

**Balcones Canyonlands National Wildlife Refuge**  
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**U.S. Fish and Wildlife Service**  
<http://southwest.fws.gov/refuges/texas/balcones/index.htm>

**For Refuge Information**  
1 800/344-WILD

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*Cover photograph of a Golden-cheeked Warbler*  
© M. Lockwood. Academy of Natural Sciences, Philadelphia

U.S. Fish & Wildlife Service

# Balcones Canyonlands

*National Wildlife Refuge*



*If future generations are to remember us more with gratitude than with sorrow, we must achieve more than the miracles of technology. We must also leave them with a glimpse of the world as it was created, not just as it looked when we got through with it.*

*Lyndon B. Johnson*



*This blue goose, designed by J.N. "Ding" Darling, has become a symbol of the National Wildlife Refuge System.*



© Eddie Hertz

*Juniper-Oak Woods at Balcones  
Canyonlands NWR*

**Welcome:  
Endangered  
Songbird  
Destination**

I hear him...over there!" Birdwatchers exclaim in hushed whispers as a Black-capped Vireo pops up from the shin oak thicket. Hidden within the observation deck, the visitors gaze through binoculars at their first sighting of the rare songbird—only 20 feet away.

Balcones Canyonlands National Wildlife Refuge offers some of the best birdwatching and habitat left in Texas for two endangered songbirds—the Black-capped Vireo and the Golden-cheeked Warbler. Less than an hour from bustling Austin, the Texas Hill Country invites visitors to slow down and enjoy the tranquil beauty.

**Wildlife:  
Melting Pot For  
Rarities**

When you enter Balcones Canyonlands NWR, you may not realize that these hills carpeted in juniper and hardwood trees fall at the juncture of the Great Plains and the Gulf Coast bioregions. Life at nature's intersections tends to be rich and unusual. Add the unusual limestone geology of the Edwards Plateau and it's not surprising to find plants and animals adapted to live here and nowhere else.



*Mountain Pink*  
Chuck Sexton/FWS

The more than 700 plant species include the Texabama Croton, discovered here only in 1989. At least a third of the state's threatened and endangered species live or migrate through the area.

**An Aerial View**

If you surveyed Balcones Canyonlands NWR from the viewpoint of a circling turkey vulture you'd see that the refuge also straddles the divide between the Colorado and Brazos watersheds.

*Post Oak Ridge*

Photograph by Larry Narcisse, FWS



The canyons facing Austin are deeply etched by erosion from the Colorado River tributaries. This rugged terrain features old Ashe juniper and oak woodlands that constitute some of the best Golden-cheeked Warbler habitat.

The Brazos River tributaries to the north cut only wide valleys. Here, the refuge foothills ease into savannahs. The open country supports oak shinneries (head-high thickets) that are vital to the Black-capped Vireo.

Both endangered songbirds face a common dilemma. They depend on very specialized habitats to make a living, and those places grow fewer by the day in the wake of development and human activity. That's why this refuge has a critical role to play in both preserving and restoring their homes.

### **Underground World**

Beneath the homes of songbirds lies a mysterious labyrinth of caves inhabited by other creatures living in perpetual darkness. The caves, cracks, fissures, sinkholes and disappearing streams form a landscape known as "karst." Think of karst as a honeycomb sculpted by water gradually dissolving the calcium carbonate bedrock of limestone.

Ringtails and raccoons retreat into cave entrances for shelter. Cliff chirping frogs and whitethroat slimy salamanders squeeze into moist crevices. Cave crickets and daddy longlegs live within caves, but leave to feed and return. Some spiders, beetles and pseudoscorpions never come out to the light, living all their lives in reclusive darkness.



© M. Lockwood, Academy of Natural Sciences,  
Philadelphia

*Golden-cheeked Warbler with  
cowbird chick*

**Golden-cheeked  
Warbler  
A Watcher's  
Calendar**

*Mid-March*

Male Golden-cheeked Warblers trill from the Spanish and live oaks, tirelessly courting females throughout the day. No matter that the tiny birds have just flown from the highlands of Mexico and Central America. When the females arrive a few days later, they barely catch their breath before choosing a mate. Listen for the male's courtship tune of bzz-bzz-bzz-bzz-up!

*Mid-April to Late May*

Males shift to defending territories with a LAY-zee-DAY-zee song, warming up before sunrise, and then again in mid-morning. Females weave nests of Ashe juniper bark strips (found only on the mature trees) and downy cobwebs, cocoons and animal hair. The three to four creamy eggs hatch in close to 12 days.

*June to Mid-July*

You won't hear much singing as the adults keep busy feeding insects to their young for about a month, despite the nestlings' ability to fly at nine days. By mid-July whole families are winging south again towards Mexico and Central America.



© G. Lasley

*Black-capped Vireo male at nest*

*Viewing Tip*

Look for lone birds and family groups; warblers flock with other species after nesting. Your chances of seeing a Golden-cheeked Warbler are much higher if you learn their song.

**Black-capped Vireo  
A Watcher's Calendar**

*Late-March to Mid-April*

The shin oaks brim with the bubbling songs of fresh arrivals from the west coast of Mexico. Male Black-capped Vireos set up territories they will defend throughout the breeding season.

*Mid-April to Mid-May*

Unlike the Golden-cheeked Warblers, both male and female construct a single nest. The low-slung, thick-walled nest lined with cocoons, spider webs and fine grasses is soon ready for the female to lay usually four eggs. Visit the Shin Oak Observation Deck for a great view of excellent vireo habitat.

*Mid-May to September*

Nestlings hatch after a couple of weeks and can leave the nest in another two weeks. The youngsters stick close to their nests and adults throughout the summer until the vireos migrate south.



*Balcones wildflowers*  
Chuck Sexton/FWS

*Fiery Skipper on  
frostweed*  
Chuck Sexton/FWS



**Wildlife In Every  
Season...**

Miss the Golden-cheeked Warbler season? Slow down and enjoy seasonal highlights and everyday life at the refuge, from monarch butterflies sipping fall wildflowers to white-tailed deer browsing in meadows.

*Birdwatching*

A visitor catching their first glimpse of a male painted bunting on a treetop is often pleasantly startled. The refuge harbors a healthy population of these dazzling birds here in the heart of their range, along with more than 215 bird species part or all year. Almost half are neotropical migrants that breed in the U.S. and winter south of the border.

*Painted Bunting*  
© Greg Lasley



*Hairstreak on  
Texabama  
Croton Flower*  
Chuck Sexton/FWS



*Wildflowers and  
Hill Country  
Scenery*

Roadsides and prairies transform to brilliant wildflower gardens each spring and fall, accenting the emerald, olive and forest green of the Hill Country woods. The flowers in turn attract a myriad of butterflies. In summer, at least 30 species of dragonflies zip across ponds, streams and meadows in hot pursuit of their insect prey.

*Fall Flocks*

Thousands of monarch butterflies and hawks migrate south through this refuge in fall, the butterflies finding fuel from wildflowers, the hawks riding thermals and warm updrafts along sharp ridges. If you are lucky you might spot a speedy peregrine falcon or a Mississippi kite.

*Prescribed burn on the refuge.*  
FWS Photograph



**Lending a Hand  
for Wildlife**

As the refuge staff diligently work to restore nature's cycles to prairie and savannah, visitors can expect to see and enjoy more Hill Country wildlife. Work crews prune and conduct a burn in the oak shinnery to match the needs of the Black-capped Vireo. They plant shin oaks to establish new vireo habitat in suitable areas, and encourage native grasses, such as little bluestem, that will become nesting, feeding and wintering areas for many birds.

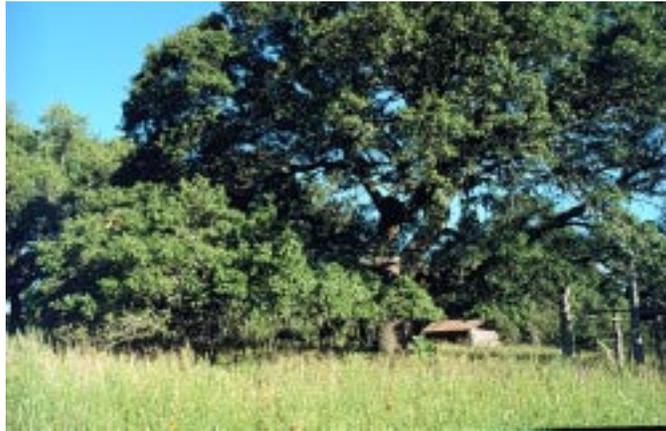
*Returning Fire*

Scientists now know that all fire is not bad for nature. Before settlement, lightning storms frequently sparked fires that rejuvenated both grasses and the shin oak community. Today, grasslands and savannah are starting to thrive again, thanks to a carefully managed prescribed burning program. Fire, too, keeps the shin oak in the brushy, low-growing state the vireos require for nesting. Gaze across a sea of wild prairie and it's easy to imagine the days when herds of bison thundered by.

*Cowbird Capers*

Enhancing habitat for vireos is a start, but brown-headed cowbirds can wreak havoc. Cowbirds lay their eggs in other birds' nests, which proved an excellent strategy for a traveling lifestyle following bison herds. Today, cowbirds thrive in the company of livestock and people. Combine their abundance with the struggling Black-capped Vireos and the result spells trouble.

When a cowbird drops an egg in a vireo's nest, the tiny songbird incubates that egg along with her's. When the chicks hatch, the heartier cowbird often gets fed the most at the expense of the vireo chicks. The refuge solves the problem by removing cowbirds from vireo nesting areas to give the endangered birds a better chance for recovery.



*Doeskin Ranch Corn Crib*

Rob Iski/FWS

## History

Layers of limestone, up to 1,000 feet thick in some places, underlie the refuge lands. These layers were formed over 60 million years ago when central Texas was a shallow sea thriving with primitive fish and other wildlife. Fossils from that period are found throughout the Hill Country.

Arrowheads and chipped rocks serve as reminders of the aboriginal people who hunted and lived here for thousands of years, relying on bison, deer, small game and wild harvests. The Tonkawa and Jumano people dwelled in this region prior to the arrival of the Apaches and Comanches in the late 1600s and early 1700s. These Plains tribes soon dominated life on the Edwards Plateau until overwhelmed by the thousands of settlers who migrated to Texas after 1848, at the end of the Mexican War.

Isolated communities cropped up in today's Balcones Canyonlands NWR by the end of the 1800s. These "cedar choppers" and cotton farmers earned a subsistence living until the late 1940s, when a ranching economy took hold. Paved roads drew visitors to the reservoirs formed by Colorado River dams.

As you drive the refuge perimeter, you'll pass by weathered, leaning homesteads. Imagine the stories of the families who cultivated the land and sent their children to one-room schoolhouses. When exploring, please leave all artifacts where you find them and help preserve a cultural legacy.

**Things to Do at the Refuge**

For a Balcones Canyonlands NWR overview, take a Hill Country tour starting at the gateway refuge community of Lago Vista and hike the nearby trails of Warbler Vista. Afterwards, head north to the town of Liberty Hill. Drive slowly along scenic Cow Creek, enjoying views of 750-foot thick Cretaceous limestone and terraces that gave the refuge its name, translated from the Spanish word for "balconies." Halfway through your trip, stop at Doeskin Ranch for hikes along a stream and up the hillside into Golden-cheeked Warbler country. The Shin Oak ObservationDeck rests at the northern tip, about nine miles west of Liberty Hill. Allow a leisurely full day.

*Doeskin Ranch*

A corn crib, water trough, cattle pens and a stock pond hint at earlier days when horses kicked up dust, cows grazed and families planted gardens and cotton. Today, the old ranch offers a place to experience both the culture and nature of the refuge on foot. Towering live oaks rise above frostweed that flowers in fall, just in time for the monarchs to find the nectar they need for their flight to Mexico.

*Warbler Vista*

Foot trails weave through the forest, allowing visitors to enter prime Golden-cheeked Warbler habitat. Hikers will be rewarded with views of Lake Travis and the surrounding hills.



### Viewing Tips

Dawn and dusk are the best times to see wildlife. Activity is lowest on hot summer afternoons and on windy days.

Remember, some animals can be dangerous when cornered or threatened. For your safety, view wildlife from a safe distance and never try to handle an animal. Leave “abandoned” young animals alone; the parent is probably nearby waiting for you to leave.

Do not feed wildlife; your lunch could disrupt wild digestive systems.

Cars make good observation blinds. Drive slowly, stopping to scan brushy areas and other places wildlife might hide. Use binoculars or a long lens for a closer look.

Try sitting quietly in one spot. Animals will come out of hiding once they think you are gone. Walk quietly in designated areas, keying in on sounds and smells.

Teach children quiet observation. Other wildlife watchers will appreciate your consideration.

Look for animal signs, such as tracks, scat, feathers and nests.

Watch for birds along the flowing waters of Doeskin Branch. Walk through waist-high native grasses in the meadows. Climb up a ridge through the forest home of the Golden-cheeked Warbler. Emerge on a windswept plateau overlooking the refuge.

*Shin Oak  
Observation  
Deck*

Viewers are welcome to stay and watch and listen for Black-capped Vireos from the comfort of a gazebo-style viewing deck set in the oak shinnery. The deck opens in late April, after the birds have set up nesting territories. Yellow-breasted Chats, Painted Buntings and other colorful songbirds add to the visual and sensory feast.

*Cactus Rocks  
Trail at Warbler  
Vista offers a  
shady place to  
walk in Golden-  
cheeked Warbler  
habitat.*

Rob Iski/FWS



*Hunting*

The refuge offers limited hunting for big game and game birds. Youth hunts for 16 years old and younger are also offered. Contact the Refuge directly for more information. Firearms may only be brought onto the refuge during these legal hunts.

**Future of the  
Refuge**

Balcones Canyonlands NWR is a young refuge in need of growing space. The refuge set a proposed border that could encompass 80,000 acres of Texas Hill Country. The task of acquiring more land is far from finished. Tracts of refuge lands range from 16-acre to 7,800-acre parcels. The challenge remains to link the tracts and protect as many pieces as possible. The Refuge Comprehensive Conservation Plan features a number of protection strategies, including



*Guided nature walks are available during special events.* Bill Reiner/FWS

acquiring parcels from willing sellers only, purchasing conservation easements and offering private landowner initiatives.

### **Meeting Your Needs**

The Refuge is open from sunrise to sunset. However, some areas may be temporarily closed to the public to allow for other activities like prescribed burning or hunting. Visitors may pick up information at the Refuge Office on FM 1431 or from the Lago Vista Chamber of Commerce on FM 1431 and Bar-K Road (next to the school). To reach the Refuge Office from Lago Vista, go west on FM 1431 for 5 miles past the intersection with Bar-K Road. If you are coming west on FM 1431, the office will be one mile from the intersection with Cow Creek Road. The office is on the north side of the highway.

*View of refuge from Cow Creek Road*  
FWS Photograph





*Guided nature walks are available during special events.*

Bill Reiner/FWS

When visiting the refuge, nearby Lower Colorado River Authority sites offer camping, picnicking and boating. Lago Vista, on the shores of Lake Travis, offers both food and lodging.

### **Help Us Protect the Refuge**

Please help us take care of our Texas Hill Country heritage. To safeguard the endangered wildlife and unique habitats of Balcones Canyonlands NWR, we do not allow camping, fishing, pets, alcoholic beverages, firearms, open fires and collecting of plants, animals, fossils or artifacts. The use of electronic devices to call birds is strictly prohibited.

### **Friends of Balcones Canyonlands NWR**

Friends of Balcones Canyonlands NWR is a non-profit organization whose mission is to support, complete, and enhance the refuge and its diverse ecology, and promote its use for recreational, educational, and scientific purposes.

To find out how to participate as a Friend, or to learn about other volunteer opportunities, contact the refuge or the Friends group directly at [www.friendsofbalcones.org](http://www.friendsofbalcones.org).

**Balcones  
Canyonlands  
NWR  
Facts**

*Where is it?*

The refuge is about 45 minutes from Austin. Take U.S. Highway 183 north from Austin, then go west on FM 1431 to Lago Vista to reach the southern end. Warbler Vista Public Use Area is just a couple minutes west of Lago Vista on the north side of FM 1431.

Or continue north on Highway 183 ten more miles to Seward Junction and follow Texas Highway 29 two miles to Liberty Hill. Take FM 1869 west approximately 9 miles to reach the Shin Oak Observation Deck.

The hiking trails at the Doeskin Ranch Public Use Area are located on FM 1174. After visiting the observation deck, continue west on FM 1869 about 1 mile, turn left at the intersection with FM 1174 and go south for about 2.3 miles. Doeskin Ranch is on the east side of the road.

*When was it established?*

1992

*How big is it?*

20,000 acres as of 2003

*Why is it here?*

To conserve nesting habitat for the endangered Golden-cheeked Warbler and Black-capped Vireo.

*Pond and Prairie  
Trail Overlook at  
Doeskin Ranch.*  
Rob Iski/FWS

