An Invitation to the Cross Timbers

Let’s go for a walk. Let’s spend some time in the woods, prairies, and wetlands of North Texas, and talk about what can be learned and shared from it. Here is an example of what I’m talking about:

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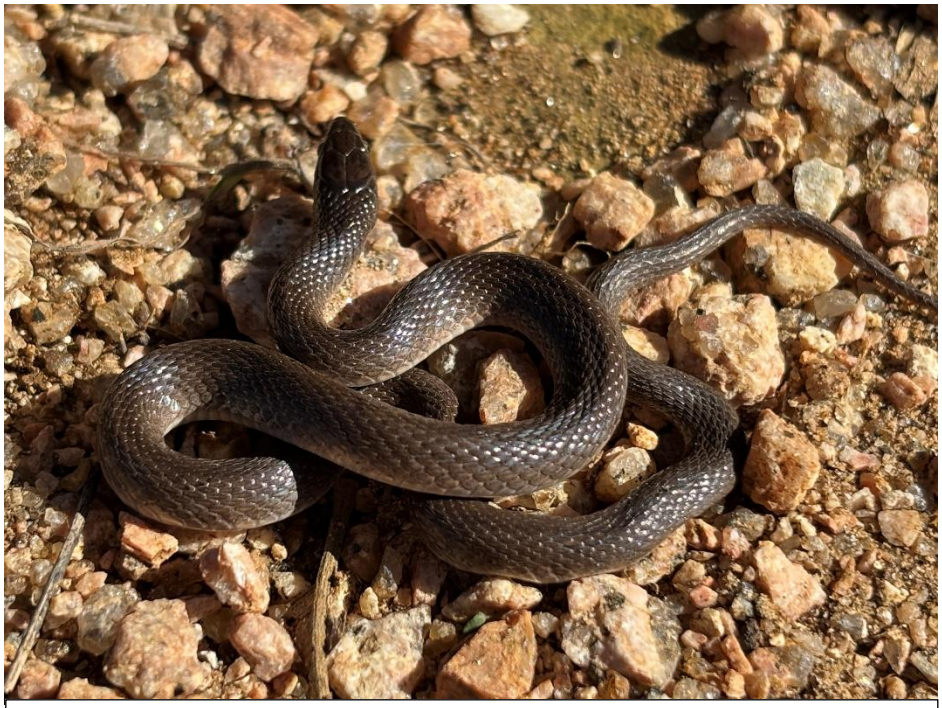
Even an old, familiar friend like Sheri Capehart Nature Preserve can surprise me, and it can choose to show common things in delightful ways. On December 9th, on a sunny early afternoon, I walked the path at the trailhead and saw the familiar squiggle of an earthsnake. What on earth was an earthsnake doing on the trail? It was a mild 66 degrees, but December is late in the year for snakes, especially at a preserve not known for many snakes anyway.

I knelt down and cupped my hand over the little reptile to get him or her to sit still for a photo. Such a pretty little knot of brown scales, motionless for a moment to see if she might go unnoticed or if it was time to run for her life (I'm arbitrarily assigning "her" without really knowing the snake's sex). After I took the photo, she made a break for it and I did not interfere.

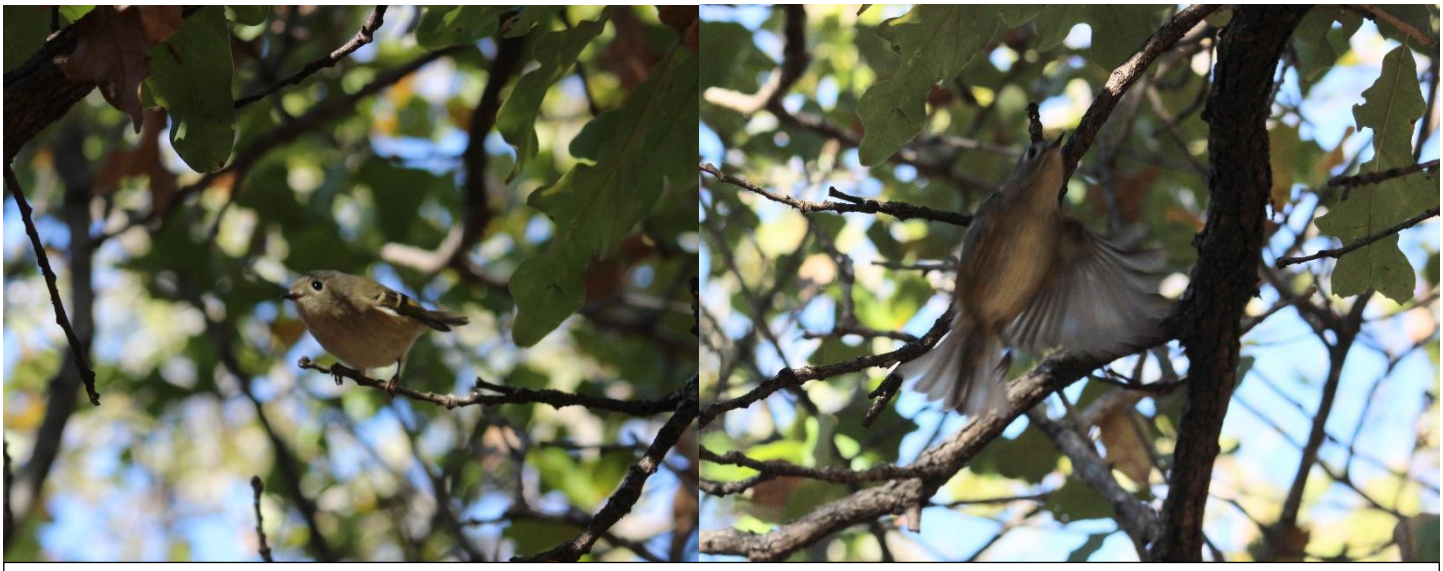


The rough earthsnake

I was grateful for her presence on this day, and also grateful that I was the one who saw her. So many people feel that killing a snake is an act of public service, even in a nature preserve. And if the human is no threat, lots of people bring dogs who see a little reptile on the trail as a toy or a snack.

The trail enters the woods as it makes its way to

a pond. Ahead, I saw a compact little kinglet-shaped bird flitting between the branches. As I got the camera out, he restlessly moved every few seconds from branch to branch and tree to tree, but always nearby. His movements, in shade and then into sunlight, showed grayish-green color, white wing bars, and a white eye ring.



The ruby-crowned kinglet

My birding includes more affection and appreciation than expertise, but I might have been confident that it was a ruby-crowned kinglet even before I saw all the markings. The nervous flicking of the wings and near-continuous motion were giveaways. The most interesting thing was how he stayed nearby, looking at me, looking away, flitting to the next branch and then returning. I got the impression that he was curious about me and what I was up to.

It doesn't surprise me that an animal would show curiosity and intelligence, but how often do we see one looking back at us as we look at them, cautious but not running away in fear? This felt like an interaction; instead of "me" and "it," this felt like "we." And that was a real delight.

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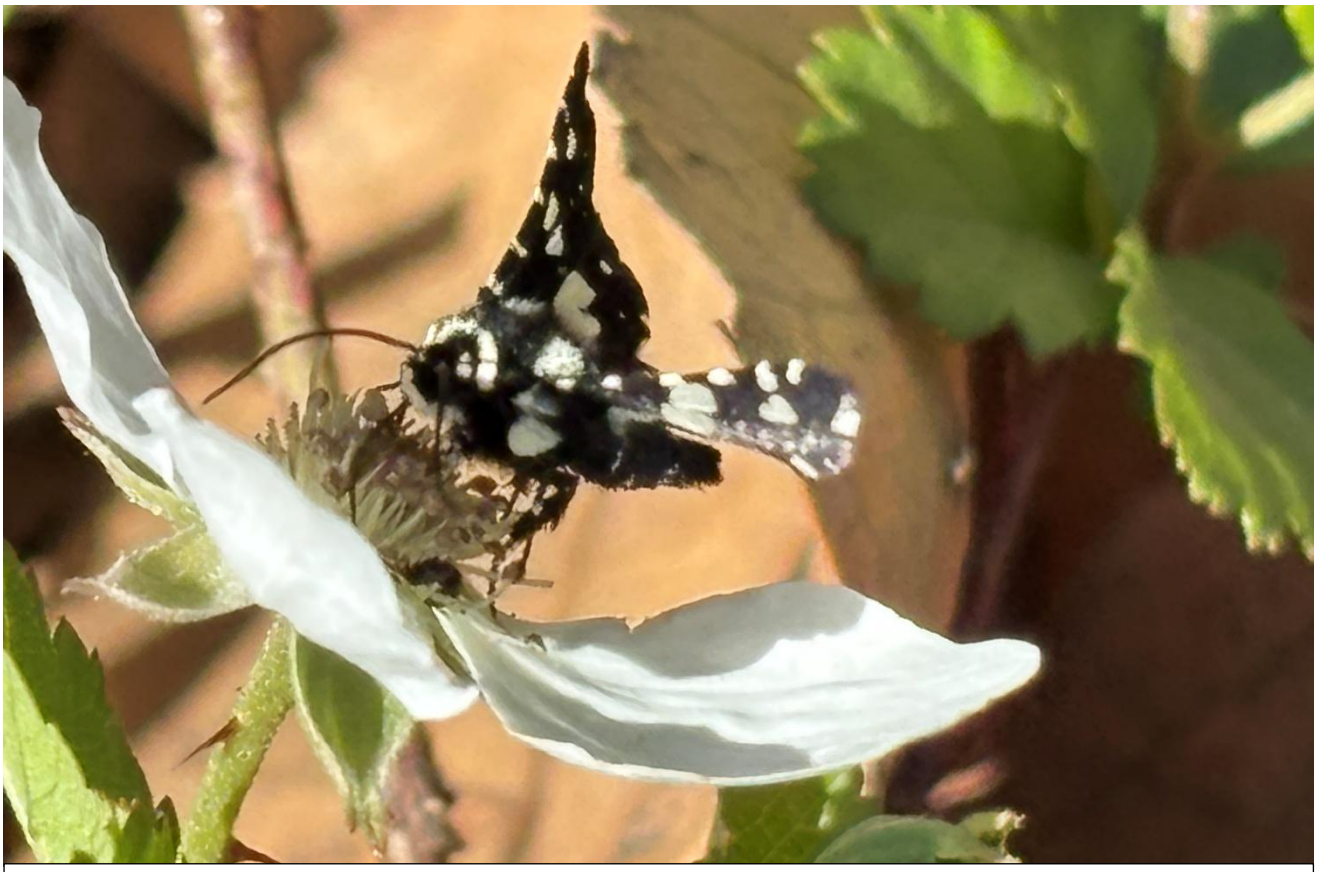
Many people like nature, and that can mean different things. It could be that they like to go fishing in a particular fishing spot. Or maybe it means they like some awe-inspiring places they have seen in nature documentaries, even if they have never walked through a redwood forest or climbed a snow-covered mountain. For some people, a love of nature might involve jet-skiing at the lake. And for many of us, it is quiet, observant, and curious. It might involve walking a trail through a nearby forest, listening intently to

birds, becoming lost in a miniature world of lichens growing on a tree branch, and just taking in the smells, sounds, and appearance of a beautiful woodland. We want to go as deep into a place as we can, feel its heartbeat, hear its breathing, and see as much as possible.



A mournful thyris, a day-flying moth, feeding on a berry flower

I want to invite you into that same kind of relationship with nature. I will show how you can be mindfully present and then respond to such experiences by writing, drawing, and other creative activities. I also provide a guide for nature study. Knowing the answers to some "what is it?" and "how does it live?" questions can make a walk in nature seem like time among friends, while still inspiring wonder and fascination.

Wonder is a great word for describing walks in nature. It comes from Middle English *wondren*, to be amazed by something extraordinary, leading to emotions like admiration or even reverential awe. Does that seem like an exaggerated way to talk about the flight of a hawk, dewdrops highlighting a spider's web in the morning mist, or the way clear water flows around stones in a creek? If we approach nature in

an open way, taking our time and paying attention, and seeing as if for the first time, then many things can bring wonder and joy.

With those emotions, we probably feel curiosity and also affection. And from there, we want to return and experience it again, investigate all the parts and understand more about it. Naturalists - people who study nature - are born from such experiences. I don't know anyone who ever became a naturalist in any other way. Not if they were going to be a naturalist whose heart is in it and who loves being out there with all those growing, breathing, swimming, flying living things. My hope is for you to become one of those naturalists, and for that to happen, there needs to be some joy, wonder, curiosity, and affection.

You might be thinking, "I'm not looking to become a naturalist, I just enjoy walking at the nature preserve and I'd like to get more out of those walks." Perfect! I would like to help you do that, and you might find that in the process, with no pain and a lot of enjoyment, you became a bit of a naturalist.

Another hope – and this is an especially important one to me – is that you will share all this with kids. We will talk in some depth about kids and how they may develop an interest in nature, come to love it and feel at home in it. Some of them discover nature and experience wonder on their own, but I think there's usually a supportive parent, teacher, or other adult somewhere, showing the way.

Learning about fish at the creek

On your walk, you could keep an eye out (and an ear, too) for things that you are drawn to. Notice all the trees and shrubs, grasses, the shape of the land, and the appearance and sound of any water. Are birds calling? Maybe a dragonfly flitting above a pond. What pulls your attention? There might be the graceful curve of stems of native grass, or the complex song of water pouring over stones. When you think about what you are noticing, do any questions come up? You might wonder about something you've always noticed, like why tree leaves turn colors in autumn. There might be

something you've never thought about before, like the name of that blue-gray and white chunky bird at the river, the one with the Mohawk crest of feathers on his head and the strange, rattling call.

Using your attention in this way might make your walk richer and more enjoyable, especially if you do it in a playful, relaxed way. It's not an assignment or chore, you just notice what you like and linger over it for a moment and see what you think of. Noticing and wondering are things that naturalists do, so now you're a budding naturalist!

Naturalists are sometimes biologists or other professionals whose work involves knowing about plants, animals, rocks and soil, streams and other wetlands, and so on. But there is no one job description for a "naturalist." She or he might also be a bird watcher or someone who loves trees, and who wants to understand more of the bigger picture of how things in nature work together. Many naturalists, including me, are amateurs, simply meaning that we do it out of love; it is not our "day job."

So, whether our journey ends with a serious interest in nature or casual enjoyment of a walk in the woods, it starts with joy and wonder. I will describe some activities and practices that you can take into the woods with you. Some are fun and a little like games. Others are designed to let you settle into a nature experience more deeply and strip away some stress or distraction. I will provide some activities that help you look at similarities and differences in leaves, shells, feathers, and other things you might find in nature.

A major aim of this work is to consider how you can preserve something about your experience in nature. Keeping a nature journal is one of the best ways to do this. Having a notebook in which you sketch a turtle basking in the sun or draw flowers and leaves with colored pencils gives you a chance to stay with the experience for a while so that you know the subject more completely. When you find the words to describe what you are hearing, seeing, and feeling, the story of your day in nature emerges. That story may capture powerful observations, and beautiful ones, too. Your journal helps you think about your experiences in greater depth and the memory of those experiences may be brighter and more detailed.

Instead of a notebook, some people use a phone or other device to record audio or video notes about their time in nature. Can that work as well as writing or drawing? Some of it depends on you. This book will discuss what seem to be important elements of nature journaling as well as several methods that might work for you.

As we walk through the woods or fields, we often find leaves, acorns, feathers, or other items that we may be tempted to take with us as a way of preserving a little of our day in nature. I will talk about this complicated subject to help clarify the ethical, legal, and practical issues. The Migratory Bird Treaty Act of 1918[1] makes it illegal to collect feathers, with very few exceptions. Refuges and preserves may not allow visitors to take anything at all, so that other visitors will be able to fully experience the place. When it is allowed, the taking of a few leaves, dried flowers, or shells may be used for some creative scrapbooking, shadow boxes, or other projects.

After all this, with nature as a source of affection and wonder, and with some practice in noticing things and describing nature experiences, these pages will go further into nature study. Our discussion touches on different kinds of living things and how they may be related to each other. A significant part of knowing how to find and appreciate things is understanding how they live - how they survive, take shelter, find nourishment, and reproduce. I want to give you a beginning frame of reference for these things, and you can take it further on your own if you wish. The name for this knowledge and understanding of plants, animals, and the natural environment is "natural history."

We will consider how we name things like blackbirds, post oaks, ferns, and white-footed mice. Some common names can be a source of confusion, for example when different people call the same snake a "velvet-tail," a timber rattler, or a canebrake rattlesnake. The alternative is the system of scientific names using Greek or Latin words (that timber rattlesnake would be called *Crotalus horridus*), and I will introduce that system for those who wish to know about it.

We will also discuss how apps and smartphones have made it easier to know which species we are seeing or hearing. Some are specific to one group of plants or animals, such as eBird.[2] The one I use most is iNaturalist,[3] covering all the plants and animals and offering a smartphone app for use in the field and a website with a broader set of features. However, there is still a place for books such as field guides and we will also talk about using them.

[1] U.S. Fish & Wildlife Service. Migratory Bird Treaty Act of 1918. https://www.fws.gov/law/migratory-bird-treaty-act-1918 (accessed 12/15/23)

[2] Cornell Lab of Ornithology. eBird. https://ebird.org/home (accessed 12/14/23)

[3] iNaturalist. https://www.inaturalist.org/ (accessed 12/14/23)

What will you do when you have finished reading all this? I hope that you spend lots of time in nature, and that the skills and ideas in this book bring much satisfaction. More than that, I hope that you will be an advocate for wild places. The Earth needs people who understand the life-support system that nature provides - our climate, atmosphere, water, and biodiversity. We are all in this together, and we cannot leave it to others to speak up for the life that we all share.

About the Cross Timbers

I'm inviting you to the Cross Timbers, not just because it's my home but because it is a beautiful example of an ecoregion – a place with its own distinctive climate, geography, soils, and living things. The Cross Timbers are oak woodlands and prairies adapted to relatively low rainfall. The ecoregion is found beyond North Texas, as you can see in a map provided online by the Ancient Cross Timbers Consortium.[4] Those woods and prairies stretch from southern Kansas down through Oklahoma and into North Texas.

Firewheel blooming at Sheri Capehart Nature Preserve

Imagine traveling across North Texas from east to west. After leaving the Piney Woods and a region called the Post Oak Savannah, we would cross a series of prairies alternating with woodlands. First there would be the Blackland Prairie, followed by the Eastern Cross Timbers. Then we would enter another area dominated by grasslands (the Grand

[4] Ancient Cross Timbers Consortium. (https://xtimbers.uark.edu/map/, accessed 8/28/25)

Prairie), followed by the Western Cross Timbers. Further west, we would cross the Rolling Plains on our way to the Panhandle.

These regions of North Texas depend on the soil and rock below as well as the rain and sun above, so let's start there. If we looked underneath the soil surface, we would see layers of rock gently tilted so that older rock is exposed further to the west of Fort Worth while the younger rock reaches the surface east of Dallas. These layers were deposited by inland seas, rivers, and floodplains, from 300 million years ago in the west to about 50 million years ago in the east.

Sandstone, clay, and similar material alternate with limestone across north Texas. Areas with limestone and clay gave rise to black soil in the Blackland Prairie east of the Cross Timbers and in the Grand Prairie to the west. Such soil supports the grasslands found there. In contrast, the two north-south bands of oak woodlands – the Eastern and Western Cross Timbers – grow in more sandy soil (especially in the east) that comes from sandstone. Rainfall is absorbed and held in sandstone and tree roots can penetrate into it for moisture during drought.

Rainfall shapes the plant communities, which in turn shape the kinds of wildlife that live within those communities. In *The Cast Iron Forest*,[5] Francaviglia reports that annual rainfall is around 40 inches in the east of our region, diminishing to about 25 inches as we go westward. Our climate is changing and weather can be erratic, but it is still true that it is wetter in the east and more arid in the west. And so, the prairies of the Blackland region may stand tall and lush, while in the west, grasses are shorter and often a little more sparse. Even the trees are a little shorter in the Western Cross Timbers.

In *Prairie Time*,[6] Matt White described the original Blackland Prairie as "…a complex patchwork of woods, brushy vegetation, and open grasslands" (p. 5). Trees grew along the corridors of creeks, with prairie often growing where the land was a little higher. The prairie is a diverse community of grasses and forbs (herbaceous, broad-leaved plants). It is full of all kinds of life, including small wildflowers, tall grasses, shorter grasses, vines, ground-nesting birds, mammals, reptiles and amphibians (some of whom spend time in burrows along with some crayfish species), and a huge assortment of insects with spiders

[5] Francavglia, R.V. 2000. The Cast Iron Forest: A Natural and Cultural History of the North American Cross Timbers. Austin: University of Texas Press

[6] White, M. 2006. Prairie Time: A Blackland Portrait. College Station: Texas A&M University Press

waiting to ambush or catch them. Such an ecosystem may grow close to the ground, but it is still complex and diverse.

The Blackland grows on that rich, black soil, and settlers soon discovered how fertile it was. The land was plowed for farms and cleared for roads and cities, so that today less than one-tenth of one percent of the original Blackland Prairie remains. Many of those remnants are maintained by conservation-minded farmers, the Native Prairies Association of Texas, and the Nature Conservancy.

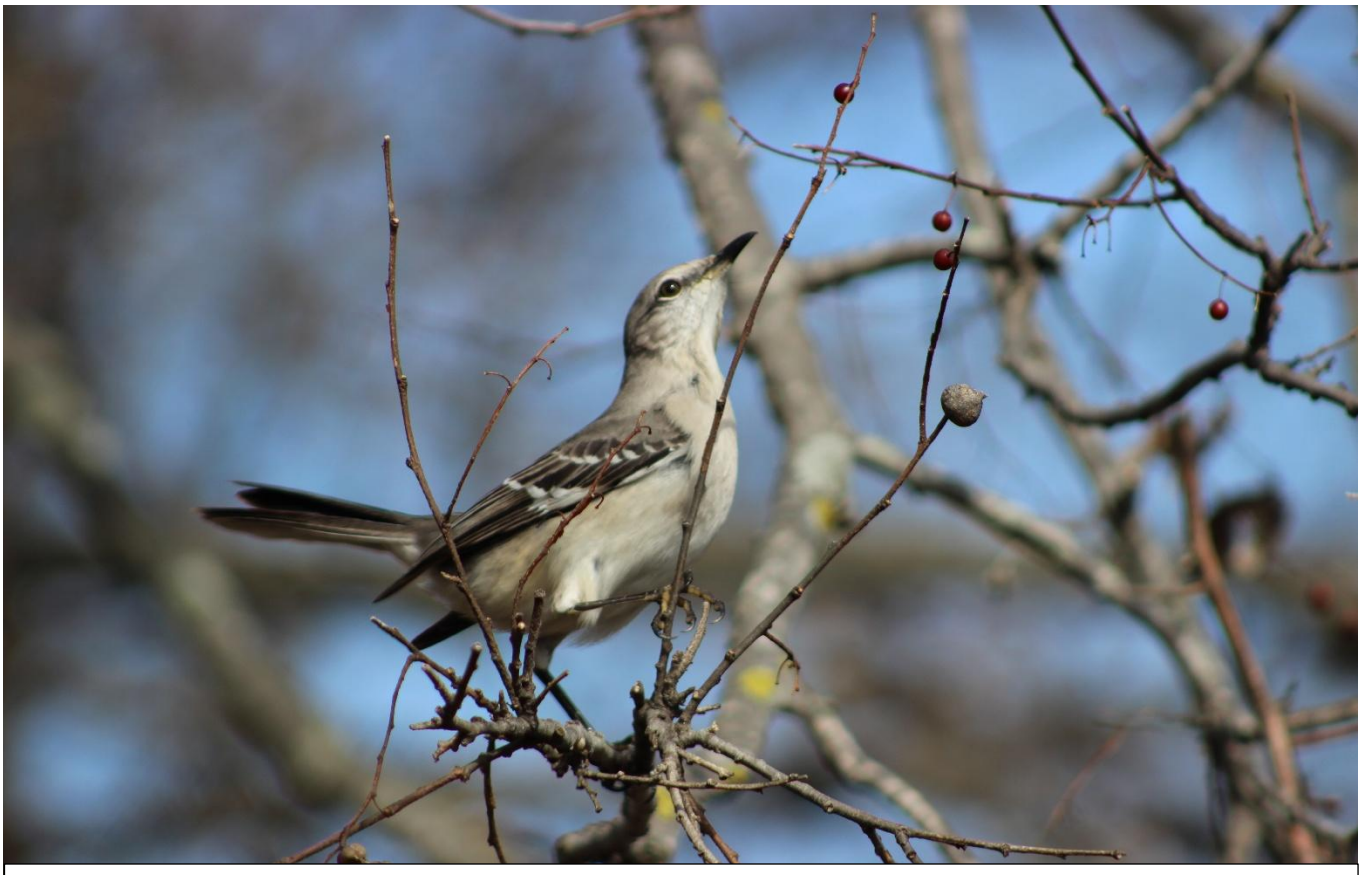
The Cross Timbers lies just west of the Blackland, consisting of those two bands of woodlands extending southward with the Grand Prairie between them. The signature trees of the woods are post oak and blackjack oak. Other species like juniper or hackberry are scattered in places, and low areas near water showcase cottonwoods, ash, and other kinds of trees. However, especially in upland areas, the post oaks and blackjacks dominate.

Autumn in the Cross Timbers at LBJ National Grasslands

Both of these species of oaks are adapted for lower rainfall and so they are fairly drought tolerant. They don't grow very tall, often reaching no more than 30 feet. Post oaks often have gnarled and twisted branches. The post oak has deeply-notched leaves with blunt lobes. Blackjack oak leaves are not deeply notched and often have three lobes, each ending with a small spine or bristle extending from the vein of the leaf.

Just as the Blackland is much more complex and diverse than a field of grass, so the Cross Timbers are not continuous oak woodlands. They are a mosaic of woodlands and small prairie openings where little bluestem and other prairie grasses grow along with wildflowers and other forbs such as western ragweed and croton (sometimes called doveweed or prairie tea). Along woodland edges, vines such as greenbrier are common.

The Cross Timbers supports populations of nine-banded armadillos, bobcats, coyotes, white-tailed deer, raccoons, and other mammals. Prairie openings are good habitat for the hispid cotton rat and other rodents. The rodents help provide a prey base not only for such predators as coyotes and owls but also for rat snakes, bullsnakes, and particularly in prairies, the western diamond-backed rattlesnake. Copperheads are common in some places within the Cross Timbers, and Texas spiny lizards hang out (literally) on the trunks of oaks while hunting insects. Days in the Cross Timbers are brightened with the songs of northern cardinals, chickadees, wrens and many other birds. On spring nights near ponds, the calls of gray treefrogs, cricket frogs, and other species can be heard. In the prairies, around ephemeral pools and ponds, chorus frogs call.



A northern mockingbird, one of the common birds of the Cross Timbers

What's Next?

The general plan I want to follow is to alternate between "chapters" that take on various topics (nature study, how children develop a love of nature, etc.) and essays about experiences in nature (a walk I took in the woods and other first-person accounts). Because those essays have some similarity to what I would write in a nature journal, I'm calling each one a "journal entry."

The first journal entry is the story of a winter walk at Fort Worth Nature Center and Refuge several years ago, seeing various animals and re-visiting a curious couple of trees growing in a permanent embrace – the "kissing trees." Following that, I want to write about what we can do in nature, including finding places to visit, whether or not to collect mementos and the general ethic of "leave no trace," as well as structured activities that expand our connection with wild (or slightly wild) places.