



MISSION

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

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

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SUMMER FUN IN THE SUN

By Linda O’Nan

Photos by Phil Wyde

We are all digging in now for the beastly days. Luckily, most of the month of June was fairly mild temperature-wise compared to previous years, but now July is pretty much as expected. As summer kicks in, project activities slow down a bit, but master naturalists still find ways to keep busy and productive.

A group of 14 of us met at Government Canyon State Natural Area in San Antonio on July 8. We had an overview from the park interpreter of the history and unique development of GC by public partnerships, a model for protecting significant public lands in urban areas.

Located over the Edwards Aquifer, GC has maximized rainwater collection use for landscaping needs and composting toilets, use of green products for building materials (ex. shredded blue jeans for insulation) and solar panels for fans & pumps.

We were blessed with moderate cloud cover for a short 3 mile hike. Pearl milkweed vine was pervasive along the savannah loop and was loaded with it's odd seed pods. Texas persimmon was bending over from the size & weight of fruit, and Old Man's beard was another interesting sight.

We all agreed another visit back in the winter for a canyon hike or especially an early spring hike to see the abundant mountain laurel is in order.

The day was just starting to warm up when we found relief & nourishment at one



of San Antonio's best Mexican cantinas. You know this group is famous for our "thirst of

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

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Photos should have captions and appropriate credits. The deadline for submissions to each month's newsletter is the 10th of the month and publication will be by the 15th.

SUMMER FUN IN THE SUN (Continued from page 1)

knowledge"... Thanks to Lyn Davis for organizing a day trip in her neck of the woods.

It is disturbing to see the effects of our ongoing drought on area lakes. Over the July 4 holiday, I was profoundly distraught by the wasteful use of water by houseguests. I know this bothers our group especially, and I hate to be less than hospitable, but I was ready to have an on site workshop on water management practices! These young folks have all heard the recycle mantra, but water still seems to slip through their fingers. Let's keep on keep'n on and spread the word. Our friends and families need to step up and see how dire our water situation is and find out how to be more responsible. It is up to us to use our HLMN training and resources to educate them.

Keep an eye on emails for ongoing and new upcoming volunteer opportunities. We still hope to get the ILSP wildlife viewing station kicked into gear soon. Awards and certification pins will be on the agenda for the August meeting, along with some light refreshments to entice your attendance. Let's get a spontaneous kayak float one day soon. The year is already half gone. See y'all soon. Can't wait.

"Coming together is a beginning, staying together is progress, and working together is success." Henry Ford

AUGUST AND SEPTEMBER PROGRAMS

by Pat Campbell

Hope everyone is having a good summer. And I hope everyone is having better luck at controlling the grasshoppers than we are. Our place looks like a war zone. I am so looking forward to seeing everyone at the next meeting on August 7 at 1:00 at the Kingsland Library. We have a full program in August so we are going back to Kingsland Library. Our speaker is going to be Richard Lewis, the environmental health and safety manager for J.M. Huber Mining Co located in Marble Falls. He is going to speak to the geology of the area, the bats and mining operations. Should be interesting, so lets come out and hear him. Lunch will be at Mr Gattis. There is a fantastic salad bar, as

well as pizza, so even if you don't do pizza, come on out. It seems as if it has been a long summer since we have been together.

September will find us back at the Methodist Church in Marble Falls. The meeting will be on Sept 4 at 1:00. Our speaker is going to be Jo Karr Tedder from the Central Texas Water Coalition. Water is a hot topic to us in the hill country and she will hopefully bring us up to speed. I have not set the lunch plans yet, but I will send out an email later with that info.

See ya at the meeting August 7.

2013 WOOD DUCK NESTING SEASON AT INKS LAKE

by Jerry Stacy

A record year! We had 79 hatchlings this year compared to 66 in 2008, our previous high year. Also, new this year were two nest boxes with 22 eggs each. The previous high egg count was 19 in one box in 2010.



Nest box with 22 eggs, 17 of which hatched.



New eggs, 05-28-13



New hatchlings, 06-06-13



2nd box with 22 eggs, 21 of which hatched



Babies growing, 06-13-13

Another exciting "record" this year was the successful hatching of three Screech owl babies. We had two in 2008.

This successful nesting season was due to NO predator activity, unlike the last few years.



Screech Owl Babies growing, 06-28-13



Screech Owl Babies growing, 06-28-13

LARK SPARROW

by Joanne Fischer



There are about three dozen New World sparrows in North America. Most are small, plump, brown-gray birds with short tails and stubby, powerful beaks. The differences between sparrow species can be subtle and differentiating one species of sparrow from another can be quite frustrating even to avid birders – which has led them to be referred to by many birders as LBJs (little brown jobs).

Most species of sparrows can be seen in Texas either as a summer or winter resident or in migration. Lark Sparrows are year-round residents in much of the state, and are one of a handful of sparrows that breed in the Hill Country.

The Lark Sparrow is one of the largest and most colorful of the sparrows - with a striking head pattern, a distinct spot on its breast and white outer tail feathers which are visible in flight.

The Lark Sparrow is quite gregarious and often feeds in small flocks, even during the breeding season. It is a ground feeder – foraging for insects and seeds and prefers open prairies, farmlands and roadsides with scattered trees and bushes.

The “harlequin” head pattern clearly sets the Lark Sparrow apart from its fellow sparrow species. It has bright chestnut ear-patches and chestnut crown-stripes

that ornament a black and white face. Its brown upper body is heavily streaked and the relatively clean white underparts are marked by a central black breast spot. In flight the long tail shows conspicuous white corners. The male and female Lark Sparrow look alike.

The Lark Sparrow breeds from early March to early September with June and July being the peak of the breeding season. The male is considered “jaunty” in its breeding act – showing off its plumage to the female bird – strutting about, fluttering its wings and spreading its white-tipped tail in courtship.

The female builds a nest either on the ground (concealed in grass or under bushes) or in a low brush or small tree. The nest is constructed of dry grass, plant stalks, bark strips and twigs and lined with leaves, soft grasses and animal hair. The female lays four or five white to light colored eggs which hatch in about 12 days and the young are then fed by both parents. Once the young have fledged, family groups merge into larger flocks. Lark Sparrows unfortunately, are frequent hosts to Brown-headed Cowbird eggs.

The Lark Sparrow is one of my favorite sparrows. Watch for them feeding on the ground under your feeders and in flight identify them by the white edging on their tail feathers.

NATIVE TEXAS RED HARVESTER ANTS (*Pogonomyrmex barbatus*)

by Phil Wyde



Figure 1. Closeup of native Texas harvester ant (picture from ref. 3)

There are thousands of species of ants in the world. Although most have a distinct antlike appearance, they do vary in size, color and morphologic characteristics. For example, ants can be tiny (i.e., barely visible) or as large as a small paper clip, hairy or smooth, red or black. Most importantly, they can have widely varied life styles. For instance they can reside in groups containing only a few individuals, or they can live in huge colonies containing more than a million individuals. These small insects are generally thought of as pests, and sometimes worse (think of army ants). However, ants can be beneficial. Indeed, only a minority of ant species actually infest homes, cause problems for agriculture or thoroughly disrupt human gatherings.¹ As for their being beneficial, ants often play an important role in their respective ecosystems, for example by recycling nutrients, aerating soil, and playing the role of prey or predator in the all important food web.

Before discussing the primary topic of this article, the native Texas red harvester ant, I would like to spend just a few more paragraphs on other ant species. The reason for this is that these other species provide some interesting contrasts and will help me make some points.

There are more than 250 species of ants native to Texas.² Some of these are quite objectionable to human populations. Two examples would be carpenter ants and black crazy ants.² There are about 14 species of the former that live in Texas and they range in size from about $\frac{1}{4}$ to $\frac{1}{2}$ an inch long. These ants like to nest in dead wood, e.g., dead trees and stumps. Unfortunately, the inside and outside of your home often have parts of them made of dead wood and these ants can become a major nuisance causing damage to the wood they live in, as well as being attracted to sweet things such as sugar and fruit that you may carelessly leave around the house. They can also bite (but not sting).

Another example of an undesirable native Texas ant is the black crazy ant.² These ants are small, about $\frac{1}{8}$ inch long, and range in color from dark grey to black. They can be easily identified since they have peculiarly long legs and antennae and move about apparently randomly without any evident control or direction. Crazy ants usually live beneath dead logs, wood and debris, and around cement surfaces. Unfortunately they will nest in walls of homes and like the carpenter ants, forage for open food.

Of course there are also non-native ants living in Texas, most of which are highly undesirable. One

reason for this is that being non-native they often have fewer native predators to keep them in check. I think that we can all agree that one of the most well-known examples of a non-native, undesirable ant species is the fire ant. I think that fire ants are most loathed because of their prevalence, their abysmal swarming characteristic and their predilection to inflict painful, harmful bites. (As you will see below, they are objectionable for other reasons, too.)

The native Texas red harvester ant, *Pogonomyrmex barbatus*, provides a marked contrast to carpenter ants, black crazy ants and fire ants. I hope that the contrast becomes evident as you read on. Right now I want you to think about why we need to know about different ant species and be able to correctly identify them. To save you from thinking too much or too long, knowledge of an ant species' behaviors is needed to determine if, and how, we should control them; being able to correctly identify an ant species is essential to being sure that we are killing an undesirable and not a beneficial species. A simple example is that in general poison baits such as Andro do not work well in controlling leaf cutter ants. If you cannot correctly identify this ant, you would likely spend a lot of time and expense without successfully stopping it from destroying your favorite plants. On the other end of the spectrum you do not want to wage war on a beneficial ant species. I hope to convince you by the end of this article that "the only good ant is a dead ant" slogan is wrong headed.

Now to our main subject, the native Texas harvester ant (see fig. 1).

Pogonomyrmex barbatus belongs, to the kingdom, Amimalia; the phylum, Arthropoda; the class, Insecta; the order, Hymenoptera; the family, Formicidae; the subfamily, Myrmicinae; the tribe, Myrmicini; the genus, Pogoomyrmex and the species, *P. barbatus*.³ This ant's main food source is seeds, which they amass and stockpile in large quantities. It is from this habit that they get their name (i.e., harvester ant).³

Worker red harvester ants are 1/4 to 1/2-inch long and red to dark brown. Their heads are rather square and they have no spines on their body.⁴ There are 22 species of harvester ants in the United States with most occurring in the west.⁴ Ten species live in Texas,^{3,4} seven of which only live

in far west Texas.⁵

As with many ant species, not all of the members of red harvester ant colonies can mate and reproduce. Indeed, very few members are able to. Those that can (i.e., winged males and females called alates or reproductives), swarm, leave the nest, pair and mate when conditions are right.^{3,4} The males die soon after mating while the females (soon to be queen ants) seek a suitable nesting site. After dropping their wings, each of these female ants dig a burrow and produce a few eggs – thus starting a new colony. The larvae hatch from eggs and develop in stages (instars). They are white and legless, and their bodies are small, crooked like squash. They have small distinct heads. Pupation into mature (mostly worker) ants occurs within a cocoon. After pupating, the worker ants begin: 1) caring for the queen and other developing ants; 2) maintaining and enlarging the nest; and 3) foraging for food. Remarkably, the queen can reproduce like this until she dies (1 to 20 years later!).

I have heard varied thoughts about the aggressiveness of red harvester ants. I think that most Texans think that they are relatively nonaggressive compared to many other species of ants, and especially fire ants. However, from what I have read I suspect that this may not be altogether true. For example in reference 3, it is stated that "Red harvester ants are known to defend their colonies with vigor. They bite with intensity and their stings are both venomous and pain-



Figure 2. Red harvester ant mound on PW's property.

ful.” (Note that bite and sting are NOT the same. The former is done using the mandibles, while the latter is carried out with an abdominal stinger.) Another problem is that some people can become allergic to the venom of these ants. (I am not sure what the active agent in red harvester ant stings is. In fire ants, it is formic acid.) I suspect that the big difference between the aggressiveness red harvester ants and fire ants is how they are approached. I suspect that ONLY a boy would mess with red harvester ants and their mounds. Both are large (intimidating) and easy to see (see text below and Figs. 1 and 2). Thus, red harvester ants have fewer opportunities to be aggressive. Fire ants on the other hand are small, darker and not so easily seen. Moreover their mounds are seemingly ubiquitous and often not readily visible so you are stepping or poking in them before you know it – thoroughly disturbing the mound and thoroughly setting off the fire ants. If you think about it, the fire ants are valiantly defending their home and family against gargantuan attackers; regardless, I want to eliminate them! (I am being a little facetious here; there are a number of reasons to eradicate fire ants. For example they can cause a lot of damage to electrical equipment, to houses and to different animal species, e.g., quail and red harvester ants.)

The population of red harvester ants has been declining steadily.^{3,5} This decline has been thought to be due primarily to competition for food with invasive fire and Argentine ants.³ It is also thought that the fire ants often prey on the mated female red harvester ants, which if true would significantly reduce successful red harvester ant colonization.⁴ Regardless, this marked reduction in native Texas harvester ants has affected a number of animal species of whom the red harvester ant was their main source of food. The most obvious example of an animal species being affected by the decline in the red harvester ant is the Texas horned lizard. The population of these reptiles has declined precipitously in parallel with the decline of the Texas red harvester ant.

The nests of red harvester ant nests are rather easy to recognize.^{3,4} They are almost always in the open with almost no plant growth around the nest or along the foraging trails. (This denuding can be up to 10 meters square.³) In addition, the entrance of the hole usually contains a number of small pebbles



Figure 3. Close up of entrance red harvester ant mound on PW's property.

(interestingly purposely deposited on the soil surface by the worker ants⁵) and the entrance to the nest usually descends at a very acute angle (see Fig. 3)

As mentioned earlier, red harvester ant foragers collect seeds and store them in their nests. (Seed hulls are usually scattered around the tunnel entrance.) In addition to seeds, dead insects are also brought in for food. There are usually numerous trails around the nest which the ants use to gather the seeds and bring them back to the nest. “Scout” ants usually go out in the morning, find the food, and mark their path as they return to the mound to alert the work ants.³ The worker ants then leave the mound following the scent trails laid out by the scouts. These foraging ants collect the food and then return to the mound where other worker ants clean the food. Still other workers tend and extend the mound. Others stay below and take care of the brood (eggs and larvae). All of this work is done by females since males are only present in the colony during the breeding season.

If there is heavy infestation in pasture and rangeland, red harvester ants can have an economic effect. However, because of their declining populations and the fact that their colonies are generally widely dispersed this is not currently a common problem. Red harvester ants can take up residence in ornamental turf areas where their denuding habit can make their presence undesirable.⁴ Happily red harvester ants do not invade structures or homes.

I hope that you are convinced that red harvester

ants are on the whole beneficial. If so, the question arises about IF and HOW to manage them. Killing them is easy. Most ant insecticides will kill red harvester ants and eradicate their mounds – rather quickly.^{4,5} However, because they generally do so little damage, play an important role in the ecosystem and are so important to the success of the Texas horned lizard, many of the references that I looked at suggested that we should avoid managing these ants (for example, ref. 5). Instead of using insecticides, it was suggested that if destruction of red harvester ant nests

and habitat was necessary it should be done using discing and/or regular mowing rather than utilizing insecticides. It was also suggested that if pesticides were selected, one should use registered products selectively and carefully following the instructions on the insecticide's label.

One last, interesting fact about red harvester ants; these are the ants usually used in ant farms that you buy for children. Apparently the relatively large size of these ants and their foraging habits make them an ideal choice for this use.³

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2013 NATIVE PLANT FESTIVAL

By Terry Whaley



The planning committee for the 4th Annual Highland Lakes Native Plant Festival and Garden Tour had its first meeting on June 28th at Main Street Coffee in Marble Falls. The festival, which is put on by the local chapters of the Native Plant Society of Texas, Master Naturalists, Master Gardeners, and the Birding and Wildflower Society, will be held from 9 - 4 on Saturday October 5th to celebrate Native Plant Week. This year's featured topic will be "Bring Back the Mon-

archs". Volunteers are needed to help with the festival in the morning at Inks Dam Fish Hatchery and in the afternoon at the gardens of the 3 homes on the tour. Please contact Sherry Bixler if you would like to volunteer. Pictured from left to right are Cathy Hill, Linda O'Nan, Terri Whaley, Beth Mortenson, Fred Zagst, Fredi Franki, Robert Yantis, Sheryl Yantis, Joan Mukherjee, Sherry Bixler, and Sue Kersey.