

TEXAS PARKS AND WILDLIFE

THE ENDANGERED
Red-cockaded
Woodpecker

AND MODERN FORESTRY
IN TEXAS:
LIVING IN HARMONY



A booklet by:

**Texas Partners in Flight, Texas Parks and Wildlife,
U.S. Fish and Wildlife Service,
U.S. Forest Service, and the Texas Forest Service**

SECOND EDITION

FOR MORE INFORMATION

For more information on all the woodpeckers, see
www.tpwd.state.tx.us/nature/birding/woodpeckers/woodpecker1.htm

PARTNERS



ACKNOWLEDGMENTS

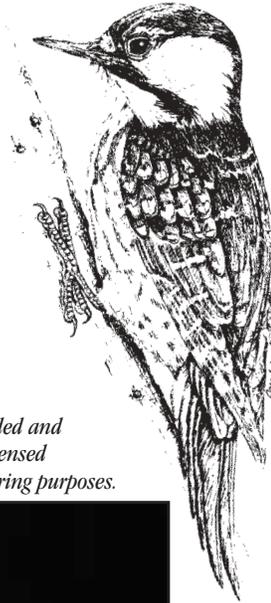
This booklet was written by Cliff Shackelford (TPW) and Jeff Reid (USFWS).
Landowner Incentive Program information was provided by Ricky Maxey (TPW).
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Red-cockaded woodpecker



PHOTO BY R. N. CONNER, USFS

Adult at the nest cavity. Notice the sticky resin on trunk of this live pine.



Adult captured, banded and safely released by licensed biologists for monitoring purposes.



PHOTO BY CLIFF SHACKELFORD, TPW

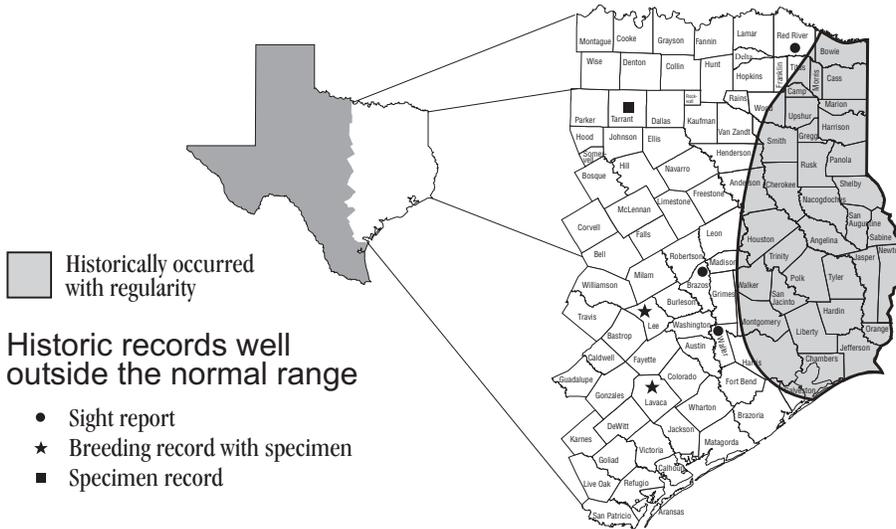
The Red-cockaded Woodpecker, or RCW, is one of eight species of woodpeckers that occur in East Texas. It is a small black-and-white bird about the size of a cardinal.

The red patches, or “cockades,” on either side of the head on males is rarely seen as they usually conceal the red until excited or agitated. The observer usually needs binoculars to see the red. This woodpecker usually does not frequent urban settings and is not a familiar backyard species. It is not likely to be observed at a bird feeder unlike the Downy and Red-bellied woodpeckers, for example.

RANGE

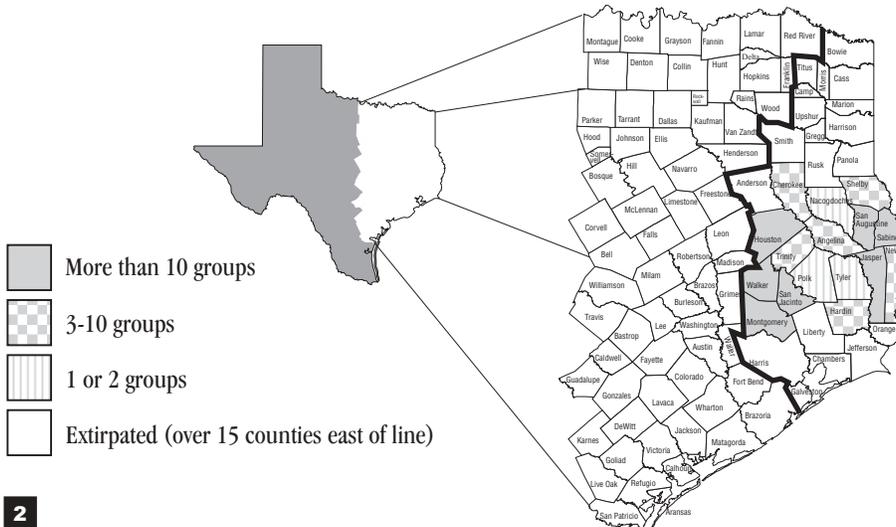
Historic Range of RCWs in Texas

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



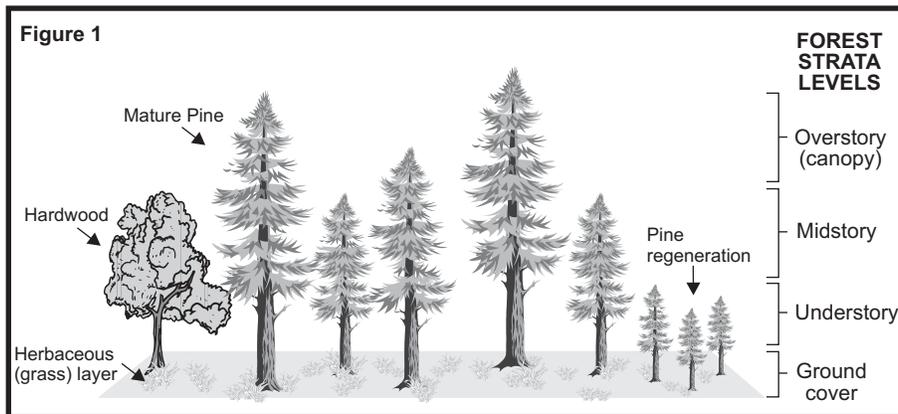
Present Range of RCWs in Texas (1998)

from known locations on private, state, and federal lands



HABITAT

The RCW adapted to open, mature pine forests throughout the southeastern U.S. Although this open, grassy condition was historically maintained by lightning-created fire, the early American Indians also used fire as a means for creating this forest condition (Figure 1).



By maintaining the open condition of these pine forests, sunlight reached the forest floor which produced a diverse herbaceous, vegetative ground cover that supported important sources of food for the Indians such as white-tailed deer, northern bobwhite and Eastern wild turkey. The historic, open, fire-maintained pine stands are very “park-like,” and are sometimes called “pine savannahs” or “pine sandhills.” These sites usually occur in very



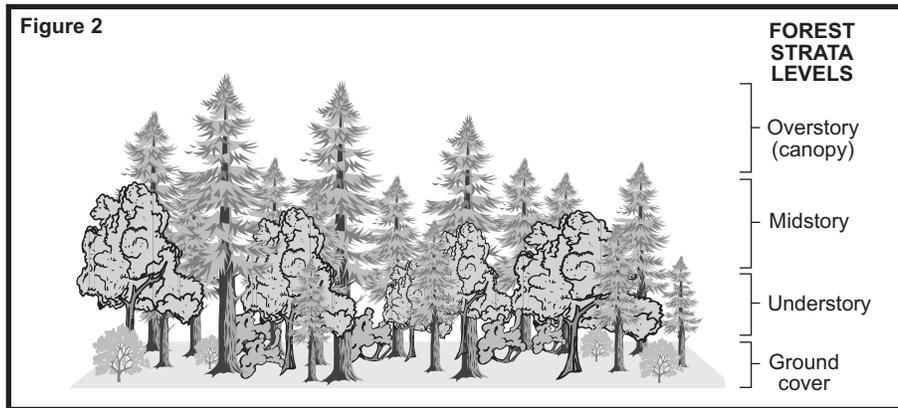
PHOTO BY CLIFF SHACKELFORD, TPW

deep sandy sites along hillside ridges, but they can also occur elsewhere on the landscape like in wetter, clay soil types.

Open, mature longleaf pine stand showing signs of recent fire. Notice the grassy understory, lack of hardwoods, and charred pine trunks. Less than 3% of this habitat type remains in the southeastern U.S.

HABITAT

The suppression of fire in the last 100+ years has allowed a thick mass of woody plant species to grow, reducing habitat for nesting bobwhite and turkeys, as well as the preferred habitat for RCWs. When the woody plants grow to a height of 15 feet or more (termed midstory), RCWs usually abandon the site (Figure 2).



A unique characteristic of the RCW is that it is the only North American woodpecker species that excavates its cavity exclusively in living pine trees. To make cavity excavation easier, the bird typically chooses old pines (80+ years) infected with a fungus called *heart rot*, which decays the inner wood of the tree.



PHOTO BY CLIFF SHACKELFORD, TPW

A pine stand with dense hardwoods due to the lack of fire.



PHOTO BY CLIFF SHACKELFORD, TPW

When fire is not an option, here is an example of recently accomplished mechanical midstory removal and thinning, a means of opening a previously dense stand.

WHY?

WHY IS IT VULNERABLE AND WHY IS IT ENDANGERED? In simplistic terms, timber harvesting of the southern pine forests has resulted in a loss of mature pine forest habitat, habitat that the RCW needs for food and shelter. Currently, much of the forests in East Texas are managed for fiber production which usually means a short rotation age. Basically, the trees are too young and too small for RCWs to excavate cavities for roosting and nesting, and the stands are usually too dense for RCWs to search for insects on which to feed. In many pine forests where sawtimber-sized trees are available for the RCWs to excavate cavities, the hardwood midstory is typically so dense that the RCW avoids these areas.

Scientists believe that RCWs adapted to excavating cavities in live pine trees to take advantage of the sappy resin which flows from wounds in the tree (see photo on page 1). The RCW pecks resin wells on the trees in which they have excavated cavities. The resulting resin “barrier” effectively prevents predators such as rat snakes, which do climb pine trees as they search for food, from climbing the trees. However, an abundance of midstory hardwoods can allow predators to reach an RCW cavity tree via hardwood limbs. The rat snake, for example, can climb the hardwood to reach the cavity and eat RCW eggs or young. This is one of the reasons why it is believed that hardwood midstory in a pine stand causes the RCW to abandon their cavity trees. If they don’t abandon these areas, they might end up in the stomach of a rat snake!

Historical accounts of the pine forests in East Texas depict large old trees, many RCWs and an open, grassy understory among a sparse pine overstory (canopy). It has been said: “Once upon a time, you could ride a horse at full gallop through the pine forests of East Texas.” In modern times, that would be virtually impossible due to the thick brush. It is believed that natural, frequent fires burned the forests of East Texas. These fires promoted the open, grassy character of the forest, while reducing most species of hardwoods in the uplands where the RCW lived. The harvesting of these forests and the lack of frequent fires have essentially changed the character of the forests, causing many species dependent on this fire-maintained ecosystem to decline. Among the declining species are: RCW, Bachman’s sparrow, Eastern wild turkey, American kestrel, northern bobwhite, Texas trailing phlox and Louisiana pine snake. (See page 8 for more information.)

RECOVERY

HOW CAN WE BRING THEM BACK? Many private landowners view their forests, or the pine timber on their land, as money in the bank. They look at the investment of time and money, and fear that an endangered species such as the RCW will show up on their land and essentially devalue their investment. In Texas, RCW recovery is designated on Federal lands owned and managed by the U.S. Forest Service. In reality, RCW recovery in Texas will depend upon assistance from the private landowners adjacent to these forests since the current ownership is essentially arranged in a checkerboard pattern. This fact concerns most private landowners with timber near the National Forests in Texas.

That is why state and federal authorities recently developed a plan to give these private landowners “peace of mind.” This Plan is known as the **Regional Habitat Conservation Plan** (hereafter, the Plan) for the RCW on Private Lands in the East Texas Pineywoods. Essentially, private landowners who sign up under the Plan are protected from future RCW occupation of their land in return for growing large sawtimber in East Texas utilizing established forest management practices such as thinning, prescribed burning and selective harvesting. These practices increase the value of the timber while giving the RCW a temporary place to live. This will benefit recovery efforts on federal lands because the net result will be more woodpeckers to inhabit the managed RCW habitat on Forest Service lands.

The landowner will also benefit from knowing that their timber investment is protected. This protection should result in larger and older trees across the landscape which should be worth more money when harvested. Through cooperative efforts such as the Plan and restoration efforts on Texas National Forests, the future of this resilient bird is looking bright.

For more information on this Plan, please contact TPW in Nacogdoches at 936/564-0234, the USFWS in Lufkin at 936/639-8546 or the TFS in Lufkin at 936/639-8180.

Texas Parks and Wildlife also provides a Landowner Incentive Program which provides matching funds for conservation projects. Read on for more details.

L . I . P .

Texas Parks and Wildlife's Landowner Incentive Program and the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program offer funding assistance to private landowners for Red-cockaded Woodpecker habitat restoration and management.

Texas Parks and Wildlife's Landowner Incentive Program (LIP) and the U.S. Fish and Wildlife Service's (FWS) Partners for Fish and Wildlife (PFW) program seek to restore and enhance fish and wildlife habitat on private lands. They are two separate sources of cost-share assistance, but most recently they have teamed up to form an East Texas Cooperative. Through this option of a cooperative program, the actual costs (up to 80% of the total project cost) for specific wildlife habitat improvement actions are reimbursed directly to the landowner. This provides cost-sharing and technical assistance opportunities to non-federal landowners, including private landowners, local governments, native American tribes, educational institutions, and other entities. This program is intended to benefit all federal trust resources, including waterfowl, migratory birds, as well as candidate, threatened, and endangered species. Projects that include wildlife habitat enhancement/restoration activities in wetlands, native prairies, riparian corridors, bottomland hardwoods, and upland habitats such as longleaf pine reforestation are sought through this cooperative. Program personnel maintain a close working relationship with personnel from the Natural Resource Conservation Service (NRCS), local Soil and Water Conservation Districts, Texas Forest Service, other government agencies, and private organizations such as Ducks Unlimited and the National Wild Turkey Federation.

For additional information on LIP in East Texas, please contact TPW Biologist Ricky Maxey at 936/564-0234. For additional information on PFW, please contact USFWS Fish and Wildlife Biologist Jeff Reid at 936/639-8546.

PARTNERS IN FLIGHT

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.

In addition to the RCW, many other species are becoming critically threatened or endangered. They, too, are experiencing serious declines because they depend on the same forest type (or habitat) as the RCW. Management that benefits this woodpecker will benefit a wide variety of other species as well. Therefore, this is an example of “ecosystem-wide management,” not “single-species management.”

The RCW is an indicator of a healthy, upland pine forest ecosystem maintained by frequent, but mostly low-intensity fires. A few other bird species that will benefit include nesting Eastern wild turkey, northern bobwhite, red-headed woodpecker, northern flicker, American kestrel, year-round Bachman’s sparrow, year-round Brown-headed Nuthatch and Red-headed Woodpecker, and wintering Henslow’s sparrow. There is a long list of plants and animals that also depend on these fire-maintained pine forests – over 70 species that we know of, too many to list here.

ADDITIONAL INFORMATION

If you would like to visit a site in Texas with Red-cockaded Woodpeckers, please contact one of the following:

W. G. Jones State Forest in Conroe <i>(Montgomery County)</i>	936/273-2261
Davy Crockett National Forest in Ratcliff <i>(Trinity and Houston counties)</i>	936/655-2299
Sam Houston National Forest in New Waverly <i>(San Jacinto, Walker, and Montgomery counties)</i>	936/344-6205
Angelina National Forest in Lufkin <i>(Angelina, Nacogdoches, San Augustine, and Jasper counties)</i>	936/897-1068
Sabine National Forest in Hemphill <i>(Sabine and Shelby counties)</i>	409/787-3870

For further reading on this woodpecker, please see:

Conner, Richard N., D. Craig Rudolph, and Jeffrey R. Walters. 2001. The Red-cockaded Woodpecker: Surviving in a Fire-maintained Ecosystem. Univ. Texas Press. 432 pp.

Check out the Web



www.tpwd.state.tx.us/nature/birding



www.tpwd.state.tx.us



www.fws.gov

<http://rcwrecovery.fws.gov>

<http://arlingontexas.fws.gov>



txforestservation.tamu.edu



www.fs.fed.us



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