

Texas Partners In Flight Flyway



NEWSLETTER

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Partners in Flight was formed to address the conservation needs of declining bird species. Federal and state government agencies, non-governmental conservation organizations, communities and conservation-minded corporations, landowners, and other businesses, have joined together in an international effort to address these declines. Together, we are working to understand the ecology and natural history of all birds in the Western Hemisphere, while also discovering the causes of their vulnerability. Our main goal is to implement actions needed to assure that these valuable species continue to occur in healthy and productive populations into the future.

PWD BR W7000-233 (9/03)

Recent Spread of the Eurasian Collared-Dove in Texas

By Brush Freeman of Elgin <brush@onr.com>
and Jim Peterson, Episcopal School of Dallas <jpeter@airmail.net>

In March 1995 the Eurasian Collared-Dove (*Streptopelia decaocto*) was first documented in Texas in Texarkana, Bowie County. The next year the species was found in numbers in both Chambers and Galveston counties. Thereafter they were found spreading rapidly, and previously unoccupied counties fell rapidly like dominos across the state. The birds quickly began colonizing areas in far west Texas with the town of Balmorhea in the Trans-Pecos being among the first in that region.

Currently the species occupies every Texas county along the Mexican border including all but one county bordering New Mexico and nearly every Texas county along the Oklahoma border. By the time this article is published, there is little doubt that most of the remaining areas will be filled. The species has spread like wildfire across the state and in numerous locations. On the Coastal Prairies, flocks of 200+ have been noted around grain elevators or similar structures, while in many Texas towns flocks of this size are common and may be even larger. In the southern half of the

state, the birds breed year-round with numerous observations of nest-building or incubating even during the cold days of December and January.

In less than eight years the species has nearly completely colonized most regions of the state with more than 221 of Texas' 254 counties occupied, per reporting efforts, at the time this article went to press (summer 2003). Remarkably, the ecoregion with the fewest records is the Pineywoods of East Texas. This would appear to be odd as it is assumed the birds have originated from the southeastern U.S. where they first appeared before moving westward. Perhaps they do not favor the forested areas or perhaps there is a lack of observers in the region to note their presence. Although the expansion by Eurasian Collared-Doves has exceeded the speed which a number of other well known examples have colonized the state (e.g., Cattle Egret, White-winged Dove, Great-tailed Grackle, etc.), it appears East Texas will be the last region of the state to be thoroughly colonized by these doves.

Recent Spread of the Eurasian Collared-Dove in Texas (cont'd)

The current belief is that this species was introduced to the Bahamas from which it apparently spread unaided to the U.S. mainland in the 1970s. However, it has recently been suggested that the species may have reached the New World on its own much like the Cattle Egret, though it is doubtful that this can ever be substantiated.

In early 2001, well after many counties had been occupied, the authors decided to track this expansion event using the powers of the internet. The first author had been collecting sightings on a small county map and supplied those to the second author for placement on the online version. The initial intent of this map was meant to be an educational item for those wanting to note the spread of the species. As an interactive exercise for the Texas birding public, for which it was originally intended, we were able to track the expansion in almost *real time*. The response to this exercise has been far more than expected and may prove a useful tool for any number of species in the future.

The physical layout of the Web site required a map of all 254 Texas counties with a readable font within each county. For this effort, we used a Texas map-generating tool discovered at <http://monarch.tamu.edu/~maps2/texas6.htm> that allowed the individual color-coding of counties as observations came from participants. After that design was agreed upon, we merely "painted" each county red as they were added. The tracking project ceased in June of 2003 as it was apparent that the birds had completely infiltrated the

state and had become yet another member of our established, albeit introduced, avifauna.

Perhaps the project benefited from the speed at which the Eurasian Collared-Dove spread through Texas. A slower, more typical range expansion might have struggled over time and suffered from the waning interest of participants. As it was, we only needed to send out a few reminders to our audience each season. Counties continue to be filled in regularly, and now over four-fifths of the state's counties have had Eurasian Collared-Dove sightings.

As we mentioned earlier, the fact that Eurasian Collared-Doves appear to have leap-frogged over East Texas on their march through the U.S. north and west from the Caribbean is interesting for now. However, drawing early conclusions about the birds' apparent disinterest in the Pineywoods is probably not appropriate at this stage. The big picture of the birds' expansion across Texas will eventually need to include habitat parameters from within Texas and surrounding states as well.

From the project's beginning, the range expansion concept has always been one of high interest and low maintenance. It required active participation from contributors, but little hard science or analysis. Best of all, participants and the public were rewarded with a *real time* opportunity to witness the invasion of a single species across the Lone Star State.

TPWD Landowner Incentive Program: Helping Rare Species

The Landowner Incentive Program (LIP) has been helping landowners preserve rare and declining habitat in the state since 1998. Some of the bird species that have benefitted from the efforts of conscientious landowners with LIP include the Lesser Prairie-Chicken, Attwater's Prairie-Chicken, Black-capped Vireo, Golden-cheeked Warbler and Red-cockaded Woodpecker.



Now a nationwide program, LIP has made great strides toward improving the landscape for endangered birds. There have been cooperative efforts, for example, between neighbors in both the Rolling Plains and the Pineywoods to reestablish declining ecosystems for, respectively, the Lesser Prairie-Chicken and the Red-cockaded Woodpecker. While LIP is relatively new, an increase in habitat for the aforementioned birds has increased.

LIP has partnered with landowners to provide funds for habitat management for the purpose of reestablishing healthy plant communities, including native grasslands. Creating a more diverse grassland will serve as better cover and food availability for ground-

dwelling birds in much of the state. Funds through LIP have provided conservation minded landowners with seed stock, longleaf pine saplings, enhancements to water systems and more – all to restore the habitats for declining bird species.

If you are a landowner interested in conserving the natural resources of Texas, please see the TPWD Web site for details on how to apply for a LIP grant at

www.tpwd.state.tx.us/conservelip/

Becoming a Better Birdwatcher: Understanding Bird Distribution in Texas Means Understanding Our Habitats

Compiled by Cliff Shackelford (Texas Parks and Wildlife Department, Austin)

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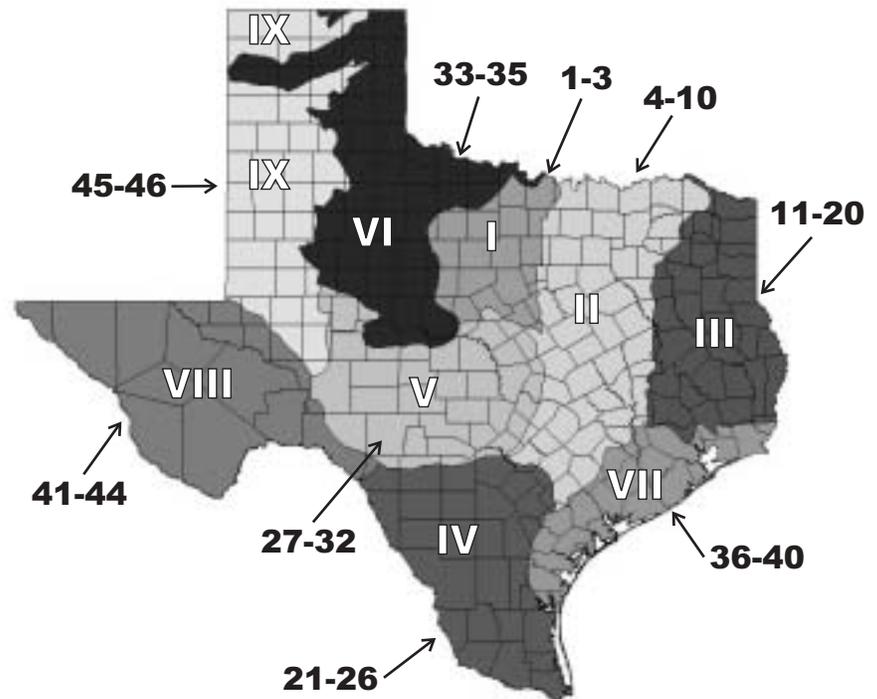
with great assistance from the following plant ecologists and botanists in Texas:

Bill Carr (The Nature Conservancy of Texas in San Antonio),

Jim Neal (U.S. Fish and Wildlife Service in Nacogdoches),

David Riskind (TPWD in Austin) and Jason Singhurst (TPWD in Austin)

To understand bird distribution and habitat preferences, it is essential to understand our state's plant communities and ecoregions. The list of 50 titles below is a sampling of papers and books that will prove useful to readers interested in learning more on this subject. The numbers on the map correspond with the numbers in the list below. Although it is not an exhaustive list, we tried to select some of the more readily available publications that can be found at most university or college libraries. Others might be harder to find (especially when noted), but a field trip to a nearby library on a hot Texas weekend should prove rewarding. The interlibrary loan system also might be an option for your local public library; this is worth investigating. Most are journal papers, but some are books. There are hundreds of additional and related publications out there on this subject, so enjoy uncovering a wealth of knowledge waiting for all on a public bookshelf near you.



PUBLICATIONS WITH A STATEWIDE EMPHASIS

Blair, W. F. 1950. The Biotic Provinces of Texas. *Texas Journal of Science* 2:93-117.

Correll, D. S. and M. C. Johnston. 1979. *Manual of the Vascular Plants of Texas*. University of Texas at Dallas. 1881 pp. [the introductory chapter of this giant book describes the ecoregions]

Damude, N. and K. C. Bender. 1999. *Texas Wildscapes: Gardening for Wildlife*. Texas Parks and Wildlife Press. 387 pp. [chapter two describes the ecoregions]

Diamond, D. D., D. H. Riskind, and S. L. Orzell. 1987. A framework for plant community classification and conservation in Texas. *Texas Journal of Science* 39:203-221.

Tharp, B. C. 1939. *The Vegetation of Texas*. Texas Academy of Science Publications in Natural History. Anson Jones Press, Houston [may be difficult to find].

PUBLICATIONS WITH A REGIONAL EMPHASIS

I. OSAGE PLAINS (OR "THE CROSS TIMBERS")

1. Diggs, G. M., Jr., B. L. Lipscomb and R. J. O'Kennon. 1999. *Shinners and Mahler's illustrated flora of North-central Texas*. Botanical Research Institute of Texas, Ft. Worth. 1626 pp. [this book is also listed in the ecoregion below].
2. Dyksterhuis, E. J. 1948. Vegetation of the Western Cross Timbers. *Ecological Monographs* 18:325-375.
3. Dyksterhuis, E. J. 1946. The vegetation of the Fort Worth Prairie. *Ecological Monographs* 16:1-29.

Becoming a Better Birdwatcher: Understanding Bird Distribution in Texas Means Understanding Our Habitats (cont'd)

II. OAKS AND PRAIRIES (OR "THE POST OAK SAVANNAHS AND BLACKLAND PRAIRIES")

4. Collins, O. B., F. E. Smeins, and D. H. Riskind. 1975. Plant Communities of the Blackland Prairie of Texas. In: Prairie: A Multiple View by M. K. Wali (ed.), The University of North Dakota Press, Grand Forks [may be difficult to find].
5. Diamond, D. D. and F. E. Smeins. 1983. Remnant grasslands of the Fayette Prairie. American Midland Naturalist 110:1-13.
6. Diamond, D. D. and F. E. Smeins. 1985. Composition, classification and species response patterns of remnant tallgrass prairies in Texas. American Midland Naturalist 113:294-308.
7. Diggs, G. M., Jr., B. L. Lipscomb and R. J. O'Kennon. 1999. Shinnery and Mahler's illustrated flora of North-central Texas. Botanical Research Institute of Texas, Ft. Worth. 1626 pp. [this book is also listed in the ecoregion above].
8. McBryde, J. B. 1933. The vegetation and habitat factors of the Carrizo sands. Ecological Monographs 3: 247-297.
9. Nixon, E. S., J. R. Ward, E. A. Fountain, and J. S. Neck. 1991. Woody vegetation of an old-growth creekbottom forest in north-central Texas. Texas Journal of Science 43:157-164.
10. Wilson, R. E. 1989. The vegetation of a pine-oak forest in Franklin County, Texas, and its comparisons to a similar forest in Lamar County, Texas. Texas Journal of Science 41:167-176.
11. Marrieta, K. L. and E. S. Nixon. 1983. Vegetational analysis of a post oak-black hickory community in eastern Texas. Texas Journal of Science 35:197-203.
12. Chambless, L.F. and E. S. Nixon. 1975. Woody vegetation-soil relations in a bottomland forest in east Texas. Texas Journal of Science 26:407-416.
13. Fountain, M. S. and W. H. Risner. 1988. Woody vegetation of a natural pine-hardwood woodland in San Augustine County, Texas. Texas Journal of Science 40:348-352.
14. Marks, P. L. and P. A. Harcombe. 1981. Forest vegetation of the Big Thicket, Southwest Texas. Ecological Monographs 51:287-305.
15. Nixon, E. S., K. L. Marietta, R. O. Littlejohn, and H. B. Weyland. 1980. Woody vegetation of an American beech (*Fagus grandifolia*) community in eastern Texas. Castanea 45:171-180 [may be difficult to find].
16. Nixon, E. S. and J. A. Raines. 1976. Woody creekside vegetation of Nacogdoches County, Texas. Texas Journal of Science 27:443-452.
17. Nixon, E. S., R. L. Willet, and P. W. Cox. 1977. Analysis of a virgin forest in the Neches River Bottom. Castanea 43:227-236 [may be difficult to find].
18. Outcalt, K. W. 1997. Status of the longleaf pine forests of the West Gulf Coastal Plain. Texas Journal of Science 49:5-12.
19. Ward, J. R. and E. S. Nixon. 1992. Woody vegetation of the dry, sandy uplands of eastern Texas. Texas Journal of Science 44:283-294.

IV. SOUTH TEXAS BRUSHLANDS (OR "THE TAMAULIPAN THORN SCRUB")

21. Diamond, D. D. and T. E. Fulbright. 1990. Contemporary plant communities of the Coastal Sand Plain, Texas. Southwestern Naturalist 35:385-392.
22. Johnston, M. C. 1963. Past and present grasslands of southern Texas and northern Mexico. Ecology 44:456-466.
23. Lonard, R. I. and F. W. Judd. 1993. Phytogeography of the woody flora of the Lower Rio Grande Valley, Texas. Texas Journal of Science 45:133-147.
24. McLendon, T. 1991. Preliminary description of the vegetation zones of South Texas exclusive of coastal saline zones. Texas Journal of Science 43:13-32.
25. Vora, R. S. 1990. Plant communities of the Santa Ana National Wildlife Refuge, Texas. Texas Journal of Science 42:115-128.
26. Vora, R. S. and J. F. Messerly. 1990. Changes in native vegetation following different disturbances in the Lower Rio Grande Valley, Texas. Texas Journal of Science 42:151-158.

V. EDWARDS PLATEAU (OR "THE TEXAS HILL COUNTRY")

27. Fowler, N. L. and D. W. Dunlap. 1986. Grassland vegetation of the eastern Edwards Plateau. American Midland Naturalist 115:146-155.

Becoming a Better Birdwatcher: Understanding Bird Distribution in Texas Means Understanding Our Habitats (cont'd)

28. Terletzky, P. A. and O. W. Van Auken. 1996. Comparison of cedar glades and associated woodlands of the southern Edwards Plateau. *Texas Journal of Science* 48:55-67.
29. Van Auken, O. W., A. L. Ford, and A. Stein. 1979. A comparison of some woody upland and riparian plant communities of the southern Edwards Plateau. *Southwestern Naturalist* 24:115-180.
30. Van Auken, O. W., A. L. Ford, A. Stein, and A. G. Stein. 1980. Woody vegetation of upland plant communities in the southern Edwards Plateau, Texas. *Texas Journal of Science* 32:23-35.
31. Wood, C. E. and J. K. Wood. 1988. Woody vegetation of the Frio River riparian forest, Texas. *Texas Journal of Science* 40:309-321.
32. Wood, C. E. and J. K. Wood. 1989. Riparian forests of the Leona and Sabinas rivers. *Texas Journal of Science* 41:395-411.
33. Lehmann, V. W. 1965. Fire in the Range of Attwater's Prairie Chicken. Tall Timbers Fire Ecology Conference 4:127-143 [may be difficult to find].
34. Schafale, M. P. and P. A. Harcombe. 1983. Presettlement vegetation of Hardin County, Texas. *American Midland Naturalist* 109:355-366.
35. Smeins, F. E., D. D. Diamond, and C. W. Hanselka. 1991. Coastal Prairie. In: Coupland, R. T. (ed.), *Ecosystems of the World: Natural Grasslands*. Elsevier, New York. (Chapter 13, pages 269-290) [may be difficult to find].

VIII. CHIHUAHUAN DESERT (OR "THE TRANS-PECOS")

VI. ROLLING RED PLAINS (OR "THE ROLLING PLAINS")

33. Rowell, C. M. 1957. Summer Flora of the Gene Howe Wildlife Management Area, Hemphill County, Texas. *Southwestern Naturalist* 2:155-171.
34. Wood, M. K. and W. H. Blackburn. 1984. Vegetation and Soil Responses to Cattle Grazing Systems in the Texas Rolling Plains. *Journal of Range Management* 37:303-308.
35. Heitschmidt, R. K. and R. D. Schultz. 1985. Effects of Drought on a grassland in the Northern Rolling Plains of Texas. *Southwestern Naturalist* 30:319-320.

VII. COASTAL PRAIRIES

36. Diamond, D. D. and F. E. Smeins. 1984. Remnant grasslands and ecological affinities of the Upper Coastal Prairie. *Southwestern Naturalist* 29:321-334.
37. Harcombe, P. A. and J. E. Neaville. 1977. Vegetation types of Chambers County, Texas. *Texas Journal of Science* 29:209-233.

41. Plumb, G. A. 1992. Vegetation Classification of Big Bend National Park, Texas. *Texas Journal of Science* 44:375-387.
42. Powell, A. M. 1988. Trees and shrubs of the Trans-Pecos and adjacent areas. University of Texas Press. 498 pp. [introductory pages of this book describe the ecoregion]
43. Powell, A. M. 1994. Grasses of the Trans-Pecos and adjacent areas. University of Texas Press. 377 pp. [introductory pages of this book describe the ecoregion]
44. Reid, W. H., C. E. Freeman, and R. D. Echlin. 1981. Soil and plant relationships in a Chihuahuan Desert Larrea-Agave Community. *Southwestern Naturalist* 26:85-88.

IX. PECOS AND STAKED PLAINS (OR "THE HIGH PLAINS OR LLANO ESTACADO")

45. Haukos, D. A. and L. M. Smith. 1997. Common flora of the playa lakes. Texas Tech University Press, Lubbock. 196 pp. [a book].
46. Rowell, C. M. 1971. Vascular plants of the playa lakes of the Texas Panhandle and South Plains. *Southwestern Naturalist* 15(4):407-418.

BACK ISSUES AVAILABLE ONLINE

Interested in reading old editions of this annual newsletter? The last several years can be found online at <www.tpwd.state.tx.us/nature/birding/flyway_news/index.htm>.

Several ornithological journals have placed their back issues online. This is an amazing resource. For The Condor, please visit <<http://elibrary.unm.edu/condor/>> and for The Wilson Bulletin <<http://elibrary.unm.edu/wilson/>>. The U.S. Forest Service also has their research publications online at <www.srs.fs.usda.gov/pubs/index.htm>.

Great Texas Birding Classic is for the Birds: Tournament Awards \$351,000 to Texas Avifauna Thus Far

By Shelly Scroggs
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In the first seven years of the Great Texas Birding Classic, winning teams have donated a combined total of \$351,000 in prize money to “on the ground” conservation in Texas. We are proud of our past accomplishments and look forward to continued growth and success as we work to conserve and protect some of the rich biodiversity Texas has to offer.

To the right is a short summary of the projects that have received funding from the Birding Classic Conservation Cash Grand Prize. To learn more about the event, please visit the Birding Classic Web site at www.tpwd.state.tx.us/gtbc/prizes



Great Texas Birding Classic (cont'd)

ACQUISITION - \$249,666

- Columbia Bottomlands Forest Acquisition Project (Gulf Coast Bird Observatory in partnership with U.S. Fish and Wildlife Service, National Fish and Wildlife Foundation and the Trust For Public Land): \$15,000 in 2001 and \$12,000 in 2002 to go toward purchase of the only significant expanse of forest in Texas adjacent to the Gulf of Mexico.
- Bolivar Flats Shorebird Sanctuary Addition (Houston Audubon Society): \$22,500 in 1998 and \$25,000 in 2000 toward the purchase of 178-acre tract adjacent to Bolivar Flats Shorebird Sanctuary.
- Harlingen Bird Sanctuary (RGV Birding Festival, Valley Land Fund, USFWS, City of Harlingen, Harlingen Chamber of Commerce): \$5,000 in 1998 towards the purchase of a 40-acre, native thornbrush and riparian habitat along the Arroyo Colorado in downtown Harlingen.
- The John M. O'Quinn I-45 Estuarial Corridor Acquisition & Restoration (Scenic Galveston, Inc.): \$16,666 toward the purchase of 900 acres of intertidal, emergent coastal wetland and the restoration of 40 badly degraded acres in 1997.
- Packery Channel Sanctuary Acquisition (Audubon Outdoor Club of Corpus Christi in partnership with Texas A&M University at Corpus Christi): \$10,000 in 2000, \$25,000 in 2001, \$23,000 in 2002 and \$3,000 in 2003 used to purchase undeveloped lots and create an island of green through this residential area on Padre Island.
- Paradise Pond Sanctuary Acquisition (Gulf Coast Bird Observatory, Audubon Outdoor Club, City of Port Aransas, Central and South West Services, Inc.): \$25,000 in 1999 to purchase 7.83-acre tract, including a two acre freshwater depressional wetland, the only one on the island.
- Port Bolivar Wetlands Restoration Project (Houston Audubon Society): \$20,000 in 2003 towards the purchase of a 650-acre wetland complex on the Bolivar Peninsula known as the Horseshoe Marsh which will protect the entire drainage system of lagoon, saltwater marsh, freshwater wetlands and coastal prairie.
- Quintana Island Habitat Acquisition and Restoration (Gulf Coast Bird Observatory in partnership with the Brazosport Birders and Naturalists): \$15,000 in 2000 and \$10,000 in 2001 to be used for sight survey, appraisal and acquisition of native habitat on Quintana Island, as well as restoration and revegetation of purchased property.
- South Padre Island Habitat Protection and Restoration (Valley Land Fund, Rio Grande Valley Bird Observatory, Valley Nature Center, South Padre Island Nature Center): \$22,500 in 1998 to purchase undeveloped woodlots on South Padre Island, important stopover sites for trans-gulf migrants.

ENHANCEMENT - \$38,666

- Created Wetland at the Gulf Coast Bird Observatory (Gulf Coast Bird Observatory): \$15,000 in 2003 to help fund the creation of a bog pond providing habitat for high priority species and construct public viewing spaces so that the public may enjoy seeing these species.
- Hugh Ramsey Nature Park Habitat Enhancement Project (Arroyo Colorado Audubon Society): \$3,000 in 2002 and \$3,000 in 2003 to be used for plants and signage in the habitat restoration of 5 acres of the Hugh Ramsey Nature Park in Harlingen.
- Valley Nature Center Wetlands Restoration Project (Valley Nature Center): \$1,000 in 2003 to be used for site enhancements (signage) at the center.
- Wings over Weslaco (Frontera Audubon Society): \$16,666 in 1997 for construction of a viewing blind on the Frontera Audubon Society Sanctuary.

RESTORATION - \$36,000

- Native Coastal Prairie Restoration at Anahuac NWR (USFWS/Anahuac NWR): \$15,000 in 1999 and \$9,000 in 2003 to remove and control exotic plants such as Chinese tallow, and to restore the ecological function of the area as coastal tallgrass prairie through the reintroduction of native prairie grass seed on abandoned rice fields.
- Dickinson Bay Seawall Prairie Restoration Project (The Nature Conservancy): \$9,000 in 2002 to restore approximately 50 acres of native coastal tallgrass prairie through removal/control of Chinese tallow.
- Invasive Exotic Removal from High Island Sanctuaries (Houston Audubon Society): \$3,000 in 2002 for the removal of Chinese tallow trees from coastal prairie habitats in Boy Scout Woods and Smith Oaks.

MONITORING \$26,666

- Colonial Waterbird Sanctuaries Project (Texas Audubon Society): \$16,666 in 1997 for long-term avian monitoring project conducted by Texas Audubon on 31 barrier islands.
- Partners in Flight Migration Monitoring Program: Tracking Landbird Migration in Texas and Beyond (Gulf Coast Bird Observatory, Southeast Partners in Flight, Department of Defense, USFWS): \$10,000 in 1999 for ongoing monitoring of high priority migratory birds.

**The Birding Classic is for the birds!
Plan on participating each spring so you, too,
can help conserve important bird habitat
along the Texas Coastal Birding Trail.**

Houston Audubon Society's Bolivar Flats Shorebird Sanctuary: Protecting a Special Place

By Winnie Burkett
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"Something has to be done! Cars shouldn't be driving through the birds and running over their nests."

For years these sentiments were shared by many birders visiting Bolivar Flats, a unique complex of salt marsh, mud flats and Gulf-facing beach on the south end of the Bolivar Peninsula. Tens of thousands of birds depended on Bolivar Flats for feeding, roosting and nesting habitat, but drivers ignorant of the damage they were doing to the birds and habitat felt they had to drive through the large flocks of roosting birds on the beach, through Least Tern nesting colonies, and as far as they could out on the mud flats. The abandoned vehicles, stuck out on the mudflats by previous thrill seekers, continue to rust away, but didn't seem to deter future adventuresome types.

It was the Houston Audubon Society that finally took on the challenge of protecting this amazingly productive area and a real challenge it was. Our first action was to attempt to close about 1/2 mile of the beach to vehicles. Access to Texas beaches is protected by the Texas Open Beaches Act and closing any portion of the beach must be approved by the Texas Attorney General's Office and the governing county. There were many telephone calls made, letters written and meetings attended. There was opposition from fishermen who didn't want to have to walk down the beach. Stennie Meadours, a board member of Houston Audubon Society, persevered and in 1985, the State and Galveston County agreed that Bolivar Flats was worth protecting so the county built a vehicular barrier to protect birds and habitat the following year.

Recognizing that protecting habitat for shorebirds required more than just a vehicular barrier, Houston Audubon continued its efforts to protect Bolivar Flats by requesting a coastal lease from the Texas General Land Office (GLO) to all property that they owned adjacent to Bolivar Flats. This effort was led by Gretchen Mueller and Ted Eubanks and once again perseverance was required. In 1992, after eight years of telephone calls, letters and meetings, the GLO granted Houston Audubon a lease to crucial coastal habitat. On April 5, 1992, Bolivar Flats Shorebird Sanctuary was dedicated and it became the first shorebird sanctuary on the entire Gulf coast.



In 1993, The Western Hemisphere Shorebird Network recognized the importance of Bolivar Flats to 25 species of shorebirds by declaring it a "Site of International Importance" as it supports at least 100,000 shorebirds annually, or 15% of a species' flyway population.

In 1996, a "For Sale" sign went up on a tract of land adjacent to the Bolivar Flats marshes. This tract supported many birds and though much of it was wetlands, scary visions of a convenience store or a

"who knows what" being built on the uplands worried many a birder. What could be done? The only answer seemed to be for Houston Audubon to purchase the land. It was a big project for the organization, but Houston Audubon had made a commitment to give Bolivar Flats as much protection as possible. So the thoughts of "should we do it?" "can we do it?" and "how do we do it?" were all sorted out and Houston Audubon went to work. In December 1997, with a grant from the GLO's Coastal Management Program, the Conservation Cash Grand Prize awarded to Houston Audubon by "The Wildbirders," Winners of Texas Parks and Wildlife Department's Great Texas Birding Classic, and generous donations from Houston Audubon members and friends, Houston Audubon purchased 178 acres of wetlands, beach and uplands and Bolivar Flats Shorebird Sanctuary grew.

In 1997 other good things were happening. Louis Tyra, an area landowner, approached Houston Audubon with an offer to donate 353 acres of wet coastal prairie on the Bolivar Peninsula. Amazingly, Mr. Tyra's wet coastal prairie was directly across the road and drained into the property Houston Audubon was purchasing. The Tyra property is used by shorebirds and ducks and is usually where the first Mottled Duck chicks of the year show up in the area. Thus, only a few weeks after Houston Audubon purchased the 178 acre tract, Louis Tyra donated his holdings to Houston Audubon and Bolivar Flats Shorebird Sanctuary grew again.

In 1999, another Bolivar Peninsula "For Sale" sign launched Houston Audubon on the largest fund-raising campaign in its history. A 615-acre private tract of beach, salt marsh and coastal prairie adjacent to the Bolivar Flats was on the market as the result of a bankruptcy. This tract included habitat full of shorebirds, rails, waders and sparrows – habitat too important to pass up. The thought of raising the \$743,000

Houston Audubon Society's Bolivar Flats Shorebird Sanctuary: Protecting a Special Place (cont'd)

needed to purchase and manage the property was overwhelming, but the alternative unacceptable. Fund-raising advice came from The Nature Conservancy and the U.S. Fish and Wildlife Service. Then donations came from Houston area foundations, the National Fish and Wildlife Foundation, Phillips Petroleum, Shell Oil, Reliant Energy, U.S. Fish and Wildlife Service, the American Birding Association and 415 committed birdwatchers from all over the U.S. Thanks to all the help, Houston Audubon was able to add 615 acres to Bolivar Flats Shorebird Sanctuary on November 30, 2001.

Our success with the 615-acre tract encouraged us to pursue a \$450,000 grant from the North American Wetlands Council to purchase the Horseshoe Marsh. This is a beautiful wetlands system, which is composed of 650 acres of salt marsh, coastal prairie and freshwater wetlands that surround a 120-acre tidal lagoon. Less than a mile from Bolivar Flats, this system is used by the same birds.

The next challenge Houston Audubon will face is to develop a management plan for the land. The coastal prairie has been heavily grazed for many years and is now invaded by Chinese tallows, but it has the potential to be excellent habitat for migrating and resident grassland birds. Although we don't have the expertise in our organization to sort out all the problems and concerns related to management of the 1800-acre complex, which we now own on the Bolivar Peninsula, we do know there is help available.

There are some who think that it is crazy for an Audubon chapter to be buying so much land. "There should be someone else to do that" "How about the state or federal government?" "What about The Nature Conservancy?" are comments that we hear. The Texas Parks and Wildlife Department does not have any acquisition money and The Nature Conservancy and the U.S. Fish and Wildlife Service refuge folks are working on as many projects as they can. Texas has very little public land and there is much that needs protecting. Since the Houston Audubon Society has had a history of protecting habitat on the Bolivar Peninsula for birds and birdwatchers so it appeared that we were the organization that needed to protect this special place.

As birders, we often know little about the ownership of the places that are important to us. Then all of a sudden they are gone and it is too late to do anything. We all need to investigate ownership of our favorite birding spots and if they are not protected, we need to find ways to get them protected. Sometimes all you have to do is bring the area to the attention of state, federal or local land protection organizations. Sometimes, however, it is an Audubon chapter, a bird club or an individual who must act. If Houston Audubon could figure out how to do these projects, then I am sure that other organizations can, too. Help is available. As birders, we must assume some of the responsibility for insuring the future of the birds we enjoy so much.



Nesting Colonial Waterbirds Under Increased Pressure

By Richard Gibbons

Coastal Bend Bays and Estuaries Program, Corpus Christi

(Richard was affiliated with this organization when the article was written)

The winds are calm for a change as the boat slips into the water. The volunteer warden starts the engine and heads for Shamrock Island, a remnant of Mustang Island in Corpus Christi Bay separated from the barrier island during Hurricane Celia in 1970. More than ten thousand colonial waterbirds (herons, gulls, terns, cormorants, pelicans, etc.) nest on Shamrock. This island provides everything a mega-bird colony needs: diverse nesting habitat, nesting material, close proximity to good foraging areas and relative isolation from marauding coyotes and raccoons.

Upon reaching the island, three boats are observed on the shores of Shamrock. The warden eases up to the first group and delicately informs the family that they are on a critical nesting island and their presence is putting many nesting birds' eggs and young at risk of predation. The family is embarrassed and they awkwardly pack their boat and leave. The warden tries to soften the experience by expressing appreciation for their understanding. This spurs a question from the youngest member of the family: "Why are all these birds here?"

This is the opportunity to share a deeper understanding for this amazing biological phenomenon. There are two major concepts explaining the colonial nesting strategy. The first suggests that the colonists have added protection from predators with thousands of vigilant eyes and dagger-like bills on the ready to repel a terrestrial predator. Watch a Great Blue Heron quiet its next meal and you'll see the point. If you get too close to a tern or gull colony, you'll likely receive a few warning dives and perhaps even a rap on the head.



The Information Center Hypothesis is another championed idea supporting the formation of nesting colonies. Less-experienced birds benefit from their fellow colonists by following them to productive hunting grounds. There is much to learn about the movements of prey and it is better to have hundreds of eyes looking for the concentrated schools of fish rather than being on your own.

The family takes a renewed look at the island and then pushes off. The warden won't see these people again.

With a growing human population and associated pressures increasing on the Texas coast, more public education and protection of colonial waterbird rookeries is needed.

The Nature Conservancy bought Shamrock Island to protect the critical nesting colony, active January through August. To help stabilize the sanctuary, Texas A&M University-Corpus Christi researchers planted wetland plants and placed artificial structures to slow the northeast shoreline erosion. The Coastal Bend Bays and Estuaries Program funded signage and a warden to inform recreationists about their potential disturbances and detrimental effects to the sanctuary. Audubon Texas provides management expertise, logistical support in the form of a boat and truck, and a seasonal warden to act as the birds' emissary and guardian on busy weekends and holidays when the disturbance pressures are greatest.

Individuals from these organizations get together in late spring to count the nesting pairs of 18 to 20 species that make Shamrock Island home for the time period that it takes to find a partner, build a nest, lay eggs

Nesting Colonial Waterbirds Under Increased Pressure (cont'd)

and fledge young. The list of nesting birds is impressive. It includes eight species of herons, two species of ibises, the Roseate Spoonbill, seven species of terns and the Laughing Gull.

The warden approaches the next group of island tourists and receives questioning glares. After receiving an information-packed ice-breaker complete with humble pleas from the warden, the spokesperson of the group replies they've been coming here for years and they will leave in a little while. Meanwhile, the two dogs accompanying the expedition are running through the colony having great fun at the expense of the birds' survival.

The warden then communicates that their presence, especially the dogs, is disrupting the colony and costing many young birds their lives and it was, in fact, illegal on both the state and federal levels. When this fails, no one stays in a good mood. The private property card is played and the boaters are asked to leave upon threat of calling the game warden and sheriff. The warden may see these people again.

While motoring around the island to engage the third boater, the warden catches a view that makes his efforts all worthwhile. A colony of ten thousand birds of numerous species makes an impression on the senses. The vibrant

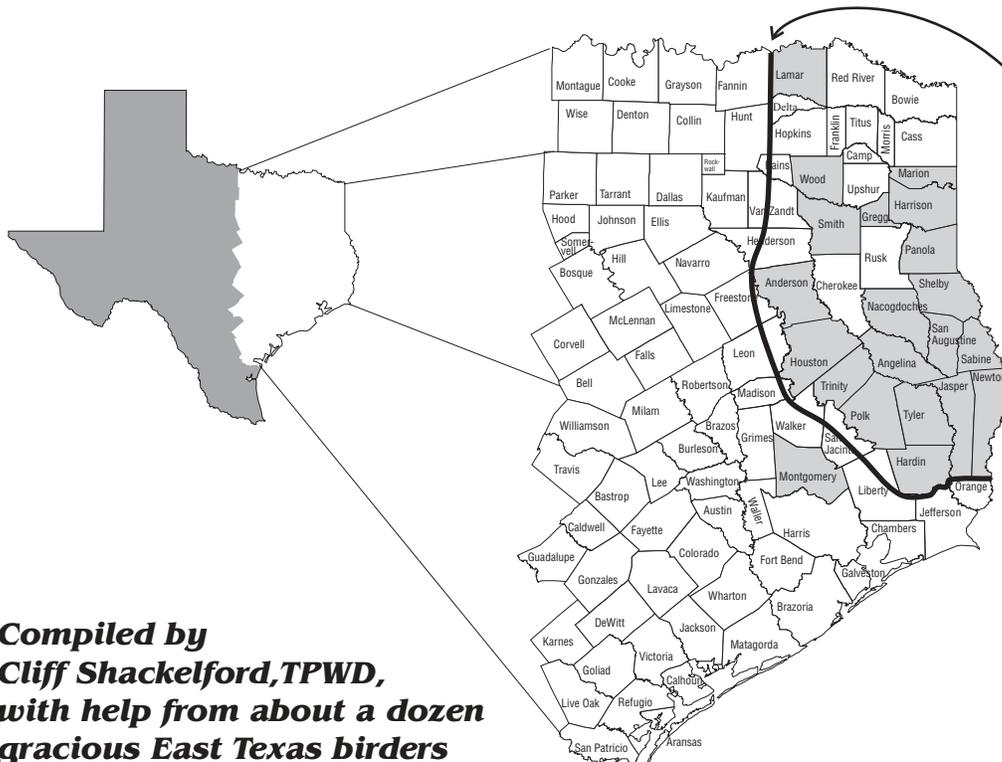
colors cruising by, the sounds of Royal Terns in a pair-bond dive, and the odor of nesting birds is not soon forgotten. There is a steady stream of birds traveling to and from this island hub. Often, it is a shift change at the nest and one mate takes a turn carrying out provisional duties.

The warden finally eases the aging bay-boat gently onshore next to the last boat on the island. There isn't anyone near the boat but he spots a fisherman wading alongside the island a quarter mile away. The wake of Laughing Gulls and Tricolored Herons indicates a disturbance in the colony. While talking to the previous group, the warden noticed this young fisherman's determined stride cutting through the island to get back to his boat. The warden watched the masses of birds mobbing the angler in an attempt to distract this perceived predator from their nests.

Now the warden shares his finely tuned story with the young man and opens his eyes to a richer tapestry of life. The warden will surely see this man again, but hopefully he will anchor offshore and maintain a respectful distance. The winds have picked up again and the warden aims the bow toward the distant shore. Tomorrow there will be a new set of boaters looking for that special getaway place. The warden will be there to share a story with them in hopes that they will share it with their friends.

BACHMAN'S SPARROW

*Records in Texas
by county from
1990-present*



**Very rare west
or south of
this solid line
(i.e., Montgomery Co.)**

**Compiled by
Cliff Shackelford, TPWD,
with help from about a dozen
gracious East Texas birders**

Unique Partnership Forged to Conserve Grassland Birds in the Texas Panhandle

By Ted Toombs

Rocky Mountain Bird Observatory in Colorado

(Ted's current affiliation is with the Environmental Defense in Colorado)

As many of us have read recently, many species of grassland birds are declining, some at an alarming rate. The causes of these population declines remain poorly understood. Some researchers point to habitat loss due to agriculture and urban development as being a major culprit. However, there are many unknowns including the degree to which land-use on the bird's wintering grounds is influencing populations. Still, with all of these unknowns, one thing is certain: grassland birds cannot be conserved without the help of private landowners. After all, it is mostly landowners who have conserved the birds all along, since they own or manage most of the grasslands in the Great Plains. Birds like the Long-billed Curlew, Burrowing Owl, Mountain Plover and Ferruginous Hawk find the habitat they need mostly on large private ranches that own or manage native grasslands. Understanding this, many governmental agencies, community groups, and non-profit organizations, including the Rocky Mountain Bird Observatory, are stepping up their efforts to involve private landowners in conservation projects. By combining efforts and sharing resources these groups can make a greater positive impact than by acting alone.

One of the governmental agencies working to help private landowners become involved in habitat projects is the U.S. Fish and Wildlife Service High Plains Partnership. In 2000, this agency began to work on building a partnership to conserve native grassland birds on private lands in the Texas Panhandle. In the end, they brought together two organizations that were previously unaware of one another, and forged a partnership that will undoubtedly have greater positive impact on grassland birds and rural communities than they had ever expected.

One of the organizations that the High Plains Partnership contacted was the Rocky Mountain Bird Observatory, a non-profit bird conservation organization headquartered in Colorado <<http://rmbo.org/homeflash.html>>. The bird observatory started a program called *Prairie Partners* in 1998. The ultimate goal of this program is to build a coalition of landowners throughout the Great Plains that are actively involved in the conservation of lands important to prairie birds. To achieve this goal, *Prairie Partners* conducts outreach to private landowners to increase their awareness and understanding of grassland birds and their habitat, and works with state and federal agencies to involve landowners in habitat conservation projects. The foundation of this work is *Prairie Partners'* grassland bird monitoring, which provides information on population trends and important habitat areas. Since its inception, *Prairie Partners* has

reached over 400 landowners owning or managing over 500,000 acres of land in five Great Plains states, and conducts thousands of monitoring point counts across the region each year.

Another group the High Plains Partnership contacted was Texas Prairie Rivers Region, Inc. <www.texasprairierivers.com>. This organization is based in Hemphill County in the northeastern Texas Panhandle and was formed by private landowners in 1997. These landowners wanted to promote nature tourism as a way to diversify their incomes and help bring needed tourism dollars to the charming community of Canadian. The natural resources of their area included one of the last remaining areas for the Lesser Prairie-Chicken, one of the rarest of the grassland birds. By showing landowners the economic benefit of this bird through ecotourism, they were encouraging the conservation of this species. By 2001, Texas Prairie Rivers Region, Inc. had grown to include more than 500 friends and cooperators, and was working with landowners owning over 300,000 acres in the Texas Panhandle. Their plan to bring tourism dollars to Canadian was more successful than anyone had expected. Today, the main street of the town is being restored and many formerly abandoned buildings are being renovated. In addition, the U.S. Fish and Wildlife Service, the Texas Parks and Wildlife Department and the Rocky Mountain Bird Observatory have begun to help landowners restore thousands of acres of grasslands for the prairie chicken.

To build upon these successes, the U.S. Fish and Wildlife Service brought *Prairie Partners* and Texas Prairie River Region, Inc. together with these other partners. Together, the groups wrote a grant proposal to the National Fish and Wildlife Foundation and successfully received funding in October 2001. The grant will help *Prairie Partners* and Texas Prairie Rivers Region, Inc. use their biological expertise and grassroots connections to involve more landowners in this partnership. Through their extensive contact with landowners, these two non-profit organizations will be able to involve landowners in conservation projects not only in Texas but in other parts of the Great Plains as well. In addition, these groups will bring other partner organizations and agencies that will stretch resources even further.

So far, 15 landowners owning or managing over 300,000 acres have become involved in Texas, Colorado, Wyoming and South Dakota. *Prairie Partners* will work with each landowner on an individual basis to design habitat improvement projects for grassland birds. Projects will be

Unique Partnership Forged to Conserve Grassland Birds in the Texas Panhandle (cont'd)

designed so that they will easily integrate with existing state or federal habitat programs. This way, project implementation costs will be shared by other partners, such as the Texas Parks and Wildlife Department or Colorado Division of Wildlife, and landowners will not be economically burdened with the full project cost.

Projects will involve activities such as controlled burning to increase grass cover and reduce shrub invasion for birds like the Lesser Prairie-Chicken and Grasshopper Sparrow, rotational grazing plans to better control the amount of grass cover available for nesting birds such as the Lark Bunting, and protection of important nesting sites for declining species like the Ferruginous Hawk. We will also work to help landowners with the financial cost of

harboring the black-tailed prairie dog. With help, landowners will be more tolerant of the presence of prairie dogs and this will help secure habitat for the Mountain Plover, Burrowing Owl, Ferruginous Hawk and others. In special cases, some landowners may be willing to place their lands under long-term habitat management plans for up to 30 years.

Although this project is still in the early stages, a unique partnership has been formed that will last for years to come. With private landowners help and by sharing our resources and expertise, we can make a significant contribution towards reversing the declines in grassland bird populations in the future.

Confusing Bird Names: Some of the Most Commonly Misspelled or Misused Names of North American Birds

By Cliff Shackelford, Texas Parks and Wildlife Department, Austin
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Spelling the common names of birds can be quite tricky. Much of it is a memorization game that should get easier with practice. Over the years, I have noticed that some common names of Texas birds, more than others, are often misspelled. I started compiling this list over five years ago after reading through countless e-mails, listserv postings, bird club newsletters, magazines, catalogues and more.

The first name given, typically in capital letters, is the correct name followed by a brief description of the confusion. This list is arranged in alphabetical order.

ALTAMIRA ORIOLE – unlike the bird, the city in Mexico is written in two words (Alta Mira)

AMERICAN GOLDEN-PLOVER – modifier changed from “Lesser” Golden-Plover

AMERICAN PIPIT – no longer Water Pipit

APLOMADO, DICKCISSEL, FERRUGINOUS, PROTHONOTARY and **PYRRHULOXIA** – very difficult to spell; requires memorization

BEWICK’S – pronounced like the automobile maker, but not spelled like it

Black-and-white Warbler and **Chuck-will’s-widow** – note the hyphens and use of lower case letters

FORSTER’S – only one E; not a “forest”

GREAT BLACK-BACKED GULL – not “Greater”

HARRIS’S & ROSS’S – apostrophe S

KIRTLAND’S – not Kirkland’s for all you Star Trek fans

LE_CONTE’S – note the space

LUCIFER HUMMINGBIRD – not a patronym; no apostrophe s

MacGillivray’s – note the capital G

NEOTROPIC CORMORANT – not Neotropical

NORTHERN BOBWHITE and **NORTHERN PARULA** – not Bobwhite Quail and Parula Warbler, respectively

PAURAQUE – two U’s

PEREGRINE FALCON – with an E on the end of the first word; the word falcon is always included

PLUMBEOUS – three vowels between the B and S

REDHEAD, MALLARD, BUFFLEHEAD, GADWALL and **CANVASBACK** – are all stand-alone words; the word “duck” is not included in these names

RUFOUS – includes an O

SAVANNAH (with an H) **SPARROW**

SWALLOW-TAILED KITE – no longer includes the extra modifier “American”

TAMAULIPAS CROW – no longer “Mexican” Crow; note spelling of this Mexican state

VERMILION – only one L

WATERTHRUSH – one word, no hyphen; this is a warbler and not a thrush

WIGEON – the old, retired spelling included a D (Widgeon), but is no longer correct

WOOD-PEWEE – only one set of double E’s; hyphenated

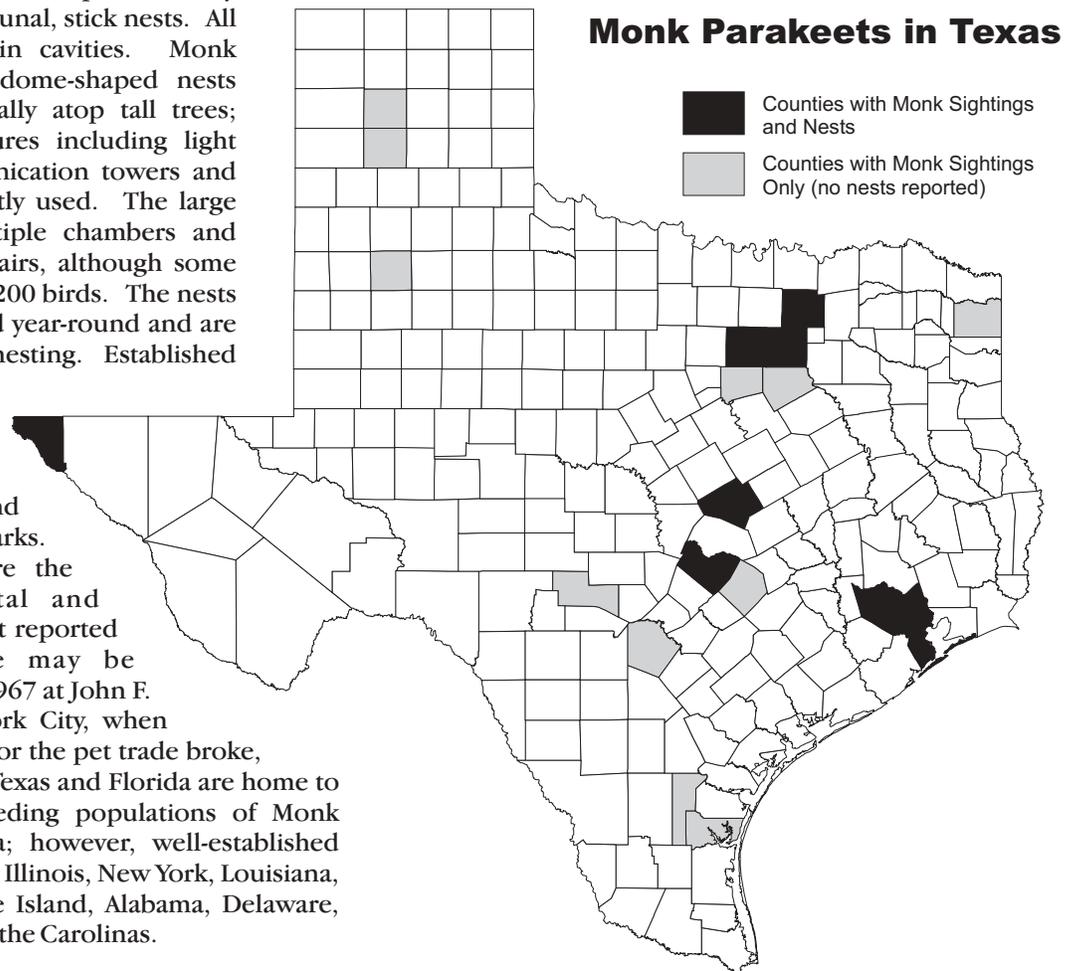
Monk Parakeets: A Texas Perspective

By **Sandy Birnbaum**, Texas Parks and Wildlife Department, Austin
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The Monk Parakeet (*Myiopsitta monachus*), a native of southern South America, is the most abundant and widespread introduced parrot species in the U.S. Also known as the Quaker Parakeet or Gray-headed Parakeet, its various names reflect the gray facial and throat coloration, which is reminiscent of religious attire. The native range of the Monk Parakeet extends from central Bolivia and southern Brazil south to central Argentina and Uruguay, where they typically inhabit open savannahs and woodlands. Dense riparian woodlands and urban settings are also frequently inhabited. Their diet consists primarily of seeds, grains, fruits, berries, leaf buds, nuts, and to a lesser extent, small insects and larvae. Preferred foods include sunflower seeds, dandelions, leaf buds and fruits and berries of trees. They are noisy and gregarious, typically flying and feeding in small flocks.

Monk Parakeets are unique to the parrot family since they build bulky, communal, stick nests. All other parrot species nest in cavities. Monk Parakeets construct large, dome-shaped nests made of woven twigs, usually atop tall trees; however, man-made structures including light poles, utility poles, communication towers and church steeples are frequently used. The large communal nests have multiple chambers and typically house one to 20 pairs, although some large nests may house up to 200 birds. The nests are maintained and occupied year-round and are used for both roosting and nesting. Established populations of introduced Monk Parakeets exist in many parts of the U.S., where they typically inhabit suburban and urban areas, particularly parks. These feral populations are the result of both accidental and deliberate releases. The first reported North American release may be attributed to an incident in 1967 at John F. Kennedy Airport in New York City, when crates carrying birds bound for the pet trade broke, allowing several to escape. Texas and Florida are home to the largest established breeding populations of Monk Parakeets in North America; however, well-established breeding populations exist in Illinois, New York, Louisiana, Oregon, Connecticut, Rhode Island, Alabama, Delaware, New Jersey, Pennsylvania and the Carolinas.

The origin of Texas populations of Monk Parakeets is unknown, but reports of escapees date back to the early 1970s. Breeding populations of Monk Parakeets exist in several Texas cities, including Austin, Dallas, Fort Worth, Houston and Galveston, and sight reports exist from across the state, including some rural areas (see map). Austin probably has the largest breeding population in the state; however, the sizes of the state's breeding populations are not well known. Many of the Austin birds may have come from an intentional release of 19 birds in the early 1980s near Zilker Park. Annual Christmas Bird Counts probably provide the most accurate estimate of the numbers of Monk Parakeets in Texas; however, some counts ignore exotic species and coverage areas may not include the parakeet's preferred urban park habitat, therefore, these numbers may not reflect the true size of the population.



Monk Parakeets: A Texas Perspective (cont'd)

In the early 1970s, Monk Parakeets were touted as the next "big" agricultural pest. Many feared they would spread rapidly across the continent, causing immense damage to agricultural crops. Due to this fear, many states implemented eradication programs. At that time, California was the only state to successfully eradicate this species. However, Monk Parakeets have since reestablished in California.

The extent to which Monk Parakeets cause agricultural damage is debatable. In their native South America, reports of agricultural damage are quite high. However, some researchers believe that these estimates are inflated. In the U.S., damage has occurred to orchards in Georgia and Florida. In Texas, there is no known research concerning Monk Parakeets and crop damage. However, if damage has or does occur, it is believed to be minimal, since the majority of feral colonies are in urban areas.

A more immediate concern caused by these birds is related to their large communal nests which can interfere with electrical operations. Due to safety issues, it is assumed that utility companies would prefer to remove the nests. However, this often creates a public relations problem due to the sentimental attachment that the public often has for these exotic birds. Nest removal is often a moot point, too, since the birds usually return to the same general location and rebuild.

There is very little research on Monk Parakeets in the U.S. The majority of data available for this species is from studies of populations in their native South America. However, as their numbers increase in the U.S., issues may arise that will garner more attention. Therefore, it is important that states, such as Texas, with well-established feral colonies, promote research and at a minimum, monitoring of this species. Florida is currently compiling statewide location data for Monk Parakeet nests. It would be of great interest for Texas to also do such a survey. This would provide a baseline for the state to aid in future research projects and possible management strategies, if needed.

As Monk Parakeets proliferate in urban areas, utility companies will need to develop policies to address the safety issues that the nests present. Recent emphasis on bird, in particular raptor, safety around power lines could provide avenues for research for this species as well, such as in the development of alternate nesting structures. It will also be important to note if any feral colonies become established in rural areas. If this occurs, then the issue of agricultural damage may arise. As with any exotic, effects of Monk Parakeets on native species are also a valid concern. There is also little to no research in this area. Since Monk Parakeets for now are limited to urban areas, impacts to native birds would seem minimal. However, this needs to be considered in the context of the role urban sprawl and habitat degradation plays in the demise of native species and what could be the repercussions of adding yet another exotic species to the picture (Campbell 2000).

According to Bucher (1992), Neotropical parrots, including Monk Parakeets, don't fit the profile of a successful pest species because they "lack the typical combination of high mobility, flock feeding and roosting, opportunistic breeding, and high productivity that characterize successful pest birds." Monk Parakeets have been established in the U.S. for several decades, without becoming a pest as first feared. However, only further research and time will tell if Monk Parakeets remain a relatively benign addition to the fauna of Texas.

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VALUABLE RESOURCES

Editor's Book Pick: Schmidly, David J. 2002. *Texas Natural History: A Century of Change*. Texas Tech University Press. 534 pp. For an historical account of what Texas landscapes were like over a century ago, this book is highly recommended. It was written mostly with mammals in mind (the author is a mammalogist), but it still has great meaning for other audiences of the outdoors (including ornithologists and birdwatchers). An extra treat with this book is the inclusion and reprinting of Vernon Bailey's 1905 Biological Survey of Texas. That government report has been long out-of-print and difficult to find in the rare book market. It's like getting a free book within a book, so get yourself a copy soon.

Looking for an online field guide to the birds of North America? This USGS Web site is a handy resource and certainly worth bookmarking <www.mbr-pwrc.usgs.gov/id/framlst/framlst>.

Fragments of a Texas Landscape

**By Julie Shackelford, American Farmland Trust, San Marcos
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Land has always been king in Texas. At one hundred forty-four million acres, or 86% of its total land area, Texas has more rural land than any other state. Because the vast majority of this rural land is in privately-owned farms and ranches, Texas has always depended on private landowners to be stewards of our wildlife resources. But the state of agriculture has grown increasingly precarious. Low commodity prices, water shortages, skyrocketing land values and uncertainties in world markets have caused many families, some who have worked the land for generations, to considering selling.

In fact, Texas paved over more acres of rural land in the 1990s than any other state in the U.S. According to the U.S. Department of Agriculture, the conversion of rural land to urban uses in Texas between 1992 and 1997 exceeded 893,000 acres. While those lands were directly converted to development, millions of additional acres, including many large properties that have been family-owned and operated for generations, are feeling the squeeze of a larger demand for rural lands for non-traditional uses. The resulting fragmentation of large tracts into smaller holdings poses perhaps the single greatest threat to maintaining long-term agricultural viability and conservation of wildlife habitats and natural areas in Texas.

Fragmentation of habitats is an almost inevitable consequence of human activities. It occurs when large expanses of relatively undisturbed landscapes are converted to patches of remnant, isolated habitat, often surrounded by quite different land uses. It can disrupt dispersal and

movements of animals, increase predation and nest parasitism, disturb animal social structure and diminish habitat health because natural events such as periodic fires are prevented.

Today, many urbanites share the landowner's dream of owning land. In the early 1990s, Texas rural land market shifted for the first time ever to a market driven not by agriculture use but instead by recreation. Unlike their predecessors, many new landowners today have little need for large land acreages in order to experience rural living. Today's land buyers are not limited by income from agricultural productivity and can afford to pay prices that far exceed the land's value for agricultural uses. New rural residents demand amenities and public services, such as law enforcement and better roads and schools. Property taxes rise to cover increased costs, more people move out to enjoy the new development, and traditional landowners face a tough decision.



Fragments of a Texas Landscape (cont'd)

These forces have changed Texas' rural landscape. Smaller acreage, higher dollar "ranchettes" are more common than traditional ranches in many regions of the state. Average farm and ranch ownership size has decreased in 74 percent of Texas counties since 1992, with most of the growth in land ownership occurring in the 10-180 acre parcel size category. Today, the eastern third of our state is dominated by land acreages less than 100 acres.

For the last two years, the American Farmland Trust and Texas Cooperative Extension have been examining the causes and impacts of land fragmentation on Texas' landscape. "Texas Rural Lands: Trends and Conservation Implications for the 21st Century" (March, 2003) can be found at <<http://landinfo.tamu.edu/frag>>. In this present article, we look at the impacts of land fragmentation on long-term bird survival.

Because of Texas' size, the cumulative, long-term impact on agriculture and wildlife of local decisions to subdivide large properties is not fully understood. Envision, for example, 1,000 acres of contiguous native rangeland that has been divided into ten parcels of 100 acres each. Each new landowner, few with conservation experience, has a very different idea about how that land should, or should not be, managed. Some prefer a manicured look, some prefer to reseed with introduced grasses, some may introduce fast-growing but non-native vegetation and some like it just the way it is. This trend does not bode well for animal species requiring larger acreages of native habitat to meet their needs.

Wildlife, including birds, have three basic survival needs: food, water and habitat. Habitat means space and cover, and some species require large landscapes instead of small pastures or small backyards. For these species to survive, populations need to be large enough to maintain adequate genetic material to avoid inbreeding and disease. Many species are specialists in their habitat needs and do not adapt well to changes in land use or shrinking blocks of optimum habitat. Here are some examples of avian species that require large acreages for self-sustaining, healthy populations (see Table 1).

For long-term, viable populations of Northern Bobwhite, once a widespread Texas inhabitant, contiguous blocks of 5,000 acres or more of preferred habitat are needed in many areas of Texas. This means that at least 800 quail need to be present at the lowest level of the annual population. The exact amount of acreage needed will vary from site to site. While the sustainability of this species in South Texas and the Rolling Plains appears promising since these areas are dominated by land ownerships exceeding 2,000 acres each, conditions are not favorable east of Interstate 35. Most of the Pineywoods is comprised of land ownership areas less than 100 acres, with remaining areas east of I-35 averaging 100-500 acres. The prevalence of improved pasture in the Blackland Prairie and the Oaks and Prairies has not helped these birds. In fact, from 1992 to 2001, the most notable land use trend in Texas was the conversion of native rangelands and cropland to non-native improved pasture. "Improved" pasture, while providing high-intensity, high-maintenance grazing for livestock, offers little in the way of habitat or food for native wildlife like meadowlarks and bobwhite.

Table 1. Minimum acreages of prime Texas habitat for healthy populations of four bird species.

SPECIES	MINIMUM ACREAGES	NUMBER OF BIRDS
Northern Bobwhite	5,000	800 individuals
Golden-cheeked Warbler	10,500	1,000 breeding pairs
Lesser Prairie-Chicken	8,000-18,000 ^A	45-108 individuals
Red-cockaded Woodpecker (Primary Core Population) ^B	70,000	350 groups ^C
Red-cockaded Woodpecker (Support Population) ^D	20,000	100 groups

^A = some data, however, suggest a more robust figure of 25,000 acres as a minimum size which could support approximately 150 individuals
^B = larger, more secure and self-sustaining population
^C = the USFWS recovery plan for this species defines a group as "The social unit in red-cockaded woodpeckers, consisting of a breeding pair with one or more helpers, a breeding pair without helpers, or a solitary male." A helper is defined in this same document as "An adult that delays its own reproduction to assist in the rearing of another breeding bird's young. Typically, helpers are related to the breeding pairs that they assist."
^D = often considered as the smallest acceptable level for a self-sustaining population

Fragments of a Texas Landscape (cont'd)

Breeding Golden-cheeked Warblers are restricted globally to the ravines and canyonlands of the Edwards Plateau of Texas. This species requires an estimated minimum of 1,000 breeding pairs to conserve a viable population. This would equal around 10,500 acres of prime warbler habitat, which is a woodland mix of old-growth Ashe juniper and oaks. Unfortunately, the Edwards Plateau's combination of loss and fragmentation of ranch land and land value inflation makes this area one of the state's most threatened. Market values of land in the Edwards Plateau increased by more than 50%, and in the Llano Uplift market values increased by more than 80% between 1992 and 2001. Between 1992 and 1997, over 200,000 acres of large ownerships (>2,000 acres) were divided into smaller holdings. Most places in the Edwards Plateau are now between 100-1,000 acres, with the larger ranches occurring on the western edge of the Edwards Plateau.

The social Red-cockaded Woodpecker has recently been divided into several different types of populations for recovery purposes and goals. A Primary Core Population is the grandest sense of population viability and would involve at least 350 groups (see table on the previous page for the definition of a "group"). These birds would therefore need approximately 70,000 acres, depending on quality of foraging habitat (i.e., high quality means mature timber relatively free of hardwood midstory). Support Populations are smaller but no less important to avoid inbreeding. This would involve at least 100 family groups, equating to about 20,000 acres of prime forest habitat. Again, most of the Pineywoods is comprised of land ownership areas less than one hundred acres, with only 20% of land in large ownerships (>2,000 acres).

The Lesser Prairie-Chicken is a species of the southern Great Plains. In Texas, they occur in the Panhandle. According to research findings, this species requires a minimum amount of managed habitat of anywhere from 8,000 to 18,000 acres. Chunks of sandsage-midgrass habitat of this size in the northeastern Panhandle could probably support 98 to 220 prairie chickens. In the drier southwestern part of the Panhandle, however, blocks of shinnery oak-midgrass habitat of this size probably could support 45 to 108 prairie chickens. These figures are based on data that show leks (or "breeding display grounds") per unit area with the average number of males using a lek (also assuming a 50:50 sex ratio). Land ownership sizes in the Lesser Prairie-Chicken range of Texas exceed 2,000 acres per ownership, and in fact, there appears to be a slight consolidation of land in the range of this species.

The effects of humans extend far beyond city boundaries, and there are few places now in Texas that are untouched by fragmenting lands. Wildlife habitat, rural heritage and livelihoods, water, and Texans will be affected by land fragmentation in the future. Do solutions exist? To read

more about the policy implications and recommendations of this land fragmentation study, please refer to "Going, Going, Gone? Impacts of Land Fragmentation on Texas Agriculture and Wildlife," (June, 2003) on American Farmland Trust's Web site at <www.farmland.org/texas/index.htm>.

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Red-cockaded Woodpecker Status in Texas

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The endangered Red-cockaded Woodpecker (RCW) requires mature living pine trees in open park-like forests to excavate its nesting and roosting cavities. These living cavity trees are essential because they exude pine resin that deters some predators, such as snakes, and provide needed shelter and a relatively safe place to nest and raise young. The RCW cavity trees plus a 200-foot boundary around these cavity trees is called an RCW cluster. Each RCW family group's territory consists of a cluster, and the associated adjacent foraging area. RCW foraging habitat includes upland pine and pine-hardwood forests contiguous to and within 1/2-mile of the cluster that have an open park-like character. In these areas, RCWs scale the trunks and limbs of living pine trees searching for insects on which to feed. The RCW has developed a social system that revolves around the family group that includes one pair of breeding birds, the current year's offspring (if any), and frequently one or more male offspring from previous years called helpers. Helpers assist the breeding pair by incubating eggs, feeding the young, excavating cavities, and defending the territory. Helpers also provide a pool of replacement breeders in addition to the young of the year, and thereby act as a buffer between mortality and productivity in regulating population size.

Currently, RCW family groups are known to survive only in 15 counties in the Pineywoods of East Texas. Most of these are on federal lands that include one Recovery Population on the Sam Houston National Forest, one Recovery Population on the Angelina and Sabine national forests (combined), and a Support Population on the Davy Crockett National Forest. In 2002, there were 342 known active RCW clusters in East Texas, including 277 on national forests, 19 on state lands, 29 on industry lands, and 17 on other private lands (see table on p. 22). In 1996, the National Forests in Texas designated over 288,000 acres as a Habitat Management Area (HMA) to provide for the recovery of the



RCW in Texas with a population goal of 1,385 active RCW clusters (541 on the Sam Houston, 330 on the Davy Crockett, and 514 on the Angelina and Sabine national forests). Currently, the National Forests in Texas harbor a number of biologically and spatially distinct sub-populations across fragmented forests which resemble a patchwork quilt when viewed from the air. A sub-population is considered to be an aggregate of RCW clusters which are separated from other clusters by 5 miles or more of currently suitable habitat, or 3 miles or more of currently or permanently unsuitable habitat. Suitable RCW habitat, again, is upland pine and pine-hardwood forests which exhibit an open savannah-like character. At present, the spatial separation between sub-populations on the national forests is thought to preempt routine demographic interchange, effectively forming nine separate sub-populations. Aggressive management of these sub-populations is imperative if the long-range goal of merging them into a functioning population is to be attained. Clearly, any stabilization or perceived increases in the number of active RCW clusters on the National Forests in Texas over the last decade are primarily

the result of habitat restoration through the implementation of midstory control (by prescribed burning or other more intensive means like mechanical removal), thinning of overstocked pine stands, installation of cavity restrictors, and artificial cavity provisioning. These habitat improvement activities combined with RCW relocations between sub-populations into restored and managed habitat have helped to stabilize the RCWs on the national forests. In fact, the use of artificial cavity inserts commenced on the Sam Houston National Forest in 1992; only then was the RCW decline halted and an increase in the number of active RCW clusters observed on this forest. However, full implementation of a management strategy on the National Forests in Texas utilizing the "tools" scientifically proven to promote RCWs and suitable RCW

Red-cockaded Woodpecker Status in Texas (cont'd)

habitat have and continue to be stifled by court imposed restrictions. One of the most important tools in maintaining pine forests with an open character suitable for RCW occupation is frequent prescribed burning. With the complete and prolonged absence of fire, a dense hardwood midstory develops beneath the pine overstory, limiting sunlight to the forest floor. With this amount of canopy closure, most herbaceous plant species disappear, and pine regeneration is limited to gaps in the hardwood canopy. In these fire-suppressed forests, fuel accumulations become a wildfire hazard, the herbaceous grassy groundcover disappears, the forest becomes thick and hard to walk through, and animals such as the RCW and others including the Wild Turkey, Northern Bobwhite and Bachman's and Henslow's sparrows disappear.

In 1998, a strategy to promote RCW conservation on private lands in eastern Texas was implemented by the U.S. Fish and Wildlife Service, U.S. Forest Service, Texas Parks and Wildlife Department, Texas Forest Service and private industry. The Regional Habitat Conservation Plan for the Red-cockaded Woodpecker on Private Land in the East Texas Pineywoods (Texas RCW HCP) promotes endangered species conservation on private forest lands by providing regulatory relief to private landowners who undertake voluntary enhancement and restoration of RCW nesting and foraging habitat on their lands. Safe Harbor Cooperative Agreements under the Texas RCW HCP currently include a total of 14 non-industrial private landowners with 2,051 acres enrolled. Additionally, two industrial private landowners and over 2,200,000 acres have been enrolled with a baseline of 32 RCW groups. On these industry lands, over 12,000 acres have been designated as RCW Habitat Management Areas where actions intended to promote RCW conservation are being implemented. The 2,000-acre Habitat Management Area in Trinity County reported 9 RCW family groups in 2002. The baseline responsibility associated with this area is 4 active clusters. Temple-Inland Forest Products Corporation maintains 11 RCW family groups on their 5,000 acre Scrappin' Valley RCW Habitat Management Area in Newton County. An additional 5 family groups are supported on other Temple-Inland lands in Texas for a total of 16.

In a cooperative project between a private landowner and the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program and Texas Parks and Wildlife Department's Landowner Incentive Program, cost-assistance was provided to the Cook's Branch Conservancy on the Mitchell Ranch in Montgomery County, Texas, to implement restoration and management in 14 active RCW clusters and their associated foraging habitat. The project involved the intensive restoration and management of approximately 250 acres of RCW clusters, and the associated improvement of habitat conditions on approximately 1,500 total acres of RCW foraging area. Cluster rehabilitation and improvement

actions included natural cavity rehabilitation at active cluster sites by removing cavity competitors and installing restrictor plates, installing artificial cavities (inserts) in RCW clusters, control burning of cluster sites and foraging areas, and RCW monitoring.

Historically, the endangered RCW occupied most of the southern yellow pine forests of eastern Texas. Currently, the range of the RCW is limited and fragmented. The known remaining RCW populations exist primarily on the four national forests, two state forests, industrial timber company lands set aside for RCW habitat management and some other private lands. Urban sprawl, forest conversion to other uses, clearcutting of large expanses of pine forests, short-rotation forestry practices and especially fire suppression in eastern Texas have altered most of the habitat historically occupied by RCWs, making most forest lands unsuitable for RCW occupation. However, by utilizing all the biologically-based tools available to land managers, especially prescribed fire, we have the ability to restore habitat in the gaps between sub-populations on federal lands and to meet the recovery goals for the species in Texas.

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For extensive information on avian traffic death, please visit <www.birdresearch.dk/unilang/traffic/trafik.htm>

Ever wonder how old a certain species of North American bird can get? Banding data can answer the question of longevity records for our birds. Interested readers will definitely want to bookmark this great USGS site <www.pwrc.usgs.gov/bbl/homepage/longvrec>.

TEXAS PARTNERS IN FLIGHT is not a club with membership dues. Instead, TX PIF is part of the nongame bird arm at the Texas Parks and Wildlife Department. We rely on partners from all walks of life. If you would like to make a personal contribution to our efforts, please donate to the "TPWD Nongame Fund." For details, please visit <www.tpwd.state.tx.us/nature/birding/assist_land_birds/mig_landbirds2.htm>.

NUMBER OF ACTIVE RED-COCKADED WOODPECKER CLUSTERS KNOWN ON FEDERAL, STATE, AND PRIVATE LANDS IN EAST TEXAS: UPDATED SEPTEMBER 2002 BY THE USFWS EAST TEXAS SUBOFFICE IN LUFKIN TEXAS															
FEDERAL, STATE, AND PRIVATE LANDS IN TEXAS	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
Sam Houston National Forest (FS)	164	163	168	168	160	150	156	153	149	140	132	132	134	133	122
Davy Crockett National Forest (FS)	55	55	55	51	45	39	40	38	38	37	36	30	29	27	28
Angelina National Forest (FS)	27	28	29	30	23	22	23	27	27	27	24	21	24	24	23
Sabine National Forest (FS)	31	27	25	25	22	27	22	20	20	15	10	10	9	10	11
Big Thicket National Preserve (NPS)	0	0	0	0	0	0	0	1	2	2	1	1	?	?	?
Federal Total	277	273	277	274	250	238	241	239	236	221	203	194	196	194	184
Jones State Forest (TFS)	13	13	14	14	14	14	14	14	14	15	15	14	?	?	?
Fairchild State Forest (TFS)	5	5	4	4	4	4	6	6	7	8	8	11	?	?	?
Huntsville State Fish Hatchery (TPWD)	1	1	1	1	1	1	1	2	2	2	2	2	?	?	?
Pine Park Rest Area (TxDOT)	0	0	0	0	0	0	0	0	0	1	1	?	?	?	?
State Total	19	19	19	19	19	19	21	22	23	26	26	27	?	?	?
Alabama-Coushatta Indian Reservation	2	2	2	2	1	1	1	2	3	3	5	5	?	?	?
Temple-Inland Forest Products Corporation	16	16	16	11	11	14	?	20	20	17	16	5	?	?	?
International Paper (formerly Champion)	9	9	3	2	2	3	3	3	3	5	5	5	?	?	?
Louisiana-Pacific Corporation *	2	?	?	7	8	8	9	12	13	6	5	3	?	?	?
Mitchell Ranch/Cooks Branch*	13	13	?	?	?	?	?	?	10	10	?	?	?	?	?
Other Private Lands*	4	4	3	1*	1*	1*	1*	1*	20	20	27	40	?	?	?
Tribal/Private Total	46	44	24	23	23	27	14	38	69	61	58	58	?	?	?
TOTAL	342	336	320	316	292	284	276	299	328	308	287	279	196	194	184

⊕ Since inception of Texas House Bill 2012 (Private Landowner Information Protection) which was signed into law on June 12, 1995, data are not available or information was not reported where an asterisk appears.

⊕ Definitions for acronyms: FS = Forest Service, TFS = Texas Forest Service, NPS = National Park Service, TPWD = Texas Parks and Wildlife Department, and TxDOT = Texas Department of Transportation.

How Rural Landowners and Land Managers Can Help Native Birds Across Texas

By **Cliff Shackelford**

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According to over three decades of Breeding Bird Survey data, our native birds are declining at an alarming rate. Additionally, Texas is rapidly losing native wildlife habitat that these birds call home. Since the majority of Texas is in private hands, private landowners hold the key to reversing these declines. We citizens of urban centers should adamantly support private land incentive programs since we cannot expect the private landowner to *foot the bill* for everything being done and needing to be done.

The list below includes a variety of management action tips that landowners and land managers can do voluntarily to help our native birds (as well as other plants and animals). Please promote these with your neighboring landowners; working together with larger pieces of land will do so much more for wildlife conservation. These items are not listed in any particular order:

- Conserve and restore native plant communities (habitats); plant native vegetation only, especially warm-season grasses. For example, meadowlarks, bobwhite, and other native grassland birds typically do not thrive in pastures dominated with non-native coastal bermuda. Control invasive plant species.
- Apply prescribed fires where appropriate (i.e., grasslands, shrublands, savannahs) every few years depending on rainfall amounts and range conditions.
- Avoid fragmentation of existing habitat. Fragmentation is the breaking up and loss of substantial and contiguous blocks of habitat. Retain large blocks of native habitat instead of cutting it up with roads, utility lines, real estate subdivisions, etc.
- Practice rotational grazing; limit populations and impacts of browsing animals (i.e., livestock, deer, exotic ungulates) especially in riparian areas, spring heads, glades, bogs and other sensitive places.
- Limit or stagger mowing and haying efforts to allow wintering grassland birds to depart (which is about early March), and so breeding birds can complete their nesting cycle (usually April through July depending on vegetative conditions and rainfall amounts that year).
- Mow or plow starting in the middle of a pasture or field, then proceed towards the outside so that skulking birds won't keep concentrating in the center area and get run over in the end. Instead, give them a chance to flee.
- Leave thickets (understory) and grassy areas for cover whenever possible. Avoid mowing and plowing the entire property – leave some natural areas completely unmowed or unplowed.
- Restore natural wetlands. Depending on the region, allow natural areas that once experienced seasonal water fluctuations to retain water like playas, oxbows (resacas), beaver ponds, marshes, coastal potholes, cienegas, etc. Bottomland hardwood forests in the eastern third of Texas need occasional understory flooding to maintain forest health. Providing water in the form of a traditional “stock pond” or “stock tank” is not as beneficial to a diversity of birds as is commonly thought.
- Control feral hogs since their rooting can destroy the regeneration of bird habitat.
- Control feral and free-roaming domestic cats since they hunt and kill native birds.
- Do not remove tree-falls or rotting logs as they provide cover and perch sites; let them rot where they lay.
- Eliminate the spraying of canopy insects since this can be an important source of food for birds. Over half of our native birds are insectivorous – let them do their job.
- Encourage cavity users to nest by leaving snags (dead trees) standing or by mounting and maintaining manmade nest boxes.
- Avoid clearcutting large blocks of forest or woodland; try selective harvesting to leave some attributes of natural forests with midstory and understory. Leave broad strips of woody vegetation along waterways to avoid erosion and so riparian birds have important habitat, too.

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