



HIGHLAND LAKES CHAPTER

MISSION

The Texas Master Naturalist program is a natural resource-based volunteer training and development program sponsored statewide by Texas 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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THE MYSTERIOUS PIPEVINE

By Joan Mukherjee

Pipevine swallowtails are the most numerous of butterflies at Cedar Stump Ranch. Even during a drought when there are no other butterflies, there will be a pipevine swallowtail flitting about. They are called pipevine swallowtails because pipevine is their larval food source. Who has ever seen a wild pipevine? Where is the pipevine to feed all those hungry caterpillars? There should be pipevine all over the fields to judge by the number of butterflies. Have you seen it? Or do they have an alternate food source?

My introduction to native pipevine came in 1999, my first year living at Cedar Stump Ranch. I moved into a new house surrounded by bare hard-packed soil and construction debris. The clay and rock mix they used around the foundation was especially packed and hard. I brought in soil where I wanted vegetation to be planted the following spring and crushed granite for walks and drive. That first winter a sprig of



green appeared next to the backdoor step in the hard-packed path. That spot never gets much rain because it is protected by four foot eaves, still the plant grew, but never taller than six inches. Although it appeared to be some sort of grass I left it because it was the only green around. As spring came I began to get interested in plants---there seemed to be so many different kinds. I started photographing and trying to identify them. One day I noticed that the "grass" at the back step had a bloom. The "grass" was only a few inches high so the flower was laying on the ground. It was a fantastic flower, about 6 inches long with a long pointed top and a very deep purple-spotted throat. It took a few weeks until the bloom turned into a green, ribbed, pecan-shaped, inch-long

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Nature Center News by Billy Hutson

The temp this morning was 39 degrees and it got up to 66 at 3pm.

The nature center recently benefited from two donations: (\$600 for fishing rods for kids) from HLMN (and I thank Fredi and the donation committee), and an unknown amount (not yet calculated) from RPR for misc. seed money because of the efforts of the several who volunteered for the Spartan competition on the weekend of May 18, 19, and 20th. There is no way that I can't acknowledge the people that contributed to this event that helped RPR and resulted in their donation for the nature center cause. I want to thank Terri Whaley, Betty Cruikshank and husband, Marjorie Dearmont, Cassandra Hutson, Richard Guidry, Helen and David Smith, Judy Caramanica, Sherry Bixler, Eva Hobbs and Julie Davis. If I forgot someone, please let me know. Special thanks to the shuttle drivers that worked two or three shifts (4 hours each shift) to make sure people made it to and from the event. They

are Jerry Stacy, Ed Myatt, Phil Wyde, Richard Guidry, Ralph Herter, and George Brugnoli. Spartan has not only signed up for this event next year but also wants to do more at RPR. This was the biggest event Spartan (a worldwide organization) has ever done and never in the same place and we helped make it happen. Thanks to all those who contributed their time even when it didn't count for HLMN volunteer hrs.

Our hosted trial family event for the Marble Falls Rotary club went well and they want to contribute to the nature center in some way and we have been put on their list for contributions for their soon to come fiscal year. It was small as a trial but we learned from it and plan to do more family events in the future. We all enjoyed a BBQ lunch while the adults toured the ranch and the kids fished and swam. It proved way too hot for an interpretive hike.

I also gave a talk to the Burnet Rotary Club and we finished taking apart the silo that I contributed to the NC. Putting it back together may end up in the dictionary under the definition of Humpty Dumpty soon. We'll see!!

It was a herculean effort that encompassed 61 hours of work from five different people, three of which were not MN's. The community is getting involved! I want to thank George Brugnoli, Bob Whaley, Ron Adwers, and Ralph Herter for the 60 plus hours of work involved.

Ed Myatt, George Brugnoli and I traveled to Vanderpool to visit a children's camp that uses silos as the dormitories. They were really fascinating and we got plenty of ideas. We got a great reception even though they were busy opening and training counselors.

The decision for the science center at RPR should be reached before the next news letter as a final meeting was held to decide the location and it went well.

We recently had a board meeting of the FOUHLNC and the minutes have been sent to everyone.

Don't forget to sign up for the NC yahoo communication site if you haven't done so already.

Stay cool, Billy !!!!!!!!

**NO JULY HLMN
MEETING!**

Pipevine

(Continued from page 1)



seedpod. By this time I realized this was no grass, but a plant with long narrow leaves that looked like grass. Chuck Sexton identified it for me as a pipevine, *Aristolochia longiflora*, or swan flower.

A. longiflora has been reported as a plant found in south Texas near the Rio Grande, living in hard packed sandy soils in full sun or shade (Correll and Johnston). That hardiness explains why it can thrive where it grows at my doorstep even in drought. While *A. longiflora* is not reported on the Edwards Plateau, there is a pipevine, *A. serpentaria*, which is found on the Edwards Plateau. If anyone knows where one can be found, I sure would like to see it.

Occasionally I have found *A. longiflora* growing in my flower beds where I always leave it; it is so nondescript no one even notices that it is there. However I have never been able to find it growing in the fields, even though it must be there. Recently I found by closely observing butterflies near or on the ground laying eggs, if one looks carefully, there is a leaf or two of pipevine, not enough to feed a caterpillar to full size. One reference suggests that butterflies locate the plant by the shape of the leaf. It is true that the butterflies flit quickly from slender leaf to slender leaf. I think they are smelling each slender leaf to verify it is pipevine. It has been reported that *A. longiflora* has an aromatic root so plant most likely has a distinctive odor. Insects are very sensitive to odor.

Pipevines are cultivated for their unusual flowers. The flowers are pollinated by insects they attract who can crawl into the long tube. Pipevines contain medically active alkaloids, including aristolochic acid. *Aristolochia* species were the source of the active ingredient in snakeoil sold at medicine shows. They have also been used for treating snakebite, childbirth and for arrow poison. The alkaloids eaten by the caterpillars make the butterfly unpalatable to birds. Humans should **NOT** ingest this plant. Some symptoms are respiratory paralysis, irritation of the gastrointestinal tract and kidneys followed by coma and death. *A. longiflora* is a plant so small and nondescript I don't think it poses any threat to humans.



2012 HIGHLAND LAKES TEXAS MASTER NATURALIST CLASS

Photos by Sheryl Smith-Rodgers and Mike Childers

All twenty 2012 HLMN Class enrollees completed the coursework to graduate. Congratulations to (l to r): Edward Bergin, Wayne Moldovan, Pat Campbell, Kay Zagst, Ed (again?), Dan Nutter, Sheryl Smith-Rodgers, Pete Smith, Deborah Moroney, Barbara Booth, Eva Hobbs, Janis Koby, Becky Breazeale, Joy Ellen Collins, Fred Zagst, Ken Gray, Celia Escamilla, , M. J. Hansen, Judy Caramanica, Vicki Myatt, Tom Ashcroft, and the Ham.



Additionally, by the end of the class schedule, 7 completed the additional 40 hours of volunteer work and 8 hours of Advanced Training to qualify as certified Texas Master Naturalists for 2012. Pictured l to r are: Sammye Childers - 2012 Class Coordinator, Edward Bergin, Joy Ellen Collins, Eva Hobbs, Deborah Maroney, Vicki Myatt, and Sheryl Smith-Rodgers. Not Pictured is Celia Escamilla.



THE *MYIARCHUS* FLYCATCHERS AND THE SUPERSPECIES LIST

by Sherry Bixler



Great Crested Flycatcher (*Myiarchus crinitus*)

There are six *Myiarchus* flycatcher species and three of them can be found in our area: Ash-throated Flycatcher (*Myiarchus cinerascens*), Brown-crested Flycatcher (*Myiarchus tyrannulus*) and Great Crested Flycatcher (*Myiarchus crinitus*). Despite its name, the Great Crested Flycatcher is smaller, but all are between 8 and 8 ½ inches. The Brown-crested Flycatcher occurs in both South Texas and southern Arizona but the Texas birds are smaller than the Arizona birds and using size to identify any of the three species is very difficult.

These species are closely matched in both size and coloration with olive-brown backs, gray throats, yellow bellies and rust on both wings and tail. Brown-crested Flycatchers are rare in the hill country as we are on the north edge of their range. Ash-throated Flycatchers usually pass through during migration, although range maps show that a few may breed here. The Great Crested Flycatcher is our common summer resident and has a darker gray throat with more yellow showing higher on the chest. Its call is a distinctive Hweep although it has other songs.

The other three *Myiarchus* flycatchers are the La Sagra's (seen rarely in Florida), the Nuttings (southern Arizona and southern California) and the Dusky-

capped (southern Arizona and far west Texas).

All adult *Myiarchus* flycatchers lean forward and bob their tails when excited. All are found in a wide range of habitats although they nest in old tree cavities. They generally lay four to five eggs and the young fledge about five weeks after eggs are laid.

The three species in our area are listed as Superspecies by ornithologists who have studied species differentiation. There are 118 North American birds on the Superspecies list, in 53 pairings. Most pairings include two species but a few have three and one has six.

Superspecies are species that evolved or diverged into separate species in relatively recent times and have remained separated geographically. Good examples are the Eastern and Western Screech-Owls. Many songbirds, waterfowl and shorebirds are on the list.

In some cases ornithologists differ on splitting or combining two species but DNA testing and other advanced scientific procedures may simplify the decisions. There is also a growing data base in regard to bird studies done in the bird's actual habitat. For now, the term Superspecies reminds us that some birds have virtual twins that may or may not look the same.

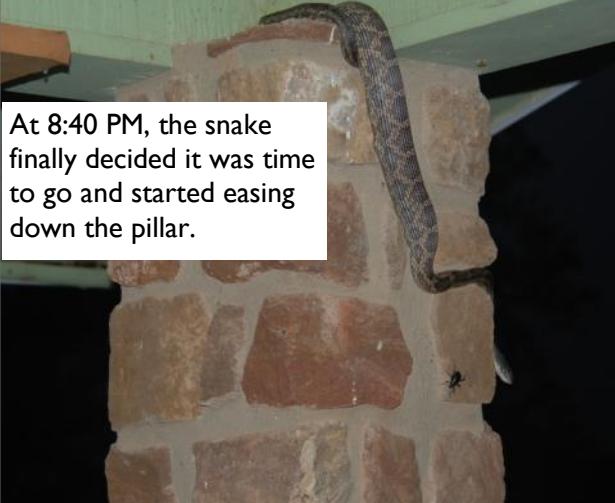
ANOTHER RAT SNAKE WIN

Rat snake 5
Barn swallows 0

Arriving home about 2 PM on May 15, I noticed a Rat snake resting on a small shelf on top of my front porch pillar. It's easy to see that it had eaten recently.



The snake had to climb up a stone pillar and then slither another four feet along a small lip to get to the five baby birds.

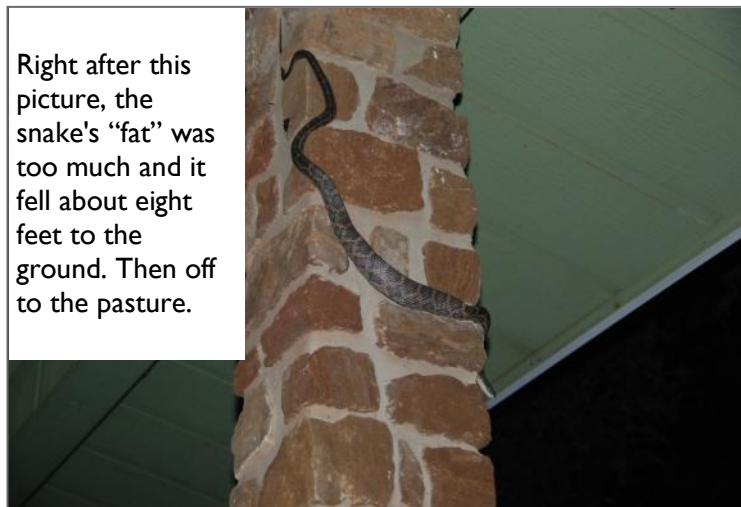


At 8:40 PM, the snake finally decided it was time to go and started easing down the pillar.



It's decent was slow and deliberate.

Right after this picture, the snake's "fat" was too much and it fell about eight feet to the ground. Then off to the pasture.



The Barn swallows have decided to try again. On the 5th of June, there were five new eggs in the nest.

JUNE MEETING

The program on June 6 at the Kingsland Library featured HLMN members Sherry Bixler & Marvin Bloomquist who presented an informative and enjoyable program on dragonflies and Damselflies. In appreciation, they were presented with gifts of beautiful dragonfly yard art made from dinnerware



NO JULY HLMN MEETING!

WORLD'S SMALLEST BIRDS

- The smallest hummingbird is the Cuban bee which is $2\frac{1}{4}$ inches long and weighs about 1.95 grams or less than the weight of a penny.
- The average North American hummingbird is $3\frac{1}{2}$ inches long and weighs 3.5 grams to 5 grams or about the weight of 3 paper clips.
- Its wings beat so fast humans can't see them – 78 times per second. The larger the bird, the slower it beats its wings.
- Eggs are the size of coffee beans. Mothers always lay two.
- Nests are made of spider webs. They are very little cottony type cups.
- Females are single mothers while males are rogues, impregnating as many females as they can.
- Its heart beats 500 times a minute but if agitated can beat 1,200 times a minute.
- Known as Nature's Helicopter because they can hover and fly forward, backward, to the left, and to the right and upside down. Other birds fly forward only.

Article clipped from an OLD Austin American Statesman ...year unknown, author unknown

Submitted by Lyn Davis

WHAT DO YOU DO WITH YOUR GLASS CONTAINERS, BOTTLES AND JARS?

by Lyn Davis

As HLMN Conservationists, it is our obligation to do what is right for our environment....so let's go GREEN. Not pink or blue as some of you would like to think you look best in BUT Green! The part that we are dealing with today is the R in Green for RECYCLING.

Before the June meeting, an email was sent out to notify you as a HLMN to bring glass of any kind or shape to the meeting and we would load it up and take it to Johnson City where it is ground up and tumbled. (Bertram no longer takes glass to recycle). Helen and I were able to layer the boxes/containers of bottles to get the maximum use of the remaining space in the car. More room for our (Lyn and Helen) empties which will remain unknown!!!

The Yukon was loaded thanks to many of you especially Marv and Sherry who had saved their beer and wine bottles up for at least a year. As you can see from the picture, our HLMN is a good time party central, party groupthe amount of beer and wine, and liquor bottles was quite "staggering".

Just an FYI: there are other things that come in glass beside adult beverages....mayo, pickles, jam, soups, etc....so save it all in a bin or box. Helen and I challenge someone to collect more recyclable glass than we did this month and take it to the place in Johnson City on Hwy 281. This would be for the August meeting – anyone up to the challenge. Let's get a volunteer list going for the "monthly hauler" of glass. Cheers!



WALKING STICKS (*PHASMATODEA*)

By Phil Wyde



Fig. 1 Walking stick (from www.Flowers.vg)

All kinds of insects fascinate me, but I have found walking sticks to be particularly captivating. Unfortunately, up to this past month I have – in my entire life -- only seen a handful. However, in the past 30 days I have racked up a number of personal walking stick records: 1) most walking stick sightings (more than a dozen); 2) largest walking stick seen (about 8 inches long); 3) most colorful walking stick seen (forest green and brown); and 4) a pair of walking sticks mating! (My life is now complete!) Throw in the fact that Billy Hutson has selected the walking stick as the emblem of the Upper Highland Lakes Nature Center (UHLNC) and what else could I write about this month.

I would like to start out with some taxonomic facts and generalities about walking sticks. After that almost everything that I will tell you about these intriguing creatures will be in the realm of the improbable, implausible and incredible. (I wonder if Billy knew this when he chose them for the UHLNC logo?)

Walking sticks belong to the Kingdom, *Animalia*; Phylum, *Arthropoda*; Class, *Insecta*; and insect Order, *Phasmatodea*. In older literature you will see that walking sticks belong in the insect Order, *Phasmida*. However, the latter name is no longer valid. It is interesting that both names, *Phasmatodea*, and *Phasmida*, derive from the ancient Greek word, phasma, which means an apparition or phantom (<http://en.wikipedia.org/wiki/Phasmatodea>). It is easy to see why this name was selected. Walking sticks are the quintessential example of camouflage and even when they are moving, you are not sure that you are seeing something alive or an apparition. There are 4 families of walking sticks. They include the common walking sticks, the winged walking sticks, the striped walking sticks and the group of smaller, thicker, flatter-bodied walking sticks called Timemas. More than 3000 species of walking sticks have been described and more probably exist.

Walking sticks are insects and thus like all insects they have six legs and an exoskeleton made of chitin. They also have three distinct body parts: a head, a thorax and an abdomen. The head contains the brain and mouth parts, the thorax serves as an attachment point for the animal's legs and wings (if it has any) and the abdomen contains the animal's digestive and reproductive tracts. Spiracles (special openings) are located throughout the latter two body segments. It is through these that walking sticks (and all insects) breathe. They also have two compound eyes that contain multiple lenses and photosensitive cells that can differentiate images, color and motion, and two antennae that can sense odors, detect temperature variations and investigate their physical surroundings (<http://en.wikipedia.org/-/wiki/Phasmatodea>). .

Walking sticks are found all over the warmer areas of the world, and are especially abundant in Southeast Asia, South America and Australia. However, many species also can be found in the United States. Interestingly, walking stick species often have preferred plants that they like to frequent. For instance, the western short-horned walking stick is usually found among globe mallow, burroweed and deerweed. Similarly, the giant walking stick of Texas is often found in river bottoms on oaks and grapevines. Infestations of walking sticks can be so bad that they may denude a food plant. Luckily, since most walking stick species do not have wings such devastations are limited in area (<http://en.wikipedia.org/-/wiki/Phasmatodea>). .

Walking sticks can vary greatly in size, with mature adult females ranging from one to greater than 22 inches in length. (Most are between 1 to 12 inches long which is still impressive.) The record is a female walking stick of the genus *Phobaeticus*. She was 22.3 inches long making her the largest insect ever measured. Females of the species *Heteropteryx dilatata* are among the heaviest of insects, weighing in excess of 65 grams ("Phasmids: An Introduction to the Stick Insects and Leaf Insects". <http://phasmid-study-group.org/content/Phasmids-Introduction-Stick-Insects-and-Leaf-Insects>."). Male walking sticks are considerably smaller than the females often being 1/3 to 1/5 the size of the females. Thus walking sticks are a very good example of a species that has sexual dimorphism (marked differences in the sexes).

There can be marked variation in the characteristics of different *Phasmatodea* species. Some have cylindrical stick-like body shapes, while others have flattened leaf-like bodies. Some species can fly, but most are wingless or have reduced wings, and thus cannot.

A few species can change their pigmentation to match their environment. However, most *Phasmatodea* species cannot. As indicated above, the eyes of walking sticks like many insects are compound and very sensitive to light and movement. Their mouthparts stick out from their heads and their legs are usually long and slender (see Fig. 1). All species have long slender antennae, sometime as long, or longer, than the length of the body (Hoell, H.V., Doyen, J.T. and Purcell, A.H. 1998. *Introduction to Insect Biology and Diversity*, 2nd ed., Oxford Univ. Press. Pp. 398-399).

As you might suspect from an insect that is so slow and generally unable to fly, *Phasmatodea* species have developed a number of defensive mechanisms to protect themselves from attacks by predators (Bedford, G.O. 1978. *Biology and Ecology of the Phasmatodea*, Annual Review Entomology 23: 125-149). I have already alluded to the most obvious, camouflage. However, some species go the extra mile in their efforts to avoid detection. For example some species of *Phasmatodea* can change color to better match their surroundings and some become covered in outgrowths of mossy or lichenous outgrowths that add to their disguise. A number of walking sticks have adapted a rocking side to side motion. This is thought to be an attempt by these insects to mimic the movement of leaves or twig swaying in the wind. Another means that stick insects try to avoid predation is by feigning death (thanatosis). They can maintain this motionless state for very long periods of time. As an additional protective measure most species feed at night when their camouflage is particularly effective and detection by a predator is lower. For your own information – and in case you ever want to impress a Harvard or University of Texas biologist – the evolution or adaptation of animals to blend in with its natural habitat to avoid potential predators is called "crypsis" (<http://www.desertusa.com/animals/walking-stick.html>).

Phasmatodea have other defensive measures. Billy Hutson told me about one and I have to admit, I was very skeptical and mentally put this in a place in my mind where I put most of his fish stories. He said that walking sticks could protect themselves by emitting a foul smelling substance from their abdomen. To my surprise, it turns out that this time Billy was not stretching the truth. A number of *Phasmatodea* species are equipped with a pair of glands at the anterior (forward) portion of their prothorax that enable them to release defensive chemical secretions that stink and may also cause a stinging, burning sensation in the eyes and mouth of a predators (Dossey, A. 2010. "Insects

and their chemical weaponry: New potential for drug discovery. Natural Product Reports (Royal Society of Chemistry) 27:1737-1757). As if this were not enough, walking sticks can also regurgitate equally unpleasant fluids through their mouths. But wait, there is more! If grabbed by a leg, they can give it up (the leg can be regenerated within weeks). Some walking stick species that have wings behave in a very un-walking stick-like manner and when threatened act aggressively and try to startle their predator by suddenly flipping open their wings to scare the attacker (<http://www.desertusa.com/-animals/walking-stick.html>). (This is un-walking stick like because walking sticks generally are the antithesis of aggressive.) Others resort to mimicry and curve their abdomens up when attacked, perhaps in an effort to appear like a scorpion.

I think that you will not be surprised to learn that the sex lives and life cycles of *Phasmatodea* are also remarkable. When mating, the male and female walking sticks may remain coupled for hours, days or even weeks. One walking stick species in India, *Necroscia sparaxes*, has been noted to stay attached for periods up to 79 days at a time. Lucky for the female, because the male is so much smaller, it does not prevent her from moving about. Regardless, after mating the female deposits her eggs through one of three methods: 1) she can simply flick her eggs to the ground by moving her ovipositor or entire abdomen; 2) she can bury her eggs in small depressions in the soil; or 3) she can stick the eggs to a substrate (usually a stem or leaf of the plant that she is on) (Bedford, G.O. 1978. Biology and Ecology of the Phasmatodea, Annual Review Entomology 23: 125-149). A single female can lay between 100 to 1,200 eggs after mating, depending on the species. Get this. Most species of *Phasmatodea* are parthenogenic, meaning that they can lay eggs without needing to mate with males to produce offspring. However, some parthenogenic species retain the ability to mate and are bisexual depending on the presence and abundance of males. (In general, only 1 in a thousand walking sticks are males.) Eggs from virgin mothers are entirely female and exact copies of their mothers. (O.K. Master Naturalists, what are the advantages and disadvantages of parthenogenesis? Yes, Cindy Sterling, one is that it is much less fun.)

Phasmatodea eggs resemble seeds in shape and size, and have hard shells. They have a lid-like structure at one end called an operculum. It is through this structure that the nymph emerges during hatching. The hatching period varies from 13 to 70 days (the average being 20 to 30 days.) Some species, particularly those

from temperate areas undergo diapause where development is delayed during the winter months and hatching does not occur until the following spring (Bedford, G.O. 1978. Biology and Ecology of the *Phasmatodea*, Annual Review Entomology 23: 125-149).

The *Phasmatodea* life cycle consists of the nymphs developing through a series of instar states. If the nymph is caught in the shed casement and cannot free itself, it will die. Once out, they will eat the shed skin. Adulthood is reached for most species after several months and many molts. The lifespan of *Phasmatodea* varies by species, but ranges from a few months to up to two years for some tropical varieties. Walking sticks kept in captivity generally live much longer than those that live in the wild.

Phasmatodea are herbivorous, feeding mostly on the leaves of their host trees and shrubs. As indicated above, they are recognized defoliators and can be injurious to forest and shade trees. In heavy outbreaks, entire stands of trees can be completely ravaged. Continuous defoliation over several years often results in the death of the tree. Fortunately for control efforts, because the insects usually cannot fly, infestations are typically contained to a radius of a few hundred yards. Nevertheless, the damage incurred to parks in the region is often costly. Birds and parasitic wasps such as the cleptid wasp *Myrmecomimeis* are natural enemies of *Phasmatodea* and help keep walking stick populations in control.

One interesting fact that I have not pointed out is that walking sticks have suction cups and claws on their feet that enable them to walk up smooth vertical surfaces and even upside down.

Before ending this article, I would like to say a few things about praying mantises since I think that a number of people confuse walking sticks and praying mantises. The two species are closely related in the sense that both sticks and mantises belong to the Kingdom, *Animalia*; Phylum, *Arthropoda*; and Class, *Insecta*. However mantises do NOT belong to the insect Order, *Phasmatodea*. They belong to the insect Order, *Mantodea* (<http://en.wikipedia.org/wiki/mantis>). MOST IMPORTANTLY, THE LIFE STYLES OF PRAYING MANTISES AND WALKING STICKS ARE VERY DIFFERENT! WALKING STICKS ARE STRICTLY HERBACIOUS, WHILE PRAYING MANTISES ARE EXCLUSIVELY PREDATORY AND ONLY EAT LIVING ANIMALS. Two other ways that praying mantises differ from walking sticks is that the former have spiked forelegs and remarkably flexible heads. (Their heads can turn up to 300 degrees; see Fig. 2). Both of these traits



Figure 2. Praying mantis (www.nationalgeographic.com/animals/bugs/praying-mantis/)

are adaptations for predation. As you read above, the legs of walking sticks are not spiked and are very thin. Moreover, the heads of walking sticks are not very flexible. You do not need spiked legs and flexible head to eat leaves.

It should be noted that mantises also use camouflage (see Fig. 2). Of course this is useful in protecting them from their predators. However, the camouflage is equally useful to the mantis in ambushing its prey – the major way that they get food. Here is something that I did not know, some ground and bark species of praying mantises pursue their prey as well as ambush them ([http://en.wikipedia.org/-wiki/mantis](http://en.wikipedia.org/wiki/mantis)). Regardless, once caught the prey are held securely with grasping, spiked forelegs.

Of course most of you are interested in the cannibalism that praying mantises engage in, and which most frequently happens during mating season. Of course you all know that when it occurs, it is the female that eats the male during, or after, mating. It is thought that this is done to provide sustenance for the soon to be mother and developing young. Also there

is evidence that the removal of the head once mating has begun may increase “copulatory movement” and enhance fertilization. However, there is some thought that the cannibalistic behavior may not occur as often in nature as occurs under laboratory conditions (<http://en.wikipedia.org/wiki/mantis>). Regardless, those of you that thought while watching the walking sticks mate at the Education Building at the Hatchery that walking sticks eat their mates – THEY DO NOT! You were thinking of praying mantises.

Interestingly, praying mantises will eat their victims alive starting almost anywhere on the body. However, if the prey resists, they will eat its head first, and then eat the rest of the prey at their leisure. Unlike some exoskeleton predators, the praying mantis does not suck the fluids out of its victim’s body, but chews it.

There is one more “fallacy” about praying mantises to dispel. That is that mantises are very beneficial because they eat destructive insects. This is only partially true since these voracious predators eat neutral as well as beneficial insects.

GALLERY

by Jerry Stone

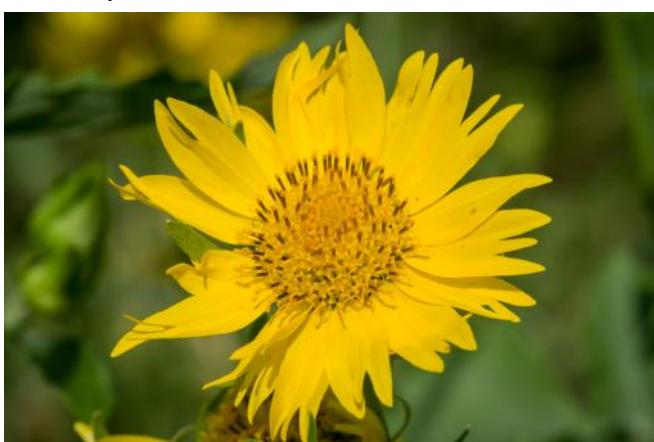


Photo of Cowpen Daisy (*Verbesina encelioides*) taken in Horseshoe Bay on 5/20/12.



Photo of katydid, honey bee and others on a White Prickly Poppy (*Argemone albiflora*). Photo taken at The Trails of Horseshoe Bay on 5/18/12.



Violet-purple Silver-leaf Nightshade (*Solanum elaeagnifolium*). It is more commonly found in a light blue color. You can clearly see the 5 banana-like stamens that surround the pistil. The flower has 5 petal-like lobes that usually curve back as in this example. Radiating from the base of the stamens is a yellow star. Photo was taken 6/1/12 in Horseshoe Bay.

GALLERY



This photo of a damselfly perched on a unopened bud of Golden-wave (*Coreopsis basalis*) was taken on taken at Inks Lake State Park on the Valley Spring Trail on 5/26/12.



Photo of Fly and Day Flower (*Commelina erecta*) taken at Inks Lake State Park Valley Spring Trail on 5/26/12.



Photo of Malta Star-thistle (*Centaurea melitensis*) taken in Horseshoe Bay on 5/21/12. According to Enquist's book, this plant was introduced from Europe and is rapidly becoming a pest in our area. It certainly is in my area!



Lindheimer's Senna (*cassia lindheimeri*) taken in Horseshoe Bay on 5/21/12. Enquist's book indicates that this plant is not supposed to bloom till September. It was certainly blooming in May. Some purple horsemint in the background provided an unusual color combination.



Photo of Texas Star or Lindheimer Daisy (*Lindheimera texana*) fruit (achenes). Only the ray flowers produce fruit and there is only one fruit per ray flower, resulting in the five fruits you see here. These fruits will fall to the ground (once all of the fruits on the plant have matured, the plant will die) and germinate in the Fall. Photo taken at the Trails of Horseshoe Bay on 5/18.

GALLERY

by Jerry Stone



Photo of a Collared Lizard (*Crotaphytus collaris*) taken at Inks Lake State Park Valley Spring Trail on 5/26/12



Photo of Palafoxia (*Palafoxia callosa*) taken at Inks Dam National Fish Hatchery on 5/26/12.



Texas Greater Earless Lizard (*Cophosaurus texanus*) taken at Inks Lake State Park Valley Spring Trail on 5/26/12. Note in the second picture that this species runs with its tail curled over its back, displaying the characteristic black bands



Photo is a Common buckeye (*Junonia coenia*) butterfly taken at Inks Lake State Park Green Trail on 6/3/12.

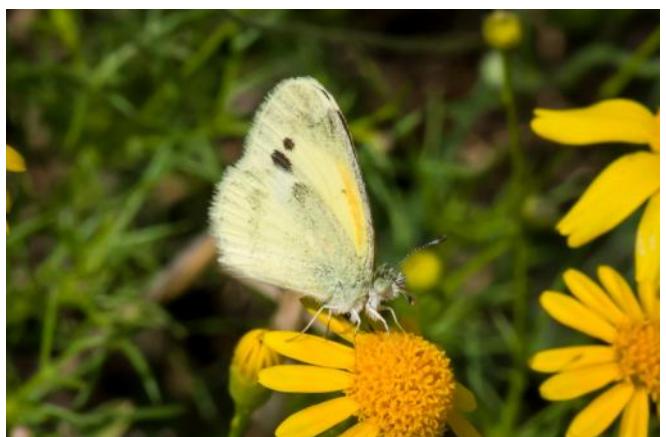


Photo of a Dainty Sulphur butterfly (*Nathalis io*) on a Slender-leaf Hymenoxys (*Hymenoxys linearifolia*). It was taken at Slick-rock Creek in Horseshoe Bay on 6/2/12.

JUNE - JULY EVENTS & VOLUNTEER OPPORTUNITIES

Falls on the Colorado Museum Annual Founders' Day Lakeside Pavilion, Marble Falls	Jul 14
Southeastern Texas Master Naturalists Regional Meeting - www.heartwoodtmn.org Spring Creek Greenway Nature Center, Spring, TX	Jul 14
Identifying the Grasses of Central Texas - Brian Loflin Balcones Canyonlands National Wildlife Refuge	Jul 21

FUTURE EVENTS & VOLUNTEER OPPORTUNITIES

HLMN Monthly Meeting Kingsland Library	Aug 1 1pm
Addressing Resource Concerns in the Edwards Plateau - http://tinyurl.com/kerrarcep Kerr Wildlife Management Area	8/3, 9/7, 10/5
Texas Bat Symposium https://www.batworld.org/brit-program-sign-up Bat World Sanctuary, Mineral Wells, TX	Aug 11
Texas Groundwater Summit http://www.iemshows.com/2012TGS/ Crowne Plaza Hotel, Austin, TX	Aug 28-30
Native Plant Society of Texas Annual Symposium Kerrville, TX	Oct 4-7
Refuge Week Balcones Canyonlands National Wildlife Refuge	Oct 13 8:30am-4pm
Texas Native Plant Week Various activities providing volunteer and advanced training opportunities	Oct 14-20
Texas Mater Naturalist Conference Camp Allen, Navasota, TX	Oct 26-28
Rainwater Revival http://rainwaterrevival.com/ Boerne, TX	Oct 27
Texas Society for Ecological Restoration Annual Conference - txser.org Rio Grande Valley & World Birding Center, Weslaco, TX	Nov 2-4

For volunteer opportunities and events scheduled at Inks Lake State Park, Blanco State Park, and Balcones Canyonlands, Balcones Canyonlands Preserve, check these websites for information:

http://beta-www.tpwd.state.tx.us/state-parks/parks/find-a-park/inks-lake-state-park/park_events/

http://beta-www.tpwd.state.tx.us/state-parks/parks/find-a-park/blanco-state-park/park_events/

<http://www.fws.gov/southwest/refuges/texas/balcones/>

<http://friendsofbalcones.org/>

<http://www.ci.austin.tx.us/water/wildland/onlineregistration/ecowebevents.cfm>

Please submit pictures, articles, reports, stories, calendar and event entries, etc. to chili865@gmail.com. Photos should have captions and appropriate credits. The deadline for submissions to each months newsletter is the 10th of the month and publication will be by the 15th.

Stewardship

An ethic that embodies cooperative planning and management of environmental resources with organizations, communities and others to actively engage in the prevention of loss of habitat and facilitate its recovery in the interest

of long-term sustainability