Eye on Nature

TEXAS PARKS & WILDLIFE

FALL 2006 A publication of the Wildlife Diversity Program — *Getting Texans Involved*

Proactive Thinking for rare wildlife

By Arlene Kalmbach and Steven Bender

For years game species in the United States have received the benefit and support of funding derived from the Pitman Robertson Act (1937), a historic measure that supports species through an excise tax on sporting equipment such as rifles. In addition, sportfish received a real boost from the Dingell Johnson Act (1950) which supports conservation through a similar excise tax on fishing gear. Endangered and threatened species find protection and support in the Endangered Species Act (1973). While these important sources of funding and support cast a wide net for wildlife conservation, countless species still slip through the holes. Many of the species not covered by any of these three funding sources are considered rare species. So what are rare species? The reference seems vague. Are rare species defined as those species rare in the world, rare in North America, rare in Texas or rare in my community? For our purpose, we define rare species as those species that are experiencing significant population decline here in Texas but have not yet attained the status of threatened or endangered. While we are sensitive to the ever increasing threat to wildlife and natural places worldwide, as Texans we are tasked with conserving for future generations the wealth of natural resources here in our home state. In contrast to species whose populations have already declined to the point of being listed by the U.S. Fish and Wildlife Service as threatened or endangered, rare species are those species whose populations are declining and who without proactive intervention, are headed for federal listing. Once a species is listed federally or by the state as threatened or endangered the

[Continued on Page 2]

PHOTO COURTESY OF DON MACCARTER, NEW MEXICO DEPT. OF GAME AND FISH

TEXAS PARKS AND WILDLIFE DEPARTMENT MISSION STATEMENT

"To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations."

You may view this publication through the TPWD Web site. Please notify us by completing a request form at **www.tpwd.state.tx.us/enews/**. Once verified, we will notify you by e-mail when a new version of your selected newsletter is posted at **www.tpwd.state.tx.us/newsletters/**. Your name and address will be removed from the printed version mail distribution list.

FOR MORE INFORMATION

All inquiries: Texas Parks and Wildlife Department, 4200 Smith School Rd., Austin, TX 78744, telephone (800) 792-1112 toll free, or (512) 389-4800 or visit our Web site for detailed information about TPWD programs:

www.tpwd.state.tx.us

TEXAS PARKS & WILDLIFE

[Proactive thinking Continued]

road to recovery is difficult and often comes with a substantial price tag and slim odds for success. Conservation efforts targeting rare species therefore become the obvious and more economical approaches to protecting and conserving wildlife. Now more than ever as threats to wildlife and natural resources continue to increase at alarming rates it is imperative that we identify those threats and work in a cohesive manner to prevent accelerated loss. As human populations continue to encroach on natural areas and alter the face of the landscape many once common species are becoming rare.

To these ends, Congress established the State Wildlife Grants Program (SWG) in 2001 to champion the cause of rare species and provide funding for conservation efforts focused on stabilizing, recovering and supporting rare species populations with the goal of preventing future listings. For five years Texas has taken full advantage of SWG funding to target declining species such as the swift fox, the Lesser Prairie Chicken, native grassland restoration, coastal rare species issues, rare species population monitoring, invasive species management and much, much more.

To ensure that SWG funds are spent wisely, Congress, with oversight by U.S. Fish and Wildlife Service, tasked each state and territory utilizing SWG funding to draft a comprehensive wildlife conservation strategy. A big undertaking for any state, but for Texas the task was, well, as big as Texas! Wildlife professionals, natural resource government organizations, private citizens and non-profit environmental organizations all had a hand in the completion of this document.

Now, one year and 1,200 pages later TPWD is proud to announce the completion of the Texas Wildlife Action Plan (formerly known as the Comprehensive Wildlife Conservation Strategy). The Texas action plan is a critical tool in the struggle to protect our natural heritage. Equipped with a catalog of species, their status, their habitats and identified conservation goals for species, habitat and ecoregions of Texas we can move conservation forward in a strategic and calculated manner.

A highly organized composition, the action plan is more than a document; it is an irreplaceable resource for anyone wishing to learn more about the state of Texas' natural biodiversity. As a document it is a hefty read, but as a conservation tool it is incomparable. Ecoregion and species classifications of high, moderate or low priority in the action plan allow conservation practices to be maximized in the areas and species of greatest need. The action plan provides everyone from the graduate student researcher to the professional biologist to the private landowner wishing to improve the natural diversity of his/her land with an organized, streamlined, protocol for conservation in Texas. To receive a copy of the Texas Wildlife Action plan contact TPWD at: (800) 792-1112 or go to www.tpwd.state.tx.us/cwcs and download a copy.

Arlene is LIP/SWG Program Biologist. Steven is a Wildlife Planner. Both work out of Bastrop.

Bald Eagle

By Brent Ortego and Chris Gregory

The Bald Eagle historically nested in the Panhandle, Northeast, Central and Coastal Texas (Oberholser 1974). The subspecies (*H. l. leucocephalus*) became rare in the contiguous United States in the mid-to late 1900s as persecution by humans greatly reduced survival and pesticides, primarily DDT, significantly lowered reproduction (Buehler 2000). The species was listed for protection under the Bald Eagle Protection Act in 1940 and the southern

[Continued on Page 3]

[Proactive thinking Continued]

subspecies which nests in Texas was listed as Endangered in 1966. Texas Parks and Wildlife Department (TPWD) knew of four active Bald Eagle nests in 1971 when nesting surveys commenced.

Both subspecies occur in Texas. The northern (*H.l. alascanus*), primarily visits from October through March during its non-breeding season. The southern breeds in Texas from October through July with many individuals leaving the state after the breeding season. The two subspecies are indistinguishable in the field.

TPWD asked professionals, land managers and birders in the 1970s to determine population status and locate additional nest sites. Survey respondents provided TPWD a better understanding of the distribution and density of wintering populations, but little information on nest sites. TPWD and the U.S. Fish and Wildlife Service conducted aerial surveys during January and February 1975 over eastern Texas (generally east of I.H. 35 and north of Aransas County) to survey known (6) nests near the Coast and locate previously unknown nesting sites throughout East Texas (Smith 1975). Aerial surveys continued in the vicinity of known sites annually, and gradually as the population increased more nests were located from the surveys and reports from cooperating landowners. TPWD was very encouraged in 1982 because numbers of active nests continued to increase reaching a total of 23; all from the lower reaches of rivers along the Coast.

TPWD started to locate nests away from coastal rivers in 1983 when it conducted another broad aerial survey west of I.H. 35. This survey was followed up with smaller scale annual aerial surveys mostly in the vicinity of known nests in following years. TPWD was monitoring 26 active nests in 1987: 18 near the Coast, six in the Pineywoods, and two in the Post Oak Savannah Ecoregions. Aerial surveys were conducted annually at known nest sites, and potential nesting habitats were surveyed if budgets allowed. Landowners were regularly asked about the presence of nesting eagles and these efforts allowed TPWD to track the species as it increased in numbers and expanded its breeding zone. TPWD's last aerial survey occurred from February through April 2005 and it located 156 active nests (Table 1); roughly a 10% increase per year through the 35 year study. Bald Eagles regularly nest today along East Texas rivers, most major reservoirs, and the species is starting to be found nesting in the Edwards Plateau and Panhandle again. The highest nesting concentrations shifted away from the coastal rivers which were the nesting stronghold through the 1980s to major reservoirs: Toledo Bend, Sam Rayburn, Livingston and Conroe. Young produced per nest continue to average greater than 0.7 which is what is needed to maintain stable populations (Sprunt et al. 1973). The Bald Eagle is under review in 2006 to be de-listed from the Endangered Species Act because of its population recovery nationwide.

Brent is a Wildlife Diversity Biologist working out of Victoria. Chris is a Wildlife Biologist working out of Livingston.

Table 1: Bald Eagle Population Trends by Texas River Basin

	Number of Territories	Active Nests	Fledged Young	Young Per Active Nest*
2005 Texas State-wide	**186**	**156**	**206**	**1.4**
West of I.H. 35	**4**	**3**	**5**	**1.7**
Post Oak	**30**	**25**	**38**	**1.7**
Brazos River	5	2	3	3.0
Navasota River	7	7	9	1.3
Neches River	6	6	8	1.6
Sabine River	3	2	2	1.0
Sulphur	2	2	4	2.0
Trinity River	7	6	12	2.0
Pineywoods	**87**	**68**	**85**	**1.4**
Angelina River	19	13	15	1.4
Neches River	2	1	0	0.0
Red River	3	3	4	1.3
Sabine River	36	29	39	1.4
San Jacinto River	10	9	15	1.7
Trinity River	17	13	12	1.3
Coastal Texas	**65**	**60**	**78**	**1.4**
Brazos River	11	11	13	1.3
Colorado River	21	21	33	1.7
Guadalupe River	7	6	6	1.2
Lavaca River	11	11	13	1.3
San Antonio River	4	3	4	2.0
San Bernard River	2	1	2	2.0
San Jacinto River	3	1	2	2.0
Trinity River	4	4	3	0.8
misc. creeks	2	2	2	1.0

* Average is only for active nests with known outcome.

Acknowledgments: We would like to thank the numerous TPWD staff and pilots that assisted with the research and monitoring of Bald Eagles, and the landowners which managed the land that supported the species.

Literature Cited

Buehler, D. A. 2000. Bald Eagle (Haliaeetus leucocephalus). In The Birds of North America, No. 506 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Oberholser, H. C. 1974. The Bird Life of Texas. Univ. Texas Press, Austin.

Smith, J. C. 1975. Bald Eagle Survey. Texas Parks and Wildlife Department Federal Aid in Wildlife Restoration Act Nongame Wildlife Investigations. Job No. 31. 10 pp.

Sprunt, A., IV, W. B. Robertson, Jr., S. Postupalsky, R. J. Hensel, C. E. Knoder, and F. J. Ligas. 1973. Comparative productivity of six Bald Eagle populations. Trans. N. Am. Wildl. Nat. Resour. Conf. 38:96-106.

Ivory-billed Woodpecker

In Texas? Why not?

By John C. Arvin

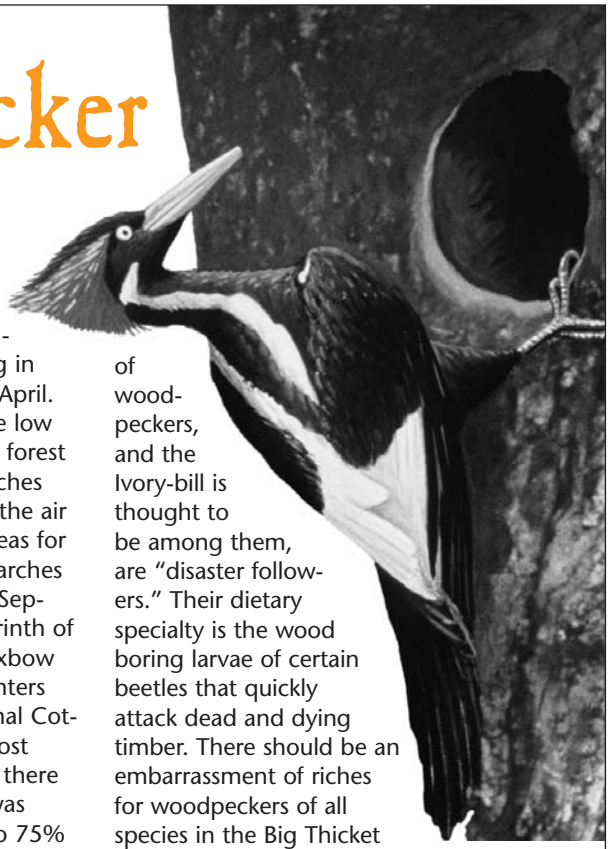


ILLUSTRATION COURTESY OF GEORGE M. SUTTON/CORNELL LAB OF ORNITHOLOGY

When scientists and government officials announced the astounding news that at least one male Ivory-billed Woodpecker, presumed extinct for the past 60 years, had been located in the bottomland hardwood forests of eastern Arkansas in the late spring of 2005 the news went through the birding and ornithological community like an electric shock. The bird had come to be a poignant icon of Americana Lost. That a few had clung to life in the swampy forests of the Mississippi floodplain sparked the hope that this might also be true in other parts of the bird's original range, which essentially consisted of almost all of the Old South. The species once ranged widely through the eastern third of Texas and in 1837 Audubon himself pronounced it "abundant" along Buffalo Bayou in what is present day downtown Houston.

The Ivory-billed Woodpecker has not been definitely recorded within the state since 1904 when Vernon Bailey, a biologist with the National Biological Survey, precursor to the U.S. Fish and Wildlife Service, collected two males in one day (of nine seen) in northeastern Liberty County. Nevertheless, there has been a steady stream of rumors, claims and alleged documentary evidence trickling from the Big Thicket of southeastern Texas, the last stronghold of the species in the state, right up to the present. Within hours of the news release in 2005 I hammered out a proposal to search the area for a remnant population.

Fortunately the USFWS decided that a range wide survey of the former range of this spectacular and charismatic species was long overdue, and funds were made available to conduct a search. We began planning in January and actively searching in April. One of the first steps was to make low level reconnaissance flights of the forest corridors of the lower Sabine, Neches and Trinity Rivers. The view from the air enabled us to pinpoint priority areas for later ground searches. Ground searches were merely difficult prior to last September because of the usual labyrinth of swampy channels, bayous, and oxbow lakes, clouds of biting insects, hunters variously armed, and the occasional Cottonmouth, not to mention the most likely problem, getting lost. Then there was Rita. The entire search area was affected, most of it severely. Up to 75% of the canopy trees are down in some areas. Systematic transects through the forests are impossible now and searchers basically have to follow the course of least resistance. Much of the searching so far, utilizing volunteers, has been by boat, although a combination of low water levels due to the ongoing drought and downed timber has made this difficult as well.

Full time searches will begin in October with the most intense efforts between then and April of 2007 to take advantage of the fall of most of the leaves, greatly increasing visibility both from the air and on the ground. While Rita was in most respects a disaster, both in human and environmental terms, there may be a silver lining if indeed Ivory-bills do still exist in the region. Woodpecker biologists have long been aware that many species of woodpeckers, and the Ivory-bill is thought to be among them, are "disaster followers." Their dietary specialty is the wood boring larvae of certain beetles that quickly attack dead and dying timber. There should be an embarrassment of riches for woodpeckers of all species in the Big Thicket region for a number of years to come.

The bottomland forests of the South, including those in East Texas, are still largely in a state of recovery from the logging excesses early in the 20th century. If a tiny population of Ivory-bills has managed to cling to existence here then habitat conditions are only going to be better and better for them. Even if we are successful in our search, no one of my generation will see the day when this symbol of Wild America can be pronounced saved. But hopefully our grandchildren will have the opportunity to see this incredible species restored in the magnificent forests of our great grandparents.

John is Research Coordinator with the Gulf Coast Bird Observatory in Lake Jackson.

Desert bighorn sheep in Texas

By Froylan Hernandez

There are five "types of sheep native to North America. The Dall's sheep (*O. dalli dalli*) and the Stone's sheep (*O. d. stonei*) are two thin horn sheep that occur in the northern portion of North America (Nichols 1980). The California bighorn (*O. c. californica*), the Rocky Mountain bighorn sheep (*O. canadensis canadensis*) and the desert bighorn (*O. canadensis nelsoni, O. c. mexicana, O. c. cremnobates and O. c. weemsi*) inhabit the southern part of North America (Wishart 1980). The desert bighorn is found in the arid mountains of western and southwestern United States.

Historically, desert bighorn sheep in Texas inhabited the arid mountains of the Trans-Pecos ecoregion. The population was estimated at approximately 1,500 animals in the 1880s. It is commonly agreed that unregulated hunting, diseases associated with introduced livestock and the construction of net-wire fences which impeded movement and fragmented habitat, all contributed to the decline of desert bighorns.

Early efforts to curtail their decline began in 1903 with the closing of all bighorn hunting. Further, in 1945 the Texas Fish and Oyster Commission established the Sierra Diablo Wildlife Management Area in native habitat as a sanctuary. Despite initial efforts, populations continued to decline. Unfortunately, the last native bighorn sheep in Texas were observed in the Sierra Diablo Mountain range in 1960. It is believed that bighorn sheep were extirpated by the early 1960s.

Originally, two Wildlife Management Areas (WMA) were used for captive propagation. The first was Black Gap WMA in 1954 with the construction of a 427-acre sheep pasture. The Texas Game & Fish Commission in cooperation with the state of Arizona stocked the facility with 16 sheep from the Kofa Mountain Range between 1956 and 1959.

The second was Sierra Diablo WMA with the construction of an eight-acre brood facility in 1970 and a 40-acre facility in 1983, the latter being donated to the state by the Texas Bighorn Society.

By 1970, the Black Gap population had grown to 68 animals and 21 sheep were released from the pasture onto the management area. Others were trans-located to the Sierra Diablo WMA Additionally the Sierra Diablo facilities were stocked with sheep from Arizona, Nevada, Utah and Mexico.

A third WMA, Elephant Mountain WMA, was donated to the state in 1985. No captive rearing facilities were constructing. Bighorn sheep on this facility would be free ranging. In 1987, 20 bighorn sheep were captured at the Sierra Diablo brood pens and transferred to the new Elephant Mountain WMA. By 2000, there were an estimated 140–160 bighorns. That same year, 45 sheep were captured and trans-located to Black Gap WMA. The latest Elephant Mountain WMA survey results indicate the population is up to 120–140 and now serves as the Texas brood stock for potential capture/release projects in restoring desert bighorn sheep back into their native habitat

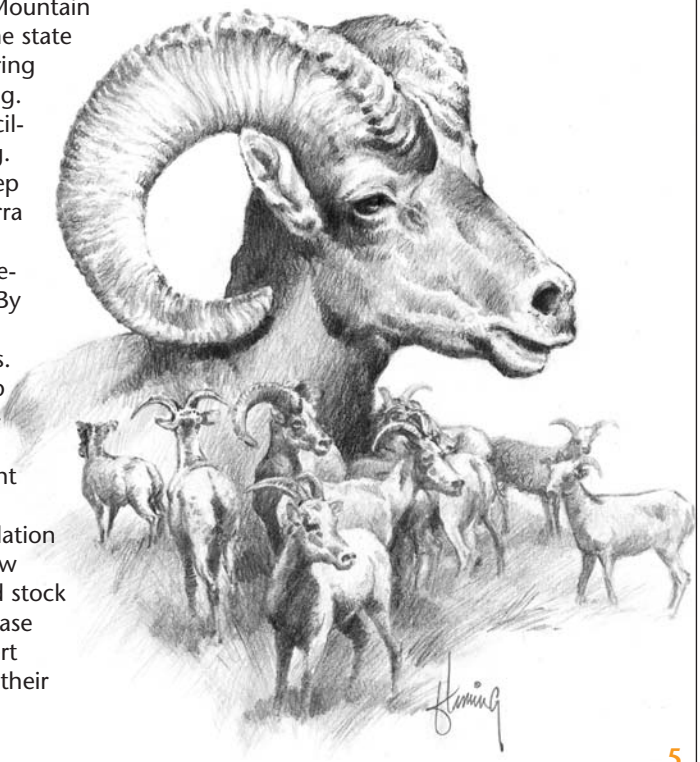
With four major releases at Black Gap WMA between 1994 and 2000, the population is now estimated to be 100-120 animals in the management area, Big Bend National Park and the surrounding private properties.

The sheep from Sierra Diablo WMA propagation facilities have prospered and formed the nucleus of the current free ranging sheep population in the Sierra Diablo, Beach and Baylor Mountain ranges. There are approximately 450 bighorn sheep ranging here. This makes up half of the current estimated Texas bighorn population.

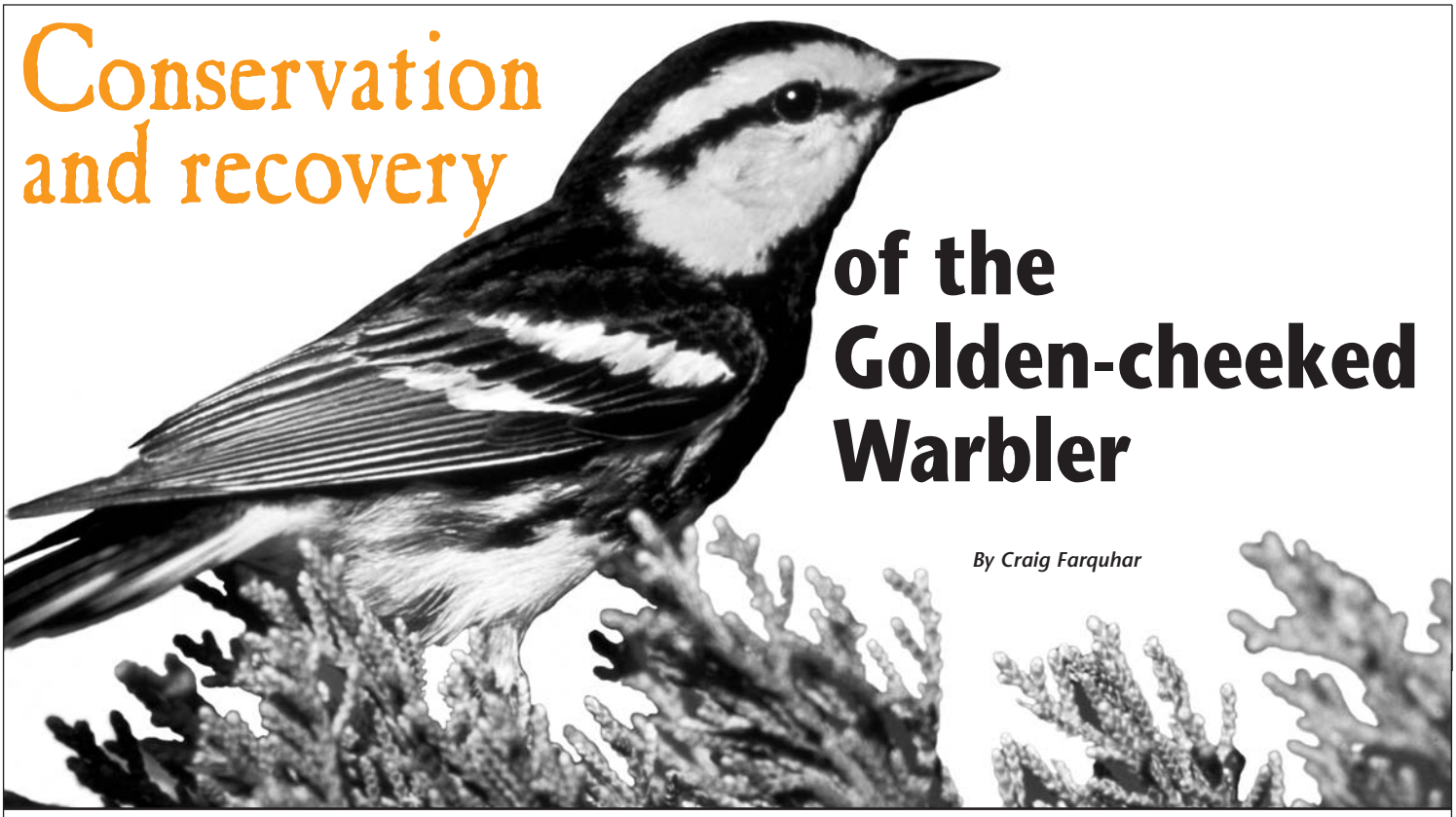
As with all restoration programs, it has not been an easy road. With the cooperation of private landowners, the interest of several groups and organizations including the Texas Bighorn Society, the aide of other state and federal agencies and the countless hours put in by volunteer groups, the desert bighorn restoration effort has been a success.

The bighorn sheep in Texas are estimated to be over 800 strong today. A rare and majestic symbol of the American West has been reestablished in its native habitat through sound management and public and private support.

Froylan is a Wildlife Biologist working at the Elephant Mountain WMA in Brewster.



Conservation and recovery of the Golden-cheeked Warbler



By Craig Farquhar

Since it was listed under emergency rule as a federally (1990) and state (1991) endangered species — due chiefly to excessive habitat loss — the Golden-cheeked Warbler (GCWA; *Dendroica chrysoparia*) has received considerable attention from academic and conservation communities. The Texas Parks and Wildlife Department (TPWD) has contributed heavily toward efforts to conserve and recover this small, elusive and brightly colored member of the breeding avifauna of the Texas Hill Country's mature oak-juniper woodlands. Beginning with the seminal review of the literature and remote sensing data from the mid-1980s which put habitat loss at an alarming 35% over a roughly 20-year period, and proceeding immediately to the generation of the species' official Recovery Plan in 1992, TPWD has been instrumental in coordinating research and policy aimed at GCWA. Many projects, most funded by federal aid programs through TPWD, have been launched in the 15 years since this species was listed.

Recently, through funding from Cooperative Endangered Species Conservations Funds (Section 6, Endangered Species Act) administered by our agency, two very important projects have commenced which will fill big gaps in our understanding of GCWA. One, conducted by the University of Missouri's Resource Assessment Partnership, focuses on producing a state-of-the-art geographic distribution map of breeding habitat in Texas using high resolution satellite imagery along with digital data on soils, geology, topography, precipitation, aspect, slope and habitat quality. This product is due to be completed in mid-2007 and will be the standard map reference for this species. The other project, performed by the non-governmental conservation group, SalvaNatura, in El Salvador, is set to begin in winter 2006. This project was designed to address critical distribution and status questions in the little-known non-breeding (wintering) range of southern Mexico and northern Central America. Intensive surveys will be conducted throughout known and suspected wintering areas in pine-oak forest communities of El Salvador, Nicaragua, Honduras, Guatemala and southern Mexico (Chiapas) over two winter seasons. This effort stems from a symposium in November, 2003, in Chiapas, Mexico, entitled, "Conservación de bosques de pino-encino y Dendroica chrysoparia" ("Conservation of Pine-Oak Forests and Dendroica chrysoparia") during which TPWD staff was invited to present a paper summarizing contributions to conservation and recovery of GCWA in Texas. We also engaged in discussions that led to the formation of a multinational collaborative effort to conserve GCWA and its imperiled habitat in Central America, called the "Alliance for Conservation of Pine-Oak Ecosystems and their Avifauna." This organization sought and received funding from the Neotropical Migratory Bird Conservation Act for the purpose of pursuing objectives related to the science and policy of conserving the GCWA's wintering habitat. It is now widely regarded as the key scientific group for conservation of GCWA in Latin America.

Currently, TPWD, along with the U.S. Fish and Wildlife Service (USFWS) and several academic institutions and non-governmental agencies, is involved in the process of addressing the latest population trends, distributional data and conservation issues defining official GCWA status. This federally-mandated "status review" will serve to give guidance to the USFWS as they render an opinion regarding whether the species still warrants its current listing, or whether down- or delisting might be advised. In all phases of GCWA conservation and management range-wide TWPD will continue to be involved at the highest levels in order to ensure its eventual recovery.

Craig is a Program Specialist working out of Austin.

[The back porch Continued]

landowners are offering their ranches as reintroduction sites for Black-tailed prairie dogs threatened with urban expansion on other parts of their range. In the Hill Country, excessive white-tailed deer populations require control using longer hunting seasons and higher bag limits offered by the Managed Lands Deer Permit Program under voluntary wildlife management plans written for cooperating landowners. These same plans may also include information on how to protect an important bat cave or spring, identify endangered cactus, and offer eco-tours. In the mixed woodlands of East Texas, Bobwhite quail are rapidly becoming the state's next endangered species. Concerned landowners are forming cooperatives to restore native grasslands and savannahs to recover this popular gamebird. This shift in land use will ultimately provide habitat for numerous other species of concern such as Henslow's and Bachman's sparrows.

Just as important as working with private landowners is engaging an urban public far removed from the rural landscape. Numerous hands-on activities for "citizen science" are offered through the Wildlife Diversity Program including Nature Trackers, Master Naturalists, the Texas Wildscapes Program and others.

This combination of technical assistance to private landowners and urban outreach will help us recover those species of concern as identified in the Texas Wildlife Action Plan.

To get involved in any of the programs mentioned, contact us at www.tpwd.state.tx.us or call (800) 792-1112.

Matt is director of the Wildlife Diversity Program working out of Austin.

Wild Stuff!

❒ Wildlife Posters

(Please indicate quantity when ordering.)

___**You Can Help Texas Turtles** (pictured)

___**Bats of the Western United States**

___**Venomous Snakes of Texas**

___**Migratory Landbirds of the Southeast**

___**Common Feeder Birds of Eastern North America**

___**Common Feeder Birds of Western North America**

$2 each plus $3 shipping and handling for up to 4 posters. Shipping $1 per poster after 4 posters.

❒ Checklist of Texas Birds

(Please indicate quantity when ordering.)

___**Number of Copies**

The newest edition of *a checklist of Texas Birds* is now available (pictured).

Including 632 species in good standing.

$2 plus shipping and handling.

PLEASE PRINT

Name _____

Address _____

_____

City _____

State _____ Zip _____

Send this form along with your payment to:
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, TX 78744

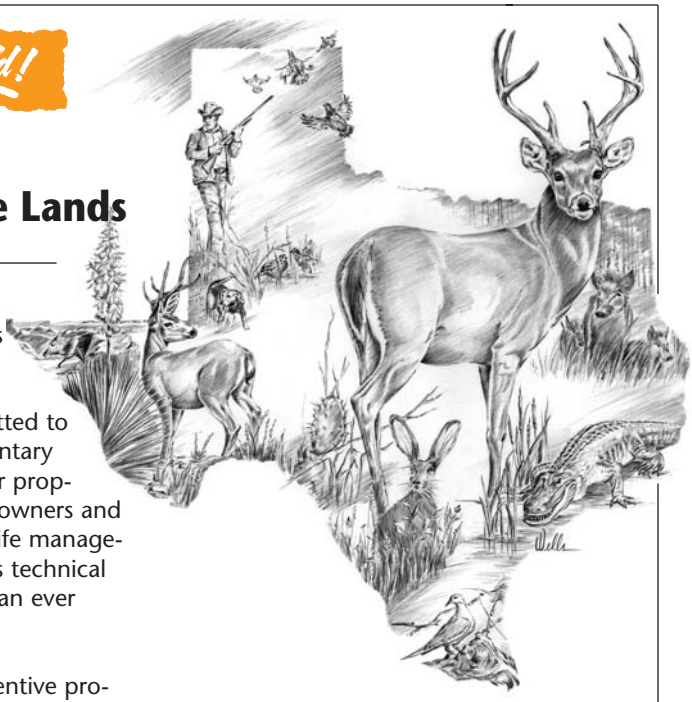
Make all checks payable to the Nongame Fund

KEEP TEXAS *wild!*

The Back Porch

Managing for Wildlife Diversity on Private Lands

By Matt Wagner



In 1988 the Texas Parks and Wildlife Department acquired Big Bend Ranch State Park. This 250,000-acre West Texas wilderness immediately doubled the size of the state park system. Harboring rare plants such as Hinckley's oak, reptiles such as Chihuahuan mud turtles and over 14 species of bats, this geologic wonderland also includes nearly 90 perennial springs — all in a 14-inch rainfall zone. I was privileged to spend my early years as a TPWD biologist re-discovering these resources during the early planning stages and before public use. Although vast in size, Big Bend Ranch State Park represents only 0.1% of the state's land area. In fact, if you combined all public lands in Texas, they would make up less than 5% of the state's 167,549,400 land acres. This fact emphasizes the critical importance of working with private landowners to achieve conservation success in the Lone Star State.

TPWD biologists are committed to assisting landowners in voluntary planning for wildlife on their properties. With over 5,400 landowners and 18 million acres under wildlife management plans, demand for this technical assistance is accelerating at an ever increasing rate.

TPWD offers an array of incentive programs for landowners to engage in wildlife habitat management including the Managed Lands Deer Permit Program and the Landowner Incentive Program for rare species. Both of these programs are habitat based and reflect not only the diversity of needs for game and nongame species, but the diversity of the landowners themselves. For example, biologists on the Shortgrass Prairies of the High Plains are working closely with landowners to conduct Pronghorn surveys in hopes of answering questions about their long term decline. At the same time, willing

[Continued on Page 7]

Texas Parks and Wildlife Department
Wildlife Diversity Program
4200 Smith School Road
Austin, Texas 78744