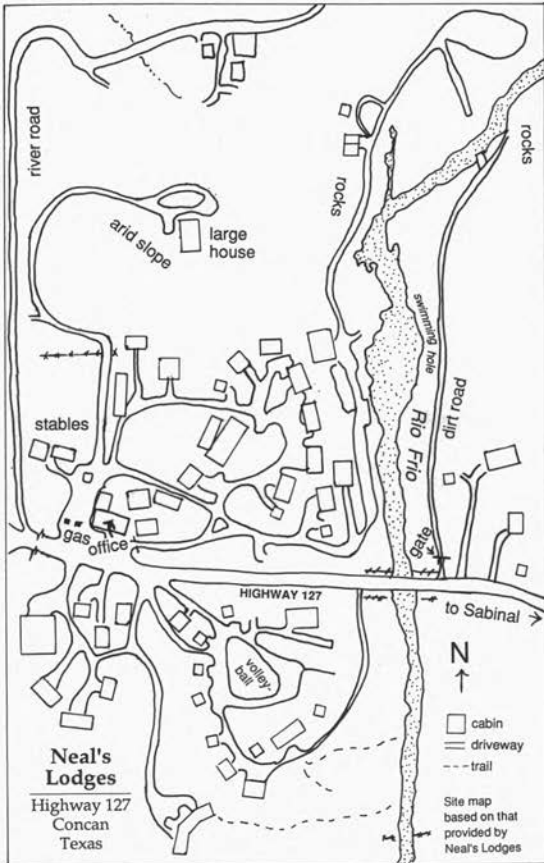


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CONCAN ON THE EDWARDS PLATEAU, TEXAS

by John C. Kricher and William E. Davis, Jr.

The Edwards Plateau, part of the "Texas Hill Country," is a land of juniper-covered hillsides, limestone soils, scrubby oaks, diverse wildflowers, and canyons rich with picturesque riverine plant species. The entire area of the plateau is confined to central Texas, from Austin and San Antonio west to Fort Stockton and Midland. Annual rainfall is about thirty inches in the easternmost part of the plateau but is reduced to between ten to fifteen inches in the western parts. Because of low rainfall, the forests of the Edwards Plateau consist for the most part of small trees and scattered shrubs. The Edwards Plateau is ecologically unique, supporting at least seven endemic wildflower species as well as two endangered bird species, the Golden-cheeked Warbler and the Black-capped Vireo. Commonly seen mammals include nine-banded armadillo, white-tailed deer, fox squirrel, and Mexican free-tailed bat.

The Edwards Plateau is surely one of the most scenic and ecologically interesting areas in Texas, a state with no shortage of good areas for naturalists. The well-eroded limestone, found throughout the region, forms diverse landscapes of hills, flatlands, and sheltered river valleys. Waters are cool and clear, often densely shaded by overarching bald cypress and cedar elm. Exposed hillsides are baked in summer's heat, and only the hardy Ashe juniper and some associated shrubs can thrive. The forest is generally open and easy to walk through, although some areas of dense Ashe juniper and oaks can be essentially impenetrable. Terrain is almost always uneven, except in some areas largely given over to ranching.

The most characteristic tree of the Edwards Plateau is Ashe juniper, commonly called Mexican, mountain, or blueberry cedar. This tree ranges northward into Oklahoma, Arkansas, and Missouri, but is most abundant throughout the "Hill Country" of central and northeastern Texas. It shows a high affinity for limestone soils, to the extent that its presence indicates limestone. The tree is bushy, almost shrublike, and often grows in dense, clumped stands called "cedar brakes." The tree can survive for up to 350 years, producing abundant cones about every two or three years. Many bird and mammal species feed on juniper cones. Ashe juniper is tolerant of natural fires, but fire suppression, as well as forest clearance, has led to a reduction in Ashe juniper in many places on the plateau.

Several oak species form a major part of the vegetation of the Edwards Plateau. Two species, live oak and lacey oak, are both common, but other species such as post oak, Texas oak, bigelow oak, and chinquapin oak are often seen as well. Lacey oak is essentially confined to the Edwards Plateau, but live oak is common throughout the southeast, especially along coastal regions. Oaks of the Edwards Plateau tend to be small in stature (rarely reaching fifty feet) but

often widely spreading, somewhat like large shrubs. Oaks seem to attract air plants, also called epiphytes, and the inner branches in particular are frequently lined with attached plants. Most prominent on the Edwards Plateau is ball moss, which looks at first glance like a thick hairball, but is, in reality, a close relative of Spanish moss as well as the many bromeliad species that characterize tropical rain forests. Ball moss grows densely on oak branches but also attaches to telephone wires.

Leguminous plants, including trees, shrubs, and wildflowers, abound on the drier slopes of the Edwards Plateau. Honey mesquite is common, as are pink mimosa, catclaw acacia huisache, Texas redbud, and sensitive briar. This latter species is among the "sensitive plants," whose compound leaves seem to instantly wither when touched. The colorful Texas bluebonnet, which blooms from March through May, is one of the many leguminous wildflowers.

Agarita is among the commonly encountered shrubs on the plateau. At first glance agarita appears to be a small species of oak. The leaves are sharply lobed and oaklike. However, the plant is a desert-adapted shrub that blooms with yellow flowers from February to April, followed by bright red berrylike fruits. Leaves are compound with three to seven very sharply pointed leaflets, so sharply pointed, in fact, that they remind the careless walker of cactus. Do not grab an agarita.

A great attraction of the Edwards Plateau is the amazing diversity of wildflowers that carpet the plateau from early spring through summer. From colorful cactus, like prickly pear, to the unmistakable firewheel, the field botanist has an embarrassment of riches to sort through. Over 400 species of wildflowers have been found on the plateau including several endemics (Enquist 1987). These include sycamore-leaf snow-bell, Texas barberry, canyon mock orange, scarlet leatherflower, bracted twist-flower, plateau milkvine, and two-flower anemone.

The sharp geological relief of the Edwards Plateau includes valleys where clear streams and rivers flow. The vegetation along these riverine areas includes an abundance of bald cypress, cedar elm, Texas black walnut, Texas ash, sugar hackberry, and eastern cottonwood. Riverbanks are often draped with vines such as western white honeysuckle, saw greenbriar, winter grape, and sweet mountain grape. In the quiet shade of the river's edge, you may find Green Kingfisher.

Birds of the Edwards Plateau

The Golden-cheeked Warbler, which nests only in central Texas and mostly on the Edwards Plateau, depends on Ashe juniper for nesting material. This warbler uses bark strips taken from Ashe juniper to line its nest. Indeed, the bird often places its nest in a juniper, though other tree species may be used as well for nest sites. Golden-cheeked Warblers arrive in Texas in March and remain until breeding is completed in late July. They forage among mixed oaks and

Ashe juniper, often near water, frequenting broad-leaved trees such as Arizona walnut, cedar elm, and big-tooth maple (Oberholser and Kincaid 1974). You may have to search—a Goldencheek pair can have a territory of as much as twenty-five acres, although in more food-rich habitats territory size is closer to three acres (Pulich et al. 1989). After breeding season, Goldencheeks migrate along the Mexican Sierra Madre Oriental mountains to their wintering range in Nicaragua, Honduras, and Guatemala.

The Golden-cheeked Warbler is an endangered species that has seriously suffered both from habitat loss and nest failure due to parasitism by Brown-headed and Bronzed cowbirds, both of which abound in the region. In extreme cases, a Golden-cheeked Warbler pair may raise more cowbirds than warblers.

Another bird species, the Black-capped Vireo, also has been victimized by habitat reduction and cowbird parasitism (Grzybowski 1991). Like the Golden-cheeked Warbler, it too is federally listed as an endangered species. Black-capped Vireos range from Mexico and southern Texas north to parts of Oklahoma and Kansas, but they thrive on the Edwards Plateau, particularly among the dense oaks (Oberholser and Kincaid 1974). Unfortunately, much of this favored habitat has been cleared to make room initially for ranching and, more recently, for housing developments. This habitat loss, plus increasing pressures by both previously mentioned cowbird species, have made the future of the Black-capped Vireo precarious. The vireo is an active bird, singing its harsh warbling song while foraging. It can sometimes be hard to see, as it often remains among the dense, shaded branches of thick oaks.

The bird community of the Edwards Plateau represents a unique mixture of eastern and western species, plus several species, such as the Green Kingfisher, Olive Sparrow, and Long-billed Thrasher, each more typical of the Lower Rio Grande Valley. One species that has increased dramatically in recent years is Cave Swallow. This bird, which closely resembles the more widely spread Cliff Swallow, is identified by its pale throat and dark chestnut forehead (exactly the opposite of the pattern on the Cliff Swallow). Cave Swallows nest in many places on the plateau including roadside culverts, picnic shelters, and, as the name implies, caves.

Where To Visit

Several state parks across the Edwards Plateau afford ideal opportunities to see the natural history of the region. These include Garner, Meridian, Pedernales Falls, and Lost Maples parks as well as the Kerr Wildlife Management Area. Lost Maples is particularly recommended, as it not only includes all of the representative species mentioned above, but also contains a relict population of bigtooth maple, a close relative of eastern sugar maple. Bigtooth maple is widely distributed in the far west, but only a few small relict stands, believed to be remains from Ice Age climatic effects, occur in Texas and Oklahoma.

Concan and Neal's Lodges

Perhaps the best place to see nearly all that the Edwards Plateau has to offer the naturalist and birder is the diminutive town of Concan. Diminutive is the right word: there really is no town, just a little sign and a hospitable lodge, named Neal's. Neal's is most easily reached from San Antonio (the nearest place where commercial jets land) by traveling west on Interstate 90 to Sabinal and taking Route 127 north. The drive requires at most three hours, even with a birding stop or two to watch roadside Dickcissels, Scissor-tailed Flycatchers, or a Crested Caracara. As you drive north on Route 127, the Edwards Plateau will loom ahead, a green escarpment adding sharp relief to an otherwise flat, agricultural landscape. As you approach the plateau, scan the grassy fields for Grasshopper Sparrows and, in fields with scattered shrubs, listen for Cassin's Sparrows. Great-tailed Grackles and White-winged Doves are common roadside species. At scattered tree-lined ponds you should find Vermilion Flycatcher and possibly Black-bellied Whistling Duck.

Neal's Lodges is located on the banks of the Rio Frio, and has been a popular vacation spot since 1927. There are feeders located at the general store and registration area, and the first species you will likely see are Brown-headed and Bronzed cowbirds along with a few House Finches. This is, of course, an ecological disaster in the making, since the two cowbird species are brood parasites, and both have been implicated in contributing to recent dramatic reductions of Black-capped Vireo and Golden-cheeked Warbler populations. Since Neal's attracts and hosts many birders, the presence of these feeders and their parasitic clientele is both ironic and disturbing, suggesting that environmental education has a long way to go. Indeed, the proprietors of Neal's are quite aware of the exciting birdlife and will cheerfully inform the birder of where on the premises to find Black-capped Vireos and Golden-cheeked Warblers. But—they feed cowbirds.

Once settled in our cabin, we began our search for the Black-capped Vireo by taking a leisurely walk through the cabin area, ambling toward the Rio Frio. We found Golden-fronted and Ladder-backed woodpeckers as well as Scrub Jays in the oaks right around the cabins, and, in the scrubby thicket behind our cabin, there were Ash-throated Flycatchers (Great Crested Flycatcher is present in the area as well), Bewick's Wrens, Black-chinned Hummingbirds, Blue-gray Gnatcatchers, and the black-crested race of Tufted Titmouse. Although it took some patient searching, including seeing both Red-eyed and White-eyed vireos first, we finally got good views of a female Black-capped Vireo. Remember that both Black-capped Vireo and Golden-cheeked Warbler are federally endangered species, so using tape recorders is illegal. Black-capped Vireos are actually more common at Neal's than at most other areas on the Edwards Plateau, and, in our three days there, we found four or five pairs, many affording stunning views of singing males.

A short walk along Route 127 and across the Rio Frio produced Yellow-breasted Chat, both Painted and Indigo buntings, and the dark-backed form of Lesser Goldfinch. We observed a territorial pair of Black-capped Vireos in shrubs along the roadside. Northern Rough-winged, Barn, and Cliff swallows were joined by a few Cave Swallows at the river. We soon learned, however, that the best place for Cave Swallow was 0.5 mile west of the lodge at a roadside park on the left. Cave Swallows place their nests beneath the eaves of the roofs covering picnic table areas.

After crossing the Rio Frio on Route 127, we climbed over a metal gate (it is okay to do this—the owners do not object to birders) and followed a dirt road that parallels the river. We encountered several Black-capped Vireos in the oaks and dense shrubs, and found singing Yellow-throated Warblers and Hooded Orioles in the canopy of bald cypress and cedar elms that line the riverside. We observed Olive Sparrow skulking among the shady undergrowth, revealing its presence by its odd, distinctive song, with a cadence like a ping pong ball bouncing and coming to rest. An Acadian Flycatcher was also singing demonstratively. A walk of about a half-mile brought us to an open field. High on the tall trees lining the field, we found a singing male Golden-cheeked Warbler. Earlier, some birders had reported observing this bird feeding its young (among which there were no cowbirds). Golden-cheeked Warblers are not as abundant at Neal's as Black-capped Vireos, but there are other places nearby where they are more abundant (see below).

Across the highway from Neal's store are several dirt roads that wind through the cabin complex. The road nearest the Rio Frio passes a volleyball field with thick shrubs and dense trees around it. We found Long-billed Thrasher here. One road leads to an open savannalike habitat with grassy areas interspersed by small copses of trees. This area is real estate for Rufous-crowned, Lark, and Field sparrows. It is also littered with the partially decomposed bodies of old automobiles, if you should perhaps happen to need a radiator cap from a '59 Chevy truck.

Just behind Neal's store there is yet another dirt road that crosses a cattle guard and bears left, passing several stables and leading up a hillside to a large house (where birding luminaries such as Victor Emanuel get to stay). The habitat is arid and desertlike, and includes acacias, mesquite, and large clumps of prickly pear cactus. Birds found here included a persistently singing Bell's Vireo (and yet another pair of Blackcaps), Cactus Wren, Black-throated Sparrow, Curve-billed Thrasher, Canyon Towhee, Verdin, Summer Tanager, Pyrrhuloxia, and Greater Roadrunner.

From dusk through the evening hours, Chuck-will's-widows are vocal, and Common Poorwill sometimes joins the caprimulgid chorus. We heard only "widows."

We recommend a short drive just before dusk to see Mexican free-tailed

bats—lots of Mexican free-tailed bats. Drive south toward Sabinal on Route 127 for about five and one-half miles, and take Farm Road 2690 to the right. Drive about one mile and stop, looking to the north (on your right). You are at a ranch that contains a cave occupied by about ten million (!) Mexican free-tailed bats. At dusk they begin exiting the cave and stream like mammalian smoke trails across the darkening sky. The bats range widely over central and southern Texas, foraging on flying insects and returning to their cave at dawn. Despite their seemingly vast numbers, Texas populations of Mexican free-tailed bats are vulnerable to habitat loss (the caves) as well as deleterious effects of pesticides sprayed on fields and picked up by the bats' insect prey. Be aware that the bat cave itself is not easy to find and is located on private property. DO NOT TRESPASS. Texans generally view property rights somewhat differently from New Englanders and think nothing of hiding explosive devices containing poison for coyote control. Should you accidentally trigger such a device, you would strongly regret it, and, if you survived, you would still be legally in the wrong since you did, in fact, trespass.

There are several other outstanding birding areas within a reasonably short drive of Neal's Lodges. We drove north from Concan, taking Route 83 north to Leakey, turning right on Route 337 toward Vanderpool. We found a pair of Green Kingfishers nesting in the clay banks along a river just east of Leakey. You are advised to inquire about this species. It is sometimes along the Rio Frio at Neal's but may occur at various scattered locations from one year to the next.

At Vanderpool we turned left and followed Route 187 north for a few miles to Lost Maples State Natural Area on the left. At the headquarters we obtained a bird list and map showing dirt roads and hiking trails. For years the trailhead parking lot has been known as one of the best spots to find Golden-cheeked Warbler. We certainly were not disappointed, hearing the buzzy song of a male even as we exited from our car. If by chance you do not encounter a Goldencheek in this area, ask at headquarters, as the park personnel monitor where all the Goldencheek territories are located. Lost Maples lists about 200 bird species, including Black-capped Vireo, so a morning of birding here should be quite productive.

Another route we recommend is to drive to Leakey and turn left, heading west toward Camp Wood. The drive is extremely picturesque, taking you past hills of limestone laden with Ashe junipers. In the sky above, scan the vulture and Common Ravens with care, because this is a prime location for finding Zone-tailed Hawk, which flies very much like a Turkey Vulture, perhaps even acting as a vulture mimic. The country flattens into an arid landscape abounding with roadside birds such as Verdin, Eastern and Western kingbirds, scores of Scissor-tailed Flycatchers, Northern Bobwhite, Eastern Bluebird, Pyrrhuloxia, Blue Grosbeak, and Loggerhead Shrike.

Neal's Lodges features more than fifty guest cabins, RV hookups, and rustic

camping facilities. In the off-season (before Memorial Day) the cabins rent for \$25.00 (per person), \$32.50 (two persons), and \$40.50 (three or more persons) per night. April and May are the best months for breeding birds, especially the Golden-cheeked Warbler and Black-capped Vireo. Also during these months the number of vacationers is low, so the birding is less subject to "anthropogenic distractions." Our visit was from May 20 to 22, 1991. The lodge provides linens but not towels or blankets. Most of the cabins have kitchenettes but do not count on much in the way of utensils or dishes. The cabins contain either air conditioners or evaporative coolers, neither of which we needed as the nights are pleasantly cool. The general store has soft drinks and groceries, but you will probably want to buy your food along the way from San Antonio, or take your meals at Neal's rustic cafe, which includes both indoor and outdoor dining facilities. Prices for dinner range from \$6 to \$10, and the food is representative of good Texas cuisine. For information and reservations, call 512-232-6118, or write Neal's Lodges, Concan, TX 78838.

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