



Naturalist Notes



Nature in April - Long-legged fly, Messua limbata spider, White Bog Violet

UPCOMING OUTREACH OPPORTUNITIES

Sat April 30th - Spring Outdoor Celebration at Mont Belvieu

Sun May 1st - Cub Scout Banquet

To volunteer, please contact Irmie Willcockson via email.



OUTREACH AT NEIGHBORHOOD PLANT EXCHANGE



TEXAS MASTER NATURALIST IN SPACE

As of April 21st, the launch of SpaceX Crew-4 is scheduled no earlier than April 26th. Stay tuned for a TMN Tuesday from space with Kjell Lindgren.

INVESTING IN BINOCULARS FOR NATURE VIEWING

Purchasing binoculars for nature viewing can be a daunting task. The features to consider and their impacts on costs are important.

I'd say there are 3 ranges of spending:

Low end - up to \$250

Midrange - \$250 to \$750

High end - \$750 to sky's the limit.

In my opinion, even as a beginner, you should buy binoculars in the midrange. You'll get better coatings, lenses, warranty, and quality images. While I use my binos for all types of nature viewing, I am, primarily, a birdwatcher. Here are the different features to consider and my recommendations from a birding perspective:

- **WARRANTY** - I think of purchasing binoculars as an investment, so warranty is important. Twenty years ago, I bought high end Bausch and Lomb binos that had a lifetime warranty on the lenses. Bausch and Lomb was bought out by Bushnell, Bushnell still honors the warranty. One of my lenses has gone wonky and Bushnell will repair it! You may not get a lifetime warranty with midrange binos but it will be better than low end.
- **MAGNIFICATION**: Two of the features of binoculars are usually part of the binocular model (e.g. 8x42, 10x42, 12x50). The first number is the magnification. 8x magnification is better than 10x or 12x magnification unless you have a really steady hand. Many birders recommend 10x42, but I just couldn't hold them steady enough to get a good look at the bird before it took off, so my binoculars are 8x magnification.
- **LIGHT GATHERING** - the binos you choose should work well in low light conditions (think birding in the woods or early evening). Note that the second number (e.g. 8x42, 10x50, 12x25) is the diameter in mm of the eyepiece opening. 42 mm is a good number to look for - anything less and you won't have enough light gathering to see well in low light conditions.
- **EYE RELIEF** - Eye relief is the distance between your eye and the lens. Not enough eye relief and you'll see black rings or edges around the image when you look through the binos. I have glasses and I needed binoculars I could wear without taking my glasses off, so I needed binos with lots of eye relief. Also, important for me, I can adjust the eye relief so that when I'm sharing my binos with someone who does not wear glasses, I can shorten the eye relief so they can see the image, too.
- **WATERPROOF AND FOGPROOF** - You want to be able to use your binos when it's raining, and you want to be able to go from hot to cold and back without the lenses fogging up. Very important for Houston area!
- **CLOSE FOCUS** - Sometimes you see a bird or butterfly right above you in the trees or on the ground in front of you. Get binoculars that allow you to focus on nature that may be 5-8 feet from you. This is very important for me. I tried several binoculars in the store to make sure I was getting binos that could focus on close items.

- LENS QUALITY - Look for BAK4 prism or ED glass (extra low dispersion) lenses with full multi-layer coatings. The full multi-layer coatings improve the image quality - clearer, sharper edges and colors. Don't buy binoculars that have BK7 prism lenses - the image quality just isn't there. It's likely you won't find a low range bino with BAK4 prism or ED glass.
- ROOF PRISM vs PORRO Prism - This describes the optics arrangement of the eye lens and objective lenses. If you are interested, here is an article that describes how binocular optics work. [How Binoculars Work | Best Binocular Reviews \(bestbinocularsreviews.com\)](#) I recommend roof prism binos because they are lighter and more compact. Though roof prism binos are more expensive than porro prism - when you are tromping around for hours with binos hanging around your neck or packing for an overseas trip - light and compact count!
- ARMORED - I've dropped my binos multiple times over the years! I carry them in a backpack with other stuff - I need armor to protect my investment!
- SPREAD - I have a narrow face so I tried binos on before I selected the binos I wanted to make sure I could see through the center of the lens (no black edges anywhere).
- FEEL - How they feel in your hand is important... the fit, placement of focus, etc. You'll want to be able to bring the binos to your face and quickly focus to see the nature in front of you.

Lots to consider, right? Any single recommendation from me would be different than 15 other people. The binoculars you end up purchasing will be a personal choice. Since they can be expensive, it is best to 'try them on' before you buy.

There are several places in Houston to try birding binoculars:

Land Sea & Sky on Richmond

Whole Earth on Shepherd or in the Galleria

Wild Birds Unlimited

As mentioned before, if you are a nature enthusiast looking for binoculars, make an investment in mid-range binoculars. Here are some mid-range binoculars that work well. You don't have to buy them from these websites, they just have good descriptions of the products. Once you've decided which binos you want, it pays to comparison shop as you might find them full price on one website but on sale on another.

[Nikon Monarch M5 8x42 Binoculars - Optics4Birding](#)

[Nikon Monarch M7 8x42 Binoculars - Optics4Birding](#)

[Zeiss Terra ED 8x42 Binoculars - Black - Optics4Birding](#)

[Leupold BX-4 Pro Guide HD 8x42 Binoculars Shadow Gray - Optics4Birding](#)

[Vortex Viper HD 8x42 Binoculars - Optics4Birding](#)

[Endeavor ED IV 8x42 Waterproof Binocular with Lifetime Warranty - Vanguard USA \(vanguardworld.com\)](#)

Good luck and good birding!

Shannon Morrison

Spring Training Class Field Trip - Houston Arboretum and Nature Center

Our second field trip was on March 5th, 2022, at the Houston Arboretum and Nature Center, and the class was facilitated by Master Naturalist Berri Moffett. Our first instructor was Conservationist Trevor Rubenstahl, who presented a detailed lecture on forest ecology followed by a tour of the arboretum grounds that reinforced the lecture. Trevor provided the class with current restoration and future plans of native ecosystems,



stormwater management, managing the reforestation and tree care and invasive species control. The tour was highlighted by Trevor's dedicated passion for his role in managing these efforts as he provided the class with numerous examples of newly and well-established native vegetation and their roles in the arboretum.

No outdoor tour in Texas would be complete without a snake sighting. It is evident that as a Master-Naturalist-in-training (and new resident to Texas) I have more homework to do in snake identification, because I was the only one who didn't know what a Broadband Water Snake looked like...and this valuable knowledge may have prevented me from being the only one who jumped out of the immediate vicinity when one appeared at our feet.

The second portion of the field trip was a presentation on Entomology given by Adrian Medellin, a Surveillance Entomologist for Harris County. He is fighting the good fight to control the mosquito population of Harris County and passed on some great information for the class to help in his efforts. In retrospect, I wish that I would have asked him his opinion on last year's "Cicada Swarmageddon" or the East Coast's imminent invasion of the evasive parachuting Orb Spider.

To date, these well-organized field trips and lectures are leading examples of organizations that employ some of the finest naturalists in the country. They provided us with new layers of thought through observation and interaction, and the narratives provided by guides and lecturers can be applied to day-to-day scenarios. There is no doubt that these trips will aid in allowing us to become better educators to the public to conservation education and service within our communities. We look forward to the remainder of our field trips.

Rob Beaton



Tending Nature: Native Plants and Every Gardener's Role in Fostering Biodiversity

In case you missed them.....

The Ohio State University recently hosted the above titled series of six webinars.

1. Beneficial Insect Biodiversity: What It Is and Why It Matters. By Mary Gardiner: author and professor, The Ohio State University.
2. Bringing Nature Home: The Importance of Native Plants. By Doug Tallamy: author and professor, The University of Delaware.
3. Cultivating a Community of Support for Native Plants by Lisa Olsen: Wild Ones Native Plants, Natural Landscapes.
4. Host-plant Specialist Bees - Biology, Biodiversity, and Conserving Them in Your Backyard by Bryan Danforth: author and professor, Cornell University
5. Bumble Bee Banquet: Selecting Native Plants for Bumble Bees by Heather Holm: author and biologist
6. Native Plants in My Garden? Absolutely! By Debra Knapke: author and garden designer

The recordings are available at this link; [Recordings | Tending Nature \(osu.edu\)](#)

Also, under a “Learn With Us tab” are a host of links to related reading, related articles and papers, journal prompts and additional resources. They are an excellent source of additional information.

[Texts, readings, papers and resources | Tending Nature \(osu.edu\)](#)

For example, a couple of potential utility in our region;

- [NWF GFW Plant List Ecoregion8.indd](#) - Keystone Native Plants - Eastern Temperate Forest - Ecoregion 8, and [NWF GFW Plant List Ecoregion9.indd](#) - Keystone Native Plants - Great Plains - Ecoregion 9, associated with Doug Tallamy's presentation.
- [Host Plants for Pollen Specialist Bees of the Eastern United States \(jarrodowler.com\)](#), associated and referenced in Bryan Danforth's presentation.

Julie d'ablaing



Bird Collision Monitoring with Houston Audubon

An incredible 600+ species of birds have been documented in Texas, and more than 400 species have been observed in Harris county. Many of these birds briefly stop by on their spring and fall migration, and a big part of that journey happens at night. About 80% of North America's migratory birds migrate entirely at night, relying on the more stable nighttime weather conditions and light from the stars and moon to help navigate. What has always been an arduous journey has become even more complicated for birds with the addition of cityscapes and artificial light along these flyways.

Artificial light at night can attract and disorient migrating birds, drawing them into cities full of threats. This often results in exhaustion, interactions with outdoor cats, collisions with our brightly lit buildings, and other dangers that can lead to fatalities. A recent study by Horton et al. (2019) found that Houston was the second most dangerous city in North America for migrating birds, not only because of our propensity for bright lights, but also because our region has nearly 1 billion birds migrating through each year. This incredible number of birds is now experiencing an incredible amount of light - something that they haven't evolved to understand.

Though attraction to and disorientation by light at night by birds is well-documented, we still don't understand the whole story. That is where community scientists come in! Across North America, organizations are working to collect more data, and Houston Audubon is proud to be one of them as part of Lights Out Texas. We are coordinating collision monitoring in our city for the second year in a row, contributing to a statewide effort to better understand the mechanisms behind this threat to birds.

Community science volunteers spend roughly 2-3 hours each morning during spring and fall migration searching for birds that have collided with a building. Teams of 2-3 volunteers walk a 3-mile route around 10 downtown buildings, collecting data on birds they find. This data will be compiled with data from across the country to help scientists better understand the factors that contribute to nighttime collisions and how we can better prevent these collisions from happening in the future.

We need your help to continue collecting this valuable data. Becoming a collision monitor is an easy way to take steps towards protecting the birds that rely on our city! Previous collision monitors stated that their favorite parts of monitoring include:

- Contributing to important work that could help in the bigger picture
- Making new friends
- Finding birds that you can save
- Getting an early morning workout in

You don't need any previous bird knowledge to get started! All of our data is entered into iNaturalist, which will help with bird identification. We send all collected birds to Texas A&M for species confirmation and use in future scientific studies. The only pre-requisite is a mandatory 1-hour training video before the first monitoring shift. While we would love it if you could join us for multiple shifts, even once is immensely helpful!

Collision monitoring is happening now and continues daily through May 15. Contact Kathy Swezey at kswezey@houstonaudubon.org for more information.

ORGANISM OF THE MONTH

GIANT WATER BUG (HEMIPTERA BELOSTOMATIDAE)

The Giant Water Bug (GWB) found in Gulf Coast Wetland habitats is a member of the “true bug” order, Hemiptera Belostomatidae. Commonly called the Toe-Biter or Electric Lighter, it is one of nature’s fascinating studies in contrast.

The Toe-biter is an aggressive and accomplished predator. Typically, in our local waters, they are 1 to 2 inches long, and will hunt small fish, tadpoles, snails, even small turtles. Some species of Giant Water Bug can get large enough to prey on larger turtles, snakes, and ducklings. Thankfully, the larger varieties are not found locally!

Giant Water bugs are mostly lurker predators, waiting along the bottom of the ponds or under aquatic vegetation and lunging out at their prey. They have very sharp rostrums (needle-sharp piercing mouthparts) that they use to inject digestive saliva that liquifies their prey, sometimes while they are still alive -- then they drink ‘em!

Toe-Biters got that nickname because they are known to latch on and bite humans that are shuffling in pond waters or reaching into their areas. Although the bite is not dangerous, they are known to be painful, akin to a bee or wasp sting.

While they are fearsome predators, they are also unique in that they are one of a very few insects that show true paternal care. After mating, the female will use her saliva to cement the eggs to the back of the male. He cares for and protects the eggs until they hatch and go off on their own.

The photo shows a male GWB with eggs on his back taken at the Katherine G. McGovern Texas Wetlands at the Houston Zoo. The Giant Water Bugs found there are only 1 of over 200 ‘volunteer’ species that have found and made homes in the natural areas of the exhibit.

Sources:

Wikipedia contributors. "Belostomatidae." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 10 Feb. 2022. Web. 22 Mar. 2022.

The Kidadl Team. “Giant Water Bug Facts You’ll Never Forget.” Kidadl. 4 Nov. 2021, kidadl.com/animal-facts/giant-water-bug-facts.

Sheryl Mills



One male Giant Water Bug with eggs, family Belostoma

Photo Credit: Sheryl Mills, Houston Zoo