

The Steward

Summer 2020

Highland Lakes Master Naturalists

Volume 11 Issue 2



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Please submit pictures, articles, reports, stories, announcements, etc. to

becky_breazeale@yahoo.com

Photos should have captions and appropriate credits. We will announce the deadline for submissions two weeks prior to the deadline. Or contact Becky and Martelle.

Thank y'all for ALL!!

Message from our President

By Terry Bartoli

With the exception of Marvin Bloomquist, I may be the only member of the Chapter with the luxury of comparing 2 presidencies. Of course I hate to compare this year to anything else, due to the mess we're in!

But there are a few basic differences. First of all, the Chapter is quite a bit larger now than it was then. Almost twice as large. Then I knew most everyone by sight. Along with their names! Those of you who know me realize how big a deal that is for me! Now at Chapter meetings (March?) it's a different story. Let's hope that we can soon get back to real meetings.

The second is related to our society as a whole. People in our country seem to be more divided than anytime I can remember. One thing I have been very concerned with is our Chapter must not let that happen in its ranks! We're all in this because we share a common interest: Nature. Of course there are differences throughout Nature, but if there's one thing we know as naturalists is that all those differences are in balance. And disturbing that balance is not a good thing. Since we are all united under one common thing it only makes sense that we keep a balance within our group. And to be tolerant of differences rather than perturbed. To look at different opinions as opportunities to learn. Only with a truly open and non-judgmental mind can we take advantage of those opportunities.

Let's all strive to do that!

Lately, I've adopted a new rule of communication: If you don't have anything else to say, please don't say it!

With that I shall end what may be the shortest President's Message ever.

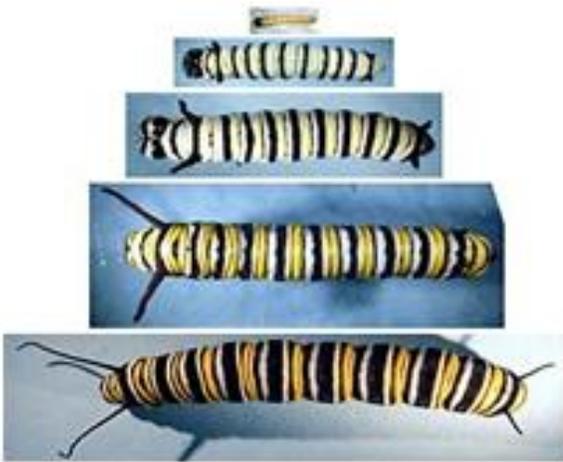
My Monarch Story, 2020

by Suzanne Atkinson

I became interested in Monarch Butterflies two years ago. I began planting store purchased milkweed and growing my own from collected seeds. This extra milkweed was to enhance the huge amount of native Green Antelope Horn Milkweed that grows all over our 31 acres of the Texas Hill Country, but dries out mid May to mid June, depending on rainfall amounts. I wanted to be able to have some in the yard (about an acre and a half) that I could water through the summer months.

I was designated as a Monarch Way Station in 2018. I planted a large amount of Mistflower. I have found Monarchs like nectar from Mistflower, Prairie Verbena, Frostweed (fall), Purple Thistle, and of course, Milkweed.

Last year I found and raised numerous Soldier and Queen Caterpillars, but was never able to locate a Monarch Caterpillar. This year, on April 6th, I found my first Monarch Caterpillar. That began the hunt for more. I had the whole family out searching native milkweed plants. From April 6th - May 13th, I have collected 63 Monarch Caterpillars in various Instar Stages (they go through 5 before becoming a Chrysalis).



From Top to bottom Instar 1 thru Instar 5.

between the 3rd and 5th Instar.

I found the larger the caterpillar, the more likely it is to be infected with a parasitoid fly, in this case a tachinid fly. I researched this anomaly as this was my first experience with a parasitoid fly. The adult fly lays an egg on the caterpillar, the egg hatches and burrows inside the caterpillar where it begins to eat. The fly larva effectively eats its host from the inside. The larva eventually exit the caterpillar. The caterpillar always dies. I had four caterpillars that did not reach the "J" stage, they appear to deflate, lay on the cage floor, turn darker and eventually a maggot (up to four) will exit. I had three that made a chrysalis before the maggot(s) exited and 19 that died in the "J" stage. Of those that made "J"s, 17 made the proper "J", hang there for up to 12 hours, drop the "J", turn dark, and maggots would exit. Exiting maggots would attach themselves to a silk string and drop from the string to the bottom of the cage; they also exited this way from a chrysalis. Two "J"s were made inverted before succumbing to the maggot. In all instances, these occurred in caterpillars collected

According to Monarchwatch.Org, parasitoid flies are a common affliction with Monarch Caterpillars. The adult fly lays an egg on either the Monarch egg or caterpillar, once the fly egg hatches it burrows into the host caterpillar and begins to eat the host from the inside. Eventually the host dies and the maggot emerges, makes a pupa and hatches into an adult fly. I collected several maggots, which turned into a pupa within 12 hours of

emergence, and hatched into an adult fly approximately 3 weeks later. There is also a parasitoid wasp that goes through the same process, but I have no experience with this type of parasitoid.



Caterpillar with fallen "J" and string from maggot (larval stage)



Deflated Caterpillar with maggots emerging (larva)



An infected Chrysalis and a pupa formed after the larval stage



Left: Two pupa and one adult tachinid fly

My analysis of this year's Monarch Caterpillar crop:

1. Collect your Monarch Caterpillars as early as possible, Instar 1 is best, but I was successful with Instar 2 and most of Instar 3. Monarch egg collection would be ideal, although they are quite hard to find/see. I prefer Instar 1.
2. Watch for migrating Monarch Butterflies to appear in the Spring. As soon as they arrive, watch to see them visit your milkweed, eggs hatch approximately 4 days after they are laid, so continue to search for either eggs, or newly hatched (Instar 1) caterpillars.

Of the 63 Monarch Caterpillars I have collected, I have released 27 butterflies, 18 females and 9 males. I have 3 Chrysalis' preparing to hatch and 6 caterpillars still munching on milkweed.



The male has two distinct spots on his lower wings. Also notice the male has thinner line markings on his wings

Female has no spots and darker lines on her wings.

Sunflowers-Queens of the Garden

By Louise Suhey

With the second spring approaching in our newly built home, I decided to grow sunflowers from seed for the first time, in a quarter of a very large flower bed (13' X 46'). After doing some research, I have found them to be one of the most interesting plants in my garden. Their Latin name, *Helianthus annuus*, comes from the Greeks. Helios meaning 'the sun' and anthos 'a flower'. Just one look at the flower heads and you can see why. (Photo #1.) Sunflowers were first planted in North America on the Great Plains by Native American Indians. Supposedly, the Mormons strewed them all along their journey to Utah, so others could follow in their footsteps months later.

In looking through catalogues, there seem to be nine main types:

Reseeding Annuals;

- 1.) Junior Dwarf- 2' tall and good in high winds
- 2.) Teddy Bear-2' tall with double heads, furry looking
- 3.) Jade-4-5' tall with 5" wide heads. Chartreuse centers with pale yellow to white petals
- 4.) Decorative-many different shades of yellow, red, and maroon 5'+ tall
- 5.) Snacking Black Oil-5' tall with 8" wide heads
- 6.) Silverleaf (*H. argophyllus*) hairy silver foliage, Hudson Valley Seed Company, native

to the TX Gulf Coast

7.) Italian White-rare Albino seeds, Park Seeds, 5-7' tall

8.) Mammoth American Giant-16'+ tall with 10" heads, thickest stalks for height and largest seed heads

Perennial Sunflower:

9.) Maximillian Sunflowers (H. Maximilian) 4-6' tall with 2-3" heads, lots of heads, but smaller. Long lived and can spread if allowed.

I choose three types in the Decorative category:

1.) Red Sun

2.) Velvet Queen

3.) Autumn Beauty (Photo #2.)

Sowing instructions say to plant seed tips facing down in well-drained, loamy soil in full sun. They do best in neutral PH 6.5-7.5 soils, and plant after the last frost date, which is around March 20th in Hill Country, depending on the year. I planted mine mid-April, and you can stagger the planting, if you want a succession of blooms. The flower bed where I planted my seeds was the slag pile, where the masons for our house chipped our Gray Lueders for the stone walls. Not the best location, to say the least, but I did pick out as many rocks as possible, and added organic material.

Seeds were planted 1" under the soil and surprisingly, I had a 95% success rate! They actually look like weeds coming up or Zinna babies, so don't pull them out.

The packages say they are deer resistant, but my deer loved the hairy leaves, and striped the stalks bare, until I was able to put up 6' fencing. By far, my favorites were the Red Sun seeds by Ferry Morse. They have beautiful multiple heads. (Photo #3.) I actually counted nine blooms on one stalk! I did use 2' tall, heavy flower stakes with circular tops to hold them up. The stalks are so fibrous that one fell over, was creased twice, and still bloomed on the ground. (Photo #4.) People say where you plant Sunflowers is the party place of the garden for bees, birds, wasps, beetles, flies, and butterflies. They were right! This last week I have enjoyed watching the Lesser Goldfinches (*Spinus psaltria*) hang on for dear life to the seed heads, due to the high winds of Hurricane Hanna blowing through. If you are planting sunflowers for bees only, single, central disk heads are the best. They provide more nectar and pollen than the doubles, because the extra petals have replaced the pollen-laden anthers. Double flowers are more difficult for bees to reach the inner flower parts.

We have all heard the stories about Sunflowers being phototropic. The Greeks called it Heliotropism, meaning 'sun turn'. In 1892 it was discovered that plants respond to light, rather than just the sun, through the use of artificial light sources. Sunflowers, in the budding stage, track the sun from East to West to absorb as much energy as possible. At night, they assume a random orientation, and then back to East, as a result of the plants circadian clock. As the flower heads appear and mature, the stalks will stiffen, and remain facing East permanently. (Photo #5.)

The medieval mathematician, Leonardo Bonacci, developed the mathematical algorithm called the 'Fibonacci Sequence' in 1202. This sequence appears in many biological settings, such as the arrangement of Pine Cone bracts and uncurling Ferns. It also happens in Sunflowers. The inter-spiraling of seeds is dizzying to look at closely. The plant uses the most number of seeds that can fit into a circle (seed head).

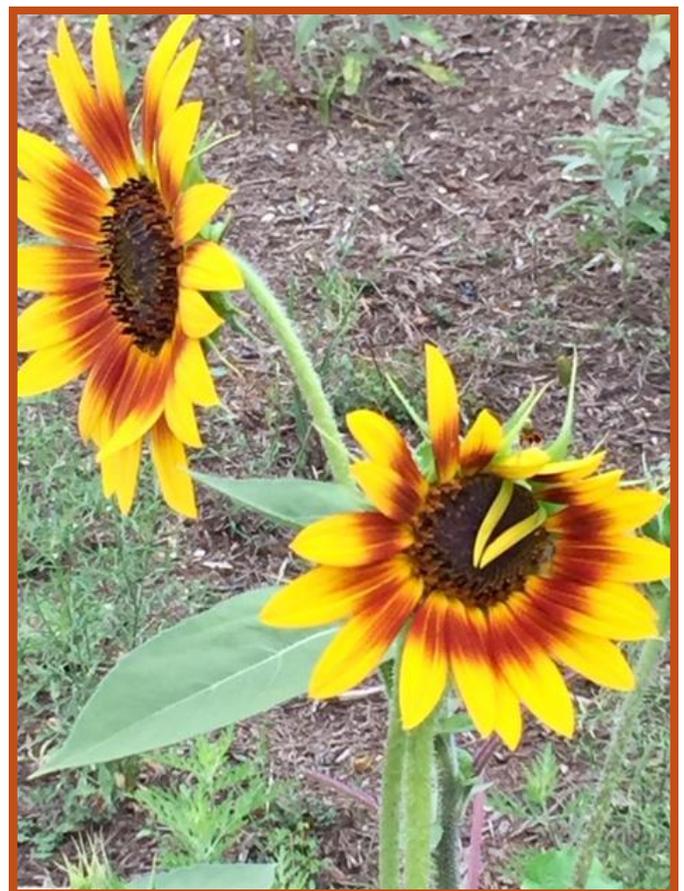
Sunflower seeds have also been found to be 'Allelopathic'. Allelopathy can be either beneficial or detrimental. It is a biological phenomenon by which an organism produces one or more biochemicals that influence the germination, growth, survival, and reproduction of other organisms. Black Walnut trees are a prime example. With Sunflowers, it's the hulls of the seeds when the birds drop them, or when seed heads die and drop hulls. Supposedly, it weakens or kills grass, or flowers. It mostly affects annuals and fast growing plants. The hulls should not harm well-established plants. Effects are very localized to a 1-2' area. Single flower, Black Oil seeds are the worst in this respect. Multiple head Sunflowers are less toxic. Plants developed this characteristic to fend off competitors. Much more research needs to be done on this subject. Scientists can't tell if the damage is from the hulls themselves, effects of mulch, or animal activity. They do suggest crop rotation every year to combat this phenomenon of phytotoxicity.

I have so enjoyed my first crop of Sunflowers, and plan on planting more rare varieties next year. If interested, there are many tutorial videos on You Tube as to growing and harvesting these beauties. Fascinating!



Above Photo #1

Below Photo #2





Left: Photo #3

Below Left: Photo #4

Below Right: Photo #5



LANDSCAPING THE TIMBER RIDGE ENTRANCE

By Melanie Huff July 23, 2020

In 1998, when we purchased our house in Timber Ridge, the subdivision entrance was flanked on the left by what remained of a brick wall following a collision some years before. On the right, just beyond the entrance road, there was a brick wall on which the letters "TIMBER RIDG" appeared. In addition to missing a final "E" (no one knew when that had happened), the letters were faded to the point of being unrecognizable. It was not uncommon for visitors to overshoot the entrance before seeing "TIMBER RIDG."

Several Timber Ridge property owners and POA board members brought up the idea of having a new, more visible Timber Ridge sign made. One property owner, a retired submariner with awesome metal-working and welding skills, started work on the new sign in early 2017. At the POA annual meeting in December 2017, I volunteered and was appointed by the POA President to be the chair of a committee to plan and install plantings around the new Timber Ridge sign. (He explained I was a Master Naturalist and the president of the Highland Lakes Native Plant Society.) No one arm-wrestled me for the honor of being the chair.

Illness, travel (both endemic to people of a certain mature age), and finding someone to do sand-blasting of the sign preparatory to painting the sign delayed its completion.

The sign was finally completed, and in early August 2019, an intrepid group of property owners (average age 75), along with wheelbarrows, spades, levels, mallets, sakrete, concrete tube forms, their John Deere utility tractors (JD tractors play an important role in this story), and the new sign, proceeded to the Timber Ridge entrance. They knocked down the old brick wall; moved the rubble to a pile; dug two holes in which to put the tube forms; set the sign legs into the tubes; mixed the sakrete; and poured. See Pic #1. The installation took longer than this summary suggests, even with the prowess of the John Deere post hole digging implement.

The sign installers wanted to know when I was going to start planting??????

August through October was hot and dry. Not a good time to be planting even native plants, assuming such plants were even available. (There was a dearth of plants at Home Depot, Lowe's, and Backbone Valley Nursery.) I did not mention that being mature people of a certain age, my husband and I had road trips planned to Utah, Wisconsin, and the Texas Gulf Coast during the fall of 2019 and late winter/early spring of 2020.

At the annual POA meeting in December 2019, I presented a (very rough) plan of the area to be landscaped around the newly installed sign (“the entrance garden area”). I said that it would be a “free form,” so I did not have exact measurements. I said that the area would be surrounded by our beloved local brown rock (located one inch below the surface on all of our properties) and built up with dirt and

mulch, probably about one foot high. I mentioned that I would be using “native plants,” specifically naming cenizo, dwarf yaupon holly, and Gregg’s mistflower. There were no comments or objections following my 5-minute presentation, probably because everyone wanted to get to the pot-luck.

Sometime after the first of the year, one of the property owners removed the brick rubble, saying he could use it on his ranch. The President of the POA did some scraping and leveling off the ground around the sign. He also put “sleeves” around the sign legs so that dirt, soil, and water would not come into direct contact with the steel legs and potentially rust them. The retired submariner worked to remove the growth (grape vines, greenbrier, and hackberry shoots) along the barbed wire fence at the rear of the proposed entrance garden area.

On March 14, we returned home from a trip along the Texas Gulf Coast to find that the world had changed. Any future trips we had planned were cancelled. Any volunteer service opportunities I had scheduled were cancelled. I called the President of the POA and told him that I was ready to start landscaping the entrance garden area around the new Timber Ridge sign.

From March 27 through April 7, I gathered rock on our property, loaded it into my pickup, hauled it to the entrance garden area, and began to construct a low wall around the area. See Pic #2. Three other property owners used their John Deere tractors and frontend loaders to bring from their properties huge boulders to anchor the side of the area that bordered the drainage ditch next to the country road. See Pic #3.

On April 19, two property owners made two trips each with their John Deere tractors to haul dirt from my property to the entrance garden area. (Approximately four cubic yards total.) Another property owner brought four frontend loads of bark mulch from his property to add to the dirt. Finally, the President of the POA used his John Deere to recover about 6 frontend loads of dirt from the drainage ditch to add to the mix already inside the walled garden area. He and I used spades, hoes, and rakes to mix, spread, and level the material inside the walled area.

Now it was time for the fun of planting.

I wanted to use plants that were native to Texas. For an explanation of the difficulty in defining “native plant,” see the Native Plant Society of Texas website at <https://npsot.org/wp/story/2009/271/>. For my purposes, I define “native plant” like Jill Nokes does in the first edition of her book, *How to Grow Native Plants of Texas and the Southwest: A native plant is one indigenous to Texas in pre-Columbian times*.

Why use native plants? According to Texas A&M AgriLife Extension: “Native plants produce flowers, fruits, and seeds throughout the year. They create a beautiful, natural look and attract wildlife such as birds and

butterflies to your yard. Native plants are well suited to our climate and soil conditions. Once these plants become established, they require less watering and need no chemical fertilizers, pesticides, or herbicides to thrive. When used in the correct conditions, they also require little maintenance.”

The entrance garden area around the Timber Ridge sign has shade for most of the day because of the immense post oak tree overshadowing it. Native plants requiring “full sun” would probably not do well in the area.

The plants that I chose and purchased for the entrance garden area (with one exception) were ones that I had successfully planted and maintained for years on my own property under similar shade conditions. Most of them attract pollinators. Most of them have flowers much of the year, which I thought would please my fellow property owners. The plants were the following:

- 3-one gallon Texas mountain laurels

- 2-one gallon Esperanzas (yellow bells)

- 6-one gallon Dwarf yaupon holly

- 2-three gallon Cenizo (Texas sage)

- 4-one gallon Cenizo (Texas sage)

Dwarf yaupon holly is a hybrid or cultivar of the native small tree, yaupon holly. I was introduced to it when the Highland Lakes Chapter of NPSOT was doing landscaping for two houses built by Habitat for Humanity in Marble Falls.

I had transferred seedlings of Gregg’s mistflower, Turk’s cap, and frog fruit from my gardens to pots, in preparation for the Hill Country Lawn and Garden Show, scheduled for March 28. When the show was cancelled, I decided to put these potted plants into the entrance garden area. Queen butterflies love the mistflower. I hoped that the Turk’s cap would beckon hummingbirds. And I planned for the frog fruit to grow over the rocks on the sides and up the barbed wire fence in the rear. I figured it could effectively compete with the hackberry shoots, greenbrier, and grape vines.

Between April 23 and May 5, I planted the purchased plants and my potted ones in the entrance garden area. I also added some chocolate daisies and Texas primroses that had been intended for sale at the Lawn and Garden Show. The daisies and the primroses were not doing well in my gardens. Much to my surprise, they recovered and thrived in their new home. See Pic #4.



Photo #1: 08/18/2019 New sign about one week after installation.



Photo #3 4/7/2020 – Rock is finished



Photo #2 03/27/2020 Starting to lay the rock.

Right: Photo #4 4/24/2020 – Dirt is in, plants are in, mulch is put down. Note the white sleeves on the sign legs





Photo #5 7/20/2020 – Timber Ridge entrance landscaping today

Let's Go Tubing - Youtubing that Is

YouTube Videos from Harris Greenwood - Poetry

Here are 35 poems Harris recited/recorded from October 2019 to June 10th 2020. Hope you and your family enjoy!....AS YOU 'hunker down" in the Covid 19 Virus Pandemic....or cure your insomnia on a sleepless night!

One of the things I have been trying to do over the past few years , is to recite poetry....

I don't write them, I just borrow them from others and amend them for reciting.

Many of the "poems" I recite are actually songs that I run across on radio, youtube, television or other sources.

My preference is to recite for small groups....like four to six at dinner or while soaking our feet in the creek in 'Blanco County.

I have recited for as many as 150 at the Greater Houston Phi Beta Kappa annual meeting and as few as one unsuspecting physical trainer who I ambushed on her way out the door. I am asked to speak to Hill Country Gatherings from time to time....usually some organization's annual meeting.or just to compensate for a home cooked meal with another couple at their ranch or city abode....yes, I do work for food!

The link below is your invitation to some of the poems I do.....

If you decide to watch the attached YOUTube, you need to know that poems are like Nuns and Lawyers.....they go in pairs.....and number next, Poems have "lead ins" /narratives that help introduce the poem and alert you to certain things in the poem that might otherwise distract you.....like what is a kinnino? or an Aldershot?....or Teddy Blue?... Calamity Jane?... or Buntline Special....?

I started out on this "journey" about 25 years ago in the Caledon Mountains thanks to Chuck and Eugenia (Head)Reynolds...

Did mostly Kipling then added some Robert Service before rediscovering Robert Frost, Percy Shelley and others.....eventually moved on to add-

ing Country Western like Don Edwards "Coyote Song" and "I'd like to be in Texas. Some I call the St John's School Poems....like Charge of the Light Brigade, Last of the Light Brigade, Mrs. Bixby, Ozymandiasbecause somehow they have a connection to my St John's School Mates or teachers.

I don't write them I just borrow, modify and recite them.....Kipling is the greatest poet that ever lived so I don't edit him....would be like going into the Louvre with a box of crayons...the YouTube collection can take a few hours, but as Harvey says, "you don't have to swallow the whole bottle of pills all at one time"each poem has its own icon so you can watch one and go to the Mall.....on second thought, please stay home! Maybe just ride the tractorbut don't you dare let anyone get closer than plow depth

.....one fun thing you can do is jump straight to no 18 and 19....that were written by Don Edwards who wins all the prizes each year at the National Cowboy Poetry Contest in Elko, Nevada....they were sent to me by a friend from UT ...greatest wide receiver that ever played for Daryl Royal....and currently the Best living wildlife artist in America... friend by the name of Ragan Gennusa works out of his studio in Dripping Springs

After I heard them, I realized that they must have been written about my Great Uncle, Hamilton Wilson and his wife Anna Laura who had a big ranch on the "Divide" West of Hunt, Texas.....but that is all explained in the "lead in " for Poem numbers 18 and 19 so you can go straight to them if can't wait to hear Ragan's story

Hope you enjoy them, but if notI will deny I ever sent them to you!
Be safe! ...and stay in touch! Harris

For your "Passport"/Link to Harris' Poetry on the Peder-nalesjust push control and click to get the link to stand and deliver ...transport you to the Double H outside Hye, Texas

Or you can click the link below or copy and paste it into your Browser.

<https://www.youtube.com/playlist?list=PLxDOLFoUuHcVezFLxEZoa6AoT4YPEISgv>

Blue Heron Video

Joel Scholzl loves herons. Here is a whirligig I made of one. <https://youtu.be/Wc8MQ5uRcwQ>

Texas Master Naturalist Program Youtube Videos

The Texas Master Naturalist Program has created TMN YouTube Channel for the purpose of sharing resources, helping chapters who may have difficulty developing a basic training schedule at the moment, or as an additional learning tool.

Some of the advance training topics are:

- o Land Stewardship
- o Historical Naturalists (with some local emphasis on early local naturalists)
- o Ecological Regions
- o Ecological Concepts
- o Ecosystems Management
- o Texas Water Resources (with emphasis given to local water resource issues)
- o Citizen Science
- o Laws & Ethics
- o Interpretation/Volunteers as Teachers



The link for these videos is:

<https://www.youtube.com/channel/UCOEvBKj1ZA2Tk5diY8A2qug>

A Good Master Naturalist Is Like A Toddler

BY P. R. WYDE

Have you ever watched a toddler discover the world? They look at everything. Nothing escapes their notice! Not the smallest ant, smallest flower, or wriggling worm. Moreover, they look in great awe at colorless bugs (e.g., “doodle bugs”), small plants such as butter cups and tiny animals (e.g., small frogs). They look at things that adults generally ignore or even disdain. Master Naturalists represent a rare exception. However, even many of them take many things for granted. If it is not a magnificent butterfly, a gorgeous bird or brilliant flower, they tend to ignore, or denigrate, it.

What follows are 10 images that I “shot” during the past 2 months during my daily “safaris” around my yard, and local destinations such as Inks Dam National Fish Hatchery, and Inks Lake State Park. They are not shots of magnificent butterflies, gorgeous birds, or brilliant flowers -- although I did take many shots of those. I hope that you will look at these images and see in them some of the things that I saw – and think about some of the things that you may be missing.

Figure 1 shows an image of one of our (I have joint ownership with Joan) Crepe Myrtle trees early in the morning just after a short rain shower. We have a lot of Crepe Myrtles on our property and I have often appreciated their flowers. This was the first time that I really noted their beautiful bark. I am not sure if the colors would have been so remarkable if seen later in the day. But, if you look, the bark is very pretty even in ordinary light, and when it is not wet.



Figure 1. Bark of a Crepe Myrtle shortly after a rain shower.



Figure 2. Snail racing along the bark of a Crepe Myrtle tree.

While photographing the bark of the Crepe Myrtle I came across this snail. He was racing along the bark. However, I got lucky and by panning and using a fast shutter speed, I was able to capture his image. I think that if you look, you will see that he is a fascinating little creature with long antenna, an ornate shell, and a handsome face. How many times have you looked at, and appreciated a “lowly” snail? I bet no toddler would pass one by.



Figure 3. Russian Thistle.

Figure 3 is an image of a Russian Thistle, AN INVASIVE PLANT that Master Naturalists are taught to scorn! However, what a pretty invasive. Forgive me for not ripping it out by its roots. For those of you that cannot forgive me, look at the invasive species in the next image.



Figure 4. Texas Long Horn Steer

Now I know that you do not want to hear this, but Long Horn Cattle are NOT native to North America. (Nor are earthworms, for that matter.) However, like the Russian Thistle, they are impressive and have admirably adapted to their “new” environment.

Look at the horns on this fellow! I do not think that any predator could get within 20 feet of him. Look at how he was looking at me. Do you think that he knew that I am from New York?



Figure 5. Spider with egg sac.

Figure 5 shows a spider going through a tangle of undergrowth dragging along an egg sac at least 1/4 the size of her body. Think about it. Most of us think of spiders as heartless, unthinking, unfeeling predators. However, here we see a spider not leaving her progeny just anywhere to be devoured by the countless insect predators out there. Instead she laboriously carries the eggs in one of the safest places that she can – ensuring that many will live long enough to have a chance to live and procreate.

You should know that it takes a lot for me to appreciate this. Just about my only fear is of spiders. If I walk into a spider’s web without seeing it, I come near to having a stroke.

Again, how many of you would take more than momentary notice on seeing a scene such as this. Indeed, I suspect that many of you would feel revulsion.



Figure 6. Grasshopper on a stem.



Figure 7. A pair of Texas Whiptail Lizards.

The Texas Whiptail Lizards in Figure 7 fascinate me. Normally it is not easy to get a picture of one of them, let alone 2. However, they were so interested in each other I was able to get quite close to them.

Reptiles are cold blooded, but they do have lives. Have you ever thought much about their lives? How about their prospective on life? I mean they are small, and they are prey for a lot of animals. They cannot have an easy life. Indeed, it is hard to believe that they are direct descendants of dinosaurs. Look at them closely. They do look like diminutive dinosaurs. And if you are a small insect, they are fierce and brutal predators.

Figure 6 shows a grasshopper on a stem. Most of us think of grasshoppers as tremendous pests. However, look closely at this insect. I think that he is remarkably put together. Look at the articulation of his parts! Look at the antenna and legs about to spring! Can you leap more than 10 times your body length? I wonder what his eyes see? (Does he see things as we do?) Another plus for grasshoppers, they make particularly good fish bait.



Figure 8. Cicada.

Figure 8 shows a Cicada (17 Year Locust). I think that in general, Cicadas are ugly, somewhat scary, and **VERY FASCINATING**. What must it feel like to be out in the world and open air after — **AFTER 17 YEARS BEING IN THE DARK, UNDER GROUND!** Have you really looked at a Cicada and thought about its unique life cycle?



Figure 9. Roseate Skimmer Dragon Fly.

As with the Cicada, Dragon Flies only spend an exceedingly small portion of their lives in a wild state of euphoria. (What else would you call wild flights of ecstasy?) Most of their lives are spent underwater as solitary, disagreeable predators. However, look at the adult creature. Isn't this one a stream-lined beauty? With all our technology, we cannot build a flying machine that can zig and zag, zoom and soar and dart about like it. Look at those all-seeing eyes! It is a spectacularly efficient predator.



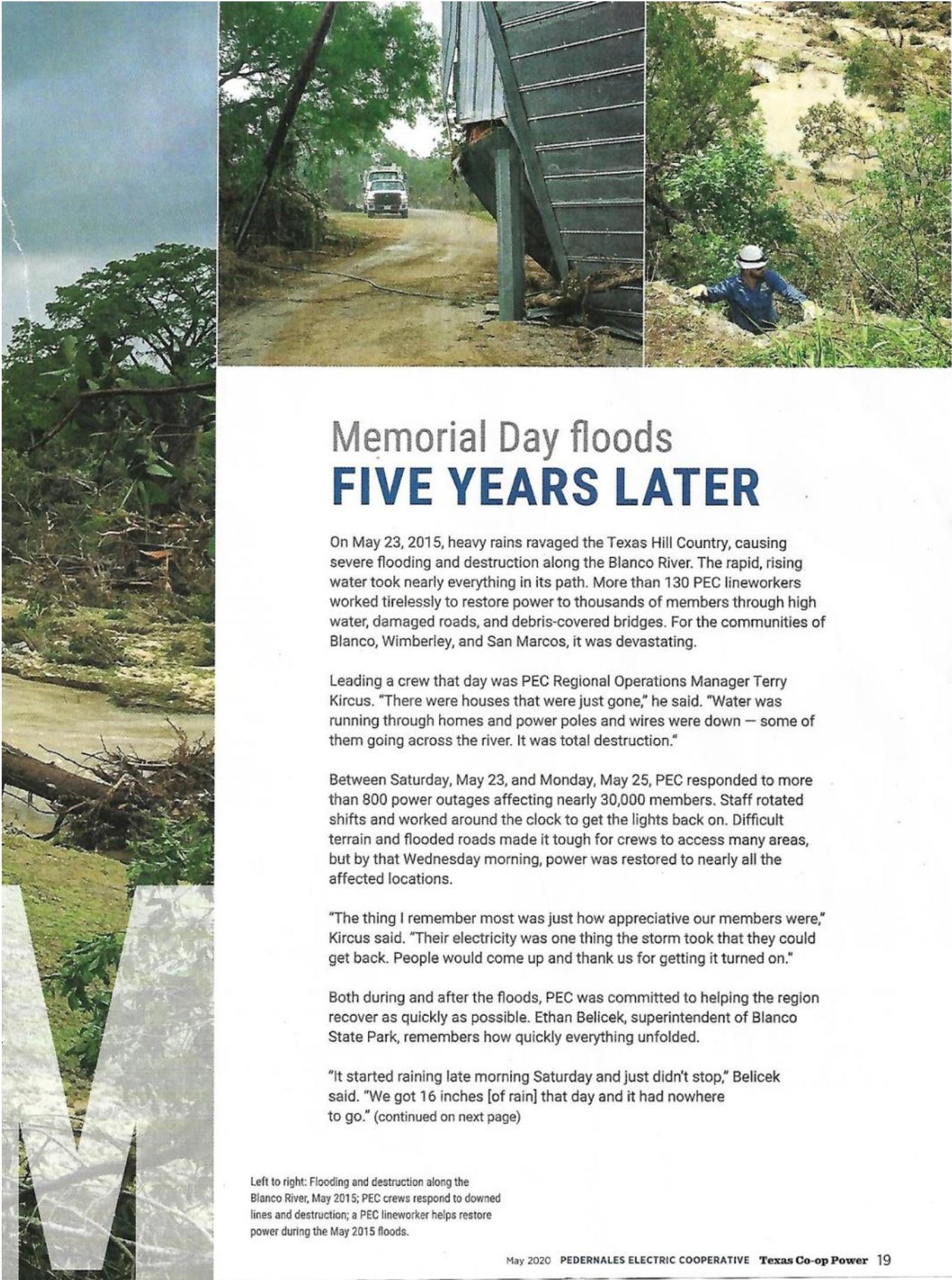
Figure 10. Walking Stick

The Walking Stick in Figure 10 amazes me. It is the prettiest Walking Stick that I have ever seen. Most Walking Sticks are as plain and inconspicuous as can be – as good camouflage demands. However, this specimen stands out. It was probably transitioning to a different habitat. I suspect that in amongst foliage, I probably would never have noticed it. Not only does this specimen have color, look at his articulation and long, linear design. Have some fun and contrast the walking stick with a Lady Bug Beetle. They are both insects – which emphasizes just how varied insects are..

I have many more images that I could have included in this article. Many are of beautiful butterflies, very pretty birds, and gorgeous flowers. I also have many of cute and furry animals (e.g., rabbits and squirrels) and of Texas hills and rivers. In fact, I also have many more images similar to the ones that you have just seen – unusual facets of nature that one normally does consider as particularly noteworthy. However, I hope from now on you will let the toddler in you out – and look at everything and let nothing escape your notice.

Blanco State Park Wildlife Viewing Station - a New Beginning





Memorial Day floods **FIVE YEARS LATER**

On May 23, 2015, heavy rains ravaged the Texas Hill Country, causing severe flooding and destruction along the Blanco River. The rapid, rising water took nearly everything in its path. More than 130 PEC lineworkers worked tirelessly to restore power to thousands of members through high water, damaged roads, and debris-covered bridges. For the communities of Blanco, Wimberley, and San Marcos, it was devastating.

Leading a crew that day was PEC Regional Operations Manager Terry Kircus. "There were houses that were just gone," he said. "Water was running through homes and power poles and wires were down — some of them going across the river. It was total destruction."

Between Saturday, May 23, and Monday, May 25, PEC responded to more than 800 power outages affecting nearly 30,000 members. Staff rotated shifts and worked around the clock to get the lights back on. Difficult terrain and flooded roads made it tough for crews to access many areas, but by that Wednesday morning, power was restored to nearly all the affected locations.

"The thing I remember most was just how appreciative our members were," Kircus said. "Their electricity was one thing the storm took that they could get back. People would come up and thank us for getting it turned on."

Both during and after the floods, PEC was committed to helping the region recover as quickly as possible. Ethan Belicek, superintendent of Blanco State Park, remembers how quickly everything unfolded.

"It started raining late morning Saturday and just didn't stop," Belicek said. "We got 16 inches [of rain] that day and it had nowhere to go." (continued on next page)

Left to right: Flooding and destruction along the Blanco River, May 2015; PEC crews respond to downed lines and destruction; a PEC lineworker helps restore power during the May 2015 floods.



PEDERNALES ELECTRIC COOPERATIVE



Top: A newly rebuilt day-use shelter replaced with funds from a PEC Community Grant. Bottom: Friends of Blanco State Park President Marcy Westcott, Vice President and Treasurer Jennifer Oines, and Board Director Suze Jernigan.

Once the water receded, Belicek said the damage was beyond anything he could have imagined.

“Everything was just gone,” he said. “Our picnic tables washed away, our shelters were down, rocks moved, and 100-year-old cypress trees laid along the riverbank. It was complete devastation.”

Marcy Westcott, president of Friends of Blanco State Park – a nonprofit that provides volunteers and fundraising for the park – works closely with Belicek and recalls that nearly 75% of the park was damaged.

“Just the idea of restoration was daunting but we knew we had to do it and began almost immediately,” Westcott said.

She said it took more than four months of volunteers working at the park to get it back up and running. Despite the helping hands, the nonprofit still needed funds. Westcott said disaster relief fell short of what was needed to fully

restore the park, including its day-use shelters.

In 2019, Westcott applied for a PEC Community Grant on behalf of the Friends of Blanco State Park. PEC’s Community Grants are made possible by the cooperative’s Power of Change program, and the group was awarded \$5,000 to rebuild the park’s day-use shelters.

“Blanco State Park is a gem, and an important economic driver to the community,” Westcott said.

“The PEC grant really changed things for us and we were able to rebuild more of the shelters than we initially thought. If people came to the park and could see what we’ve been able to do as a result of the grant, they’d be amazed.”

Thanks to generosity of PEC members, Friends of Blanco State park, and other volunteers, the future is looking bright for Blanco State Park and the community.

Help nonprofits like Blanco State Park

Enroll in PEC’s Power of Change Program today! Call us at 888-554-4732, or sign up through SmartHub.

Make a one-time donation, or have your bill rounded to the nearest dollar each month. The average contribution is just \$0.49 a month, and less than \$6 a year – proof that a little pocket change can make a big difference.



Bee Bombs

By Becky Breazeale

I was at Balcones Canyonlands Wildlife Refuge with Ray Buchanan for a Birds to Bridges Educational Ed session. We were escorting the students from the bus to their stations when a student said “what’s that?”. Ray responded, “that’s Beebalm”. The kids thought he said “bee bomb” and they loved it. You know kids love anything that has the word bomb in it.

At that time I had never seen a Beebalm plant, but I knew I never forget what. Bee balm looked like nor its name. Beebalm, *Monarda citiodora*, a.k.a. Lemon Beebalm or Horsemint is a bee friendly plant according to Texas A & M Agrilife Extension.’s list. <https://aggie-horticulture.tamu.edu/travis/wp-content/uploads/2016/04/EAGF-2017-Central-Texas-Bee-Friendly-plants.pdf>

Bee Balm (Horsemint, Bergamot)	<i>Monarda</i>	Shrub	Spring - Summer
Bee Bee Tree	<i>Tedredium danielli</i>	Shrub or Tree	July, Aug.
Bee Bush	<i>Aloysia gratissima</i>	Shrub	Spring - Summer
Bitterweed	<i>Helenium amarum</i>	Flowering plant	Summer - Fall
Black Willow	<i>Salix nigra</i>	Tree	Spring

The plants' petals, bracts, and scents were used by indigenous people in North America. They were named after Nicolas Monarda a 16th century botanist and physician who used monardas to treat human ailments.

Being part of the mint family, these lavender to pink annuals have a very relaxing scent.. They are popular with hummingbirds, butterflies, moths as well as bees. So the next time you are in a field of wildflowers and you smell an aromatic plant, standing taller than most remember it is a Beebalm plant, not a Bee Bomb plant.



Photo courtesy of Lady Bird Johnson Wildlife Center

Sources:
<https://aggie-horticulture.tamu.edu/travis/wp-content/uploads/2016/04/EAGF-2017-Central-Texas-Bee-Friendly-plants.pdf> ,
https://www.wildflower.org/plants/result.php?id_plant=MOCIC



Emergence

By Martelle Luedecke

I was Blessed one morning to see a Cicada come out of its shell. As you will see by the change in lighting my adventure started early morning and continued for longer than a moment. The photos are left to right chronological emergence.





Pollinator Garden Project at Inks Dam National Fish Hatchery

Thanks to Jerry, Chris L., Suzanne, Kaye, Lyn, Pat for hard work on walkways for new pollinator garden. Starting to look like a destination now, made great headway. Photo below hierba de zizotes—important Central Tx native milkweed. Photos by Linda O’Nan





Spark Bird

Blooms and Bird magazine describes a “Spark” bird as the bird that got you interested in Bird Watching. Here are some of our members

Dianna Hodges - When we first married we lived in a house near a pond. I loved watching the Great Blue Heron, nicknamed “George” by the neighbors, hunt for fish. Later we found the nesting site for the bird and watched the babies get fed and fledge. Great Fun.

Lyn Davis - In 2009, Doris was at Longhorn Caverns with ET and her other raptures. I was so fascinated that I immediately read books on Great Horned owls in captivity and bought several of Doris’s owl shirts. Helen Smith drug me there. So vivid - I remember it being brisk! The rest is history. Although I think I have subconsciously always liked birds because my house is full of antique bird pictures.

Becky Breazeale - tons of hummingbirds at Lyn Davis’s house in Austin. I have never seen a hum-

mingbird come to a feeder. If you could have two “spark” birds, the second would have to be the Kingfisher I saw along a canal in Galveston where it was living in someone’s boat house. It came close enough that I could see it’s remarkable features.

Sue Kersey - When I was living as a young girl in Raytown, Missouri I learned to love and enjoy the birds. My parents would make sure we had bird houses up for the cold winters and they always found a way to have bird seed for me to fill the feeders. But the one I found the most interesting was the blue jay, I loved their color and what a attitude they had. They were everywhere and such great fun to watch. When I was in high school we were the Raytown Blue Jays and I truly thought that was the best ever and had lots of clothing items with blue jays on them. Funny as now I still wear lots of shirts with birds on them. I had a wonderful aunt & uncle in St. Joseph, MO and he was a true bird watcher and he taught me how to attract birds to our yard. Over the years I have continued to enjoy and learn about the birds where ever we have lived and we have taken many vacations to go bird watching. Living here for the last 20 years has been wonderful as Texas really has so many birds that live and migrate through our Texas Hill Country. I truly feel blessed to have been watching and loving birds all of my life.

Vicki Adcock - That would be the one I found in the birdhouse! Although, he’s a frog, not a bird. I would have to say the Lesser Goldfinch. I’ve always loved Hummingbirds, but I started getting interested in identifying the birds when I wanted to know the Lesser Goldfinch. I love watching them in my fountain.

Another member - No spark bird. Mother and grandmother watched the birds so came by it naturally. Interest grew as a hobby...

Maybe “chase” birds....

Four letter codes....*MODO* (Mourning dove), *ROPI* (Rock Pigeon), *TV* (Turkey Vulture). And *LEGO* (Lesser Goldfinch)



Gallery



Barn Swallow - Dinner time! Photo by Sharon McBride



Dillow - Caught in the Act - Photo by Sharon McBride



Lesser Goldfinch - All Clean Photo by Sharon McBride



Lesser Goldfinch Splashing Photo by Shaqron McBride



Left: We have had many fledglings being fed at our feeders, but these grackles are a first. I have never seen them at our feeders before this and have not seen them since. I love surprises! Photo was taken from inside-reflection interference by Shirley Winslow

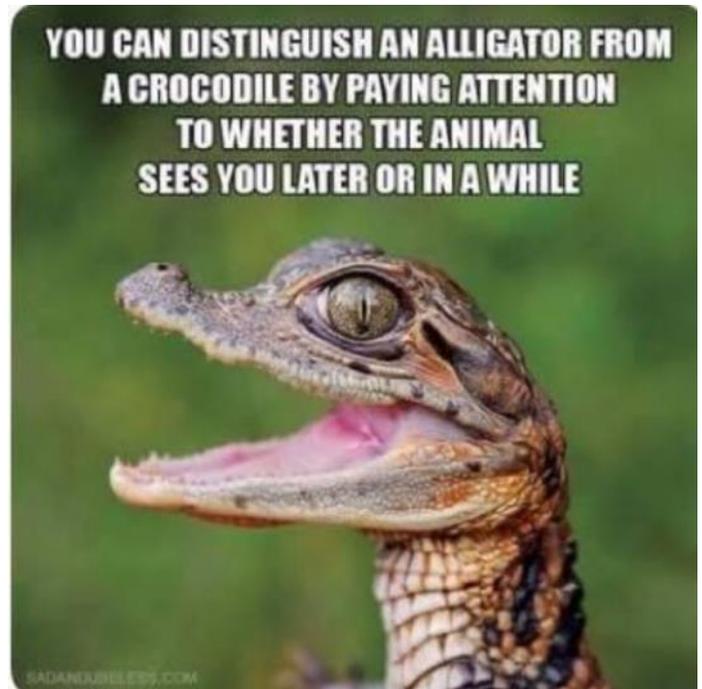
Right: Family gathering or it may have been a farewell party as I have not seen the male since this photo-again taken through my window. Photo by Shirley Winslow



Left: Pat Campbell's Antelope Horn milkweed at the Monarch caterpillars had lunch.



Left and Below right: Life is continuing to go on at the Wyde House. One wren just graduated into the world. (He fell at my feet, took one look at me and fled to the window.) 4 (you only see 3 eggs) Northern Cardinals are just beginning their young lives. They did not flee, but their mother did. I have that same effect on women.



Sue and Mike Kersey's baby Mockingbird

T E X A S

MISSION



The Texas Master Naturalist program is a natural resource-based volunteer training and development program sponsored statewide by Texas A&M AgriLife Extension and the Texas Parks and Wildlife Department.



The mission of the program is to develop a corps of well-informed volunteers who provide education, outreach, and service dedicated to the beneficial management of natural resources and natural areas within their communities for the state of Texas

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Gary Hampton's Columbines