

# Fredericksburg Nature Notes



## Newsletter of the Friends of the Fredericksburg Nature Center

July, 2020 Volume 1 Number 3

<http://fredericksburgnaturecenter.com/>

### Editor's Musings: **Lonnie Childs**



#### Dear Friends of the Fredericksburg Nature Center,

When July arrives, one certitude in Texas living is that the heat of Hades will radiate upon us, wilting our spirit and dampening our enthusiasm for outdoor activities. Compounded by an ever-festering pandemic, we might understandably decide to seek repose in the confines of our air-conditioned abodes and binge on the latest Netflix series or better yet, read some good books. But I counter that urge with a clarion call to go to the Nature Center, and seek out that nature bathing experience for which your soul still hungers—the calming visage of green vegetation, siren bird songs, and the fleeting beauty of butterflies. Life will begin to feel much better.

Arrive early and beat the heat for a quick tour around the mile plus Vista Loop and Live Oak trails. We have a regular cadre of early walkers, runners, and dog walkers who inhabit the trails, so join in. Finish your hike with a visit to the Bird Blind where shade is omnipresent all day, and the view is being transformed from a functional birding spot into an appealing garden habitat that stands on its own aesthetic merits. Then venture over to the Pollinator Garden which is still in spectacular bloom and can be coolly viewed from the shade of two different arbors. I challenge you to count the number of Queen butterflies feasting on the Blue Mist Flower.

So, rise from your couch, go to the park, and quench your need for some nature. No mask required, but please social distance.



Happy Nature Trails!

*Lonnie*

Chill out at the  
Leopold Bench  
in the  
Pollinator Garden



**OUR MISSION STATEMENT: “To enhance, protect and interpret the natural ecosystems of the Texas hill country while providing educational and quality of life opportunities for members of the community and visitors”**

## Trail and Garden Projects

Admittedly, the summer heat is slowing us down and diminishing our appetites to initiate any major projects until Fall, but work does continue for some intrepid volunteers to complete on-going projects. Regular work sessions are scheduled Tuesday mornings and new volunteers are profusely welcomed. In maintenance mode, we always have need for help with filling bird feeders and watering new plantings.

**Vista Trail Repair:** A hardy crew of octogenarians and septuagenarians with an occasional 60 something youngster is working on timbering and hauling in gravel to repair the downhill section of the Vista Loop Trail below the Bird Blind. If you know how to use a shovel or wheelbarrow, join up for some quality functional exercise. We don't discriminate against people under 60! Thanks to the LCRA for donation of the gravel.

**Bird Blind Habitat:** Mary Ellen Terrell continues to enhance the Bird Blind habitat area. The “bones” of the landscape have been installed—water feature, dry creek bed, and planting beds. Now comes the fun part in filling out the area with native perennial shrubs and flowers that will not only complete it as habitat, but also transform it into an appealing landscape. If you are not a bird-watcher but a plant lover, there will be an equally interesting view from the Blind of an inviting understory garden.



Photos by Lonnie Childs





*"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."*

Margaret Mead

**Along the Trail Observations**



**Corona Flower? No!  
Button Bush**  
*(Cephalanthus occidentalis)* -  
"Western Head Flower"  
Growing in the riparian area along Live Oak Creek where it likes moist, humus-based soils. Deciduous shrub grows to 12' H x 8' W. Hummingbirds & Butterflies like it.



**Green or Pearl Milkweed Vine**  
*(Matelea reticulata)*  
"Netted Milkweed"  
Growing on trail near & below Cactus Garden on south end of Live Oak Trail.  
Twining vine that grows in thickets on rocky hillsides. Endemic to Texas and Mexico.



Pearl Milkweed Vine Leaf

**Along the Trail Observations continued**

**Prairie or Low Wild Petunia**

**(*Ruellia humilis*)** - Genus named after French herbalist Jean de la Ruelle & humilis refers to "low-growing or dwarfish".

Found along LO Trl near meadow where it likes open woodland edge. Larval host for Buckeye butterfly. Not the same species as *Ruellia caerulea* which is the non-native Mexican variety sold in nurseries and is INVASIVE.



**Texas Bull Nettle**

**LOOK BUT DO NOT TOUCH!**

**(*Cnidoscolus texanus*)**

You have perhaps encountered this plant with an alluring white flower that blooms in the heat of summer. The well-defended plant has hollow hairs along the leaf margins and stems that contain Formic Acid, the stinging chemical in bee and wasp stings, and the hairs will penetrate leather gloves. So we have convergent evolution even between plants and animals. The stems also contain an irritating milky sap.





*"Life sucks a lot less when you add mountain air, a campfire and some peace and quiet."*  
Brooke Hampton

## What's Blumen and Buzzin' at the Pollinator Garden?

## Blooms

The Pollinator Garden is still blooming in full display and heavily visited by Butterflies and Native Bees.



**Zexmenia** (*Wedelia acapulcensis* var. *hispida*)

Larval host for Bordered Patch, Sierran Metalmark, and Lacinia Patch butterflies.



**Rose Pavonia** (*Pavonia lasiopetala*)

Small woody shrub that provides ample nectar for Butterflies & Hummingbirds.



**Purple Leatherflower Seed Capsule**  
(*Clematis pitcheri*)

Twining perennial vine with gorgeous flower.



**Frog-Fruit** (*Phyla nodiflora*)

Hardy semi-evergreen perennial ground cover. Good nectar plant & larval host for Phaon Crescent and Pearl Crescent butterflies.



Joseph A. Marcus

All photos by Lonnie Childs unless noted otherwise.

*"There is nothing in a caterpillar that tells you  
it's going to be a butterfly."*

*R. Buckminster Fuller*

**What's Blumen and Buzzin' at the Pollinator Garden? (continued)** *Butterflies*



**Goatweed Leafwing (*Anaea andria*)**



**Great Purple Hairstreak (*Atlides halesus*)**



**Black Swallowtail (*Papilio polyxenes*)**



New record for the park!

**Southern Skipperling (*Copaodes minima*)**

**All Photos by Bill Lindemann** Bill recorded 33 species in a 2 week period in June including: Celia's Roadside-Skipper, Goatweed Leafwing, Southern Skipperling, Reakirt's Blue, Gray Hairstreak, Bordered Patch, Sachem, Fiery Skipper, Orange Sulphur, Little Yellow, Checkered White, Queen, Pipevine Swallowtail, Giant Swallowtail, Black Swallowtail, Hackberry Emperor, Phaon Crescent, Pearl Crescent, Gulf Fritillary, Variegated Fritillary, American Lady, Monarch, Common Buckeye, Sleepy Orange, Lyside Sulphur, Dainty Sulphur, Ceraunus Blue, Dun Skipper, Brazilian Skipper, Nysa roadside Skipper, Eufala Skipper and a Wood Nymph .

He subsequently recorded 19 of the same species in two one hour sessions. **The Butterflies are here for the viewing!**

*"The hum of bees is the voice of the garden."*

Elizabeth Lawrence

## What's Blumen and Buzzin' at the Pollinator Garden? (continued) **predators**

The Butterflies kind of steal the show, but let's not forget some of our other insects.

How about these Pollinator Predators? Every healthy ecosystem needs some predators. We've done such a good job at attracting Pollinators that these guys show up for the free buffet!

blenqof



**Band-winged Dragonlet Female (*Erythrodiplax umbrata*)**

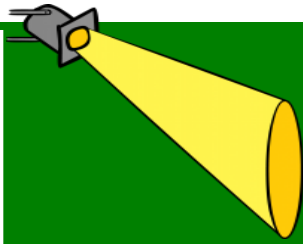


**Widow Skimmer Female  
(*Libellula luctuosa*)  
FFNC logo species.**



**All Photos  
By  
Bill Lindemann**

**Cicada Killer or Hawk (*Sphecius speciosus*)** This scary looking wasp grows to 2 in. long and incites terror on sight. However, it is quite harmless and will only deliver a mild sting if caught and squeezed. The stinger of this solitary wasp evolved to paralyze its Cicada prey which it catches in mid-air. The wasp will then drag its prey into a hole that it has dug. It lays an egg in the prey which will be eaten by the larvae when it hatches. This guy is also a pollinator as they feed on flower nectar.



Thanks Jane!



## Volunteer Spotlight: Jane Crone

Our volunteer recognition this month highlights long-time volunteer Jane Crone who has participated in some way with most of the major projects and undertakings of FFNC during its 20 year history.

Jane was born in Galveston, Texas into a medical family – her father being a military doctor and her mother attending University of Texas nursing school on the island. After medical internships and residencies in New Orleans, Buffalo, and Philadelphia, the family settled in Ft. Worth where Jane spent the bulk of her youth. It was during her youth spent here on the outskirts of the city, that Jane developed her interest in Mother Nature. These were the times when your mother gave you your lunch, said be home by supper, and you rode off on your bike with dog in tow for a day of adventure in the outdoors. Jane and her brothers loved wandering about with particular interest in finding fossils.

Jane “escaped” Texas and went to college at the University of Washington in Seattle. After marriage, Jane relocated to Virginia area where she raised her young daughter. During this period of her life, she re-engaged with her nature spirit and love of camping by becoming involved with Girl Scouts (her daughter was not so much into the camping!). Jane also started an Explorer’s Post of the Boy Scouts for disabled adults. Her involvement with scouting led her to meet John Crone (another avid volunteer) who was to become her second husband.

Upon John’s retirement from IBM, they moved to Fredericksburg in 1998. After retirement, Jane had more time to pursue her nature interests and became involved with Texas Ornithological Society (TOS) and then the Fredericksburg Chapter of the Native Plant Society of Texas (NPSOT). In the NPSOT chapter, she served as Vice President – Programs and then President. Under her leadership, the chapter won NPSOT’s state chapter of the year award in 2011.

Her involvement with FFNC began soon after its inception and ultimately led to her joining the Board on which she has continued to serve for somewhere around 18 years. During this tenure, she has participated in virtually all of the organization’s activities including building trails and gardens, serving as program chair, working on 3<sup>rd</sup> Grade Day, installing library exhibits, and assisting with the Wings over Texas nature festival.

What does Jane love most about her volunteer work with FFNC? Being outdoors in nature’s bounty, returning value to the community, and the great friendships she has developed with other FFNC members.

**When you see Jane in the gardens or on the trails, please tell her thanks for all that she has done to further the FFNC mission!**





*"If the earth is a mother then rivers are her veins."*

*Amit Kalantri*

## Feature: A Creek Runs Through It—Live Oak Creek

by Lonnie Childs

Thanks to Bill Lindemann for help with this article.

The aesthetic and ecological centerpiece of our Nature Center rests with having a creek that flows year round through its' heart. Flowing water not only soothes the souls of our visitors but provides a multitude of benefits for the flora, fauna and overall ecological health of the area.

Water of course is one of the necessities for life as we know it and serves as immediate habitat for fish, amphibians, birds, and aquatic plants. But between the creek and the upland trees resides another narrow ecozone known as a **riparian buffer** which multiplies the benefits of water and expands the reach of its value.

While riparian buffers comprise only a very small portion of the land area in the state, they are an extremely important component of healthy watersheds and ecological function. Riparian areas provide critical habitat for wildlife and plant species that thrive on a wetter environment. They help maintain water quality by filtering pollutants such as nutrients and sediment, thus preventing eutrophication (algal blooms). Healthy riparian vegetation reduce stream bank erosion and maintain stable stream channel geomorphology by slowing water. Vegetation provides shade, which works to lower water temperatures and thus supports higher dissolved oxygen levels, which are important to maintain fisheries.

All natural habitats face threats, and riparian buffers are no exception as they suffer the negative effects of many land use practices. Urban development, invasive species, improper grazing practices, agricultural run-off, and over-use from recreational activities are just a few examples. Additionally, humans seem to have a natural urge to clean-up riparian areas and transform them into parks which turn the stream-beds into well manicured drainage ditches. Tree and limb debris actually capture soil allowing for more vegetative growth which enables more soil deposition and thus increases in the stream bank. Stream banks act like sponges and raising them heightens the water table keeping the stream flowing (the opposite force of erosion). This is not to suggest that we cannot have areas manicured for human use like LBJ Park, but we don't want the whole length of the waterway to resemble a park.



View from Vista Loop Trail



*“There is a way that nature speaks, that land speaks. Most of the time we are simply not patient enough, quiet enough, to pay attention to the story.”*

*Linda Hogan*

## Feature: A Creek Runs Through It—Live Oak Creek continued



Area near Live Oak source



**Live Oak Creek Below Dam**—Healthy riparian buffers are not neat but appear messy to the uneducated eye. They harbor good anchor plants from Bald Cypress & Sycamore trees to Eastern Gamma grass & Giant Sedge. Logs and brush catch sediment which builds to provide areas for vegetation to grow. Over time, stream banks grow & retain more water, raising the water table. Healthy vegetation also provides a buffer to retain the soil bank by slowing water during periodic floods.

**The origins of Live Oak.** Live Oak Creek flows 15 miles south from its headwaters in north-western Gillespie County, skirting the southwest edge of Fredericksburg, to its entry into the Pedernales River about one mile south of the park. The source water emanates from numerous springs percolating from an exposed Edward’s Limestone formation with its’ “headwaters” located just north of Weinheimer Rd. and west of Loudon Rd. Numerous surface drainages (the most prominent being Pecan, Garden, and Honey Creeks) contribute to the year round flow of Live Oak, although there are places where the groundwater flows underground only to emerge again downstream. The watershed drains a total of 45-50 square miles.

**Biological Diversity.** Land value is in the eye of the beholder. Real estate developers view it for potential commercial development. If you are a ranch or farmer, you look for potential productivity. Other might see recreational value related to sports or RV parks. But FFNC took a piece of “waste land” that no one saw value in because of its inaccessibility and saw its potential biodiversity. You might say that Live Oak Creek fostered and then protected its own little corner of biodiversity. Without Live Oak Creek as its ecological anchor, we would not see this level of biodiversity in an area that encompasses less than 15 acres.

**Invasive Species.** As noted previously, one of the threats to our natural riparian zones is the invasion of non-native botanical species, although we do have Nutria in the park which burrow the banks and eat aquatic vegetation and feral cats which decimate our songbird and rodent populations. By far, invasive

### Biodiversity Species Count:

Birds—180	Butterflies—80
Amphibians—9	Reptiles—10
Mammals—14	Wildflowers—260
Dragonflies—33	Damselflies—52
Fish—28	



*"Water is the driving force of all nature."*

*Leonardo da Vinci*

## Feature: A Creek Runs Through It—Live Oak Creek continued

plants are the biggest threat. Urban streambeds are more exposed to residential landscapers bringing in plants such as Ligustrum, Nandina, and Chinaberry which clog our waterways and choke out native species. Arundo donax (River Cane), a towering Bamboo-like grass, represents another major invasive threat. Baron’s Creek has extensive stands which are being addressed by an eradication program sponsored by Texas Parks and Wildlife (TPWD) and Hill Country Alliance. FNC does suffer with Chinaberries, Malta Star Thistle, and Cockleburs which are all noxious invasive plants.

Since Live Oak Creek is a mostly rural watercourse, it has not been plagued quite so much by the common exotic species found in urban landscapes. But as residential development increases on the west side of Fredericksburg, this threat increases accordingly, and we will have to continue our vigilance. Bill Lindemann did find one interesting invasive visible on the point of the island in the Live Oak lake. It should pose no problem but perhaps serves as a deceptively alluring example of the risk of future invasives to come, since this plant



Scarlet Rosemallow (*Hibiscus coccineus*)  
Native of southeastern US

Photo by Bill Lindemann

no doubt floated downstream from a residential landscape. The red flower is Scarlet Rosemallow which is native to the southeastern US.



Hensell Sandstone

Grotto area with Maidenhair Fern  
Photo by Lonnie Childs

**Geologic Interest.** Live Oak Creek has carved out pieces of geologic history in several areas along the creek bank. In the Grotto area, a Hensell Sandstone outcrop is exposed consisting of fluvial deposits dating back 110 million years. The course of a southward flowing stream was altered and left sediments deposited for the eons. The deposits themselves are eroded Llano Uplift sediments from as far away as Enchanted Rock. The Hensell Sandstone is one of four aquifer bearing formations in the county and erodes into the red soil utilized to grow grapes and peaches in the area. Dinosaurs would have walked on the Hensell.



*“Texas weather is long periods of drought punctuated by periodic floods.”*

*Roy Bedichek*

## Feature: A Creek Runs Through It—Live Oak Creek continued

**Flooding and Restoration.** Periodic flash floods are a matter of course in central Texas given our weather patterns and topography. Each flood is unique based on amount/intensity of rainfall and other specific factors, but sometimes they can be described as “cutter” or “filler” flood events differentiated by their end results.

Typical flood cycles involve a series of smaller “filler” flood events where sediments and banks may be moved from eroding areas and deposited downstream in healthy buffer zones where it fills in the stream bank over time. Some smaller debris will be transported downstream also. Eroded areas lose stream bank, and healthy riparian buffers gain bank.

These smaller floods will be followed by periodic larger “cutter” flood events that will make major alterations to the riparian vegetation, banks, debris, and even the stream course. These powerful flood events are termed “cutters” because they gouge large segments of the stream bank and carry large amounts of sediment and debris downstream. As mentioned previously, the most effective buttress to damaging floods is to maintain a healthy riparian buffer with anchor plant species and accumulated sediments that slow the water and thus limit erosion. In other words, the riparian buffer serves as an ecological savings account to help better survive the onslaught of a major flood event.

Our nature center has experienced two major flood events in our 20 year history. The first occurred on Memorial Day weekend, 2007. The Live Oak watershed captured 16 inches of rain in 12 hours with 11 inches of that amount recorded in 4 hours. Live Oak Creek became a raging “cutter” flood whose effect was not so much a result of moving debris but rather stream bank damage. The creek rose well over its banks and washed away 15-20 feet of the bank where the creek bends below the dam, while also washing away our kiosk, the trail steps with bridge, and permanently altering the stream bank.

In this event, Willow trees located immediately downstream from the dam impeded the flow of the water and pushed it towards the high stream bank. Water follows the path of least resistance and finds its way downstream, no matter the obstacle. Riparian experts later recommended that we remove those mid-stream trees before future floods to facilitate flow. So sometimes a little selective riparian grooming is in order.

There was no feasible remedy for the lost stream bank other than fill in the eroded area with boulders which serves as a “band-aid” against future floods. Volunteers re-built the trail steps with a more fortified design constructed with the heavier boulders.





**"The power of nature can make fun of the power of man at any time!"**

**Mehmet Murat Ildan**

## **Feature: A Creek Runs Through It—Live Oak Creek continued**

In October, 2018, Live Oak Creek suffered a another major flood event when over 10 inches of rain were dumped in its upper watershed in a short period of time. This was the same weather event that flooded the Llano River and washed out the Kingsland bridge. This flood did not so neatly fall into the cutter vs. filler categories as its end effects were more influenced by debris movement. Since we had not had a significant flood in over 10 years, significant amounts of debris had accumulated upstream. The flood waters subsequently dislodged and carried huge rafts of debris downstream. As the debris moved through the park, it slowed as it went over the dam, and then slowed even more as it traversed the immediate bend of the creek across from the trail steps. The slowing debris was trapped on the sand bar in the bend of the creek which caused more debris to pile up on it and the build-up compounded. The area was left covered by massive amounts of debris, leaving the trail impassable and much of the resident vegetation heavily damaged.



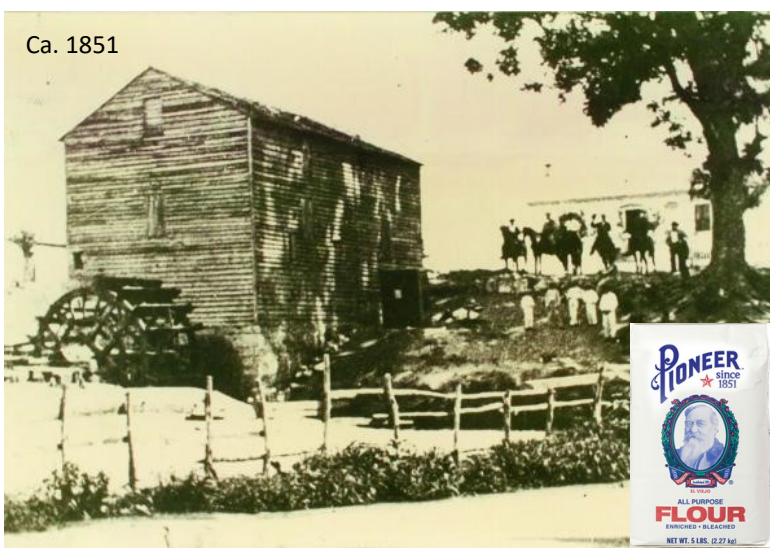
Photo by Mary Ellen Terrell

**Live Oak Trail steps covered by debris.**



Photo by Mary Ellen Terrell

**Debris in the bend of the creek across from the trail steps.**



Ca. 1851

In 1851, Carl Guenther emigrated to Fredericksburg from Germany. He bought land on Live Oak Creek between the park & the Pedernales River and built a grist mill which was much needed. A flood damaged the first mill before it was even completed. He re-built & persevered until 1859 when drought dried up the creek and left the mill powerless and without product to mill. He moved the business to a growing San Antonio where it

Photo by Tom Hynes



*"If you want to make Mother Nature laugh, tell her your plans."*

*Anonymous*

## Feature: A Creek Runs Through It—Live Oak Creek continued

The human perspective looked at the damaged riparian zone and saw ugly destruction. Mother Nature might view it and say, 'Uh, I'm just rearranging a bit.' If the debris pile in Live Oak Creek was located in a wilderness area, the solution would be simply to let the restorative processes of Mother Nature take their course. But this would take many years for the area to naturally return to some usable state and be visually appealing. Since the damaged area was in a park setting designed for recreational use, human intervention was in order.

For FFNC volunteers who had labored hard and long to create the nature trail, the flood was devastating and dispiriting to say the least. But being the intrepid volunteers that they are, and after much debate, they proceeded to cut and gather debris into 51 piles for burning. The efforts continued for over a year. Today after less than two years, most of the small to mid-size vegetation has naturally returned to a normal state, and a visitor would not know that the area had flooded. We did not fight Mother Nature but helped her along. Her healing powers are substantial and engender great resilience,

**In conclusion.** Leonardo da Vinci said that "water was the driving force of all nature." Sometimes we humans appreciate the force and sometimes not. Floods are difficult events for humans to suffer, but perhaps they are Mother Nature's way of reminding us who is in charge and that we must follow her rules and not ours.

In serving as stewards of our nature center, we have been gifted with the treasure of Live Oak Creek. Although not pristine, it's health is still good, and it anchors and nourishes our little patch of nature. Beautiful flowing streams are a declining part of nature which speaks to the current health of Mother Nature. Give ours special care, reverse it, and next time you walk over the bridge tell it thanks for quenching our spiritual thirst.



Live Oak Creek Riparian Zone Today



Photo by Tom Hynes

Bill Lindemann—Chief Firebug at work  
Note the cleared area in back.



*"I like this place and could willingly waste my time in it. "*

**William Shakespeare**

## Scheduled Events

July 15 Who's That Knocking in the Woods? A Woodpecker Presentation by Bill Lindemann

**TO BE RE-SCHEDULED TO A FUTURE DATE**



**Thanks to our supporters and the City of Fredericksburg  
for your continued support of the  
Friends of the Fredericksburg Nature Center!**

**A 501(c)(3) corporation**

**Go to <http://fredericksburgnaturecenter.com/membership> for more information**

**Comments, questions, or future newsletter submissions can be sent to  
Lonnie Childs, Newsletter Editor, at [lonniechilds@utexas.edu](mailto:lonniechilds@utexas.edu)**