



Highland Lakes Steward

October 2011

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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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COCHINEAL INSECT

by Joan Mukherjee

Every interpreter loves to demonstrate cochineal dye when they see the webby white deposit on prickly pear pads. What kind of insect is the cochineal? Spider? Beetle? The answer is neither; it is a scale insect in the order Homoptera which also includes leafhoppers, aphids, spittlebugs, mealybugs and cicadas. Our Texas species is *Dactylopius coccus*. Other species also produce carmine dye but the species are very difficult to tell apart.

Cochineal insects produce carminic acid that makes up 17-24% of the dry insects body. It is believed that its purpose is to deter predation by other insects. The females are wingless and about 5 mm. (0.2 in.) long and cluster on cactus pads. They penetrate the pad with beak-like mouthparts and feed on its juices, remaining immobile. The males are much smaller, have wings and are rarely seen. Adult males cannot feed and live just long enough to fertilize the eggs. After mating the females get much larger and give birth to tiny nymphs. The nymphs secrete a white waxy substance over their bodies to protect from water loss and excessive sun; this we observe on the cactus. When the nymphs reach the crawler stage they produce long wax filaments and move to the edge of the pad where the wind catches them and carries them to a new host.

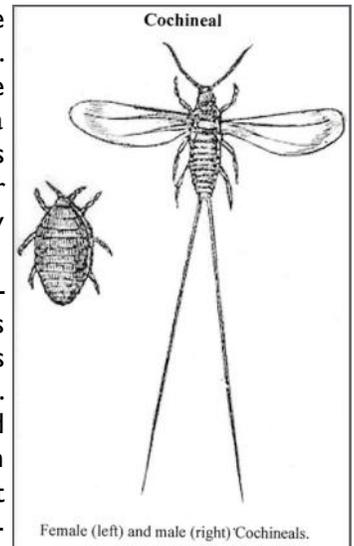
The insects will feed on all prickly pear (*Opuntia*) species. The preferred species of cochineal farms is *O. ficus-indicia*.

Modern cochineal farms maintain the cacti at a constant temperature of 81 deg. F. The complete cycle lasts three months. Peru is the largest exporter of cochineal today. Australia attempted to set up a cochineal industry importing Brazilian cochineal insects and prickly pear cactus. The insects died off and prickly pear invaded all of Australia. Cochineal insects can damage or kill the cactus.

Our local cactus species is *Opuntia engelmania*. Look for the insects on cacti that have partial or full shade.

Red dyes tend to fade easily and often are toxic. Carminic acid is a very stable, non-toxic red dye. Historically it was highly valued as a fabric dye after it was discovered in the Americas. It sets more firmly on protein-based animal fibers such as wool, than on vegetable fibers. Today health fears over food additives have made cochineal desirable for use in food and cosmetics as well as fabric. Use of cochineal must be noted on the label since a small number of people are allergic to it.

I will leave it to our local weavers to tell us how to collect and process the dye.



Female (left) and male (right) Cochineals.



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We've all heard of a murder of crows, a kettle of hawks...how about these groups?

A stare of owls
 A wedge of swans
 A watch of nightingales
 A party of jays
 An unkindness of ravens
 A rafter of turkeys
 A company of parrots
 A siege of bitterns

From Linda O'nan

NOMINATION COMMITTEE'S NOMINATIONS FOR OFFICE FOR 2012

The 2011 Highland Lakes Master Naturalist Nominations Committee is comprised of Sammy Childers, Ray Buchanan and Phil Wyde. After conferring, the Committee nominated a member of the Chapter for each of the Chapter's executive offices (i.e., President, Vice President, Treasurer and Secretary). Each person nominated was contacted and each indicated that they will serve if elected. The slate of officers nominated was announced at the recent October General (Monthly) Meeting to allow chapter members to consider if they, or a member of the chapter that they know, would like to run for one of these offices. The nominees will again be presented at the November General (Monthly) Meeting. At that time if someone wishes to nominate themselves or another chapter member in good standing from the floor for any of these positions they can do so – with the stipulation that there must be prior consent from the person being nominated. The new officers will be elected and installed at the December Annual Meeting.

The nominees are as follows:

- President: Fred Franki
- Vice President: Linda O'Nan
- Treasurer: Phillip Mitchell
- Secretary: Sonda Fox

This report is made by Phil Wyde, Chair 2011
 HLMN Nominations Committee

NOVEMBER MEETING Fredi Franki

The November General Meeting will be November 9, the second Wednesday of the month, 1:00pm at the LBJ National Historical Park in Johnson City. We will have lunch at the Silver K prior to the meeting. For our program, HLMN members Harris Greenwood and Romelia Favrot will share their experiences in land management. They have many stories to tell about invasive plants, drought, wildlife encroachment, and renovating existing structures on their property. After the meeting, we are invited to their home for a first-hand look at their challenges and accomplishments. This will be an interesting and fun meeting, don't miss it. Many thanks to Harris and Romelia! More details plus directions will be sent before the meeting.

OCTOBER MEETING

Photos by Jerry Stone



CONGRATULATIONS to Penny Nichols (L) on receiving her 500 Hour Pen!



Bill Lindemann provided an excellent overview of the geology of the Big Bend Area

2011 NATIVE PLANT GARDEN TOUR

Photos by Mike Childers

The 2011 Highland Lake Native Plant Garden Tour was held in celebration of Native Plant Week on October 15th. We are delighted to report that for the second year we were a huge success! The five gardens showcased were perfect in everyway and we want to thank everyone involved with the tour! Even Mother Nature was on our side with over 2 inches of rain to provide much needed water and sparkle.

Our garden owners this year were Marvin & Judy Bloomquist, Marion & Mark Wood, Linda & Bob Fleming, Helen & Duke Dillon and Mary K & Charles Dillon. Thank you so much for inviting us into your beautiful gardens. We hope that those who came to visit the gardens were able to see that our Texas natives have made it through this drought of record and were still blooming and looking so good. We really heard so many positive words for the tour and were even asked about the date for next years garden tour. All of our speakers provided excellent garden related knowledge for our visitors and they added so much to the tour.

We want to thank the members of the Highland Lakes Master Naturalist, Master Gardeners, and Native Plant Society for providing the garden staffing, giving tours, working at the welcome tables and parking with such enthusiasm and knowledge. Please know that without you we could not even consider doing this project.

Our hard working committee this year worked many hours planning this tour and a very special thanks goes to Fred Zagst, Lyn Davis, Fredi Franki, Sylvia Williams, Sherry Bixler, Karen Wilkens, Mike & Sammie Childers, Terri Whaley, Marjorie Dearmont, Marvin Bloomquist and Robert Yantis. You all are the reason this garden tour was such a success.

We are delighted to be able to continue funding the very successful Master Gardener's vegetable garden project at the Helping Center in Marble Falls.

Once again, a very special thanks to this year's HLNPSOT Native Plant Garden Committee, everyone that helped in the gardens, our speakers, vendors and garden owners. Without you all this very successful garden tour could not have happened.

With abundant gratitude & thanks,
Sue Kersey & Linda O'Nan



Numbers Game

Seeds of Life

2,000

Age, in years, of the oldest germinated seed

34

Beechnuts a chipmunk can fit in its cheeks at once

32,000

Whitebark pine seeds a Clark's nutcracker
might store each year

4

Locked doors protecting seeds stored in
Norway's Svalbard Global Seed vault

1,845,831,357

Seeds stored at the Kew Gardens
Millennium Seed Bank

30,402

Number of plant species the seeds at the
MSB belong to

300,000

Species of seed-bearing flora in the world

10

Maximum number of years it takes the coco de
mer, the world's largest seed, to mature

44

Weight, in pounds, of coco de mer seed

0.2

Length, in millimeters, of the orchid *Aerides
odorata* seed, the world's smallest

3,300,000

Seeds of the orchid *Aerides odorata*
needed to make up one gram

197

Distance, in feet, *Tetraberlinia morelina*, an
African legume tree, can shoot its seeds

WILSON'S WARBLER ALERT!!!!!!!

By Sue Kersey

We are having a really good migration of the Wilson's Warbler this year. I have had really large numbers in my bushes on the north side of our house as we are full of midges (tiny little green bugs that breed in hot weather in our lake) and the Wilson's warblers are having a feast!! And we are so glad they are here enjoying the bugs! Look them up in your field guides and I bet if they are here in Highland Haven, in the Kingsland area and Bertram that you may have them too.

Wilson's warblers are very active, frequently twitches tail about and flicks wings. They often stay low in undergrowth eating bugs. They are all yellow underneath, olive above, small back to olive cap on crown, small bird 4.75", slender tail and small bill. The male will have a pure black cap and females cap varies from a mixture of black and dark olive to just dark olive. Their song is a chattering descending trill.

Have fun watching for them and I hope ya'll get to enjoy the warbler migration that is just getting started. Don't forget to join FeederWatch which starts Nov. 12th.

Check out the two pictures I was able to get. They move so fast it is a trick to catch them not moving.



WARBLER MIGRATION AND CAT PREDATION

By Sherry Bixler

There are 58 warbler species in the United States and Texas has an amazing 45 of the 58; some common species and some rare. Many warblers migrate down the central flyway but both eastern and western species may occasionally join in. Five eastern and five western species do not appear in Texas at all and would be considered accidental should that happen.

Three other species are found only in southwestern New Mexico and Arizona.

Warblers that sometimes spend the winter in the hill country include the Yellow-rumped Warbler, Orange-crowned Warbler and Common Yellowthroat. Last year's exception was a Yellow-throated Warbler, not to be confused with the Common Yellowthroat. Our only common breeding species is the Golden-cheeked Warbler but others have been recorded as rare nesting species: Prothonotary, Northern Parula, Black and White, Swainson's and Yellow-throated Warblers plus the Louisiana Waterthrush and Yellow-breasted Chat.

All other warblers are seen only during migration and this fall's migrants have included a large number of Yellow, Wilson's and Nashville Warblers while other years may have large numbers of different species. Although cats may kill some adult warblers, most cat predation is centered on fledglings who have not learned to protect themselves (see article below). Cat owners in breeding bird habitat must be especially careful to prevent this.

Over the years, many cat owners have told me that their cat "does not chase birds" or "rarely catches one," but catching birds, lizards and other wildlife is as natural to cats as catching mice. The only way to protect birds is to keep cats indoors at all times. This is also much safer for the cat. (Adding a bell to a cat's collar is usually not effective since cats approach prey very slowly.)

With permission from Bird Conservation editor Gavin Shire, the following article from the Spring 2011 issue gives details from a study done on predator damage: "A recent study that tracked Gray Catbird fledglings in three Washington D.C. Suburbs found that outdoor cats were the leading source of known predation on the young birds. This study, published in the January 2011 edition of the Journal of Ornithology, was conducted by (two doctors) from the Smithsonian Institution and Mrs. Anne L. Balogh of Towson University.



In the study, small radio transmitters were attached to 69 newly hatched catbirds. These transmitters recorded the birds' locations every other day until they died or left the study area. Forty-two birds died during the study – 33, or almost 80 per cent, due to predation. Almost half of the known predators were free-roaming cats.

The study also found that predation was the most significant factor affecting a catbird fledgling's survival – not parental age, brood size, sex, or hatching date. The vast majority of the deaths occurred in the first week after the bird fledged from the nest. Because fledglings beg loudly for food and are not yet alert to predators, they are easy prey for cats and other predators.

'This study certainly adds more validation to what we have been saying for years – that outdoor cats are a highly destructive predatory force that is causing havoc in the world of native wildlife. I hope we can now stop minimizing the impacts that outdoor cats have on the environment, and start addressing the serious problem of cat predation' (quote from Darin Schroeder, Vice President for Conservation Advocacy at ABC. ABC has a wide variety of materials available on its website to help address the problems caused by free-roaming cats:

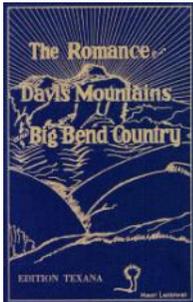
www.abcbirds.org/abcprograms/policy/cats/materials.html
A complete copy of the study is available at: http://nationalzoo.si.edu/scbi/migratorybirds/science_article/pdfs/55.pdf

www.abcbirds.org/abcprograms/policy/cats/materials.html

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MORE INTERESTING READING ON BIG BEND!

The book reviews for the October issue of *The Steward* concern three of the most important and comprehensive works published about the Big Bend area of the northern Chihuahuan Desert. Two of the books are early works, the later book being Ro Wauer's excellent journal/memoir *For All Seasons*.



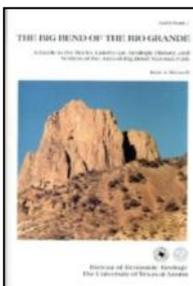
The earliest book is often referred to as the Bible of Big Bend literature, Carlyle Graham Raht's book *The Romance of Davis Mountains and Big Bend Country*. This book was originally published in 1919, the Texana Edition being published in 1963. Reviewed by Margy Butler

Carlyle Graham Raht writes from a lifetime of experience in the Big Bend, and a lifetime of acquaintance with some of the region's most colorful figures. Though loaded with facts, his story has the feel of folklore, the tone of a friend telling you the tales of the way it was before. (from a review on the Great Texas Books website, <http://texasgreatbooks.org>)

The story in this important book begins in the 1500's, with the tale of Cabaza de Vaca coming across the land. You may have your hand over your mouth now, yawning, but it's a sure sign you're not reading Raht's book at the moment, because his prose is anything but boring. Compelling would be the better word. The tale covers the years from de Vaca to Villa, near the conclusion dealing with Francisco (Poncho) Villa's raids on Ojinaga, just across the Rio Bravo from Presidio, near where we will take the road into Saucedo, the old ranch headquarters of what is now Big Bend Ranch State Park.

Raht recounts tales of the Comanche, and of the Texas Rangers. He tells of the camel brigades and General Pershing. Pictures are included of the Generals Obregon, Villa, and Pershing, with Patton, aide to General Pershing, looking on. Raht tells of the terrible droughts, and of the across the border cattle raids. If you'd like to know more about the early days in the northern Chihuahuan Desert, this is the book to read. Interesting, informative reading by an old master of a writer.

This book is available at some area libraries, also from Amazon (even a Kindle edition!) and other booksellers.

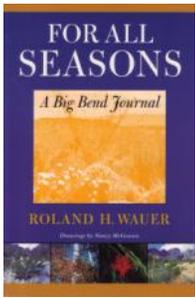


One of the most comprehensive and readable books ever written about the Big Bend was published originally in 1968. Ross A. Maxwell, the first Superintendent of Big Bend National Park (1944 – 1952) is the author of the book *The Big Bend of the Rio Grande*, and the book is chock full of interesting historical photos and background information about the early days in the park plus extensive flora, fauna, and geological data. The book is a small bonanza, with botany, geology, mining activity, candelilla factories, and much more all there, and fascinating in the telling.

Included in the book is a packet of large maps, in a pocket at the back of the book, which alone make the book worth the cost of admission.

If Bill Lindeman whetted your appetite, during our last HLMN Chapter meeting, for more information on the geology of the area, get this book. There are photographs, drawn illustrations, charts, all explaining the remarkable geology of the area that we are going to be looking at and hiking through. On page 48 (1971 edition) is an excellent photo of a bedrock mortar, several of which we will see on our trip in to Saucedo on Monday, 10/31/11. On pages 30-31 drawings and text help inform one on the Solitario and lacolithic domes. If you acquire this book and look at just these two items you'll be prepared to recognize some of the most fascinating artifacts and geologic structures of this extraordinary topography!

For aficionados of the Big Bend, this book is a must read. Available at several area libraries and at Amazon in various editions from various sellers. Reviewed by Margy Butler



For All Seasons, A Big Bend Journal by Roland "Ro" H. Wauer, Drawings by Nancy McGowan, University of Texas Press, Austin, 1997
Reviewed by Sondra Fox

I can't believe there is another soul who knows all the many aspects of the Big Bend area as Ro Wauer. He not only was Chief Park Naturalist at Big Bend National Park from 1966-1972, but having a 32-year career with the National Park Service, he spent a lot of time at Big Bend while pursuing other duties. In the years since his retirement, he continues to return to Big Bend regularly for the enjoyment and to do field studies as well. When Ro made his presentation to the Highland Lakes Birding and Wildflower Society in April, he stated that Big Bend was his favorite place and it shows in his writing.

Ro has written several books about the Big Bend. For All Seasons is a year-long daily journal of his experiences and observations in Big Bend National Park. The unusual part of this journal is that his notations span from 1966 to 1996. January 5, 1969's musings may be followed by January 6, 1982, then January 7, 1970. The reader can, therefore, not only get an idea of what changes occur seasonally in the BB, but also over a span of years. Ro often refers to these changes in his writing.

This author's writing is easy to read and easy to enjoy. He roams the vast expanse of the Big Bend recording his experiences with the topography, geology, plants, birds, mammals, reptiles, and insects that make this vast land so enchanting. Having known this area of our state over so many years, he knows when expected occurrences, such as migrations, take place and recognizes when the unexpected occurs. One day Ro may find himself in the middle of a herd of javelinas and the next day (and another year) he's surrounded by thousands of the large Big Bend millipedes (brought out by heavy rains); then he's watching peregrine falcons in Santa Elena Canyon, followed by a day cataloging the flora found in the Chisos Mountains.

For All Seasons is not a scientific writing; it is the day-to-day experiences of a man who knows the Big Bend area and enjoys every minute he spends there (well, almost). Mr. Wauer's vast knowledge about, and appreciation for, Big Bend is obvious. When I grow up, I want to be Ro Wauer.

Christmas Party

Awards & Pins
2012 New Officers Installation

Wednesday, December 7th
Cocktails @ 5 pm...Dinner to follow
Quail Point, Horseshoe Bay

REMARKABLE RIPARIAN SUMMIT STEWARDSHIP = SUSTAINABILITY

By Sammye Childers
Photos by Mike Childers



Wayne Ellmore

On October 6th, 200 people who are passionate about educating people about the vital role of Riparian Zones in our ecosystem met in San Antonio for a one day summit. The keynote speakers were Wayne Elmore, one of the foremost authorities of riparian systems in the U. S., Janice Staats,, Hydrologist for the National Riparian Service Team, and Sky Jones-Lewey, Resource Protection and Education Director with the Nueces River Authority.

We were reminded that concern for Riparian Systems is not a new issue BUT never has the issue been more critical. In 1600 BC Emperor Yu of China advised: To protect your rivers, protect your mountains. In 1938-39, another visionary named W. C. Lowdermilk, traveled extensively and wrote a booklet called 'Conquest of the Land Through 7000 Years' for the U. S. Department of Agriculture. The document is still relevant today and is recommended reading. It is available online:

<http://mff.dsisd.net/Environment/Lowdermilk.htm>

Janice Staats warns, "Riparian restoration will not happen by regulation, changes in the law, more money expended, or any of the normal bureau-

cratic approaches. It will only occur through the integration of ecological, economic and social factors and participation of affected interests."

The most revealing fact to indicate that the general population MUST become informed, responsible water stewards: Worldwide, Earth has lost 30% of its continental capacity to store fresh water. That coupled with the ever increasing human populations should make all of us think about what we can do to help educate and enlighten others. Older standards, established primarily in the 1930's and 1940's, still persist today. Those standards included straightening stream channels (removing meanders), removing trees and brush from the riparian zone and removing sediment from the banks and stream beds. All have proven to be unsound human practices.

Lessons learned in the past fifteen years:

- Value placed before function does not work in the long term.
- What happens on the land determines the quality and quantity of our fresh water. Land means every square foot of every continent. Small



Janice Staats



Skye Jones-Lewey

shareholders have as much responsibility as the large shareholders.

- Remember a healthy stream WILL always meander.
- Riparian Zones are self sustaining systems. For the most part, they are able to revitalize themselves with little or no intervention.
- Streams require sound stewardship, cycles of flood and drought and opportunity to heal (which requires time, time, time). All elements needed are already in place. In general, the quicker the fix, the more costly it is and the less likely it is to succeed or to have lasting effect. Look for the hindrance that inhibits the natural recovery rather than “correcting” a problem. Most stream degradation is the result of unsound human practices.
- The more plant diversity in a Riparian Zone the better. Healthy, diverse vegetation is perhaps the most powerful component of maintaining and restoring streams. A 12 x 12 x 18 inch cube of soil may contain up to 22 miles of roots in a healthy system.
- Large woody debris is a necessary component

of sustainability of the streambed. Learn to appreciate dead and leaning trees. They are a vital part of stream culture.

- Streams in urban situations are primarily drainage ditches. They cannot be viewed or treated in the same ways as a wild stream. BUT, they can be managed to their best potential.
- Water stored underground is perhaps more important to the system than the water seen moving across the surface of the streambed. We need to turn our focus towards the banks/sponge rather than focusing on the stream itself. We also need to change perceptions from “watershed” to “water catchment” systems. We must hold water in place for as long as possible as it moves across the land. We must also learn to view streams/aquifers as one, interconnected and inseparable
- While burning has become an accepted tool in upland restoration, burning is detrimental to the riparian zone and is never a desired practice.

What can we do?

- We can educate ourselves so we will know what is possible and then share what we know with all willing listeners. Be able to explain and educate others to what the possibilities are.
- Set up a monitoring system. We can monitor and record the progress of our waterways. We need to know what we are doing right and what is going wrong. Photo points are invaluable. Take photos and document the progress of waterways that you are familiar with at least seasonally each year. Agencies are working to provide clearinghouses for this documentation so more complete histories can be established. Such documentation supplies the needed tools for future success.
- **SHARE** all knowledge gained. **HOLD** to the principles and practices that we have learned. **KEEP MOVING FORWARD** with each new discovery.

Never, ever, ever, ever, ever, ever, ever give up.

Never give up.

Never give up.

-Churchill

FALL IS HERE AND SO IS INFLUENZA. SHOULD I GET "THE" VACCINE?

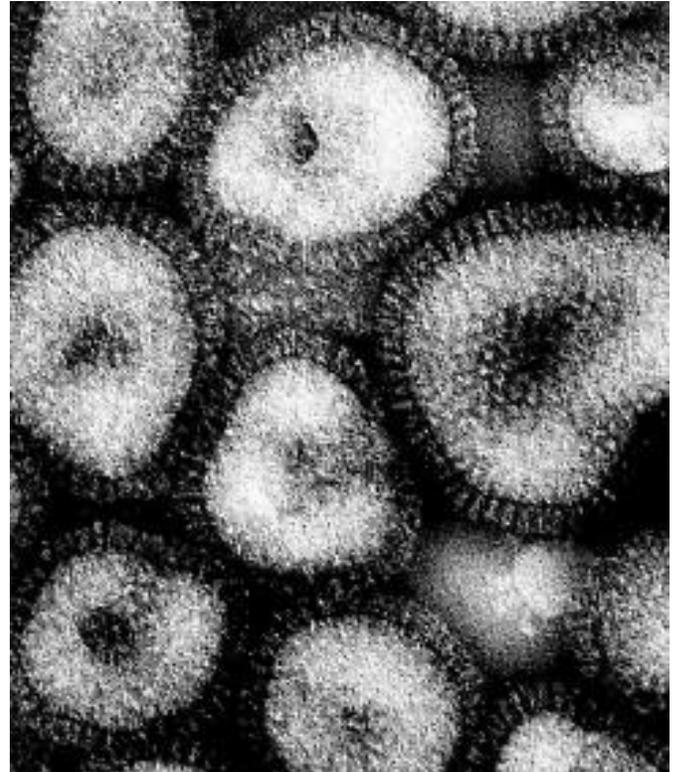
By Phil Wyde

It is October and we are now weeks into the fall. The leaves are changing (if they have not already) and the weather is finally cooling off. Unfortunately, the coming of fall also means that influenza viruses are back and it is time to think about whether you should get a vaccine to prevent or ameliorate potential influenza virus infections. As with many things, there is no simple answer. And far be it for me to tell you what to do. I will just present some facts to you to help you decide.

First thing to consider is that there are about 35,000 excess deaths a year attributed to seasonal influenza in the United States. (Seasonal just means influenza caused by "ordinary" strains of influenza virus, e.g., H3N2, H1N1 and influenza B). You might say to yourself, there are more than 300 million people in the United States. 35,000/300,000,000, that's pretty good odds of not dying of influenza. However, if you have chronic lung or heart disease, diabetes, are pregnant, are very young or older than 65, your odds go up. Moreover, influenza infects hundreds of thousand, if not millions of people in the United States each year and many of those infected feel like they are going to die! Some of you are probably thinking that the vaccine always makes me feel ill, what is the difference? The answer is that the "feeling bad" caused by the vaccine usually only lasts for a day, and it does not compare to the illness that a real influenza virus infection can cause for a week or more! One other thought, if you get influenza, serious or not, you can pass it on to your children, grandchildren, elderly parents, as well as to your friends and fellow Master Naturalists. All that said, the odds are still in your favor.

Ah, if life were so simple. We have to worry about more than just seasonal influenza. What about avian influenza (induced by H5, H7 or H9 influenza viruses), H1N1 "swine flu," H2N2 influenza virus strains that have not been around for many decades or newly emerging influenza virus strains? These may well be more virulent than the average influenza virus and not having seen them in decades or ever, we may not have much immunity against them. With increased virus virulence and decreased immunity, our odds of getting serious or lethal influenza virus infections go up precipitously.

I suspect that some of you are now thinking that in the recent past the "government and establishment"



tried to scare us about H1N1 viruses circulating that may have increased virulence similar to the 1918 pandemic influenza virus strain and it proved to be no worse, and maybe less virulent, than the seasonal flu. That is true, but that was last year and two years ago. The experts really can only guess what influenza virus strains will appear and predominate each year. They are usually right, but as has just been pointed out, they sometimes aren't. Regardless, I would like you to consider the following headline taken from the Friday, October 9th, 2009 issue of the Austin American-Statesman (Metro and State Section): "Swine Flu Kills Second Sister." It goes on to say in the article, "... Sylvia Duran, 35, died Wednesday. She was in intensive care with pneumonia during the funeral for her 42-year-old sister, Linda Druan ..." Note the ages of the sisters and the fact that although the odds of the sisters not getting lethal influenza virus infections were greatly in their favor, they did – and they lived in Austin, Texas.

As I said above, I am not making any recommendation as to what you should do. I would like you to be aware of some options. There are live and killed influenza virus vaccines available for use against seasonal

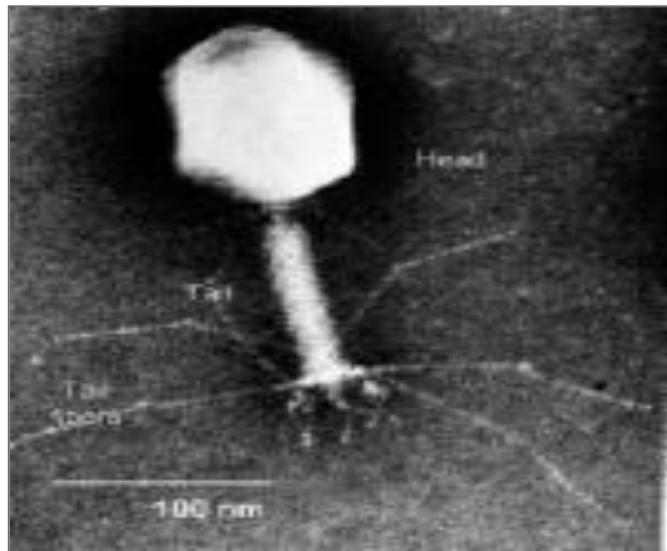
influenza viruses. Almost all of these vaccines are about 80% effective IF the strains of influenza virus in the vaccine are the same or similar to the influenza virus strains circulating in the community. The live influenza virus vaccines are much nicer to get since they are given as a simple nose spray and thus do not have any pain associated with them. However they do have some (small) risk associated with them. (Ever hear about mutations and genetic recombinations?) The killed influenza virus vaccines are what most of you have heard about, or gotten, for years. They are generally given using a syringe and needle, are usually trivalent (i.e., contain viral antigens from a H1N1, H3N2 AND influenza B viruses) and are designed to protect you against these strains of influenza viruses). They now have a killed influenza virus vaccine that is administered intradermally (into the skin and not through the skin). This one also should cause almost no pain since the needles used are very small. The killed influenza virus vaccines are generally safe since killed viruses cannot mutate, recombine or replicate. However, they can cause you to feel ill for a day or two. Moreover, if you have an allergy to any substance in the vaccine, you can develop serious reactions after getting the vaccine. Currently there are no commercially available influenza virus vaccines against avian, H2N2 or newly emerging influenza virus infections. (It generally takes a year to produce a new influenza virus vaccine.)

Influenza virus vaccines shots to prevent or ameliorate seasonal influenza are commonly available at your doctor's office and in different commercial establishments (e.g., Walgreen Pharmacies and HEB). At the latter they usually cost about \$20. Two years ago I got my influenza vaccine FREE in Marble Falls. Last year I did not get an influenza virus vaccine and I got influenza. I was VERY sick for over a week, lost all of my good humor and seriously did not think that I "was going to make it." It was not all bad. I lost 15 pounds. As I have said, there are no commercially available vaccines currently available for use against avian or H2N2 or newly emerging influenza viruses. However, there are influenza antiviral drugs such as amantadine, rimantadine, Relenza and Tamiflu that can be effective against most influenza virus strains, especially when taken very early in the infection. They all require a prescription in the United States, and of course they are not cheap. Some of these drugs can be used prophylactically, but unless you were at very high risk, such use is not practical.

Whatever you decide to do this year, remember to:

- Wash your hands often;
- Cough into a tissue or sleeve;
- Avoid being in large crowds in close quarters (until spring);
- If you get influenza, stay home until 24 hours after your fever ends; and
- Consider getting a vaccine before you get exposed to influenza virus.

I hate the thought that you might read this article and only feel fear and apprehension about viruses. I rather hope that being Master Naturalists you think about all the creatures and things that abound in the "hard to see [i.e., microscopic] world," that you see their beauty and wonder both about their simplicity and complexities. Among my favorite viruses is the T4 bacteriophage that infects or "eat" Escherichia coli bacteria (see adjacent electron micrograph).** Note how different the T4 bacteriophage and influenza virus are. Just for your interest, several Nobel Prizes were won by scientists studying bacteriophage.



Electron micrograph of influenza virus courtesy of Dr. K.G. Murti.

**Electron micrograph of bacteriophage T4 courtesy of www.virology.net/big_virology/BVDNAmyo.html

KIDS DAY OUT!

By Carol Navarro Adams Photos by Sue Kersey



Your support for the KIDS DAY OUT was outstanding! It was an unforgettable experience that the kids will never forget. Imagine this: you are a kid from Burnet County and you heard that there is a cool park ten minutes from your home; however, for some reason you have never been there. You don't know what a kayak is. You are one of the millions of children in our country/world that do not play outside.

Then, one day in September many local and state agencies get together to give you, a Burnet kid, a special day to play outside, to learn about nature, and to do some really fun activities at the fairgrounds, all for free! Now, there is no excuse for not going to the fairgrounds to have some great fun outside. There you are standing in line anticipating your turn to try this thing called kayaking. You have a hopeful



expectation that you can do it, yet some fear that you can't do it. While you wait your turn to try kayaking for the first time in your life, you have an extreme case of butterflies in your stomach. You begin to have some anxiety. You watch the other kids in the big pool of water and wonder if you can do this. The paddle is so big, bigger than you! "Will I be strong enough to hold it and paddle myself around that big pool like the others?" You wonder how one of those

funny orange things that they are putting around their neck will feel and will you be able to paddle with that on. You think maybe I can get out of this line and go do something else. It's too scary, but you turn around and realize that you can't get out of line. There are too many people behind you. Maybe you can ask someone to do it with you. Maybe you won't have to do this thing called kayaking by yourself. Oh no, it

looks like they do not let you go with someone else in that boat! You have to do it all by yourself. As you get closer to the pool you see that the big people in the pool are smiling and seem very helpful. You see that the other kids are smiling...hmmm. "Ok...I guess I have to try this....I am scared but as I get closer and closer to the pool, I can see that the people that are helping us are really nice. They are

helping us to be safe with that funny orange thing. Oh, I can put this on...it's easier than I thought. These people really care. Ok, they are nice people. Whew! Now I am not so afraid. They will help me too. I will try it. Oh, they are teaching us to paddle first, whew this paddle is not that heavy...and I can do it too...it's not that hard. Wow...now it's my turn to get into the kayak. I am scared again...ok... they are so careful with me, helping me into the kayak. I am so glad that they



did not let me tip over. I can hold the paddle in the boat and they are giving me a little push to get started. They are smiling at me and telling me that I am doing a great job, speaking softly, teaching me to turn. I think this is easier than I thought. I can do it too! I like these people. I love this feeling of kayaking. It's so fun! I think I can do it too! Oh darn, I have to get out now...wow, that was fun! I did it! Maybe someday I can go kayaking on a river, or a pond or Inks Lake. Wow, I am going to go kayaking! I can't wait to tell my friends and grandma too. I did it!"

greatly appreciated by TPWD/Inks Lake State Park, the Burnet community, and the kids. We could not have done it without the following Highland Lakes Master Naturalists: Linda Fleming, Helen Smith, Lyn Davis, Melanie Huff, Elaine Barnhill, Cindy Sterling, Charlie Bierle, Pam Walt, Jeff Stokes, Sherry Bixler, Jean Schar, Deb McClintock, Phil Wyde, Jerry Stacy, Connie Baron, Billy Hutson, Judy Bloomquist; the Friends Group: Leslie Cox, Craig and Lynn Davidson, Ellen Frayle, Lyn Davis, Becky and Robert Meyers; Reporters: HLMN Sue Kersey and Highland Lakes



The person who touched a Burnet kid's life forever was you! The kids did not understand what a Master Naturalist is but they did understand your goodness, kindness, care, encouragement and patience with them. Thank you for your many, many acts of kindnesses shown to the kids. And thank you for your time, energy and passion it took to connect kids to challenging fun activity in the great outdoors. You are



Weekly: John Hallowell; Staff: Superintendent Terry Rodgers, Lead Ranger, Chris Hall, Ranger Sean Jones; Hosts, Elaine and Roger Barnhill, and Patty Durdin.

A special thanks to Jerry Stacy and Connie Barron who managed the Jet Ski Simulator all day! We could not have had two better kids to run that activity. The only problem was getting Jerry to share it with the other kids. Hee hee.

MONARCHS UPDATE

by Sondra Fox

I have continued to see about five Monarchs per week, all singles. Phil Wyde reported having over twenty at the flowers in his yard on October 1st.

A summary of *Journey South's* progress report on the Monarch butterfly's migration since the September Steward report follows:

Sept. 15 - Monarchs were on the move this week along the Great Lakes' shorelines. People on the north shore of Lake Ontario scored the season's highest counts so far, 269 in an hour.

The roosts Monarch butterflies form during fall migration are quiet. They are well camouflaged and often high up in the trees, so they are hard to study. So far this fall, only 43 roosts have been reported compared to 156 reports last year at this time. This year's roosts have also been small. Most have had only a few hundred butterflies and the largest contained about 1,500. Last year at this time, the largest roost had 10,000 Monarchs. This fall's roosts have also been short-lived. Most have lasted only a day or two.

Sept. 21 - Cool temperatures descended across the Central Plains this week, and along came the highest migration counts of the season. The first two roosts were reported in **Texas** this week. Also reported in Texas was a flight of 100 Monarchs in one hour. Eastern Flyway - A clear pulse of Monarchs finally appeared this week. From Vermont to Virginia, Monarchs were moving.

Sept. 28 - A blizzard of butterflies appeared along a 50-mile stretch of the Lake Ontario shoreline, roughly from Toronto to Niagara Falls, Ontario. All week, peak migration sightings have been reported along the Great Lakes of Ontario and Erie. Monarchs bunch up there, either waiting for safe crossing conditions or traveling along the shorelines. Reports from the Appalachian Mountain region of Virginia have been particularly strong during the past week. The mountains are a Monarch migration corridor. Monarchs can use 'ridge lift' to gain altitude, and then soar effortlessly along the mountain ridges. The leading edge of the migration is now entering **Texas**, and peak conditions building across Oklahoma.

October 6 - Monarch butterflies are in a race against time during fall migration. They must leave the north before they're trapped by the cold. Monarchs are cold-blooded so, in order to fly, their flight muscles must be warm enough.

From the Atlantic Coast to **Texas**, it was a big



week for migration. After several days of rain in the east, high pressure moved in, the sun came out, and so did the Monarchs. From NJ -While on the beach they were coming off the ocean in groups...continually! Some were so tired they were seen resting on the beach. Others were flying in groups toward the dunes and heading for food and cover for the night. From Virginia's Assateague Island - It was estimated that 5,000 monarchs were roosting there one night. This is the largest report of the season outside of **Texas**. Migration was strong all day. East coast - The Monarchs migrated down the beach in a continuous stream from 8:15am to 6:15pm. The average was about 600 per hour. Spontaneously, people along the Ohio River reported a huge wave of migration. They continue to pass by at more than 200 per hour, a continuous stream.

Funneling into Texas: All monarchs headed for Mexico must cross **Texas**, and the butterflies began to arrive in substantial numbers this week. Reporting from Valentine, TX, was a rancher who had thousands roosting in pecan orchards near Valentine. Another observer in Midland said, "Monarchs have invaded in mass! They are literally everywhere. Every flower patch has hoards hovering." Ft. Stockton reported, "The trees are dripping with Monarchs. They are so thick in the air I can hear and feel the wing beats." However, the Monarchs in west **Texas** seem to have overshot their destination. The overwintering sites in Mexico are located at longitude 100 West (that longitudinal line runs north/south just west of Abilene), but large numbers have been reported in far west Texas including the Big Bend area. Any idea as to why?

No monarchs yet in Anganguero, Mexico, however.

GALLERY



Baltimore Oriole
Photo by Jerry Stone: 9/18/2011
Keep the jelly and fruit out for them.



Ruby-throated
Hummingbird
Photo by Jerry Stone:
9/14/2011

Immature male Ruby-throated Hummingbird
Photo by Jerry Stone 9/14/2011
The dark lines in the throat (called stippling) indicates a young male. The dark spots are actually dark centered feathers. The lone dark spot is PROBABLY an iridescent red feather that appears dark or black because of the angle involved in the photo.



VOLUNTEER OPPORTUNITIES AND AT/EVENTS CALENDAR

Mike Childers

OCTOBER EVENTS & VOLUNTEER OPPORTUNITIES

Education Center Dedication Inks Dam National Fish Hatchery	Oct 18 10am
Autumn Trail Maintenance Day Inks Lake State Park	Oct 20 9am-Noon
Texas Master Naturalist State Conference Mo Ranch, Hunt TX	Oct 21-23
Friends of Balcones Canyon Nat'l Wildlife Reservere Nature Day & Annual Meeting Balcones Canyonlands National Wildlife Refuge	Oct 23
Autumn Trail Maintenance Day Inks Lake State Park	Oct 27 9am-Noon
Big Bend Ranch State Park Field Trip Big Bend Ranch State Park	Oct 29-Nov 4

FUTURE EVENTS & VOLUNTEER OPPORTUNITIES

2011 Texas Invasive Plant and Pest Conference The Lady Bird Johnson Wildflower Center	Nov 8-10
Christmas Party - Awards and Pins - 2012 New Officers Installation Quail Point, Horseshoe Bay	Dec 7 5pm
HLMN Monthly Meeting: Harris Greenwood and Romelia Favrot - land management LBJ National Historical Park in Johnson City	Nov 9 1pm

For volunteer opportunities and events scheduled at Inks Lake State Park, Blanco State Park, and Balcones Canyonlands, 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://friendsofbalcones.org/>

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

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.