
- **work with the local community and other land conservation interests in the region to minimize habitat fragmentation and potentially restore habitats beneficial to wildlife and bird species of the region***
- **acquire as much land within the authorized boundary as possible within the scope of legislation***
- **contact NRCS conservationists and USFWS personnel to discuss private landowner initiatives applicable to the area***
- **prohibit construction of large communication towers in the park and discourage their construction in the Heritage Area**
- **manage existing fields to avoid nesting season for grassland birds (1 April through 1 July)***

Research

- **determine and compare the historical and contemporary Rock Dove lineages if possible, for potential restoration of Rock Dove population**
- **list park needs and projects on Research Permit and Reporting System web site (RPRS)**
- **develop contact with Gulf Coast Cooperative Ecosystem Studies Unit (CESU) at the Texas A&M University in College Station, TX**

Compliance: Park compliance with the Migratory Bird Treaty Act and the Executive Order 13186 (US Government 2000), Responsibilities of Federal Agencies to Protect Migratory Birds, is necessary to assure that park activities incorporate bird conservation into park planning and operations. Further, to ensure that migratory birds are considered in all phases of park planning processes, especially during the National

Environmental Policy Act (NEPA) and the Director's Order #12 Compliance processes, the park should consider adding specific language in project evaluations that requires consideration and implications of park projects on migratory birds. The MOU being developed between the NPS and the FWS will likely contain specific language requiring a park to consider implications of park projects on migratory birds. Additional considerations are to encourage:

- **park staff to begin specific consideration of migratory birds during park planning processes**
- park staff to attend USFWS training on implementation of EO 13186 at the National Conservation Training Center (NCTC) (when available) or other training on migratory bird conservation in North America. NCTC has several courses and training related to conservation of migratory birds (<http://training.fws.gov/courses.html>)

The USFWS NCTC offers and reserves two tuition free slots for National Park Service employees wishing to attend NCTC courses on a first come, first served basis. Additionally, discount lodging is also available while attending a NCTC course.

Outreach

- **participate in International Migratory Bird Day (IMBD) events with a local partner (<http://birds.fws.gov/imbd.html>) such as the Acadiana Audubon Society, Alexandria Bird Club, etc.***
- **work with private landowners to protect landscapes and habitats of the area through NRCS and USFWS private lands programs***
- **nominate CARI/CRNHA as an Important Bird Area (<http://www.abcbirds.org/iba/nominstr.htm>)***
- **develop outreach and educational programs to enhance visibility of bird conservation issues, which may include interpretation of Rock Dove use, organized bird walks, owl prowls, etc.***
- **encourage accurate documentation of observations from recreational birding by visitors (see Cornell University's eBird monitoring program (Cornell Lab. Ornith. 2002 (<http://www.ebird.org/about/index.jsp>))***
- **work with adjacent landowners and neighbors, the local community, and public officials to curb unregulated and free roaming feral and domestic dogs and cats in the park***

- **support bird conservation by serving shade-grown coffees at meetings, events, and the office buildings in the park**
(<http://www.americanbirding.org/programs/conssbcof3.htm>)*
- contact and partner with the Alexandria Bird Club or Acadiana Audubon Society to implement portions of this plan
- park staff are encouraged to attend USFWS training on Migratory Bird Education at NCTC
- consider adding links to bird conservation information, data, etc. to the park's web site home page
- Subscribe to LABIRD-L, an electronic forum for discussion of birds in Louisiana: Subscription: listserv@listserv.lsu.edu; Message subscribe labird-l Your Name

Partners and Partnerships: Partnerships for land conservation and protection will perhaps have the greatest positive influence on bird conservation above all other landscape scale planning. This opportunity at CARI has presents tremendous potential due to the large partnership based previously established with the creation of the Cane Rive National Heritage Area. Foremost, park staff is encouraged

- **to utilize the existing partnership framework and resources to assist in achieving goals of the park and for this plan**

Additional recommendations are to:

- **keep abreast of Winn, Grant, and Natchitoches Parishes and other local initiatives that could impact park resources***
- **contact NRCS, and USFWS private lands biologists to discuss private landowner initiatives applicable to the area***

Several private landowner programs could be implemented that would serve to protect areas adjacent to CARI and potentially improve water and habitat quality in the vicinity

- **partner with Red River National Wildlife Refuge and Kisatchie National Forest staffs to coordinate and cooperate on aspects of this plan and voluntary conservation efforts on Heritage Area lands**
- **develop partnership with Louisiana Department of Fish and Wildlife staffs to implement aspects of this plan***
- **contact the Lower Mississippi Valley Joint Venture office (see Funding section for explanation of Joint Ventures) to develop partnerships and**

funding proposals tiered to priorities established by the park, this ACIP, and the WGCP bird conservation plan*

- contact and partner with the Alexandria Bird Club or Acadiana Audubon Society (<http://www.jjaudubon.net/acadia.htm>) to implement portions of this plan
- evaluate local or regional land use data and plan potential for habitat protection across organizational boundaries
- develop land use agreements with local landowners through state, FWS programs

Funding Opportunities: Internal NPS funding is often an effective source to obtain funding; however, the project will have to be a fairly high priority among the park's natural resource program to successfully compete for the limited funding available in the NPS. Therefore, partnerships and outside funding programs are often more productive for securing bird conservation funding. CARI is encouraged to enter all high priority projects into the NPS Performance Management Information System (PMIS) database. Funding for conservation projects for Neotropical migrants is also available through the Park Flight program. Suggestions include:

- **increase base funding to implement basic protection and management needs for birds and their habitats (habitat based management not only benefits the birds but other wildlife as well)**

With the exception of the North American Waterfowl Management Plan (NAWMP and its associated funding legislation, the North American Wetland Conservation Act), funding opportunities for bird conservation programs, plans, and initiatives have been lacking. Only within the last decade have other appropriate and specific sources for bird conservation funding been created and used. The NAWMP has been supported for approximately 14 years by the North American Wetlands Conservation Act (NAWCA 1989). This program has provided \$487 million in appropriated funds matched with \$1.7 billion for wetland and bird conservation projects since its inception. In 2002 alone, over \$70 million US dollars were awarded to US and Canadian agencies and organizations to enhance waterfowl populations by improving, restoring, or protecting wetland habitats. To adequately evaluate projects and distribute these funds, partnerships called Joint Ventures were established. Nationally, 14 (11 US, 3 Canada) Joint Ventures have been established, several which are funded and staffed. Internet links to Joint Ventures are:

(<http://southwest.fws.gov/gulfcoastjv/ojvcontact.html>) and
(<http://northamerican.fws.gov/NAWMP/jv.htm>).

Funding through NAWCA is highly underutilized by the NPS and any park unit that has wetland, water, or bird conservation needs associated with wetland are encouraged to

investigate using this funding source. Naturally, there are certain requirements to be eligible for all grants and park managers are encouraged to consult with the nearest Joint Venture, BCR, or PIF Coordinator to learn how this program might be applicable to implementation of this plan, and other park wetland issues. CARI/CRNHA is within the operational Lower Mississippi Valley Joint Venture. Contact needs to be made with the coordinator of this Joint Venture to explore opportunity to investigate use of this funding source and developing proposals.

Internal FWS funding programs may be used to support projects, but no effective method of project proposal delivery to these sources is currently in place for the NPS. Current funding in these programs may result from FWS familiarity with NPS needs, or NPS participation in one of the area FWS Ecosystem Teams, where a project has been identified and proposed to be funded through the Ecosystem Team. The park is encouraged to:

- **contact the Arkansas-Red Ecosystem Team and consider participation in their planning efforts**

One largely unexplored yet potentially fruitful funding source for national parks is the myriad of grants through the FWS State Programs, where grants are awarded to private individuals engaged in habitat conservation projects. No funding is directly available to national parks, but identified projects with important or critical adjacent landowners can sometimes be funded through these sources. Similar programs are available if the adjacent landowner is a federally recognized American Indian tribe.

Specific congressional appropriations to protect migratory birds have recently been authorized under the Neotropical Migratory Bird Conservation Act (2000) (<http://www.nfwf.org/programs/nmbcapp.htm>). Appropriations through this Act are authorized up to \$5 million per year. However, in 2004, appropriation was approximately \$4 million and a majority of this funding was directed toward projects in Central and South America.

Many of the identified projects are eligible for funding under various grant programs of the National Fish and Wildlife Foundation: <http://www.nfwf.org/programs/programs.htm>.

Other prominent funding sources available to NPS managers for bird conservation are listed on this projects web site at: <http://southeast.fws.gov/birds/NPSHighlits.htm>.

Funding opportunities for migratory bird conservation are available yet most natural resource agencies are not fully aware of and/or understanding of how to use these sources. Perhaps a consolidated migratory bird funding source catalog will become available to managers in the future; this is needed.

Contacts

Primary contacts within the region can be obtained by viewing the web site for the Southeastern Bird Conservation Initiative, National Park Service at <http://southeast.fws.gov/birds/npsbirds.htm>. This web site will provide contact information of the appropriate bird conservation coordinator in the region for park personnel.

<p>US Fish and Wildlife Service Charles Baxter Lower Mississippi Valley Joint Venture Vicksburg, MS 601 629-6600 Charles_Baxter@fws.gov</p>	<p>Chuck Hunter Regional Refuge Biologist Atlanta, GA 404-679-7130 Chuck_Hunter@fws.gov</p>
<p>Pat Stinson Private Lands Biologist Jackson, MS 601-965-4903 Pat_Stinson@fws.gov</p>	<p>National Park Service Laura Gates Cane River Creole NHP Natchitoches, LA Laura_Gates@nps.gov</p>
<p>Keith Watson Asheville, NC 828-350-8228 Keith_Watson@fws.gov</p>	<p>Paul Conzelmann Gulf Coast Inventory & Monitoring Network Coordinator National Park Service 337 482-0644 Paul_Conzelmann@nps.gov</p>
<p>Michael W. Johnson Arkansas-Red Ecosystem Team Crossett, AR 870-386-2700 Michael_W_Johnson@fws.gov</p>	<p>Eric Worsham National Park Service Exotic Plant Management Coordinator Big Thicket National Preserve 409-839-2689 x 225 Eric_Worsham@nps.gov</p>
<p>Red River National Wildlife Refuge 318-726-4222 northlarefuges@fws.gov</p>	<p>David Muth Jean Lafitte NHP&P New Orleans, LA David_Muth@nps.gov</p>
<p>Jennifer Wheeler Waterbird Conservation Plan Coordinator 703-358-1714 Jennifer_A_Wheeler@fws.gov</p>	<p>John Yancy Gulf Coast CESU Atlanta, GA 404-562-3279 John_Yancy@nps.gov</p>

<p>Others Nancy Higginbotham Louisiana Partners In Flight Coordinator 225-765-2976 higginbotham_ne@wlf.state.la.us</p>	<p>Jim Neal PIF West Gulf Coastal Plain Physiographic Area Coordinator 409-569-6129 jim_neal@fws.gov</p>
<p>Dwight LeBlanc Louisiana Wildlife Services State Director Port Allen, Louisiana 70767 225-389-0229 Dwight.LeBlanc@aphis.usda.gov</p>	<p>Alexandria Bird Club Loose Alliance of Casual and/or Keen Bird Watchers of Central La. E. V. "Tiny" Moore Alexandria, LA evonpelt82@yahoo.com</p>
<p>Wiley Barrow US Geological Survey Lafayette, LA 337-266-8668 wylie_barrow@usgs.gov</p>	<p>Ken Danzak Kisatchie NF Pineville, LA 318-473-7192 kdanzak@fs.fed.us</p>
<p>Dan Twedt US Geological Survey 601-629-6605 Vicksburg, MS dan_twedt@usgs.gov</p>	<p>Acadiana Audubon Society Lafayette, Louisiana http://www.jjaudubon.net/acadia.htm</p>

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APPENDIX A

Priority Species List for Breeding Birds in West Gulf Coastal Plain

Draft Date 8-2-01

SPECIES	Area	TIER	SCORE	G-RA	G-BD	G-ND	TN-L	TB-L	AI_B	PT-B	%pop	Threshold
<i>I.A. Highest Overall Priority</i>												
Red-cockaded Woodpecker	S42	I.A.	30	4	4	4	5	5	4	4	13.3	6
Swallow-tailed Kite (SE US Subsp.)	S42	I.A.	29	4	5	4	4	4	3	5	?	6
Swainson's Warbler	S42	I.A.	29	4	4	5	4	4	5	3	47.1	6
Swallow-tailed Kite	S42	I.A.	28	4	5	4	4	4	2	5	7.5	6
Bewick's Wren (Eastern Subsp.)	S42	I.A.	28	4	4	4	4	5	2	5	?	6
<i>I.B. High Overall Priority</i>												
American Kestrel (Southeastern Subsp.)	S42	I.B.	27	4	4	4	3	4	4	4	?	6
Kentucky Warbler	S42	I.B.	27	4	3	4	3	3	5	5	17.3	6
Bachman's Sparrow	S42	I.B.	26	3	4	4	4	4	3	4	6.3	6
Least Tern (Interior Subsp.)	S42	I.B.	25	4	4	3	3	4	3	4	?	6
Prothonotary Warbler	S42	I.B.	25	4	3	4	3	3	3	5	4.8	6
Prairie Warbler	S42	I.B.	25	3	3	4	2	4	4	5	4.9	6
Cerulean Warbler	S42	I.B.	25	4	4	4	4	4	2	3	0.12	6
Chuck-will's-widow	S42	I.B.	24	4	2	3	3	3	4	5	7.1	6
Brown-headed Nuthatch	S42	I.B.	24	3	4	4	3	3	5	2	15.8	6
Least Tern	S42	I.B.	23	3	2	4	4	4	2	4	?	6
Bell's Vireo	S42	I.B.	23	3	3	5	3	4	2	3	0.2	6
White-eyed Vireo	S42	I.B.	23	3	2	4	2	3	5	4	20.2	6
Bewick's Wren	S42	I.B.	23	3	2	2	4	5	2	5	0.02	6
Wood Thrush	S42	I.B.	23	3	2	4	4	3	3	4	3.4	6
Worm-eating Warbler	S42	I.B.	23	4	3	4	4	3	2	3	3.9	6
Hooded Warbler	S42	I.B.	23	3	2	4	3	3	5	3	26.4	6
Orchard Oriole	S42	I.B.	23	3	2	3	2	3	5	5	5.9	6
American Woodcock	S42	I.B.	22	4	2	3	4	4	2	3	--	6
Red-headed Woodpecker	S42	I.B.	22	4	2	2	3	3	4	4	3.2	6
Scissor-tailed Flycatcher	S42	I.B.	22	2	4	5	3	2	2	4	3.3	6
Louisiana Waterthrush	S42	I.B.	22	4	2	3	4	3	3	3	4.1	6
Painted Bunting	S42	I.B.	22	2	4	3	3	4	3	3	5.6	6

SPECIES	Area	TIER	SCORE	G-RA	G-BD	G-ND	TN-L	TB-L	AI-B	PT-B	%pop	Threshold
<i>II.A. High Regional Concern</i>												
Yellow-billed Cuckoo	S42	II.A	21	3	1	2	3	3	5	4	7.5	6
Eastern Wood-Pewee	S42	II.A.	21	3	1	2	3	3	4	5	5.3	6
Carolina Chickadee	S42	II.A.	21	3	3	3	1	2	5	4	11.6	6
Ruby-throated Hummingbird	S42	II.A.	20	4	1	3	2	2	5	3	4.7	6
Blue-gray Gnatcatcher	S42	II.A.	20	3	1	2	2	3	5	4	6.8	6
<i>II.A. High Regional Concern (cont.)</i>												
Black-and-white Warbler	S42	II.A.	20	3	2	2	2	3	3	5	2	6
Eastern Kingbird	S42	II.A.	19	3	1	2	2	3	4	4	2.3	6
Northern Rough-winged Swallow	S42	II.A.	19	3	1	3	2	2	3	5	0.6	6
Brown Thrasher	S42	II.A.	19	3	1	3	2	3	3	4	1.1	6
<i>II.B. High Regional Responsibility</i>												
Acadian Flycatcher	S42	II.B.	21	3	2	4	3	3	4	2	8.7	6
Yellow-throated Vireo	S42	II.B.	21	4	2	3	3	3	4	2	8.2	6
Pine Warbler	S42	II.B.	20	3	3	3	2	2	5	2	23	6
Red-bellied Woodpecker	S42	II.B.	19	3	2	3	2	2	5	2	6.5	6
Summer Tanager	S42	II.B.	19	3	2	2	2	3	5	2	15.7	6
<i>II.C. High Regional Threats</i>												
Northern Bobwhite	S42	II.C.	21	2	2	2	4	4	2	5	1.2	6
Painted Bunting (Western Subsp.)	S42	II.C.	21	2	4	3	3	4	3	2	?	6
White Ibis	S42	II.C.	20	2	3	3	3	4	2	3	?	6
Dickcissel	S42	II.C.	20	2	2	4	4	4	2	2	1	6
Bald Eagle	S42	II.C.	19	4	2	1	3	4	2	3	--	6
American Kestrel	S42	II.C.	19	4	1	1	3	4	2	4	0.1	6
Loggerhead Shrike	S42	II.C.	19	3	1	1	3	4	2	5	0.8	6
DO NOT INCLUDE IIIA SPECIES												
<i>III.A Regional Stewardship Priority</i>												
Little Blue Heron	S42	III.A	18	3	1	1	4	4	3	2	7.7	6
Yellow-breasted Chat	S42	III.A	18	3	1	3	2	3	5	1	14.4	6
Red-shouldered Hawk	S42	III.A	17	4	2	2	2	2	4	1	11	6
Pileated Woodpecker	S42	III.A	17	4	1	1	2	2	5	2	6.5	6

SPECIES	Area	TIER	SCORE	G-RA	G-BD	G-ND	TN-L	TB-L	AI-B	PT-B	%pop	Threshold
Purple Martin	S42	III.A	17	2	1	1	3	3	5	2	9.6	6
Carolina Wren	S42	III.A	17	2	2	2	2	2	5	2	12	6
Tufted Titmouse	S42	III.A	15	2	2	2	1	1	5	2	7.3	6
Black Vulture	S42	III.A	13	3	1	1	1	2	4	1	9.8	6
Northern Cardinal	S42	III.A	12	1	1	1	1	1	5	2	8.7	6
Cattle Egret	S42	III.A	9	1	1	1	1	1	3	1	8.6	6

III.B. National Watch List

None

IV.A., IV.B., and IV.C. Federally Listed Species, State and Provincially Listed Species, and Species of Local Management Interest

None

Notes: This list is based on Physiographic Area species lists and scores downloaded from the RMBO database April 2001. However, scores reflect changes recommended by Hunter et al. 2001) that have not yet been incorporated into the database (these are indicated on master sheets he left with Demarest). This is a Physiographic Area list for the WGCP and should not be construed as comprehensive for the WGCP BCR, because this BCR also includes a portion of the Ozarks-Ouachitas physiographic area. The WGCP BCR list will be compiled separately using BCR scores downloaded from the RMBO database. This is a draft list and will be circulated to PIF coordinators in OK, TX, AR, and LA for comment.

It is difficult to determine how best to treat resident species that rank into tiers for both the breeding and non-breeding seasons. Though present year-round, some populations of "resident" species are actually comprised of different individuals each season, replacing each other through localized, short-distance migrations. Other populations represent the same individuals year-round. Each of these situations has unique conservation implications, and flatly electing to place emphasis on breeding versus non-breeding season scores (or vice versa) may bias conservation attention away from a season where it may in fact be justified and uniquely beneficial. Thus, species that rank out in the breeding season are shown here whether or not they also rank into tiers in the non-breeding season. Discrepancies are discussed in the text, but breeding season scores are often based on more accurate data, and should therefore be considered with more confidence.

APPENDIX B

Priority Species List for Non-Breeding Birds in West Gulf Coastal Plain

Draft Date 8-2-01

SPECIES	Area	TIER	SCORE	G-RA	G-BD	G-ND	TN-W	G-TB	AI-W	G-PT	%pop	Threshold
<i>I.A. Highest Overall Priority</i>												
Red-cockaded Woodpecker	S42	I.A.	31	4	4	4	5	5	4	5	--	--
<i>I.B. High Overall Priority</i>												
Henslow's Sparrow	S42	I.B.	27	4	3	5	4	4	3	4	--	--
American Woodcock	S42	I.B.	26	4	2	3	3	4	5	5	--	--
Brown-headed Nuthatch	S42	I.B.	26	3	4	4	3	3	5	4	--	--
Bachman's Sparrow	S42	I.B.	26	3	4	4	4	4	3	4	--	--
Smith's Longspur	S42	I.B.	26	4	4	5	4	3	3	3	--	--
Sprague's Pipit	S42	I.B.	25	3	4	3	3	4	3	5	--	--
LeConte's Sparrow	S42	I.B.	24	3	2	4	4	4	5	2	--	--
Harris's Sparrow	S42	I.B.	23	3	4	4	3	2	2	5	--	--
Ross's Goose	S42	I.B.	22	4	5	4	3	2	2	2	--	--
Short-billed Dowitcher	S42	I.B.	22	4	3	2	3	2	3	5	--	--
Red-headed Woodpecker	S42	I.B.	22	4	2	2	3	3	3	5	--	--
Loggerhead Shrike	S42	I.B.	22	3	1	1	3	4	5	5	--	--
Brown Thrasher	S42	I.B.	22	3	1	3	2	3	5	5	--	--
Field Sparrow	S42	I.B.	22	3	2	2	3	3	4	5	--	--
<i>II.A. High Regional Concern</i>												
Greater Scaup	S42	II.A.	20	3	2	2	3	2	3	5	--	--
Northern Bobwhite	S42	II.A.	20	2	2	2	3	3	3	5	--	--
Killdeer	S42	II.A.	20	3	1	2	3	3	3	5	--	--
Red-bellied Woodpecker	S42	II.A.	20	3	2	3	2	2	5	3	--	--
Carolina Chickadee	S42	II.A.	20	3	3	3	1	2	5	3	--	--
Lark Sparrow	S42	II.A.	20	3	1	3	2	3	3	5	--	--
Grasshopper Sparrow	S42	II.A.	20	3	1	2	3	3	3	5	--	--
Rusty Blackbird	S42	II.A.	20	4	1	2	3	2	3	5	--	--

SPECIES	Area	TIER	SCORE	G-RA	G-BD	G-ND	TN-W	G-TB	AI-W	G-PT	%pop	Threshold
Horned Grebe	S42	II.A.	19	4	1	2	2	2	3	5	--	--
American Wigeon	S42	II.A.	19	3	1	2	2	3	4	4	--	--
Northern Pintail	S42	II.A.	19	3	1	1	2	3	4	5	--	--
Yellow-bellied Sapsucker	S42	II.A.	19	3	2	2	2	2	5	3	--	--
Spotted Towhee	S42	II.A.	19	2	2	2	2	3	3	5	--	--
Eastern Towhee	S42	II.A.	19	2	2	2	2	3	3	5	--	--
Eastern Meadowlark	S42	II.A.	19	2	1	1	3	3	4	5	--	--

II.B. High Regional Responsibility

None as yet

II.C. High Regional Threats

Short-eared Owl (if not a IIB)	S42	II.C.	21	4	1	1	4	4	2	5	--	--
Sedge Wren (if not a IIB)	S42	II.C.	21	3	3	3	3	4	3	2	--	--
Canvasback (if not a IIB)	S42	II.C.	20	3	1	2	3	4	3	4	--	--
Redhead (if not a IIB)	S42	II.C.	20	3	2	2	3	4	2	4	--	--
Northern Harrier (if not a IIB)	S42	II.C.	20	4	1	1	3	4	3	4	--	--
Bewick's Wren (if not a IIB)	S42	II.C.	19	3	2	2	4	3	2	3	--	--

III.A Regional Stewardship Priority

None as yet

III.B. National Watch List

None as yet

IV.A., IV.B., and IV.C. Federally Listed Species, State and Provincially Listed Species, and Species of Local Management Interest

None as yet

Notes:

This list does not show species below tier IIA because PP and RR values and corresponding thresholds have not been calculated for the non-breeding season, thus preventing species to be tiered into IIB and IIIA. These tiers require this ancillary information (Note how no species in the Physiographic Area Excel database has been tiered into IIB or IIIA). This issue is pending a discussion with RC's and RMBO.

This list is based on Physiographic Area species lists and scores downloaded from the RMBO database April 2001. However, scores may reflect changes recommended by ~~Chuck~~ Hunter (et al. 2001) that have not yet been incorporated into the database (these are indicated on master sheets he left with Demarest).

This is a Physiographic Area list for the WGCP and should not be construed as comprehensive for the WGCP BCR, because this BCR also includes a portion of the Ozarks-Ouachitas physiographic area. The WGCP BCR list will be compiled separately using BCR scores downloaded from the RMBO database. This is a draft list and will be circulated to PIF coordinators in OK, TX, AR, and LA for comment.

It is difficult to determine how best to treat resident species that rank into tiers for both the breeding and non-breeding seasons. Though present year-round, some populations of "resident" species are actually comprised of different individuals each season, replacing each other through localized, short-distance migrations. Other populations represent the same individuals year-round. Each of these situations has unique conservation implications, and flatly electing to place emphasis on breeding versus non-breeding season scores (or vice versa) may bias conservation attention away from a season where it may in fact be justified and uniquely beneficial. Thus, species that rank out in the non-breeding season are shown here whether or not they also rank into tiers in the breeding season. Discrepancies are discussed in the text, but breeding season scores are often based on more accurate data, and should therefore be considered with more confidence.

APPENDIX C

Priority Habitats and Bird Assemblages in the West Gulf Coastal Plain

Oak/hickory forest

Kentucky Warbler
Bewick's Wren
American Kestrel
Chuck-will's-widow
Hooded Warbler
Worm-eating Warbler
White-eyed Vireo
Yellow-billed Cuckoo
Eastern Wood-pewee
Louisiana Waterthrush
Orchard Oriole

Oak/gum/cypress, bottomland hardwood forests

Swallow-tailed Kite
Swainson's Warbler
Cerulean Warbler
Prothonotary Warbler
White-eyed Vireo
Yellow-billed Cuckoo
Red-headed Woodpecker

Longleaf/slash pine forest

Red-cockaded Woodpecker
Henslow's Sparrow
Bachman's Sparrow
American Kestrel
LeConte's Sparrow
Brown-headed Nuthatch
Scissor-tailed Flycatcher
Eastern Wood-pewee
Red-headed Woodpecker

Loblolly/shortleaf pine forest

Henslow's Sparrow
Bachman's Sparrow

American Kestrel
LeConte's Sparrow
Chuck-will's-widow
Hooded Warbler
Brown-headed Nuthatch
Prairie Warbler
Scissor-tailed Flycatcher
Eastern Wood-pewee

Mixed pine/hardwood forest

Bewick's Wren
Henslow's Sparrow
Bachman's Sparrow
American Kestrel
Kentucky Warbler
Chuck-will's-widow
Hooded Warbler
Worm-eating Warbler
LeConte's Sparrow
Scissor-tailed flycatcher
Bell's vireo
Prairie Warbler
Yellow-billed cuckoo
Eastern Wood-pewee
Louisiana Waterthrush

Grassland/shrubland

Henslow's Sparrow
Bewick's Wren
Bachman's Sparrow
American Kestrel
Sprague's Pipit
LeConte's Sparrow
Scissor-tailed Flycatcher
Bell's Vireo
Prairie Warbler

Riparian woodlands

Swainson's Warbler
Kentucky Warbler
Cerulean Warbler
Hooded Warbler
Yellow-billed Cuckoo
Louisiana Waterthrush

APPENDIX D

RARE, THREATENED AND ENDANGERED BIRDS OF LOUISIANA (JULY 9, 1996)

Scientific Name	Common Name	State Rank	Global Rank	FWS
ACCIPITER COOPERII	COOPER'S HAWK	S2B	G4	
AIMOPHILA AESTIVALIS	BACHMAN'S SPARROW	S3	G3	C2
AJAIA AJAJA	ROSEATE SPOONBILL	S2	G5	
AMMODRAMUS HENSLOWII	HENSLOW'S SPARROW	S3N	G4	C2
AMMODRAMUS SAVANNARUM	GRASSHOPPER SPARROW	S3	G5	
AQUILA CHRYSAETOS	GOLDEN EAGLE	S1N	G4	
ASIO FLAMMEUS	SHORT-EARED OWL	S2S3?N	G5	
CAMPEPHILUS PRINCIPALIS	IVORY-BILLED WOODPECKER	SH	G1	LE
CARACARA PLANCUS	CRESTED CARACARA	S1	G5	LTNL
CHARADRIUS ALEXANDRINUS	SNOWY PLOVER	S1B,S2N	G4	
CHARADRIUS MELODUS	PIPING PLOVER	S2N	G3	LELT
CHARADRIUS WILSONIA	WILSON'S PLOVER	S3B	G5	
CHONDESTES GRAMMACUS	LARK SPARROW	S2S3B	G5	
COLUMBINA PASSERINA	COMMON GROUND-DOVE	S1	G5	
DENDROICA CERULEA	CERULEAN WARBLER	S1B	G4	C2
DENDROICA PETECHIA	YELLOW WARBLER	SAB	G5	
EGRETTA RUFESCENS	REDDISH EGRET	S2	G4	C2
ELANOIDES FORFICATUS	AMERICAN SWALLOW-TAILED KITE	S1S2B	G5	
FALCO PEREGRINUS	PEREGRINE FALCON	S2N	G4	E(S/A)
GRUS AMERICANA	WHOOPING CRANE	SH	G1	LE
GRUS CANADENSIS	SANDHILL CRANE	S1N	G5	
HAEMATOPUS PALLIATUS	AMERICAN OYSTERCATCHER	S1B	G5	
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	S3B	G4	LTNL
HELMITHEROS VERMIVORUS	WORM-EATING WARBLER	S3S4B	G5	
LATERALLUS JAMAICENSIS	BLACK RAIL	S2?N	G4?	C2
LOPHODYTES CUCULLATUS	HOODED MERGANSER	S2B	G5	
NUMENIUS BOREALIS	ESKIMO CURLEW	SH	G1	LE
PANDION HALIAETUS	OSPREY	S2B	G5	
PELECANUS ERYTHORHYNCHOS	AMERICAN WHITE PELICAN	S3N	G3	
PELECANUS OCCIDENTALIS	BROWN PELICAN	S2	G4	LENL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	S2	G2	LE
PLEGADIS FALCINELLUS	GLOSSY IBIS	S2	G5	
SCOLOPAX MINOR	AMERICAN WOODCOCK	S1B	G5	

Scientific Name	Common Name	State Rank	Global Rank	FWS
SEIURUS MOTACILLA	LOUISIANA WATERTHRUSH	S3B	G5	
SETOPHAGA RUTICILLA	AMERICAN REDSTART	S3B	G5	
SITTA CAROLINENSIS	WHITE-BREASTED NUTHATCH	S2	G5	
SPEOTYTO CUNICULARIA	BURROWING OWL	S1S2?N	G4	
STERNA ANTILLARUM ATHALASSOS	INTERIOR LEAST TERN	S1B	G4T2Q	LENL
STERNA CASPIA	CASPIAN TERN	S1S2B	G5	
STERNA FUSCATA	SOOTY TERN	S1B	G5	
STERNA NILOTICA	GULL-BILLED TERN	S2B	G5	
VERMIVORA BACHMANII	BACHMAN'S WARBLER	SH	G1	LE
VIREO BELLII	BELL'S VIREO	SHB	G5	
VIREO GILVUS	WARBLING VIREO	S1B	G5	

Federal Status

Federally listed animals are protected by the Endangered Species Act of 1973 (as amended), and the list is maintained by the U.S. Fish and Wildlife Service. The USFWS simplified the assignment of various "candidate species" designations in 1997, and those changes are reflected here.

Applicable federal statuses are defined as follows:

LE	Listed Endangered	Taxon is threatened by extinction throughout all or a significant portion of its range
E/SA	Endangered by Similarity of Appearance	Taxon is treated as an endangered species because it may not be easily distinguished from a listed species
LT	Listed Threatened	Taxon is likely to become an endangered species in the foreseeable future
T/SA	Threatened by Similarity of Appearance	Taxon is treated as a threatened species because it may not be easily distinguished from a listed species
PE	Proposed Endangered	Taxon proposed for listing as endangered
PT	Proposed Threatened	Taxon proposed for listing as threatened
C	Candidate species***	Taxon for which the USFWS has sufficient information to support proposals to list the species as threatened or endangered, and for which the Service anticipates a listing proposal
MC	Management Concern	Unofficial federal status for potential future candidate species
(PS)	Partial Status (based on taxonomy)	Taxon which is listed in part of its range, but for which Louisiana subspecies are NOT included in the Federal designation

(PS: status)	Partial Status (based on political boundaries)	Taxon which is listed in part of its range, but for which Louisiana populations are NOT included in the Federal designation e.g. (PS:LE)
(status, XN)	Non-essential experimental population in portion of range	Taxon which has been introduced or re-introduced in an area from which it has been extirpated, and for which certain provisions of the Act may not apply

(Modified from Federal Register, 50 CFR Part 17.11 {31 December 1999})

GRANK and SRANK

As a guide in setting conservation priorities, TNC developed a ranking system for estimating the abundance of plants and animals tracked by Heritage programs. The Global Rank (GRANK) is assigned by TNC Central Zoology staff based on the best range wide (global) abundance information for each taxon. A five-tier system (G1-G5) is used to describe rarity, from G1 (extremely rare) to G5 (widespread). The same system is applied by DNH to assign the State Rank (SRANK), which describes the species' abundance within our state borders.

SRANK and GRANK are based primarily upon the number of occurrences of the element (species) within the state and range wide, respectively. For obscure or under-studied species, ranks are based on the best available information, and consideration may be given to other factors influencing the rarity of each taxon.

SRANKs used in this list are defined below. GRANKs are similarly defined, except that ranking criteria apply range wide (e.g. an S1 species is "extremely rare" in the state, and a G1 species is "extremely rare" range wide).

S1	Extremely rare and critically imperiled in the state with five or fewer occurrences, or very few remaining individuals, or because of some special condition where the species is particularly vulnerable to extinction.
S2	Very rare and imperiled within the state, six to twenty occurrences, or few remaining individuals, or because of some factor(s) making it vulnerable to extinction.
S3	Rare and uncommon in the state, from 21-100 occurrences.
S4	Widespread, abundant, and apparently secure within the state, but with cause for long-term concern.
S5	Demonstrably widespread and secure in the state
SH	Of historical occurrence in Louisiana, e.g. formally part of the established biota, with the expectation that it may be rediscovered.
SU	Can not be ranked using available information.
SX	Believed to be extirpated from the state.
S#S#	Denotes a "range rank" because the rarity of the species is uncertain (e.g. S1S3).
S?	Unranked at this time
SE	Exotic species established in the state
SE#	Exotic numeric (e.g. European starling would be SE5)
SP	Potentially occurring in Louisiana, but not yet documented by DNH

_N	Occurs in Louisiana in a non-breeding status (several birds)
_B	Breeds in Louisiana
SA	Accidental or casual in the state (several birds)
SR	Reported from the state, but insufficient data to assign rank
SRF	Reported falsely from the state
HYB	Hybrid within its range in Louisiana
SSYN	Synonym for another species
_Q	Questionable taxonomy (GRANKS only)
_T#	Subspecific taxon rank (GRANKS only)

APPENDIX E

USFWS SPECIES OF CONSERVATION CONCERN (2002) in the WEST GULF COASTAL PLAIN/OUACHITAS (BCR 25)

Little Blue Heron
Swallow-tailed Kite
American Kestrel (resident *paulus* ssp. only)
Peregrine Falcon
Hudsonian Godwit
Stilt Sandpiper
Buff-breasted Sandpiper
Short-eared Owl
Chuck-will's-widow
Red-headed Woodpecker
Acadian Flycatcher
Scissor-tailed Flycatcher
Bell's Vireo
Brown-headed Nuthatch
Bewick's Wren
Wood Thrush
Sprague's Pipit
Prairie Warbler
Cerulean Warbler
Prothonotary Warbler
Worm-eating Warbler
Swainson's Warbler
Louisiana Waterthrush
Kentucky Warbler
Bachman's Sparrow
Henslow's Sparrow
Le Conte's Sparrow
Harris's Sparrow
Smith's Longspur
Orchard Oriole