Rio Grande Valley Chapter, Texas Master Naturalists

The Chachalaca

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The Rio Grande Valley Chapter Texas Master Naturalist is organized exclusively for charitable, scientific, and educational purposes, more specifically to develop a group of knowledgeable volunteers to provide education, outreach, and service dedicated to the study of conservation of natural resources and natural areas within the Rio Grande Valley of Texas.

A Unique Moth in the U.S.

Story and photos by Anita Westervelt, Rio Grande Valley Chapter

By August, I'd pretty much exhausted the moth and bug inventory of our courtyard and moved the setup to the dark side of the house, where July's heavy rains caused the resaca to escape its bounds, bringing the water within 15 feet of the house.

Eusceptis flavifrimbiata

I check the moth sheet most mornings, sometimes beginning around 4:30 a.m. and a couple more times before the sky begins to get light.

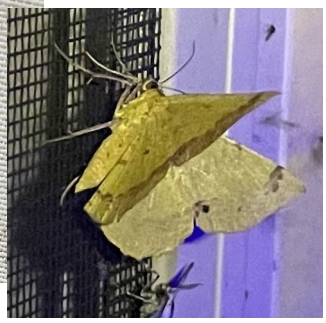
One morning, amongst dozens of potato hoppers, a moth sat on the sheet with closed wings. It was about an inch in length; the top half of the wings appeared to be pale yellowish white in the light from the black lights and my white light headlamp. The bottom half of the wings were a black geometric, Art Deco-ish design.

I thought it was one of the bird dropping moths. I snapped a good photo, uploaded it with the phone app, but iNaturalist.org gave me no identification help at all, which was odd. I photographed it again from several angles and submitted three photos, thinking that would help with identification, but still, nothing.

Later that morning, I e-mailed an iNaturalist identifier and long-time Lepidopterists' Society member who has helped me in the past when I have had questions about the odd things moths do. I described where the moth sheet was set up and sent him seven different views.

He soon replied: "Your moth is ***Eusceptis flavifrimbriata***, unique in the U.S., and reported common in Sabal Palm and similar habitats around Brownsville, in September and October. Reported host plant in Costa Rica is Malvaviscus." Malvaviscus are flowering plants in the mallow family, Malvaceae, like Turk's cap, *Malvaviscus drummondii*. Bugguide.net notes the moth's range as Southmost, Texas to Central America.

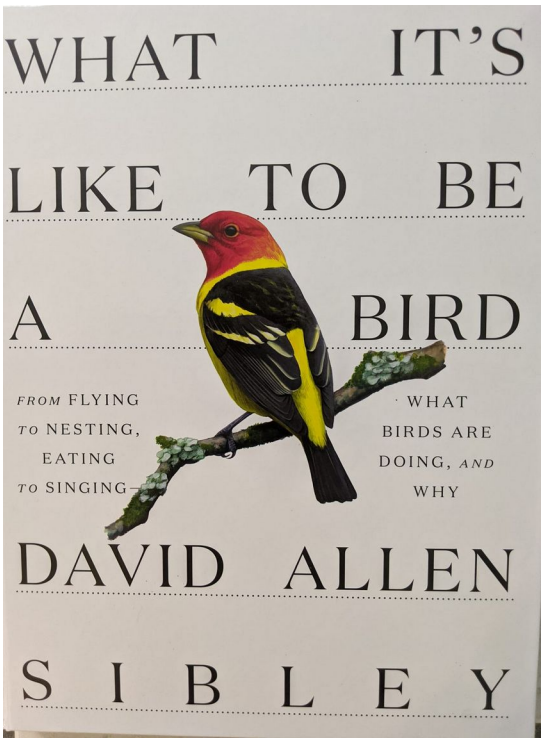
Chickweed geometer



Erastria decrepitania

A number of other moths visited the moth sheet this summer; although not considered especially unique to San Benito, they were new to me. Two striking moths were the colorful **chickweed geometer moth** which is prominent through the eastern half of the U. S., and possibly an ***Erastria decrepitania***, whose range is listed from Austin, Texas south to Venezuela, that is awaiting verification at www.iNaturalist.org.

Book Review: *What it's Like to be a Bird* by David Allen Sibley



Article by M. Kathy Raines, Rio Grande Valley Chapter

Who doesn't wonder what it's like to be a bird? I certainly do. And who better to hear it from than the learned and so accessible Mr. Sibley? I very much enjoyed this book, which I first read cover-to-cover—then consulted as I studied certain birds. It is a fine *resource*, which I will be reviewing over and over. It is a book to savor.

Sibley's colored drawings are stunningly and often a bit amusingly rendered, as in that of a petite Common Yellowthroat (*Geothlypis trichas*) dutifully but unwittingly feeding an insect to a much larger Brown-headed Cowbird chick (*Molothrus ater*). We do find comedy in nature, as we find it in observing one another.

He lovingly illuminates the beauty in the common, which is what artists do. I have never seen a lovelier picture of a male Common Grackle (*Quiscalus quiscula)* —quite similar, of course, to our own Great-tailed Grackle (Quiscalus mexicanus)—sky-pointing, its neck and head a purply iridescence. It recalled for me the awe of seeing a grackle for the first time as a child, struggling to determine its color amid all that luminance.

In his introductory comments, Sibley writes, humbly: "This book is a guide to the science of birds, but it's an incomplete guide that barely scratches the surface of their world. It is designed to be browsed casually, so that different topics will spark connections and perhaps offer a sense of discovery."

In a disclaimer, Sibley writes that his book "is a very selective and incomplete review of bird science," covering topics he finds particularly intriguing and including "recent discoveries and tantalizing possibilities." Writing that he has "attempted to point out uncertainty and verify the accuracy of everything" in the book, he suggests that readers "follow the sources at the end of the book for more information."

What it's Like to be a Bird has an interesting organizational scheme, which I appreciate, beginning with thematic discussions of birds, then articles on particular species, but I do miss having an index. While Sibley includes a thorough list of his sources in the back, with notes, one cannot look up a bird alphabetically. Instead, he includes a section near the end entitled "Birds in this Book", where birds, unalphabetized, are awarded short descriptions, with page numbers corresponding to lengthier analyses and drawings.

In his first section, Sibley discusses general avian characteristics, including feathers, coloration, senses, migration, and other fascinating topics, with a focus on behavior. Refreshingly, he does not

veer from expressing uncertainty. For instance, he writes: “Vultures often spread their wings in the sun; here, too the reason is unclear.” Also, he notes, “Some species of birds walk and others hop, and the reason for this difference is unknown.” I’m all for saying “I don’t know” when I don’t. And there are so many mysteries that no one knows, though we strive for answers.

Sibley makes the case that birds are intelligent, feeling, decision-making creatures not unlike ourselves. Birds make definite choices, he claims, for example, in nest building. The construction itself is instinctive, he claims, but a bird can alter its techniques, “depending on the local conditions, using different materials, building a nest more quickly, adding more insulation in cold weather, and more.”

I relish knowing that birds devote “at least 10 percent of each day” to preening feathers, and that they all follow similar routines. I learned that “[f]lashes of bright color, such as a white rump, can help startle potential predators or potential prey.” I didn’t know birds “can sleep with one eye open, resting one half of their brain at a time” or that “tendons in a bird’s toes have a mechanism (similar to a plastic cable tie) that keeps the toes tightly closed with very little effort.”

Brown Pelican –photo by Pat McGrath Avery

The birds he features particularly, he writes, are “a selection of the most common and/or familiar in the continental U.S. and Canada,” noting, “Much of the science described here applies to birds anywhere in the world.” His selection includes numerous local species, including the Roseate Spoonbill (*Platalea ajaja*), Brown Pelican (*Pelecanus occidentalis*), Snowy Egret (*Egretta thula*), Northern Mockingbird (*Mimus polyglottos*) and Greater Roadrunner (*Geococcyx californianus*), as well as the many we see during fall and spring migration.

Though Sibley has written extensive bird guides and contributed to noteworthy publications like *Smithsonian* and *Science*, he writes with the eagerness and enthusiasm of a child. He has even illustrated an anthology of poems on birds, *Bright Wings*, edited by American poet Billy Collins. He would be the most vibrant of bird-watching companions, I think.

Though I read it first on a Kindle, I would recommend getting a hard copy. My device exhibits only black-and-white photos that do not give the illustrations justice. Also, at least for me, a hard copy greatly facilitates research.

This is one my favorite nature books, one I think would be a most valuable addition to any bird-lover’s library, one to cherish and consult frequently.

Listening to Nature in a Noisy World

Article by Julia Jorgensen, South Texas Border Chapter

Acoustic ecologist Gordon Hempton tells the story of a friend who remembered a childhood morning when she woke in the dark, hearing the footsteps of a dog in the surf outside her beachfront window. She could tell what the dog was doing--how it was walking, stopping, running, digging--just from listening. The experience was memorable because the darkness made her aware of how much her sense of hearing allowed her to know in a quiet place. In her everyday life she had been unaware of this ability.

Without modern noise, healthy human hearing should be pretty good—audition was a more important sense than vision for our earliest mammalian ancestors, who were nocturnal. And for much of human prehistory and history, natural sounds were important in structuring human activity and in the way places were remembered and named. Stephen Feld, an acoustic anthropologist, has studied the lives of people from the rainforests of Papua, New Guinea, an environment where much is visually hidden and sound is critical to orientation, hunting, knowledge of time of day and of weather, awareness of predators, and much else. The Papuan Kaluli people also used metaphors of auditory forest experiences as central concepts in their visual, verbal, musical, and choreographic arts and in their naming practices.

Listening in nature -- photo by Caleb Frith (Wikimedia Commons)

Hempton notes that a person with no hearing loss can, in fact, hear sounds from miles away when in a quiet place, so the potential to hear as our ancestors did is present if we can find quiet places. But hearing loss is an issue--he has found that Americans often do not understand "quiet"---those who are usually surrounded by noise may find a relatively-less-but-still-measurably-noisy place "quiet", and people may subject themselves to hearing loss by trying to cover ubiquitous noise (such as traffic) with louder music. In that case they gradually become isolated from the natural world.

Because listening has had such low importance in our culture, the presence of noise has increased without restraint, dramatically. People who have lost hearing or taken it for granted may not understand what there is to protect when it comes to natural sounds---why human noise should be kept out of wild places. In addition, Feld points out that "visualism" is embedded in the European concept of landscape, so it is not surprising that acoustic experiences have not usually been considered in the operation of nature parks in the U.S. However, when asked in a National Park Survey, nearly three-quarters of people report that they value the sounds of nature and sought peace and quiet during their park visits.

Journaling in the forest – photo by Doug Robichaud (Wikimedia Commons)

You may not know that the U.S. National Park Service has a Natural Sounds and Night Skies Division. The division has wonderful experiential, teaching and research materials on its website at https://www.nps.gov/subjects/sound/explore.htm for anyone who wishes to bring the awareness of natural sounds to those you serve as a Master Naturalist.

If you wish to experience sound in nature the way it used to be, you may visit a Texas State Park called Big Bend Ranch, which has been designated a Dark Sky Park by the International Dark Sky Association (IDA). Visit www.txnsf.org for more information. The park is also a candidate for a Quiet Park by Quiet Parks International.

One Square Inch of Silence: Noise in Wilderness

Article by Julia Jorgensen, South Texas Border Chapter

"Now that we have changed the most basic forces around us, the noise of that chainsaw will always be in the woods…. the world outdoors will mean much the same thing as the world indoors."
Bill McKibben, *The End of Nature*

Even though I live in an urban area, one of my favorite experiences is sitting in my back yard and hearing nothing but birds, insects (cicadas!), tree frogs, and the rattle of lizards in the flowerbed. It is always a shock when the noise of lawn equipment intrudes, as it so often does. This shock is even more disappointing to a person hiking in a wilderness area (often after a long, difficult journey) when a helicopter or fighter jet shrieks into view.

Quiet experiences anywhere are becoming harder to find. Noise levels in the U.S. have grown at an astonishing rate in the past fifty years, with more very loud bursts and a growing homogenous background hum from transportation and industry in urban areas and, now, even in wilderness areas. Between 1970 and 2010 road traffic grew ten times faster than population; between 1980 and 2010 domestic passenger flights more than tripled.[1] From 1993 to 2018 the U.S. added 76 million registered vehicles, and between 1994 and 2019 the number of vehicle miles travelled in the U.S. grew by 1.9 trillion miles per year.[2]

According to the *Atlantic*,

> People living in cities are regularly exposed (against their will) to noise above 85 decibels from sources like traffic, subways, industrial activity, and airports. That's enough to cause significant hearing loss over time. If you have an hour-long commute at such sound levels, your hearing has probably already been affected. Urban life also sustains average background noise levels of 60 decibels, which is loud enough to raise one's blood pressure and heart rate, and cause stress, loss of concentration, and loss of sleep.[3]

Les Blomberg, the Executive Director of the Noise Pollution clearinghouse, has said, "In 1900, you had a good chance of finding peace and quiet in roughly 75% of the continental US. By 2010, that number was 2%, and it's a similar phenomenon almost everywhere."[4]

In our oceans, activities such as offshore oil extraction and commercial shipping have significantly increased low-frequency background sounds under water, affecting marine life.[5]

How has noise pollution affected wilderness? Over the past decade, nationwide monitoring by acoustic ecologists Gordon Hempton and Kurt Fristup (for the National Park Service) has shown that anthropogenic noise intrudes upon protected wilderness parks. Even in parks like Denali, aircraft noise can raise the noise level by five decibels. Fristup himself expressed surprise at the ubiquity of aircraft noise in all parks.

Fristup's team created a noise map of the U.S., based on 1.5 million hours of recording from 600 monitoring sites across the country, measured on a typical summer's day. (You may view a manipulable version of the map here: https://www.nps.gov/subjects/sound/soundmap.htm)

For decades Gordon Hempton also travelled the U.S. taking acoustic measurements.[6] He was in search of quiet places, and he considered a place "quiet" when one can hear no anthropogenic noise during most 15-minute intervals. In 2005, after decades of acoustic measurements, Hempton identified his quietest American spot--the best among only a dozen places he identified as quiet--one square inch on top of a log in the beautiful Hoh Rainforest in the center of the 922,650 acre wilderness of Olympic National Park. He dubbed it the One Square Inch of Silence and he endeavors to keep it quiet by preserving silence in the 1000 square mile area around it.

Hempton has worked with the Olympic staff to quieten park operations, which have sometimes involved chainsaws or helicopters (for counting elk). Left alone, the park should be quiet, as it is out of the path of highways, utility lines, and other traffic. But Hempton has been bedeviled by overflying airliners from Seattle's Seatac Airport, along with military planes. His ongoing quest for a no-fly zone from the FAA has so far had little effect. "From a quiet place, you can really feel the impact of even a single jet in the sky," he said. "It's the loudest sound going."

Olympic National Park – photo by Julia Jorgensen

Although there are many noise problems caused by activities on the borders of national parks and wilderness areas, air tourism (particularly by helicopters) and military jet overflights count as perhaps the worst.[7] For decades there have been complaints from the public about helicopter tours at the Grand Canyon and most other parks, and there have been several deadly tourist helicopter crashes at the Grand Canyon and in Hawaii.

Because of the air tourism problem, the National Park Service has been required to work with the FAA in implementing the National Parks Air Tour Management Act of 2000 (which exempts the Grand Canyon). By 2018 only three parks had actually created plans as mandated by the 2000 law, although in that year there were 47,000 air tours over 78 national parks. In 2019 Public Employees for Environmental Responsibility and the Hawaii Coalition Malama Pono sued the federal government to have the law enforced. Hawaiian parks have been particularly overwhelmed by helicopters, in one place (during 2017 lava flows) with almost 17,000 air tours in one year. The plaintiffs for air tour regulation won their lawsuit, and presently the FAA is seeking public comment on plans they have written.

However, a better plan for air tours is coming thanks to Hawaiian congressman Ed Case, who reacted to a 2019 helicopter crash in Oahu and recent helicopter intrusions on memorial ceremonies at Pearl Harbor by proposing the Safe and Quiet Skies Act, H.R.389. This proposal is now in the House Subcommittee on Aviation. This Act would prohibit air tours over national parks, wildlife refuges, wilderness areas, military installations, and cemeteries.

But the military aircraft threat to Olympic National Park and to the Olympic Peninsula has become a crisis. In 2017, the U.S. Forest Service agreed to permit the Navy to introduce training flights in new Growler jets as part of its Pacific Northwest Electronic Warfare Range. According to expert commentators, there was no assessment of environmental impacts before this decision, although the jets fly over the park (a World Heritage Site) and over nesting habitats of the Spotted Owl, the Marbled Murrelet, and many endemic species. According to biologist David Spring, the jets are unusually loud and flights are not restricted by altitude; since the Spotted Owl may nest a few hundred feet up in this old growth forest, the noise impact may be as loud as 120 decibels.[8]

Spotted Owl (*Strix occidentalis*)--photo by LassenNPS (Wikimedia Commons)

Near the park, the people of Ebeys Reserve experienced such intolerable levels of noise from the flights that they sued the Navy in 2019, as did the Washington State Attorney General, asserting that the Navy did not properly assess the environmental and health impacts of its program. The lawsuit remains unresolved pending the results of more acoustic measurements.[9]

However, in 2019 an independent acoustic study of three sites near or in the park, showed that military aircraft noise dominated the soundscape around 10 % of the daylight hours (but on one occasion throughout 52% of the day) and military overflights could occur up to 80 to 100 times per day in some of the locations.[10]

As the Biden administration is expanding Pacific Northwest wilderness areas that will protect species like the Spotted Owl, we may hope the tide is turning in public understanding of the value and vulnerabilities of national wilderness treasures such as Olympic National Park. Could such understanding make its way into all our federal agencies?

1. Barber, J. R., Crooks, K. R. & Fristrup, K. M. (2010). The costs of chronic noise exposure for terrestrial organisms. Trends in Ecology & Evolution 25, 180–189.

2. Statista.com and Fhwa.gov

3.https://www.theatlantic.com/technology/archive/2018/02/city-noise-might-be-making-you-sick/553385/

4.https://www.nonoise.org/ https://www.bbc.com/travel/article/20210712-the-worlds-most-endangered-sound

5. Hildebrand, J.A. (2009).Anthropogenic and natural sources of ambient noise in the ocean. Marine Ecology Progress Series 395, 5–20.

6.https://www.bbc.com/travel/article/20210712-the-worlds-most-endangered-sound https://www.bbc.com/travel/article/20150110-the-quietest-place-in-the-us and Hempton, Gordon, *One Square Inch of Silence*, 2009

7.https://www.outsideonline.com/outdoor-adventure/environment/helicopter-tours-noise-outdoors-faa-rules/

8. https://washingtonenvironmentalprotectioncoalition.org/research -- David Spring's research

9.https://olympicforest.org/category/military-training/ -- summary of history of Navy overflights https://citizensofebeysreserve.com/ -- video and timeline of Ebeys Reserve's experience https://www.stripes.com/branches/navy/2021-08-19/naval-air-station-whidbey-island-growler-jet-noise-2600379.html -- pending lawsuit

10.https://olympicforest.org/wp-content/uploads/2021/05/061219-SummOfFindings_OlyPen.pdf -- acoustic study of jet overflights, and https://olympicforest.org/portfolio/military/ -- beautiful video of the park and the jet overflights, with interviews of park visitors

The Effects of Noise on Wildlife

Article by Julia Jorgensen, South Texas Border Chapter

Noise pollution has increased dramatically in the U.S. over the past few decades, outpacing population growth. Ecologists are increasingly concerned about the effects of noise and night time light pollution on wild creatures and wild places.

Judging by the effects of noise on human health and well-being, there may be much to worry about. The dangers to humans are uncontroversial in science, even though, to many people, noise may be similar to secondhand smoke: causing no concern because it is ubiquitous, invisible, and increases gradually, as does hearing loss. Besides inducing hearing loss and tinnitus, noise exposure can increase risk of cardiovascular disease, and it can lead to sleep deprivation, cognitive impairment, and social and emotional difficulties.

Research on wildlife and noise has been heavily weighted toward studying the impact of noise on communication behaviors and movements in songbirds and marine mammals. Shannon's* survey of the literature from 1990-2013 showed that terrestrial studies most commonly documented:

alterations in bird calls in order to override the masking effects of intruding noise
abandonment of noisy habitats
increased vigilance in noisy environments
alterations in foraging behavior
impacts on individual fitness
and the alterations in the structure of ecological communities (although these studies were rarer).

Shannon's survey found that some terrestrial wildlife will show behavioral changes beginning at a noise level of only 40 dBA (i.e., 40 "A-weighted decibels"), and twenty percent of the research documented changes below a noise level of 50 dBA (for comparison, rustling leaves average 20 dBA, bird calls average 44 dBA, and the lowest urban ambient sound occurs at 40 dBA; human annoyance with a sound usually begins in the upper 70 dBAs).

In 2019, Kunc etal* updated Shannon's analysis with a statistical summary of 102 studies of the effects of noise on the behavior of terrestrial amphibians, arthropods, birds, fish, mammals, and mollusks. Kunc found that anthropogenic noise caused significant responses in all taxonomic groups—animals in every group changed some behavior when noise entered the environment. By presenting one type of intrusion (noise) alone in field settings, studies were able to show that noise has effects on a broad range of behaviors, including communication, distribution, foraging, and homeostasis of organisms. It is safe to assume that these effects would likely be amplified in real world contexts where human-induced noise would almost surely co-occur with other intrusions, such as roads.

Kunc etal conclude, "These clear-cut effects of noise are particularly important from a conservation point of view, because it shows that noise affects not only a few species that we need to pay attention to but many species that inhabit very different ecosystems."

Some studies find an effect that seems to be positive for a species. For example, while anthropogenic noise *decreased* the hunting efficiency of one bat species in a particular environment, the bat's prey probably *benefited*. But in that case it is safe to predict that long term noise could result in an ecosystem change with unknowable consequences.

Similarly, Francis etal* conducted one of the few studies of noise effects on a community ecosystem, finding that Scrub Jays, songbirds averse to noise, would abandon pinon pine trees in an area when noise was introduced. Black-chinned Hummingbirds, however, like to build nests in noisy environments, and will increase their foraging activity in a noisy area. In the long run, noise would be expected to reduce the seed dispersal of the pines in the noisy area, while favoring the pollination of the hummingbird-preferred plants. They conclude that noise can be a strong force in altering ecosystems.

Black-chinned Hummingbird—photo by VJAnderson (Wikimedia Commons)

Scrub Jay—photo by VvAndromedavV(Wikimedia Commons)

Another important issue is the evolutionary effects of our new world of anthropogenic light and noise. Swaddle* notes that levels of light and sound at night exceed anything found in Earth's past, so animals and plants may not have the genetic ability to adapt. It is worth quoting his summary:

> The crucial role light plays in the regulation of physiology and species interactions has been well studied, but the widespread effects of artificial light received limited research attention until the past decade… most research had focused on documenting large-scale mortality events resulting from the attraction and disorientation of animals (e.g., turtles and birds) by artificial lighting. Research in the past decade, however, has involved numerous biological responses, including the effects of light on physiology, reproduction, foraging, movement, communication, and community ecology… As with noise pollution, evolutionary implications are largely understudied.

Despite mounting evidence that anthropogenic noise and light negatively affect populations and communities, these stimuli are rarely considered in conservation planning and restoration efforts. Much less is known about how anthropogenic noise and light might influence evolution and the potential implications for conservation. Behavioral responses to noise and light exposure could result in the selection of maladaptive traits and the formation of evolutionary traps.

These research summaries give conservationists much to think about**.** Because each field study is costly and time-consuming, studies of multiple species in the same ecosystem and studies of ecosystem changes over long periods are rarely attempted. There are many things we cannot know

about animals, plants, ecosystems, and noise without more intricate studies of animal and plant biology, sensory systems, habits, and abiotic variation in environments. By the time we know all the answers, the ecosystems will be gone. But both Kunc and Swaddle have given conservationists tools to argue for legislative protection of whole ecosystems from noise and light, based on the precautionary principle.

Before and during the 2003 Northeast blackout, a massive power outage that affected 55 million people —photo by Todd Carlson https://www.darksky.org/light-pollution/ www.txnsf.org

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Shannon, G. et al A synthesis of two decades of research documenting the effects of noise on wildlife. Biol. Rev. (2016), 91, pp. 982–1005.

Kunc, H.P. and Schmidt, R. (2019) The effects of anthropogenic noise on animals: A meta-analysis. Biology Letters.

Francis, C.D. et al. (2012) Noise pollution alters ecological services: enhanced pollination and disrupted seed dispersal. Proc. R. Soc. B: Biol. Sci. 279, 2727–2735 24

Swaddle, J.P. et al (2015) A framework to assess evolutionary responses to anthropogenic light and sound. Trends in Ecology and Evolution.

Shell Club – 60 Years and Counting

Article & photo by Frank Wiseman, Rio Grande Valley Chapter

Have you wondered what the names of those shells or sea beans are that you picked up on the beach? Did you know there is a local shell club that can help you find out?

Not surprisingly, many of our TMN members are also members of our local shell club. I refer you to the Port Isabel/South Padre Island Shell Club. The club officially began around 1960 with a small group of people, locals and others from out of state, who were interested in collecting shells and learning about them. They met at the old Jetties Café on Padre Island.

The club started with around 10 or 12 members and has continued as a club through the years, never having a large membership, but always with a faithful group of people who loved to collect and share their information about shells. In the beginning years, the members displayed their shells at yearly Shell Shows at the Cabana area on the Island, which was located just to the west of the present pavilions.

Our State Shell: the Lightning Whelk; specimens showing both a right and left opening.

The club organized officially with bylaws and officers. The Purpose of the club read as follows:

> *Section 1.* The purpose of the club is to promote shelling and related activities; to further the education and interests of the club members; to encourage conservation so that future generations can enjoy shelling; to demonstrate shelling techniques, etiquette and activities.
> *Section 2.* Dues will be determined by a vote of the membership.
> *Section 3.* No part of the dues or net income will be used as salary for any individual, officer or member of the club.

Since the 1970s, our meetings have been held at 2:00pm on the fourth Sunday of each month, unless otherwise designated at St. Andrew's Episcopal Church in Port Isabel on North Yturria Street. **However since March of 2021, we have held our monthly meetings via Zoom on the third Wednesday of the month at 6:30 to 7:00pm for social time and from 7:00 to 8:00pm for meeting time.** Our programs have always been presented by one of our members on a local Gulf of Mexico shell or some item related to the Gulf waters or the beaches' drift items, like sea beans, or other island drift.

Our meetings are led by our President and begin with introductions of new members and guests, announcements, show and tell, offer of refreshments, a program on shells or a related beach or island topic-- guest speakers are welcome-- ending with the door prize drawings. Our door prize tickets are sold at $1.00 each. Funds raised go to our annual February Luncheon Fund. This helps to defray club members' cost for their meal at a local restaurant.

We invite any TMN member to attend, realizing one hour of Advanced Training, since we are a partner of RGVCTMN. We also invite you to join our club as a member. Club dues are only $8.00 for a single member and $10.00 for a couple. There is no obligatory volunteer work or advanced training...just the fun of being with other shell collectors once a month to enjoy the camaraderie and shared shell information.

If you want to know the name of that shell or sea bean you recently picked up on the beach, this is the place to come and find out!

Our next program will be on September 18 on Barnacles presented by Anita Westervelt.

To join, please send an email to request a Zoom invite to Linda Butcher, President, at thetxbirdlady@netscape.net

“. . . Gold in the Morning Sun*”

Story and photos by Anita Westervelt, Rio Grande Valley Chapter

I noticed a number of volunteer morning glory vines growing under the shade of an old and much self-pruned mesquite tree. Most of the vine’s leaves were speckled with holes. Thinking I’d find caterpillars on the underside of the leaves, I turned several over but found nothing.

Holey morning glory leaves

Very close by, I’d been watering a two-year old stick, under advisement from several post-freeze nursery and landscaping articles. It’s the main trunk of what was left of a Royal Poinciana tree after the February freeze. Miraculously, in July, the tree responded to my confident and diligent ministrations and began shooting up new growth from the ground, around the base of the trunk.

On another day, after having noticed the holey morning glory leaves, I was checking on the Royal Poinciana when my eye caught a tiny speck of gold the size of a pin head on one of the leaflets. The speck appeared to be textured, like metallic gold lame fabric. I thought it might be a butterfly or moth egg.

Leaf beetle on Royal Poinciana leaflet

I captured a quick shot; before I could look closer, it flew off the leaflet and landed on a morning glory leaf. I took another shot but couldn’t seem to capture the shine. Without the sun directly on the bug, it didn’t shine, but the bug did quickly tire of the photo session and scarpered to parts unknown.

I enlarged the two photos and uploaded each to www.iNaturalist.org. The identification on the leaflet popped up as ***Deloyala fuliginosa***, which is a member of the **leaf eating family**, Chrysomelidae; a family that includes 35,000 species from 2,500 genera.

The other photo, which depicted the bug at a different angle on the morning glory leaf, came up as being in **Tribe Cassidini** (a tribe within the leaf beetle subfamily Cassidinae), "**a genus of tortoise beetles in the family Chrysomelidae,**" (leaf beetles).

Of those two possibilities, research showed that adults and larvae feed on plants in the morning glory family, Convolvulaceae, according to bugguide.net. Leaf beetles occur throughout the world but are concentrated in the tropics. In general, they are less than one-half inch long; there are about 2,000 species and subspecies in North America, north of Mexico. Many are brightly colored with striped, spotted or blotched patterns, and some are shiny gold, silver or other metallic colors. "There is a mind-boggling array of beetle species," according to www.mdc.mo.gov, a comprehensive conservation website, "and chrysomelids are just one of the large families of beetles." Leaf beetles are the second largest family among the plant-eating beetles, taking a backseat only to weevils.

Leaf beetle on Morning Glory vine

The adult leaf beetles eat leaves, flowers, and other plant parts. Although some eat a variety of plants, many species are limited to one type, such as plants in the morning glory family. Because of their preference for particular plants, some leaf beetles are used to control invasive weeds, thereby helping maintain natural ecosystems, according to information at the North American Insects & Spiders website.

As herbivores, leaf beetles transform plant nutrients into a form palatable to predators. Herbivorous insects pass plant-made nutrients up the food chain to animals that do not eat plants, such as rats, bats, lizards, frog, birds and a variety of invertebrates.

The voluntary morning glory vines in the area where I saw the gold bug have not yet bloomed this year; in the past they have been the red center morning glory, *Ipomoea amnicola*, an introduced species found in much of Mexico and South America and introduced in Arkansas, Missouri and Texas.

*This story is titled using lyrics written by Fred Hellerman and Marshall Barer from their song, "I'm Just a Country Boy."

The Effect of February's Freeze Continues

Article & photos by Robert Gaitan

I'm sure our neighbors are wondering why it has taken me so long to collect the palm fronds from our Bismarck palm. I now have a large pile at the end of our driveway, along with branches of huisache. Both had finally fallen after February's freeze. Even then, I made sure nothing had decided to use the branches as shelter.

Branches collected from Bismarck palm and huisache

Back in May, we were rewarded for leaving the remains of our cardboard palms intact with a baby mockingbird! While neighbor after neighbor had basically clear cut all "dead" plants, we knew nature could make use of what remained after the freeze.

Mockingbird fledgling

We still have our remains of our esperanza trees standing because we notice dragonflies, damselflies, and hummers like to perch there and scan their surroundings. Now as new growth is returning from its base, hummers and bumble bees are enjoying the new nectar.

Dead Esperanza branches provide perches

Palm tree sentinels in our backyard

But I'm sure people that drive by our house must wonder what we are doing with our other palm trees. While the Bismarck had clear signs of life at the top of its crown, our other palms were not so fortunate.

We have seen many birds land on these remains and either inspect them for a meal or use their vantage point to hunt for flying or crawling snacks. Though I am considering what to plant amongst these sentries, maybe some Washingtonians, we continue to let nature take its course.

It is interesting to see the slow collapse of palms as opposed to the drying of trees. One palm, not seen now, seemed to collapse upon itself. Its base crumbled the rest fell over. We let it lie where it fell and watched it decay over time. It served as a great hunting ground for birds, snakes, and frogs looking for ants, worms, or beetles.

Dead trees provide habitat for wildlife

I have been watching one of the palms begin to cave in. The sides have developed a couple of holes but there is no more top on the palm. The stress lines along the sides make me wonder if it too will fall over soon. I bet I could push it over if I wished. Maybe my neighbors wouldn't mind if I did.

Interestingly, I felt like I was being watched as I mowed around these palms. Could it be my neighbors wondering if I was finally going to take these monoliths down?

Living in a cul de sac with less than a handful of direct neighbors, it is easy to see if there is someone watching.

As I glanced around, no one was in sight. Could they be looking behind closed curtains? Were they hoping I might hit these palms with the mower and take it down?

By the way, our neighbors across the cul de sac, have only grass that they practically shave every few weeks. Their only plants are dandelions and other wildflowers blown over from our yard. There is only a brief moment of color in their yard before they mow it again.

But no, no one was watching...until I saw a glimpse of orange...coming from within the dead palm. Do you see it?

"Orange" you going to find me?

Orange bill of Whistling Duck gives away its hiding spot in the dead palm tree

Just the other day, a pair of Whistling Ducks sat on our fence and watched Barbara and I working in our backyard. I didn't think too much of it as we often get an entire flock visit us during the winter. However, we seldom see them during the rest of the year. Apparently this pair decided this old palm, for as long as it is meant to stand, was perfect for starting a family.

By the way, I installed two nice looking duck boxes in our backyard...apparently the boxes are not up to their standards!

The Scarlet Lady

Article by Frank Wiseman, Rio Grande Valley Chapter

When I was a kid living on the farm in the La Feria area, I always felt fortunate to come across this little red bug with black spots on its back. Yes, I'm talking about the ladybug. We were always told that this particular bug was a lucky bug.

After doing research later in life, I have learned that this luck was due to the fact that farmers considered it "bad luck" to kill one since they were so beneficial to crops. Indeed, a ladybug that lives from two to three years on average can consume up to 5,000 aphids in its lifetime. Although insects, such as the aphids and mites, are their main diet, they also eat fruits and vegetables. Ladybugs are found in many different habitats, including grasslands, forests, cities, suburbs, and along rivers.

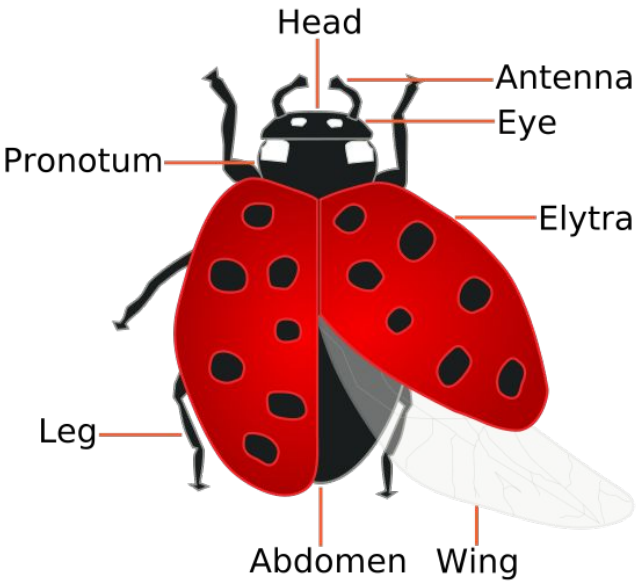
Seven-spot ladybugs (*Coccinella septempunctata*) eating aphids and mealy bug—photo by Zeynel Cebeci (Wikimedia Commons)

The ladybug belongs to the family of Coccinellidae. The name *cocinellids* is derived from the Latin word *coccineus* meaning "scarlet." The ladybug has many different names, depending on which country you happen to be in. A common name given to this beneficial bug is "ladybird"--in England—from the time when it was thought it resembled the red cloak worn by "Our Lady" in early paintings. The spots of the seven-spot ladybird (the most common in Europe) were said to symbolize her seven joys and seven sorrows. In England, when in very early times the ladybug would first appear in June, around the feast of important Christian missionary, St. Barnabas, the bug was often named "Bishop-Barnaby," "Barnabee," the "Bisho-that-burneth" and "Bishy bishy Barnaby." In Germany the Ladybug translates to Mary's beetle (Marienkafer), again with the religious connotation. Continuing in the religious vein, in France it's known as "God's animal" (la bete a bon Dieu).

I remember many times our TMN volunteers working in Ramsey Park in Harlingen would see a ladybug and call everyone over to observe. I guess we are fortunate to still see these among our vegetation. Count us lucky to have at least one of the 5,000 species of ladybugs. Ours is known as the "harlequin" which was introduced to America from Asia in 1916; it quickly spread and became the most common species of ladybug.

Asian or Harlequin Ladybug (*Harmonia axyridis*)--photo by Anita Westervelt

Most coccinellids have round to elliptical, dome-shaped bodies with six short legs. Depending on the species, they can have spots, stripes, or no markings at all. The seven-spot ones are red or orange with three spots on each side and one in the middle; they have a black head with white patches on each side. Some of the coccinellids are colored yellow, orange, or red with small black spots on their wing covers, with black legs, heads, and antennae. Of course, like all the critters in the animal world, there can be many different variations of these color patterns and numbers of spots. They are found all over the world from the countless species available.



Ladybug diagram by Persian Poet Gal (Wikimedia Commons)

Ladybug facts:

- Life span, two to three years. Spots vary from as many as 20 to none and some have stripes.
- A female ladybug will produce clusters of 20 to 50 eggs in the early spring and can lay as many as 1,000 eggs in her lifetime.
- Ladybug larvae are actually larger than their adult counterparts – some say they look like alligators.
- Ladybugs can eat up to approximately 5,000 aphids in their lifetime, allowing farmers to use them as controllers of crop-eating pests.
- If a ladybug is attacked by a predator, it will secrete a foul-smelling yellow liquid (which is actually its blood). This is usually all it takes for the predator to change its mind.

Lady bug larvae – photo by Diane Hall

- The ladybug's name was first coined in the Middle Ages when European farmers prayed to the Virgin Mary when pests began to destroy their crops. Ladybugs later came around and killed off the insects. The farmers, believing that they were an answer to their prayers, called them 'the beetle of Our Lady'.
- When in flight, a ladybug can beat its wings up to 85 times per second.
- Ladybugs will actually eat each other when food is scarce.
- Unlike many other insects, ladybugs hibernate during the winter.
- The color of a ladybug's spots fades as it ages.
- Ladybugs breathe through an opening located at the sides of their bodies.

A rhyme from Mark Twain's Tom Sawyer: Tom is addressing a ladybug.

Ladybug, Ladybug, fly away home.
Your house is on fire, your children's alone

I hope you are fortunate to find one of these ladybugs as you venture out into your backyard or to the other wild places you visit. Consider it a stroke of LUCK!

Ladybug species – photo by Anita Westervelt

What lurks in the garden in the dark of night?

Story and photos by Anita Westervelt, Rio Grande Valley Chapter

I'm always delighted when I see a new bug in the garden and try for an identification via www.iNaturalist.org. Instead of leaving it to discovery, I keep a black light and moth sheet set up during months when night temperatures are above 70 degrees Fahrenheit. My predawn routine is to check what's been drawn to the sheet during the night. Beetles of all size, shape and color frequent the moth sheet. Once identified, I research to see if they are beneficial or destructive. Three interesting beetles are described below.

Banded cucumber beetles, *Diabrotica balteata*. The yellow-striped green, colorful adults are 1/5 to ¼ inch long; head, antennae and leg segments are reddish brown.

Detrimental pest. They feed on leaves and flower parts. They are currently found in the southern states from California to Florida and North Carolina.

These pests attack cucumbers, squash, melons, pumpkins and other members of the gourd family. They also feed on gourd, amaranth, crownbeard (frostweed), silverleaf nightshade and mulberry, according to extensionentomology.tamu.edu. They also carry and spread a disease called bacterial wilt.

Adult females lay eggs in cracks in the soil in clusters of about 100 eggs each and can produce two to 15 egg clusters -- up to 850 eggs per female; they can produce six to seven generations per year.

Larvae feed below ground on plant crowns and roots. Handpicking pests from plants is an early control. Foliar insecticides are sometimes needed to control adult beetles.

Banded cucumber beetles (*Diabrotica balteata)*

~ ~ ~

Bombardier beetles, genus *Brachinus* -- If you're not familiar with these beetles, this may be hard to believe: According to a National Wildlife Federation site, (nwf.org) these bugs are remarkable because of their ability to shoot a boiling, corrosive substance at a predator through their abdominal tip; the tip can be rotated 270 degrees -- for better accuracy!

False bombardier beetles, genus *Galerita* (pictured below) -- Both bombardier and false bombardier beetles are members of the ground beetle family, Carabidae. The false bombardier beetles are a tamer version of their fierce cousins. Their chemical defenses are not the very hot, explosive type as the *Brachinus*. Still, *Galerita's* spray is noxious to vertebrate and invertebrate pursuers and probably good enough to dissuade a frog or toad, according to bugguide.net.

Not a threat, except to other insects and caterpillars.

Bombardier beetles have red heads, are usually less than an inch long, hunt at night and eat mostly small insects. They are found in North and South America, Europe, Africa and Australia, in temperate woodlands and grasslands.

False bombardier beetles have black heads, are nearly one inch in length, can be active at night and during the day and eat other insects and caterpillars. They are found in almost all continents except Antarctica, in woodlands, backyards and moist areas.

~ ~ ~

Giant water scavenger beetle, *Hydrophilus triangularis*, is generally identified by its body shape -- to a car buff that would be like a 1940s Chevy Fleetline Torpedo Lowrider -- this beetle is the largest aquatic-dwelling beetle in the United States. Its characteristic elongated and narrow body is uncommon to other species.

Beneficial insect, not a pest, according to Texasinsects.tamu.edu. These beetles are found in Mexico, Canada, and the majority of continental U.S. states. They are glossy black and smooth bodied and 1.6 inches long.

I wasn't expecting the critter to buzz around my ankles. Miraculously, I caught the action -- and quickly stepped away. Two days later, at 4:15 a.m., another giant water scavenger beetle crawled along the same section of sidewalk near the moth sheet. It flexed its wings and hopped onto the bottom of the sheet frame, crawled to the top, then onto the window screen where it eventually fell off, landing on the sidewalk with a decided clatter. Another one crept from under the bottom of the moth sheet frame; they crawled toward each other, collided and instantly went in opposite directions.

Considered ambush predators, *H. triangularis* are usually found in ponds, shallow lakes, stagnant and slow waters but preferring deeper water such as weedy ponds and deep drainage ditches. They prey on aquatic insects, snails, amphibians, fish, frogs and other predatory insects. They reduce mosquito populations in fresh water. Adults are general feeders and also feed on decaying organic matter and detritus. They can overwinter on land, under leaf litter. Adults may be found at lights.

Milestones & awards for June 2021, July 2021, and August 2021

Congratulations!

Newly Certified Texas Master Naturalists

David Batot ‘21

WELL DONE ALL!

100 Hours Milestones

Mimi Romero ‘21

250 Hours Milestones

Susan Upton ‘21

500 Hours Milestones

Richard Loya Fall ‘19

1000 Hours Milestones

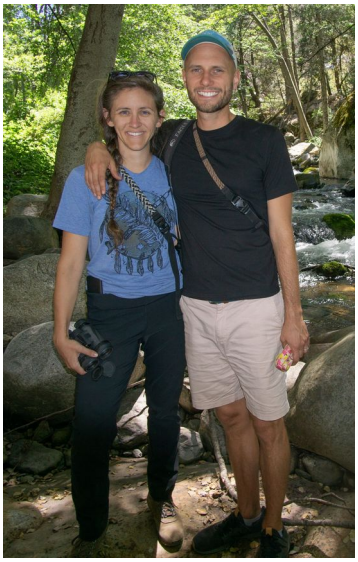
Paul Cardile ‘14

Welcome!

The Rio Grande Valley Chapter would like to welcome back Sharon Horace (Class of 2009) and Richard Loya (Class of 2019). In addition, we welcome Andrew and Audrey Hicks who are transferring their membership from the Rio Brazos Chapter to the Rio Grande Valley Chapter.

Sharon Horace

Richard Loya



Audrey & Andrew Hicks

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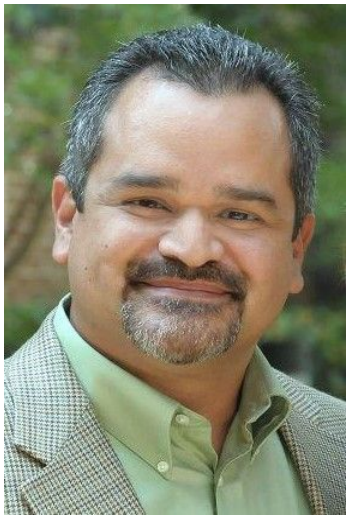
Texas Master Naturalist
2021 Annual Meeting
October 21st-24th

Have you registered yet for the TMN Annual Meeting? Now's your chance to expand your knowledge at this year's HYBRID event! You can attend **on-line or in-person** at the Dallas/Fort Worth Airport Marriott in Irving, Texas. Don't delay, both the **standard registration and early virtual registration close October 1**. Late virtual only registration is open October 2 through October 24.

For more information and to register: https://txmn.tamu.edu/2021-annual-meeting/
Limited scholarships for RGVC members; contact Teresa: purplebirder@outlook.com

Contributors to this issue of The Chachalaca



Robert Gaitan

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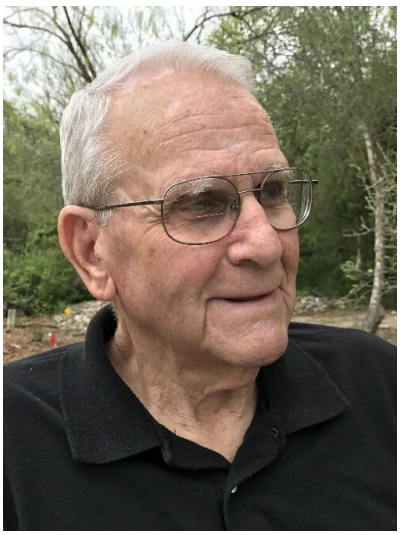

Frank Wiseman

RGVC Leadership Team 2021

Officers

President	Roberto Gaitan
1st Vice President	Tamie Bulow
2nd Vice President	Barbara Peet
Secretary	Carolyn Cardile
Treasurer	Maria Reyna-Gomez

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New Class	Barbara Peet
Communications	Diane Hall
Advanced Training	Teresa Du Bois
Volunteer Service	Alejandra Gomez
New Class Rep	Susan Upton
At Large: Winter Texans	Carolyn Woughter

Committees

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Training	Robin Gelston (chair), Pam Bradley, Barbara Peterson, Emma Gonzales
Volunteer Service	Tira Wilmoth
Communication	Diane Hall, Chet Mink, Tamie Bulow, Robert Gaitan

Advisors

Texas AgriLife	Tony Reisinger
Texas Parks & Wildlife	Javier de Leon

Can you help? We can always use additional help on our committees!

Please contact us at riograndevalleychapter.tmn@gmail.com

RGV Master Naturalists This chapter is an affiliate of the Texas Master Naturalist Program jointly sponsored by Texas AgriLife and the Texas Parks & Wildlife Department.