

The Steward

Winter 2019-2020

Highland Lakes Master Naturalists

Volume 10 Issue 4



HLMN volunteers, Terry Bartoli, Cathy Hill, Phil Wyde, Jerry Stacy, Melanie Huff, Jim Howell, Mike Riley, Terry Stracke, Linda O'nan, Park Guests, George Brugnoli, and Monica Stewart, Park Interpreter. Photo by Mark Stracke

CLEAN SWEEP AT INKS LAKE STATE PARK By Becky Breazeale

Clean Sweep is one of our annual volunteer activity and has taken place for 16 years at Inks Lakes State Park. This event is held in late winter/early spring and was coordinated this year by Cathy Hill of Friends of Inks Lake Park group and Monica Stewart, Park Ranger. This opportunity helps to prepare the park for the arrival of Spring Breakers and Summertime Campers.

Most years, there are certain areas in the Park that cannot be reached. During Clean Sweep, special equipment is used and a pack of volunteers comb the campgrounds and lakeshore. Waders and kayakers scour the lake too.

This year provided a rare opportunity for volunteers. With the drawdown of Inks Lake by eight feet, volunteers were able to access areas that had been covered by water and debris that had been there for years. HLMN volunteers collected enough trash to fill a TRASH DUMPSTER. Monica Stewart, Park Interpreter, thanked all the volunteers for their time and hard work. If you get a chance this spring or summer, pay a visit to the cleanest park in Texas, courtesy of HLMN.

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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. Sams we are going to miss you. (Trifecta!!)

Thank y'all for ALL!!

Message from our President

By Terry Bartoli

Well, my new job in the Chapter has gotten me thinking about my time as a TMN. I was in the 2005 class, so I realized this was my 15th year. When I started the class, I had just gotten the house and land finished and decided I wanted to know more about what I should be doing with it. I knew I had to build a fence, and a fence means cattle guards. Cattle guards meant gates. See, I have neighbors north and south of me and the road that connects those two properties runs through mine. I was thinking "What is a city boy like me doing out here in the middle of the country and have I bitten off more than I can chew?"

Fortunately, I have very good neighbors, unlike my previous homes in Austin. And I came to learn how valuable good neighbors can be. They helped me with a lot of good advice and support, and I quickly realized how important it was for me to repay in any way I could with the help they had given me. So, I decided to give them the only help I could offer at first: time and work.

I had a friend named Marvin Bloomquist who told me about an organization he was involved in and thought I might be interested in getting involved as well. And soon I found myself with all my Thursdays for the next three months committed to learning about something, but I wasn't really clear what it would be. Well, I found out quickly enough! From one of the lessons in the first few classes, I got hooked on something. Billy Kniffen from the County Extension Service, at that time, taught a class on Rainwater Collection. Using his own self built system, he showed how I could save water from rain to use when I didn't have rain or well water. If you live in parched Llano, you pay attention to that kind of opportunity. Soon, after quite a bit of research, scrounging and enlisting the help of another good friend named Jerry Stacy, I had 4000 gallons of rainwater storage capacity! And believe me, it's bailed me out of several issues with my well and water pumps!

I could tell you a lot more stories about my progress into successful land improvements. But one common thread runs through all of them: help from others and help to others. And that's my point in this message.

We're all together in a great TMN Chapter. I can't imagine being involved with any other chapter I know about. This one is mine and I cherish it. But we're all in the same position that I was 15 years ago, and the one I still am in today. The value of other people to me and whatever value I can offer to them. Do I like everything about everyone in the Chapter? Of course not! And I suspect there may be some things about me that other people find a bit...annoying.

But if I stop and think about it, there is not one person in our Chapter who could not teach me many things I don't know. And how valuable a resource is that?

So, I encourage each and every one of you to seek out the help and advice of anyone and everyone of our members. And with that comes the resulting obligation that you should also be generous with your help and advice. Together we represent a powerful source of knowledge. Let's organize it! And let's use it!

Share Love like a dove. by Christian Ebel, age 9

Share Love like a dove. Fly on. Violence gone.
Share a piece of your Peace.
Go out and teach. Teach Peace. Be Peace.

A good place to start is in your Heart.
Let the waves of emotion be like the ocean.
Flowing in, flowing out, with no doubt.
Shout it out! Teach Peace!

Sail through life, find a good wife.
Or, go alone, and be shown
God everywhere. No need to fear.
You're never alone, or on your own.
God in your heart. That's the way to start.

Share Love like a dove. Fly on. Violence gone.
Share a piece of your Peace.
Go out and teach. Teach Peace. Be Peace.

Teach Peace.

What is success? — Ralph Waldo Emerson

To laugh often and much;
to win the respect of intelligent people and
the affection of children;
to earn the appreciation of honest critics and
endure the betrayal of false friends;
to appreciate the beauty;
to find the best in others;
to leave the world a bit better, whether by a
healthy child, a garden patch or a redeemed
social condition;
to know even one life has breathed easier
because you have lived.
This is to have succeeded!

AWARDS CEREMONY AND CHRISTMAS PARTY

Photos by Mark Stracke

1,000 Hour Pin Charles Beierle and Betsy Bouchard



Left:

500 Hour Pin

Mary Ann Holt, Suzanne Adkinson, and Kristin Rodgers

250 Hour Pin Kaye Barr and Dan Nugent



2019 Certification

Jill Goff, Roy Appleton, Bill Edwards, Arlen Hanle, Barbara Warden, and Bill Nabors. Chris Landherr not pictured.



Recertification - Warbler Pin - Suzanne Adkinson, Terry Bartoli, Morgan Becky, Charles Beierle, Matt Carley, Lyn Davis, Dennis Ellison, Fredi Franki, Kathy Griffis-Bailey, Gary Hampton, Arlen Hanle, Carole Hess, Eva Hobbs, Anne Holly, Wayne Holly, Joan Mukherjee, Paula Richards, Mike Riley, William Sewell, Sheryl Smith Rodgers, Rob Sproul, Earlene Thorne, Jan Warren, Marcy Westcott, Cynthia Woodhull, Shirley Winslow, Lynn Wolheim, and Ray Zender



Left:
Lisa Marler recognized for her volunteer service hours.!!



Outgoing President,
Susan Montgomery



HUGE THANK YOU TO OUR Banquet Committee: Lori Greco, Robin English,
Carole Hess, Judy Haralson, Lisa Marler, and MaryGrace Kuehne

VANISHING BIRDS

By Sherry Bixler

Recently Cornell, Audubon and other organizations have released statistics showing a major decline in most North American bird species. Cornell says that three billion birds have been lost. Bird numbers have decreased from twelve billion birds to nine billion in the past fifty years, down more than twenty-five percent. Many factors are almost beyond our control: climate change, massive habitat destruction in South and Central America and growing populations. But there are steps we can take to help. Keep cats indoors. They are the number one man-made cause of bird deaths but are also preventable. Add tape or fluttery objects to windows if you have bird collisions. Another way to cut down on collisions is to place bird feeders close to windows (within three feet) or at least thirty feet away. Don't use pesticides, not even organic pesticides. Ninety-six per cent of land-based birds need insects, either year-round or during breeding season. Cut down on use of plastics. Discarded plastics can trap birds and are sometimes eaten by mistake. Buy organic foods when possible, cutting down on commercial use of pesticides. Buy shade-grown coffee. Trees planted amid monocrop coffee fields are valuable for roosting and nesting birds. Provide food and water. Once thought to be important only to attract birds to your yard or to bird blinds, supplemental food and water are becoming a necessity. Provide shelter and nest boxes. Trees and shrubs are vitally important to birds; nest boxes should be constructed with vent and drainage holes, a removable panel for cleaning, and correctly sized entrance holes. Baffles for pole-based nest boxes are critical and Noel predator guards are inexpensive additions with instructions available on line. Native plants are the most important factor in helping the birds. Only native plants play host to the insects they need. Native plants need little water except when very young and do not need pesticides. So please, whether you have a small city lot or a ranch, make a resolution to do more in the next year, even if you just make a small start. Check Audubon.org/plants data base below and enter your zip code for a list of about 300 suitable plants just for your area. <https://www.audubon.org/native-plants>

Turkey Hollow, Selah Bamberger Ranch - An HLMN Project

Turkey Hollow complete. This was a two year restoration project began by HLMN's Rob Sproul and Cam McCabe on 12/9/2017. Both Rob and Cam are Class of 2017. Photo Rob Sproul





Stephen Fulton, Ranch Manager at Selah Bamberger Ranch in Johnson City somehow got a Bobcat Skidder into Turkey Hollow and prepared an Amphitheater. Kudos to Steven.
Photo by Rob Sproul

This is the Turkey Hollow crew today and of late.

From left to right:

Back Row: Guy Wolfinger, Stephen Harrell, Ronnie Eason.

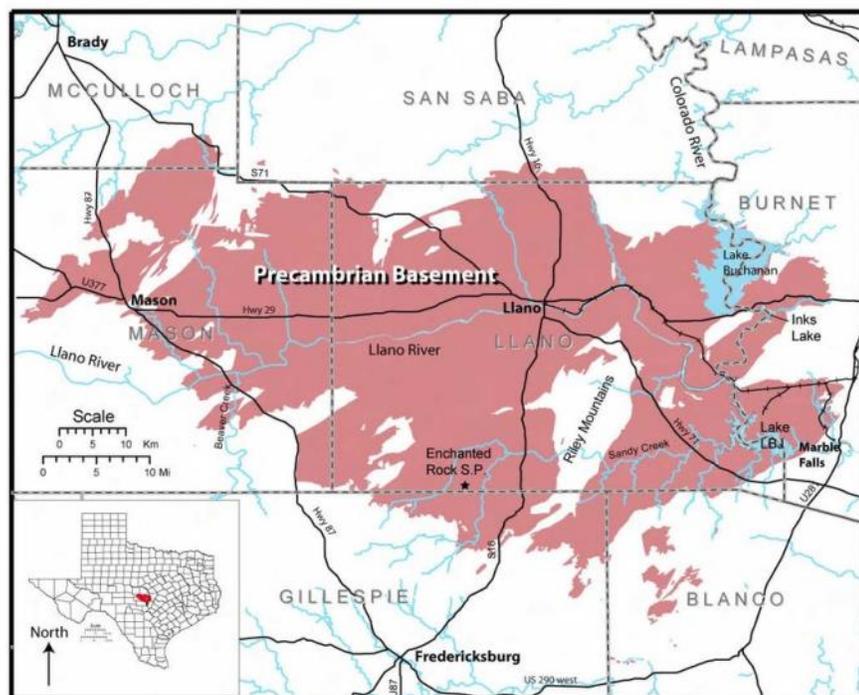
Middle Row: All sitting: Linda Knowles, Patty Harrell, Andrew Martin.

In front, leaning against the tree is Richard Knowles.

Rob Sproul taking the picture.



counties including: Burnet, Llano, Blanco, San Saba and Gillespie. Sandy soils are common. Since the Edwards Plateau and Llano Uplift cover such a wide area your specific soil type, rainfall and drainage characteristics may differ from your nearby neighbors.



Llano Uplift courtesy of
researchgate.net

Land owners should determine the characteristics of their specific environment as they plan their native plant landscaping.

WHY Natives are Good for You and the Environment

Native plants provide benefits to our local ecosystem and to us personally. Natives benefit our ecosystem since they:

1. Provide food sources (seeds, nuts, nectar and fruits for birds and native pollinating insects.
2. Provide protective habitats for birds, butterflies and wildlife
3. Support of beneficial insects that help control destructive insect pests
4. Attract insects for birds to consume

5. Require less water for plants which leaves more freshwater for migratory birds and wildlife.

Natives saves you Time and Money

Native plants are those well suited to your specific climate and soil conditions. Once these plants become established, they require little extra watering and no chemical fertilizers, pesticides or herbicides to thrive. This means less maintenance and less money out of pocket.

Your investment in native plants will result in personal (time and money) benefits because natives:

1. Tolerate and resist local diseases, pests and drought – you keep the plants you buy
2. Minimize the use of fertilizers and pesticides – saves money plus toxins do not run off your land and into your water supply
3. Tolerates weather extremes so you plants “stick it out” through the extremes
4. Protects water quality by controlling soil erosion and runoff
5. Once established they require little extra watering thus conserving valuable water - you keep your money

HOW -How can you start enjoying Native Plant Benefits?

Beware of the Exotics and Ornamentals

Our native trees, shrubs, flowers and grasses that support habitats for wildlife are being destroyed by aggressive building development. This development is introducing exotic and ornamental plants based on low plant prices or limited understanding of native benefits by builders, landscapers and nurseries. These exotics negatively impact our ecosystems.

Many of the exotic “landscaping plants” available in nurseries are species introduced from other countries and have become invasive pests that outcompete native species and degrade the habitat in remaining natural areas. These “exotics” when compared with natives require more water, pesticides and herbicides. Some hill country cities estimate that over 50% of its water usage is to maintain landscapes and lawns.

Look to the Native Plant Experts

There are nurseries/landscapers and retail stores with knowledgeable staff ready to help you plan, select and install natives however these experts must be sought out. The native plants offerings from “big box” hardware stores can be limited.

Steps to the Native Benefits

1. Research the on-line resources listed in this article to find the plants for your specific property and goals.
2. Visit nurseries and talk with native plant experts who should ask many questions about your environment and your landscaping goals. With a landscaping plan you can gradually replace nonnatives with native plants so in time you will enjoy the benefits.

3. Look for free seminars and classes held by nurseries such as:

Backbone Valley Nursery, Marble Falls, <http://backbonevalleynursery.com/events/list/>

Friendly Natives Nursery, Fredericksburg, www.friendlynatives.com

The Natural Gardener, Bee Caves, <https://tngaustin.com/>

1. A comprehensive nursery list is on the Native Plant Partner Nurseries of NICE (Natives Improve & Conserve Environments) web site. <https://npsot.org/wp/resources/nice/>
2. You may need to “guide” some landscapers towards the plants you want.

Conclusion: A native plant landscape habitat works in harmony with all its surroundings. They provide many benefits to our environment and us personally. Moving to a native plant landscape is definitely worth the effort.

Online Resources

<https://agriflifeextension.tamu.edu/>

<https://npsot.org/wp/resources/nice/>

<http://www.hcuwcd.org/plantguide.pdf>

Thanks goes to the above resources for some of the information in this article.

Advanced Training at Johnson City Library, February 28

Photos by Rob Sproul



Steve Garmon, Pedernales Falls State Park Interpreter and HLMN Charles Ahrens teaching touch table techniques for working with children and adults on pelts and skulls.

February 28, 2020



Birds Seen During a 20 Minute Visit to the Granite Shoals Wildlife Viewing Center (P.R. Wyde)

The other day I visited the Granite Shoals Wildlife Viewing Center. I often go there, but this was the first time this year. I favor this Viewing Center to see birds over the one at Inks Lake State Park and the one at Inks Dam National Fish Hatchery because it is very easy to get to – and because the birds are very easy to see and take close photographic images. This is because the feeders are very close to the viewing portals that you “shoot” through. There are also some other factors: 1) I have on several occasions made some unusual sightings. For example, I have seen road runners and egrets there, and during this visit, I saw a kestrel, a female House Finch, a Great Blue Heron and six ducks. (The last flew off before I could identify them.) At any rate, I thought that I would share a few images that I took there with you and hopefully get you to visit this unsung spot that our Highland Lakes Master Naturalists helped construct.

Image 1 is of two species of Gold finches, the American Gold Finch on the left, and a Lesser Gold finch on the right. (Both males.) That brings me to one of my pet peeves about birders. How would you like to be called “LESSER” when you really are easily the equal, if not more beautiful, than that other bird! Yes, I know that to birders “lesser” signifies small, but surely they could have come up with a less humiliating term!

Image 2 is of a male Northern Cardinal. I “shot” him on a nearby tree. They are so common here, but special, nevertheless.

Image 3 is of a female Northern Cardinal. As you can see female Northern Cardinals are not as “flashy,” or as good looking, as their male consorts. (I am sure that all of you know, especially since you are Texas Master Naturalists, that the MALE OF **EVERY ANIMAL SPECIES IS ALWAYS, WITHOUT EXCEPTION, MORE BEAUTIFUL THAN THE FEMALE OF THE SPECIES!**) That truism being said, I think that female Northern Cardinals are still very pretty and classy. (The same could be said of human females.)

Image 4 is of a White Crowned Sparrow. I often hear sparrows being disparaged. However, as this little fellow illustrates, many sparrows are special. (Don’t tell anyone, but I even like the common, invasive, house sparrow. They are always so busy and comical.

Image 5 shows a White Winged Dove. There were quite a few around. I know that they are relatively new to this area (at least in the numbers that we now see them), but I think that they, too, get a bad rap. If you look at them closely, they are exotic, colorful and apparently, I am told, taste delicious.

Image 6 is of a male Red Winged Black Bird. Not considered an exotic bird, but I think one worthy of being included in my collection.

I will end here emphasizing that I saw all of these birds in a 20-minute span of time. Imagine if I had stayed longer.



Image 1. American and Lesser Goldfinch



Image 2. Male Northern Cardinal



Image 3. Female Northern Cardinal



Image 4. White Crowned Sparrow



Image 5. White Winged Dove (Left)

Image 6. Red Winged Black Bird (Below)



Dark Sky Initiative - Simple and inexpensive ways to preserve the night sky.



Jane Brunclik - Lago Vista passed an ordinance so all new buildings have to have dark sky compliant lighting. Cost nothing.



Stephen Harrell - Yes, dark skies is important. And even a small reduction helps.

No new landscape lights and turn off the ones you have – especially those that point up into the trees. Save electricity, maintenance costs, and general trouble working around them when maintaining your gardens and yard. (I'm as bad as anyone, by putting up seasonal/holiday lights. Had a neighbor say he liked my lights because he can see more when walking in the evening and I'm 100' away from the road.)



Dark skies is very important for bird migration and star gazing! The simplest measure is turn off outdoor lights. Remove flood lights and all outdoor lighting that is not down facing. Horseshoe Bay is one of 3 International Dark Sky Communities in Texas. Others include Dripping Springs and most recently Wimberley.



Joan Mukherjee - I think it is very important. Light at night is very disruptive to bird migration, insects, bats and of course to star gazing. Shielding lights so they point to where they are needed, usually the ground, shutting them off when not needed, i.e. when we are sleeping, using red lights instead of bright white are all easy to do. And do we need all those bright billboards and advertising all night long?



Harris Greenwood - Night Skies are a major natural resource for the Hill Country and we need to support the movement and save the night skies.....

We signed the initiative years ago

Coincidentally, we just changed our outside lights to direct them down so get better security and less night sky damage....just installed Saturday

Love the milky way and other night time attractions, future generations will appreciate, and next is to Save Our Springs which saves our rivers which save our coastal estuaries with fresh water inflows necessary for saving our shrimp, crabs, fish, oysters, etc , etc.

Robert Patterson - When I grew up in Abilene, Texas in the 50s and 60s, ability to see the Milky Way was taken for granted. We could lay on the driveway in the summer and see millions of stars if there was no moon. Winter was even better. These days, even at a farm 30 miles south of Abilene, one can barely even see stars, much less the Milky Way.

Unless they travel to some dark sky place like Ft Davis, children today will never see the stars. That is abnormal and not healthy for Homo sapiens.

In my opinion, much of the light pollution, city and rural, comes from "security lighting"; private vapor lights installed around homes, high intensity bulbs on the sides of houses pointing outward, porch lights, street lights and, of course, things like Bucky Beaver or a huge Stripes store on the horizon.

The cheapest thing to do would be to turn off those intrusive lights. Secondly, install lower wattage, softer light bulbs.(I just fought a battle with city hall here in Rollingwood over that. I finally just changed the bulbs myself). There are also tons of inexpensive, solar-powered downward facing lights for walkways and such. Lighting up where you need to see rather than lighting the entire neighborhood would cut way down on light pollution.

Further, I believe that any light which illuminates neighboring properties should be illegal. Forcing neighbors to build fences and design landscaping to protect themselves from other people's lighting is unfair.

Considering how special my relationship was with the sky as a child, I am fairly passionate about this issue.



Kristin Rodgers shares her comments in the following article.
Our vanishing Night—How Light Pollution is changing Our World.

Our Vanishing Night – How Light Pollution is Changing Our World



Photo Credit: http://imgsrc.allposters.com/img/print/posters/richard-bizley-earthrise-photograph-artwork_a-G-9989605-14258389.jpg

Earth, a world teeming with life collectively existing among magnificent landscapes we best know by daylight. By looking at a daytime view of our planet from space any outsider would be hard pressed to imagine nearly eight-billion people inhabit this world. But then to imagine there are nearly nine-million *other* species sharing this big blue marble alongside all of those humans is unfathomable --- unless we change the perspective.



Photo Credit: <https://www.spiegel.de/international/germany/ambitious-efforts-to-reduce-light-pollution-in-germany-and-elsewhere-a-932352.html>

By looking at a night-time view of earth from space we see our planet come alive with light. The impact of human's place on this planet becomes apparent

as natural and manmade borders are outlined by artificial lighting at night. From space, lines of fishing boats can be seen dotting the Nile River, gas flares from oil and gas production and the bright glow of urban areas all become visible. The most advanced cultures are witnessing the vanishing of natural darkness from generation to generation as natural darkness is replaced by the increased use of artificial lighting at night.

In the United States ninety-nine percent of the population lives under light polluted skies that inhibit residents from experiencing a true, natural nighttime. But this isn't just a local problem. Across the planet, over eighty percent of the world's population lives under light polluted skies. Advanced satellite images show light pollution is growing at a rate of six percent per year and there is no barrier to hinder the spread. Light at night is getting brighter exponentially in both the amount of areas lit and the radiance of the light (Kyba et al. 2017).

For millennia the natural cycles of day and night were ruled by the sun, the moon and the stars. Virtually all living creatures have relied upon the rhythmic cycles of day and night to regulate sleep patterns, guide migration and breeding patterns, provide mating and feeding cues for wildlife and offer the natural physiological processes required at a cellular level to maintain optimum health not just for humans, but for millions of other species as well. Natural darkness provided by the night offers opportunities of rest and recovery for some, of wakefulness for others, but of survival for all.

It's hard to imagine, but once upon a time, this nocturnal world was a central part of human existence as well. Countless celestial bodies danced above our ancestor's heads for centuries; arousing curiosity, inspiring art for some and fear for others. Natural sources of light at night such as stars remained the topic of a myriad of traditional ecological knowledge passed down through generations. Countless stories immortalized in the constellations overhead inspired tales of great warriors who fought their eternal fights while others loved their eternal loves. These stories became the cornerstone of entire cultures of peoples. The cosmos has helped guide exploration, inspired studies and knowledge of celestial movement, shaped entire cultures and numerous religions, and stimulated the continuation of life as well as enable scientific discoveries that help answer age old questions of not just our origin, but the origins of life itself.

Four hundred years ago stars glimmered so bright they would cast unimaginable shadows across even our planet's moonless nights, illuminating a side of our world unknown to many today. Our own Milky Way once appeared as a solid ribbon across the night sky. Only by looking at a magnified view could one tell the Milky Way wasn't one body as it appeared from the ground, but rather hundreds of thousands of stars so densely gathered together that their faint, ancient light forms created a distinguishable path across the cosmos. Some people are fortunate today to have experienced the feeling of standing below a starlit sky, gazing up in awe - feeling small and insignificant - and larger than life - all at the same time. But for ninety-nine percent of the people in our country, they may never know that feeling.

As human populations grow, so too does the use of artificial light at night. It is this growth contributing to light pollution across our planet. Although there are various working definitions of light pollution, each depending on the impact it has on those defining it, light pollution is easiest defined as the excessive and inappropriate use of artificial light at night. But this definition can be misleading. It is not light that is the problem, it is when the use of light crosses the line to become wasted energy, creating wasted resources that supply that energy and results in a negative alteration of the environment. Most important to point out, efforts to increase outreach and awareness of light pollution are not designed to rid our world of light, rather they are designed to inform people of the ways certain types of light are problematic to our health and the health of our environment. Key components of the message include:

How artificial light can be a potential pollutant, and
 How misuse of light occurs when it is directed where it is unwanted, unneeded or damaging

Light can be tolerated by the nocturnal environment if it is used appropriately. The International Dark Sky Association (IDA) has adopted a definition that identifies the adverse effects of artificial lighting and defines light pollution as “any adverse effect of artificial light, including sky glow, glare, light trespass, light clutter, decreased visibility at night and energy waste (IDA, 2020).”

This definition includes the following four components:

- Urban sky glow – the brightening of the night sky over inhabited areas
- Light Trespass – light falling where it is unwanted, unneeded or unintended
- Glare – excessive brightness that causes visual discomfort and decreases visibility
- Clutter – bright confusing, and excessive groupings of light sources, commonly found in over lit urban areas (think Las Vegas, or Singapore).

So why should we care?

Because light pollution affects all of us. Light pollution has been deemed by the World Health Organization to be a probable carcinogen, contributing to breast and prostate cancer, a disruption in our Circadian Rhythm, sleep disorders and even affecting our health at a cellular level. The increased use of lights that is hurting us the most is the “blue” light being emitted by our phones, tablets, televisions, those super bright bulbs in gas stations and shopping centers, billboards, and even in your refrigerator! The minute your eyes detect this blue light, cells in the back of your eyes send a signal to your brain saying --- WAKE UP! Which is a bad thing when it’s ten o’clock at night and you’re looking for a midnight snack or checking social media on your phone just before bed.

Think of it this way: as the sun rises in the morning the sky becomes a beautiful bright blue color, alerting the cells in our eyes it’s time to wake. As the day progresses, the sun begins to set, those cells detect lower levels of blue and send signals to our brain it’s time to rest and recover. Our body’s Circadian Rhythm begins its rest cycle, emitting melatonin to our brains. Melatonin has been found to effect virtually all living creatures. It’s function is ultimately to keep us healthy. But with the growing presence of blue light, our Circadian

Rhythm is thrown off, and our body is unable to rejuvenate and fight illness and disease.

But light pollution does not just affect humans, it also affects wildlife. Birds are thrown off course by the bright lights in cities, often fatally becoming disoriented and exhausted. Baby sea turtles are disoriented by the bright lights of resorts and condominiums, losing their way to the ocean and often succumbing to vehicle collisions or predation.

Light pollution is also affecting our culture, as we lose inspiration from the stars above, losing the potential for future artistic works such as *Starry Night Over the Rhone* by Van Gogh or the stories of constellations passed down for centuries.

The excess lighting that is escaping unshielded light fixtures and misused lighting sources is creating waste in excess of \$2 billion per year. When we consider one American household uses 1,946 kWh/year in lighting energy, and the upright that shines up into the sky creating sky glow and clutter, we find that light that is essentially lighting up the sky could light more than 11 million homes a year, just by being redirected and using the correct fixtures and bulbs (IDA, 2020).

What can we do about reducing the harmful effects of light pollution?

We can start by just knowing a little more about the problem. Light pollution is surprisingly the easiest type of pollution to reverse. We can begin by:

- Simply turn off the lights at night, or use a dimmer on lights

- Use shielded light fixtures that direct the light down, directly on the places intended on being lit

- Use the minimum light needed for the task

- Decrease flux and limit blue light (light with higher color temperatures)

- Write a letter to your local POA, HOA or politician to enact ordinances and help your community become a dark sky community

- Join a citizen science campaign such as *Globe at Night* to help measure the presence of artificial light at night and add to the data researchers are gathering to promote the use of more ordinances

- Join the IDA! For a small fee you can support the IDA in their research and outreach efforts. Studies show that only 1 in 10 people are aware of the harmful effects of light pollution, but of those who are members of the IDA, 7 in 10 are not only aware of the issue, but they have installed smart lighting options in their homes, written their local politicians, engaged schools and businesses to make smarter lighting choices... and turned off the lights.

Light pollution is easily reversible with one part knowledge and one part action --- Minimal action... just begin by turning off or dimming the lights. Choose warmer lighting for your home such as amber lights that are easier on our bodies at night.

I am always happy to help answer questions, provide information or direct communities toward smarter lighting options. If you would like more information on how to become a member of the IDA or what types of lighting fixtures or bulbs are best, please email me trodgers25@yahoo.com.

More Clean Sweep photos (cont'd from cover)



At Stumpy Hollow.
Photo by Mark Stracke
Left and Below



By the Fishing Pier
Photo by Mark Stracke



The Cove
Photo by Mark Stracke
Left

Below
Near the Park Store
Photo by Mark Stracke



**Images from Hobbyist Lyn Davis' yard,
February 14th**

Left: Shrimp Plant *Justicia brandegeana*, is an evergreen shrub in the genus *Justicia* of the family *Acanthaceae*.



Right: Texas Mountain Laurel *Dermatophyllum secundiflorum*, a species of flowering shrub or small tree in the pea family, Fabaceae.

Photo by Lyn Davis

Follow up on Reducing our Plastic Footprint

Recycling isn't working – here are 15 ways to shrink your plastic footprint

[https://www.theguardian.com/environment/2019/nov/27/how-to-shrink-plastic-footprint-recycling?](https://www.theguardian.com/environment/2019/nov/27/how-to-shrink-plastic-footprint-recycling?CMP=Share_iOSApp_Other)

[CMP=Share](#) [iOSApp](#) [Other](#)

Other recycled plastic products

Rothy's has repurposed 37+million single-use plastic bottles and turned them into their signature thread. The company's humanely harvested merino wool comes from an Australian farm and is crafted at a sustainable Italian mill. They have two different sustainable outsoles, one is made with carbon-free rubber, and the other uses luxe vegan leather. Their soft, cushy, washable insoles are made with bio-based castor oil and recycled materials. rothys.com



Colgate oral-care brand is launching what it says is a vegan-certified toothpaste that comes in an "industry-first" recyclable tube. The tube is made from the same plastic as milk jugs. <https://www.cnn.com/2020/01/15/business/colgate-recycle-toothpaste-tube-trnd/index.html>



Rothy's Shoes

Sprucing up the Inks Dam National Fish Hatchery Facilities

A HLMN grant for expansion of Native Plant Garden at the Hatchery



Garden progress! Hard work of walkways and rock placements thanks to Sherry, Hollis, Jerry, Celia, Kaye, Cris—will try & finish Monday 13th @9am on walkway and lengthen bed by fence. Kudos to Bailey for plumbing fix (& skid loader skills) & McCartney’s rocks! Looking good - 1st crew Sherry, Hollis, Celia whooped not pictured/fresh recruits Kaye & Cris!

Photo by Linda O’nan

Look Alikes...

Viceroy	Characteristic	Monarch
Black line across lower back	Wind pattern	No black line on side of lower wing
2 ½ to 3 ½ inches	Wing Span	3 ½ to 5 inches
Willow, cottonwood, thistle ,	Host Plant	Milkweed



Queen	Characteristic	Monarch
Wings open, color more solid with brownish tint	Wind pattern	Wings open black veins are wider and more orange
2 ½ to 3 ½ inches	Wing Span	3 ½ to 5 inches
Nectar of flowers and dead foliage	Host Plant	Milkweed
Spring, Summer, and Fall in Central Texas	Appearance	Spring and Fall



CLR Military Family Day





Meet the Members:



Ray Buchanan Class of 2005

Where were you raised?

Lampasas, Texas, son of only Dentist in town, grad from high school 1956 (sports, pep squad, and a fun history class with Mrs. Norris) Received the Senior History Medal at Graduation.

What is your professional background?

35 years as a history teacher (overseas, college and private school), Head of History Department at a private school in Dallas. Special focus: curriculum development and use of primary sources in teaching history, especially art history.

Tell us about your nature-related passion or volunteer activity.

As Leopold said, emphasis on "natural, wild, and free"; Main volunteer activity with kids at birding location at Great Outdoors Program at Inks Lake State Park and bird songs and calls at Bridges to Birding program at Balcones Canyonland National Wildlife Refuge. Also, focus on books about nature (trees, plants, conservation). Also, emphasis on gardening and on development of Native American Sacred Garden Program for Nature Center, Candlelight Ranch, and school groups.



Lori Greco Class of 2013

Where were you raised?

I was raised all over Houston and graduated from Conroe High School.

What is your professional background?

I was a professional Soldier in the Army Veterinary Corp for 27 years.

Tell us about your nature-related passion or volunteer activity.

My passion is birds and teaching kids about nature

Luedecke Column

Helpful hints for your Spring gardening.

- ❖ Test your soil to determine pH and nutrient ratios and needs if be.
- ❖ Many vegetables need about an inch of water a week, tomatoes do. Place a soaker hose around your veggies and then cover with mulch, mulch and more mulch.
- ❖ Herb and vegetable companion gardening help in attracting beneficial insects and pollinators and dissuading unwanted visitors. Please fill free to write with specific questions. We've done bunches of research on this topic.
- ❖ Journal what you planted where and when so that you can duplicate your success. You can even draw a small map for future reference.
- ❖ Label your rows and plants. Popsicle sticks work great.
- ❖ When you are deciding how wide to make your garden bed or raised beds, here's a good rule of thumb: Make sure that you can comfortably reach the middle of the bed from each side, to prune, weed and harvest.
- ❖ Plant something new that you've never tried before!
- ❖ Harvest your potatoes when the leaves start to turn brown.
- ❖ Fire ant solution: Mix equal parts Borax (or similar brand) and sugar. Then sprinkle around the openings of the mound. The object is to entice not smother so go easy on the sprinkling.
- ❖ Harvest celery when it is 12-15 inches in height.
- ❖ 20% vinegar is a practical mainstay. To kill the weeds in the driveway or sidewalk, pour/spray directly on the unwanted invasive. You can also put it in a spray bottle and spray around your house and porch to keep ants out of your home. Beware that where you place or spray you are going to kill whatever the vinegar comes in contact with. The vinegar doesn't know the difference between the plants that we love and dislike.
- ❖ Plant running fruits and vegetables such as melons in the corner of your garden.
- ❖ When you see the grasshoppers it's time to get the flour out. 50# will be more than enough to do the average yard. All-purpose flour will work; self-rising flour is best. And grasshoppers aren't "gluten-free." It is best to apply the flour of choice early in the morning when there is a heavy dew on the ground. Step number one is to determine the direction of the wind. (hint hint) Step two, throw with the wind. (hint hint hint) Step three is to cast the flour by hand over the yard's and garden's infested areas. Repeat the process in about two to three weeks, when the next hatch begins.
- ❖ Soil Marines reporting for duty!! Beneficial nematodes control fleas, fire ants, grubworms, termites and roaches.
- ❖ Stagger your plantings so that you don't have your entire harvest yield in one week.
- ❖ Once the veggies start really producing, remember to pick them small and tender. We do this for two reasons. First of all, they taste better, and secondly, they produce more when you pick them often. And thirdly, the harvest is easier on your back.

Till next time. Keep your souls and soles in your garden!

Remember the True Master Gardener: Jesus said, "I am the vine; my Father is the Gardener." John 15:1 Have questions or comments? Contact Bill at The Luedecke Group Realtors (512) 577-1463 or email bill@texasland.net. Or contact Martelle at Luedecke Photography (512) 769-3179 or email luedeckephotography@gmail.com

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 says he painted this Monarch from a photograph that was sent to him by a fellow artist that knows he loves to paint butterflies.