

The Hills Above Possum Kingdom Nature Committee Newsletter Summer/Spring 2024

INTRODUCTION: The Turkeys have been strutting (well, the males have) and there has been Turkey mating going on in our yard. In the skies we are beginning to hear the call of the Sandhill Crane as they begin to arrive in this Spring migration. Soon we'll have an increase in insects – some that are a true nuisance. And this Spring will also bring us a sky phenomenon that seldom occurs a total solar eclipse that takes place on April 8th. See our article below on this one!!! And as spring approaches, the bright winter stars will begin to be taken over by the dimmer spring stars. A bright comet (Pons-Brooks) will pass close to earth. This comet is about three times the size of Mount Everest and will likely be visible with the unaided eye in April. By April 21 the comet will swing by Jupiter which will make it much easier to track down and then about nine days later will reach its closest point to the sun and just might increase in brightness making it easier to see. If we can keep our skies dark here in the Hills we will be able to continue to see and marvel and the beauty a dark sky can bring.

This edition of our Newsletter is filled with interesting, intriguing and thought-provoking articles from your Nature Committee (Lynne Aldrich, Peter Gottschling, Wolf Patrick, Ron Ritchie, Magyn Whitaker, Debra Wallace) which we think you will enjoy and learn from. So, turn down your evening lights and enjoy these Spring & Summer months and stay tuned for August/Winter!!

SEARCHING FOR SPRING IN AN OLD MESQUITE (Ron Ritchie): It's early March and as I'm searching for signs of Spring I notice the young mesquite trees are just starting to leaf out but not the mature trees. Old mesquites aren't fooled by a premature spring. Mesquite trees are amongst the most ubiquitous flora in The Hills. Some people consider them a trash tree, but not me. Mesquite trees are native to Texas and part of the natural landscape. Early settlers relied on the wood of Mesquite trees for heating, cooking, and making furniture. The trees were even a source of food as the beans can be pounded into a flour that can be made into sun dried cakes high in protein.

People trying to clear Mesquite trees off their land are in for a challenge. Cut one down and the roots will send up 10 shoots to replace it. Mesquite trees are survivors. They send their roots down deep to make sure they can withstand any drought. They fight off the mistletoe and the mesquite beetles. They resist the woodpeckers trying to get at the beetle's larvae under the bark. Mesquites have evolved to thrive in Texas's brutal climate. Neither our hottest summers nor our coldest winters will stop them. Branches will die or break off in a storm but properly pruned mesquites enhance your landscape. All of Texas embodied in a tree.

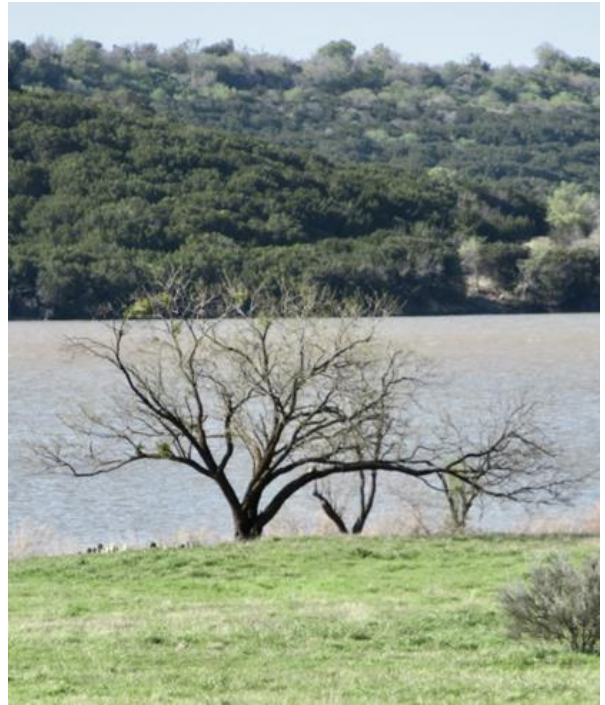
So, as I search for signs of Spring, I look past the young Mesquite trees to the mature ones and remember the last verse in Frank Grimes 1928 poem "The Old Mesquites".

*Well it may be Spring for all we know-
There ain't no ice and there ain't no snow,
It looks like Spring and it smells so too,
The calendar says it's plenty true-
And yet they's a point worth thinkin' about-
We note*

that the old

mesquites

ain't out!



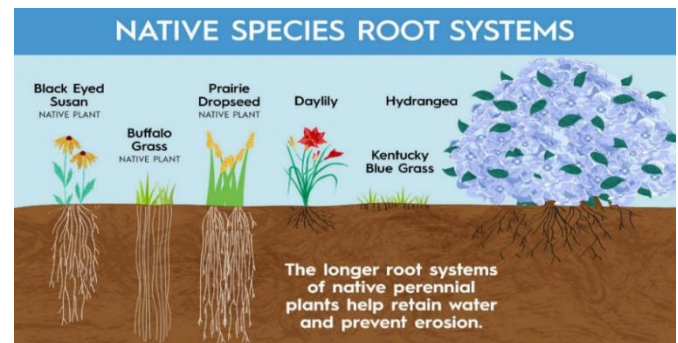
NATIVE PLANTS (Debra Wallace): Hi neighbors! My name is Debra and I'm an Official Plant Nerd; in particular a Native Plant Nerd. We bought land in the Hills back in 2021 and subsequently purchased another piece of land last year with an existing home on it. We are currently part-timers but plan to move here full time someday. One of the very first things I did on our first stay in our home was to walk the land and see what native plant treasures awaited!

Why native plants? Well, besides being a plant nerd, I'm also a lazy gardener as well as a frugal one. There are many reasons and benefits to having native plants in your landscaped areas or property:

- ☼ Native plants not only provide beauty but don't need pampering. Once they are established, you can just leave them alone. Perfect for my lazy gardener tendencies!
- ☼ Native plants are very low maintenance since they are adapted to the climate and soil conditions in our area, or ecoregion. The Hills is located in the Cross Timbers level 3 ecoregion of the State.
- ☼ Native plants help reduce air and noise pollution from the use of mowers, blowers, and trimmers, while saving money and time too.
- ☼ Native plants are healthier and stronger. They don't need fertilizers. This not only saves time, but money on expensive fertilizers.
- ☼ Native plants are typically drought tolerant, so once established they need less water. Another money saver on the water bill!
- ☼ Native plants don't need pesticides. Not only a money saver, but by not using pesticides, we can help protect beneficial wildlife as well as our own water supply.

- ☼ Speaking of wildlife, native plants provide habitat and food for birds, butterflies, bees and other beneficial pollinators. They help support these pollinators as well as other wildlife.
- ☼ Ninety percent of plant eating insects can only eat plants they co-evolved with – the native plants. Many butterflies need specific native plants to survive and Monarch caterpillars can only eat milkweed plants.
- ☼ Native plants are mostly perennials (come back every year) or an annual that reseeds. This means not needing to purchase plants or seeds year after year. Another big money saver!
- ☼ Native plants with their long root systems can be great plants for erosion and runoff control if you have water runoff on your property thru a creek or other drainage areas.

So back to what I found when exploring our property over the past year. Besides, the native trees, I was excited to see many perennials and reseeding annuals on our property. One thing I've personally learned about native plants is they are very easy to dig up or divide and then move to a landscaped bed if desired. Or you can collect seeds from the annuals and "reseed" them yourself in another area of your property where you want to enjoy them.



In the past year during our many visits I've seen over 20 different native plants. I'm sure there are many more native shrubs, cacti and grasses to identify still, but the flowering annuals and perennials were the ones that stood out to me the most and the ones I primarily photographed. Here are a few of my favorites using the common names along with the scientific name in parentheses:

Firewheel or Indian Blanket (*Gaillardia pulchella*) - This is an annual that will reseed itself. It can bloom from April to frost especially if it gets some supplemental water.





Snow on the Mountain (*Euphorbia marginata*) – This is another annual that will reseed. It will bloom from mid-summer to fall. Supposedly when this plant blooms it is letting you know that summer is almost over.



Golden Crownbeard or Cowpen Daisy (*Verbesina encelioides*) - This annual reseeds as well. It can bloom from spring to fall.



Another favorite is the **Prairie Verbena (*Glandularia bipinnatifida*)** - This plant is a perennial and blooms spring to winter. It is a nectar and pollen source for birds, bees and butterflies.

Horsemint or Lemon Beebalm (*Monarda citriodora*) – this reseeding annual is loved by bees and butterflies. The leaves have a lemony scent when crushed. It blooms from May to July but with additional water can bloom until the fall.



Yarrow (*Achillea millefolium*) - this plant is another perennial with white or pink blooms from mid spring to early fall. The interesting foliage looks similar to a fern.



Some plants that I don't have my own photos of yet, but are located on our property (photos from LBJ site) are:



Horse Crippler Cactus (*Echinocactus texensis*) – This native cactus grows very low to the ground. It is very hard to see especially when it is not blooming. Horses have been crippled by stepping on it, hence the name.



Prickly Pear Cactus (*Opuntia* spp.) – There are several of prickly pears on our property but I've yet to identify the exact species. Once they flower, I should be able to narrow it down to a specific one. All the prickly pear cacti are perennial and should flower April thru June. Interesting fact: The Prickly Pear Cactus is the State plant of Texas.



Lotebush or Gray Thorn (*Ziziphus obtusifolia*) – this shrub stood out to me due to the large grayish thorns all over it. It has small leaves with some very small flowers and berries on it. While its not a plant that I would move closer to the house due to the spiny thorns, it does serve as a nesting home for birds and the berries provide food for wildlife.

Another thing I did once we got moved in, was to plant a few natives that I purchased or grew at our home in Denton County (also located in the Cross Timbers ecoregion). They are:



Crossvine (*Bignonia capreolata*) – It is an evergreen climbing vine with orange flowers that provide nectar for both butterflies and hummingbirds. I put two plants, one on each side of a trellis, and they tripled in size since planting. I'm looking forward to it covering the entire trellis soon.

Red Yucca (*Hesperaloe parviflora*) – This native plant even though called a yucca, isn't really a yucca. It doesn't have the really sharp leaves like yuccas do. The leaves are evergreen and get about 2 to 3 feet tall. The flower stalk can get almost 5 feet tall with coral tubular shaped flowers. The flowers, like the Crossvine, attract hummingbirds. The ones I planted were divisions from an existing plant.



Rattlesnake Master (*Eryngium yuccifolium*) – This is a perennial native with leaves similar to a yucca. It has very unique stiff round flowers on long stems. It can grow up to 6 feet tall. I thought the name and plant were a great fit for our area! I bought it at a Native Plant Society of Texas (NPSOT) plant sale.



This last native I would like to share is one that I plan to plant mid-April this year. It is one that is very important to the Monarch butterflies.



Green Milkweed (*Asclepias viridis*) - Milkweed plants, as mentioned previously, are the sole food source for the Monarch caterpillar. This particular milkweed is mostly green with bits of pink. It is a perennial and blooms from mid-spring to fall.

One of my favorite websites I use to help identify or find plants which are native to our ecoregion is the Lady Bird Johnson Wildflower Center's Native Plant Lists and Collections. <https://www.wildflower.org/collections/>

This is where knowing our ecoregion is the Cross Timbers comes in handy, as you can search by ecoregion. Additionally, if you are looking for something for a particular part of your yard/property, you can search by light requirement if you have a shady spot, you're trying to fill for example. Or you can search by bloom time, or by type of plant, i.e. tree or shrub.

The second one I use quite a bit is the NPSOT plant database. <https://www.npsot.org/resources/native-plants/native-plants-database/>

Like the LBJ website, there are a variety of ways to search the database. However, this database includes information on any needed maintenance too. Even though most

native plants don't require much if any maintenance, sometimes cutting back a plant, or its blooms, can generate more blooms or keep it the shape and size you desire.

The last website is the Audubon Society native-plant locator by ZIP Code. It is informative because it not only shows you native plants by our zip code, but also what birds and other wildlife are supported by the plants.

<https://www.audubon.org/native-plants>

There are a variety of apps you can use on your phones to help identify plants or find out what will grow in our area. The iNaturalist app includes not only plants, but insects, reptiles and other wildlife. It consists of observations made by people who use the app and then verified by experts. You can take a picture and upload it and then get help identifying it. But a warning; the app can really use your phone battery up quickly when using it.

So, let's say you want to plant some native plants and you don't have what you are looking for already on your property to divide or reseed. Or you just want to have more!

If you want to purchase seed, one of the best online and print seed catalogs is Native American Seed <https://seedsources.com/>

Since we are new to this area, I'm not aware of any native plant nurseries out this way so I did a search on native nurseries. It appears most of them will be near Weatherford or in Fort Worth. Another option to find some native plants is a local NPSOT native plant sale.

The Cross Timbers chapter of NPSOT holds their annual native plant sale in Weatherford each year. This year it is on Saturday, May 4th from 9-4. Some chapters post the plants they plan to have at the sale ahead of time on their website. This way you can see if there will be anything there that you are specifically wanting to buy. If you plan on attending, you need to get there right when they open because they will sell out fast!

<https://www.npsot.org/chapters/cross-timbers/>

The NPSOT website includes a page which lists nurseries who specialize in native plants. Besides the specialty nurseries, some traditional nurseries, or home improvements stores, also carry natives in their nursery stock. This is where it is important to know the scientific name of a plant. Typically, the nursery identifier tags have a common name shown as well as the scientific name. You can use that information to identify natives.

For example, Lantana is a plant you will find pretty much anywhere, however there are native ones like Texas Lantana (*Lantana urticoides*) and non-native ones. The native Texas Lantana has orange/yellow flowers and like other natives is drought tolerant, disease and pest resistant. The native Lantana will come back year after year. Those

pretty pink confetti ones that catch your eye are not native and will more than likely need to be replaced the next year or the year after.

I hope this information provided will lean you toward looking at natives when you are planting or planning your landscape at your property here in the Hills. You may find you have a little bit of plant nerdiness in yourself as well.

LET'S GO NATIVE!

THE ENVIRONMENTAL/NATURE PSYCHOLOGY OF COUNTRY PEOPLE AND CITY DWELLERS (Wolf Patrick): Why might it be useful for us in The Hills to understand these two perspectives and how it relates to the natural world around us?

Well, our community has grown by leaps and bounds, and we are finding ourselves merging with folks from various backgrounds. Country people - who want the country to remain the country, city dwellers - who want the country to be the city, urbanites who may never have felt at completely at home in the city and want to become *country*, and an in between mix of those who want to live in the country - but with a bit less ruralness.

Having a degree in social psychology, and seeing how we could better understand each other, I thought I would be brave and tackle this subject in the hopes that it may help. So, let's try and understand each other in terms of how we view our natural environment, and why we view it that way.

For this article we will simply contrast the environmental social psychology of country people and city dwellers. Understanding that in the simplest form, country people may view country as having minimal to no human impact and city dwellers may view country as a place with a hydro-electric dam.

Place Attachment – can be described as the establishment of a bond between people and a place, a place where they feel secure, content, and familiar.

Place Identity – can be a component of self-identity, the foundation of a person's sense of belonging to a place/community and is usually a social construct based on objective physical settings.

As you can probably guess by the above definitions, nature is a heavy contributing factor in *Place Attachment* and *Place Identity*.

For many who grew up in the country, the natural landscape harbors familiarity; let's understand that as a lack of change and is a very important part of their lifestyle and sense of self. An intimate relationship with the "natural" world around them forms meaningful attachments and positive beliefs toward nature. In this vein, many country people take pride in observing the life cycle of wildlife, the skies, and botany in their area, often engaging purposefully in trying to maintain a balance between all interactive contributors to their natural environment, being a part of it, rather than a hinderance to it. These people also tend to find the partial isolation of this lifestyle to be appealing.

Studies show that rural lifestyles develop unique opportunities for Place Attachment, strengthening a person's connection/attachment to where they live, and elevating feelings of belonging and relaxation.

In contrast, city dwellers have more indirect connections with rural settings, which can hinder positive relationships and attachments to the natural environment – nature. In contrast to country residents, city dwellers have more external influences and distractions, leaving them less interested in what is happening within their community and with others. These influences make them less likely to form attachments to their environmental surroundings or community, but also make them more resilient to and less bothered by change. They can find isolation less appealing, preferring the hustle and bustle and conveniences of the city. But due to cost factors they may seek more affordable living in the rural setting but can often be disparaged by the lack of medical facilities and general conveniences. To feel less isolated, they may seek to push for changes in their new rural community, to bring it more in balance with less city - but far less country.

For country people attachment to community is fortified through trust of neighbors but is diminished by social and cultural diversities/differences with others. City dwellers are used to such diversities and less bothered by them.

Country dwellers tend to have more social interactions with their neighbors and have a more direct network of friendships. This kind of connection strengthens their attachments and involvement with their neighbors who share their rural norms. Studies prove that those living in these environments are more motivated to create social bonds. This assists in creating trust among these people and creates a willingness to help each other. Being more isolated from external influences, country residents take more interest in what is happening in their community, their safe place. Forcing changes to the familiarity of their environment can feel like a threat to their self-identity and the security of their Place Attachment.

City dwellers tend to be less bothered by such changes in a rural environment as they may not develop the same familiarity constructs and are less likely to establish such attachments.

So, that is some factual info based on studies and other research. It shows us why we may have different views and attachments when it comes to the natural world within our community. Understanding this should help us to communicate and reach more common goals for the future of The Hills.

As humans we are social animals. And we like to get out, walk and enjoy nature itself. Here in The Hills, we have created a community where we socialize with our neighbors, exchange ideas, walk around safely, ride our bikes, and enjoy some of the natural things that you may not find in the city. Yet at the same time, we are close enough to take advantage of small-town life when we want/need, and if desired we can

still take a little longer drive to the big city – creating a balance to our lives that gives us the advantage of merging country living and city life for those who desire it.

The following are funny condensed versions of some online responses I ran across from city dwellers trying to explain their new rural living; This may be why rural living freaks them out sometimes:

1. Nighttime is way different. Scary.
2. Foxes scream like a woman being murdered at night.
3. Silence causes your ears to ring.
4. The house sounds are really super creepy when there aren't any neighbors nearby that could be causing them!!
5. True darkness is weird. Never knew true darkness before, except when the power went out for 5 minutes. Now having no city lights, and it being pitch black in my bedroom and having to buy an actual nightlight is just weird. My Aunt said she would absolutely lose her mind.
6. Going from municipal water and sewer systems to wells, pumps, septic tanks and leach fields gives you a whole bunch more s**t to worry about, literally.
7. The knowledge that my neighbors probably won't realize if I died out here is frightening.
8. People make small talk at the post office and the bank. Weird.
9. The fear that something is going to come out of the woods behind your house at night to kill you in your sleep. (But it's only been deer so far.)
10. Deer decimates my garden, owls abducted (then likely killed and ate) my ducks, and raccoons took chickens.
11. There is a large bird on my roof every night, I think it is plotting to kill me.
12. Every time I get an outside cat it disappears.
13. Why are people always flicking their index finger at me when my car meets theirs on these medieval-era roads?

Here are some online responses of country people trying to help city dwellers understand country living:

1. Listen, the deer hit you, you didn't hit the deer.
2. Yes, that tractor does have the right to be driven on a one lane road.
3. Heaven help you if you go through that ranchers gate and don't close it.
4. Yes, you have to help your neighbor find his horses. Afterall, he helped get that deer out of your living room.
5. Everybody knows, is related to, or knows someone that is related to literally everyone.... except you.
6. The guy who knocked on your car window when you were stopped on the side of the road was not trying to carjack you, he thought you had broken down.
7. Those are toads singing their night song, not the creature from the black lagoon.
8. No we don't want Taco Bell to move in down the street, that brings lights, and we like the stars not being blotted-out-dots.
9. No need for you to call the police, I have my 12 gauge in my truck.

10. What do you mean you need me to take you to shore because you have to pee?
11. You know you dont go outside after dark, so why do you have your yard lit up like Fort Knox?
12. You want me to shoot that bobcat? You did notice he killed and is carrying a giant rat, right?
13. That is not an invasion of UFO's, those are called "Stars."

This all proves we can laugh together!!

SERIOUSLY, WHY DO I HAVE WEEDS IN MY YARD? (Magyn Whitaker): I am honored to be a member of the Nature Committee here at The Hills. The running joke, for those who know me, is that I am not a fan of 'Nature' and the vast majority of those people, to include myself, wonder why I'm on this committee. I am going to say that while on this committee, I have come to respect nature and have gained an additional appreciation for my fellow committee members and their love for nature.

As a member of the nature committee, most of the articles I have written for the quarterly newsletter are about subjects that annoy me and get on my nerves about nature. Hogs, and the damage they cause. Allergies in Texas, that make me not want to go outside at all, just to name a few. This article is right up there with those two; Weeds in my yard and flowerbeds. Seriously, what is the point? Insert eyeroll here.

So, what are the benefits of weeds?

1. Some lawn and garden weeds bring nutrients and water up from deep in the soil and down from the air, and subsequently make them available to microbes and plants.
2. Some weeds break up hardpans (In soil science, agriculture and gardening, hardpan or soil pan is a dense layer of soil, usually found below the uppermost topsoil layer. There are different types of hardpan, all sharing the general characteristic of being a distinct soil layer that is largely impervious to water) and compaction and control erosion.
3. Another benefit of weeds is that they increase the organic matter content of the soil as they continually grow and die. That's one reason to let them cycle through the lawn.
4. Garden weeds also act as our own diagnostic tool by telling us a tremendous amount about the nutritional balance of our soil through their presence and growth habit.
5. They also fix nutritional imbalances, vastly improving soils, perhaps in as little as a couple of years, but often decades or centuries.
6. One of my favorite (I use this term loosely) benefits of weeds is that they provide homes and food for microbes and animals. For the weeds we haven't gotten rid of yet, our chickens absolutely love them and snack on them daily! Good Chicken Food = Yummy Eggs!

That's just a few things weeds do in the lawn and garden. Having said this, if you simply can't live with them on the lawn, it is possible to control most of them and still have a happy garden.

Now to answer the question, how do I get rid of unwanted weeds in my yard and flowerbeds? The first and most obvious answer is to take the time to go out in the yard or flowerbed and pull the pesky things yourself. It's a workout but you can pull the weeds up from the root and use the next option to hopefully kill any roots left behind. Both liquid weed control and granular weed control are effective weed control options as well. Liquid weed control is mixed with water and sprayed on the lawn, where it either soaks into the soil to stop weeds from growing or sticks to the weed itself to kill them.

While weeds in our yard and flowerbeds are a fact of life, here in good ol' Texas, I guess the moral if this article is, if you can't live with them, there are ways to live without them.

FLIES OF TEXAS (Lynne Aldrich): Flies (along with bees) are great pollinators, but they can be a nuisance as they flutter about you – always on the attack. And some can be major carriers of disease. Diversity is important and the flies have figured this out. There are a lot more to flies than just those pesky house flies and fruit flies. So, here are some facts to be aware of and enjoy.



House fly



Fruit Flies on an apple

Flies are one of the four largest groups of insects so you see plenty of them around you. They belong to the Diptera Order which in Texas has about 30 common fly species. And a lot of them will be mistaken for a bee. They can be separated out with careful study because flies have only one pair of wings and belong to the order Diptera, while bees and wasps have two pair of wings. And then if you want to separate some flies out by sexes look at those eyes. Female eyes on some fly species have a gap between them while male eyes connect together.

So – disease carrying flies are usually aquatic and guess what – a mosquito is actually a fly and one of the world's deadliest beasts because it spreads disease like malaria, west Nile and yellow fever – killing more people than any other creature in the world. Gnats and those no see um's along with those 'love bugs' our cars batter up are also flies.

But not all are villains, and as mentioned above, are important in pollinating and even helping to control other insects. Some flies are decomposers – feeding on dead carrion (blow flies) which can help in solving crimes!! There's not a lot of studying going on to help in determining the conservation status of flies so most just get put down and managed as pests.

Flies are very diverse. Some begin their lives in water habitat, some morph in soil and decaying matter or on a host that can be a plant or an animal. They are found in a myriad of different habitats – deserts, mountains, beaches, in cities & woodlands.

Just what are some of the other flies we have here in Texas and out in our back yards? There are two main groups of flies. Nematocera & Brachycera. The Nematocera are long and slender with long legs and a many-segmented antennae and their larva mainly live in water and moist, soggy soil. They include love bugs, crane flies, mosquitoes, midge and gnats.



Love (lady) bug



Crane fly



Midge

The Brachycera are larger with a short antennae and include soldier flies (mostly beneficial), robber flies (predate on other insects), mydas flies (nectar and pollen eaters) and bee flies (pollinators and predators).



Soldier Fly



Robber Fly



Mydas Fly



Bee Fly

The **House Fly** is probably the most common fly and really like indoor places where we find them as very irritating. Because they feed sometimes on contaminated foods, trash and poop they can spread germs and although they don't bite they can vomit & defecate which is how they transmit diseases.

Bristle Flies can resemble bees and look similar to a House Fly but are larger and hairy. They hang around flowers but they will parasitize other insects by depositing their eggs on them and even inject the eggs into the host.

I think we are all familiar with the **Vinegar Fly** which is what we commonly call fruit flies. They too can pick up bad things in their travels and pass them on. If their larvae gets into that fruit you've left out you just might end up with an upset stomach. And beware, they will also find drains attractive to live in – finding food particles and water to live on. And interestingly enough they do not get washed away when you run water.

Horse & Deer Flies probably will become more and more common around here as we grow. And while both of these are harmless in terms of disease they have a bite that you will remember.



House Fly



Bristle Fly



Fruit Fly



Horse Fly



Deer Fly

Robber Flies are really good predators – establishing a territory from which they snatch other insects including bees, wasps, grasshoppers, house flies & stink bugs. They are generally spiny & hairy!!

Soldier Flies may resemble a wasp (the Black Soldier Fly) but have no stinger so they are not going to bite you. They can easily get trapped indoors and you're likely to find them hanging around your windows trying to escape. They like bright sunlit areas. It's the larvae of this species that makes it very beneficial as it is the larvae are scavengers and feed on manure, lots of different decomposing organic matter, carrion, mold, plant refuse – you name it they eat it. Because of this they help in controlling common flies as their eating style liquifies what they are eating on enough to make them unsuitable to the pesky flies larvae. The larva is a segmented maggot like thing that can be kind of scary to stumble across!!



Robber Fly



Black Soldier Fly



Soldier fly larvae

Bee Flies can be variable from fuzzy bee look-alikes and hairless hump-backed flies. They can hover and the buzz but they will have only two wings (bumble-bees have 4) and they have large eyes and skinny long legs. They also can be pollinators BUT, they are also predators on bee nests. Bees build their nest in tunnels in the ground where the bees then lay their eggs. The Bee Flies deposit their own eggs in the bee's nest, taking over that nesting site.



Bee Fly



Bee Fly

Hover Flies are another bee look-alike. Being a fly it has only two wings and will hover over flowers – and a human where they are looking for sweat to drink. It cannot sting and it's larvae will eat lots of Aphids as a pest control. As a really good distinguishing feature, the flies will have very short stumps for antennae while bees and wasps will have long antennae. They will also have very large eyes which can almost look like sunglasses.

Crane Flies resemble a mosquito but are much larger and most of this species life, about 95%, is spent in the larval stage in water, wet leaves and ground. This larval stage can last for up to three years, helping in decomposing and recycling organic material. Once they enter their adult stage about all they do is look around for a mate and lay eggs. They don't eat any real food and they don't bite. Because they like water the larval will usually remain dormant during dry seasons but once the rains come then come the adult Crane Flies to start their reproduction.



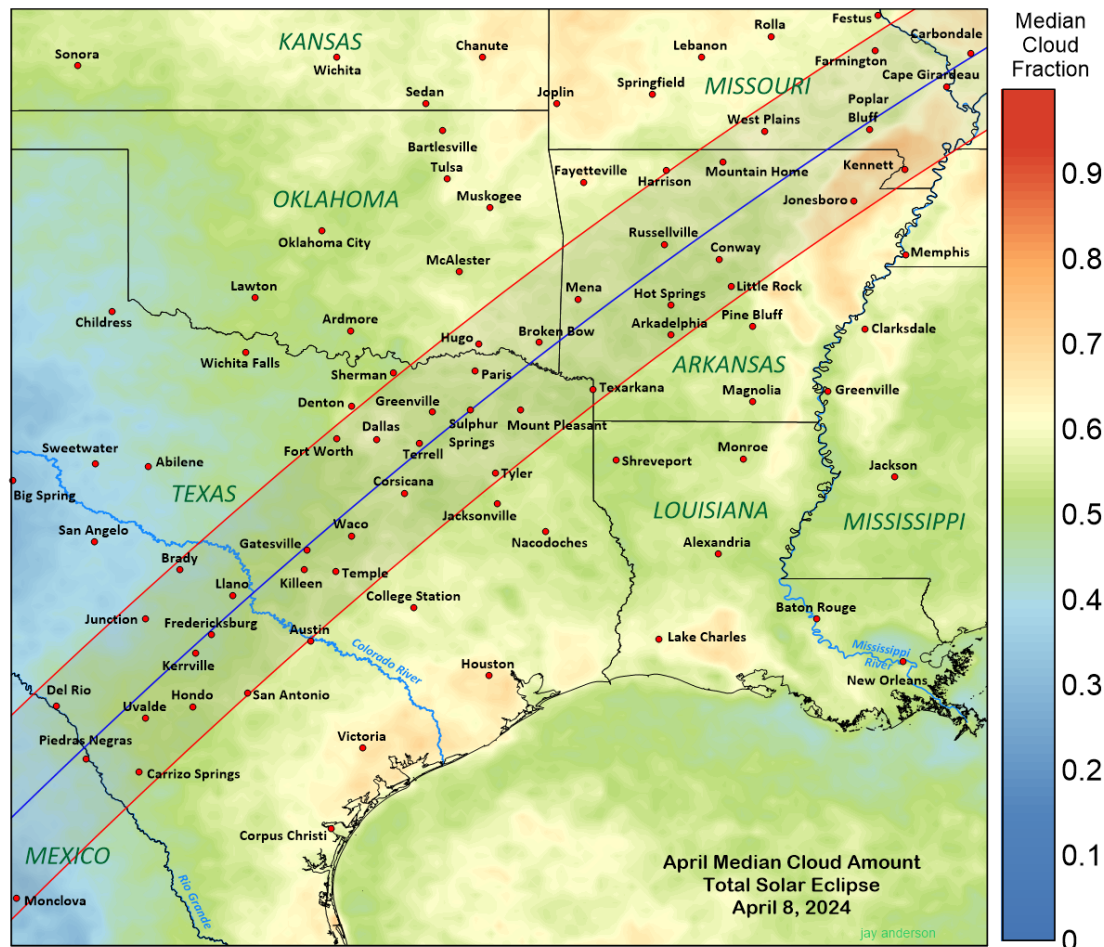
Hover fly



Crane Fly

APRIL 8 SOLAR ECLIPSE, SAVE THE DATE (Peter Gottschling): I hope you are all aware that there will be a solar eclipse on Monday April 8 starting about 12:24 CDT at our location. The eclipse will enter Texas near Del Rio and move northeast just missing The Hills. Unfortunately, in The Hills it will only be 98% totality. If you look at the map of totality below you can see that starting about an hour east of here it will be a total solar eclipse. Fort Worth will have 2 minutes and 39 seconds of totality. I suspect there will be viewing opportunities there such as on the Trinity River Bike Trail, the arboretum and even at the Fort Worth Zoo. If you are thinking of traveling to the eclipse center to get about 4 minutes and 30 seconds of totality and have not made plans yet I will warn you

that hotel prices in the path of totality have quadrupled and more for rooms around that date, if you can still get one. The map below also shows the chances of cloudiness and most of Texas is around 50% and chances go up the further north you go. If you are going to watch the eclipse, you have to do it safely so keep reading.



The United States Naval Observatory has a calculator to determine the times and duration of the eclipse for the location you choose.

<https://aa.usno.navy.mil/data/SolarEclipses> .

This example is for Glen Rose, Texas

<https://aa.usno.navy.mil/calculated/eclipse/solar?eclipse=12024&lat=32.24&lon=-97.76&label=Glen+Rose%2C+TX&height=300&submit=Get+Data> where you might go to Dinosaur Valley State Park to watch where you will have 3 minutes of totality. Lynne and I will be in Wills Point where there is 4 minutes and 21 seconds of totality. If you are flexible watch the weather for cloud cover forecasts. If your destination is predicted to be totally cloudy have a plan B where you might go for less cloud cover.

Safe Solar Viewing

Looking directly at the sun can cause blindness or other severe visual problems.

You must use approved solar viewing glasses which are inexpensive and can be ordered from several places including EarthSky.org which is a science website based in Austin <https://earthskystore.org/> . I would not consider it safe to get glasses through Amazon or other such on-line retailers because there are fake glasses being sold. Here is information about safe viewing glasses and vendors (includes Walmart) approved by the American Astronomical Society <https://eclipse.aas.org/eye-safety/viewers-filters> . You can also use #13 or 14 welder's glass but never lower than 13. Don't have eclipse glasses? You can see the eclipse indirectly through a pinhole projecting the sun on a white sheet of paper, see <https://www.timeanddate.com/eclipse/make-pinhole-projector.html> . You can even project the partial eclipse through the small holes of a cheese grater! Remember that in The Hills we only have a 98% eclipse so part of the sun will always be shining. You should wear the eclipse glasses the entire time in this area. If you are in an area with 100% eclipse it is safe to take off the glasses until the moon starts to move off the sun again.

If you want to take pictures you must have the correct neutral density optical filter (ND5) screwed onto your lens (I recommend at least a 200mm lens). You can find these filters at B&H and other online photography retailers. They run about \$90-150 depending on the lens filter thread you are using. Don't get a cheap one because they have color aberrations and reflections. I recommend Hoya brand. During the 100% total eclipse you can take the filter off but you must put it back on when the moon starts coming off the sun. Although I would not recommend it, you can tape one of the solar glasses' filters over the lens of your phone to take pictures. The sun will be very tiny on a phone picture. If using binoculars or a telescope you must also have the proper solar filters. Looking at the sun without filters on a telescope or binoculars will surely blind you.