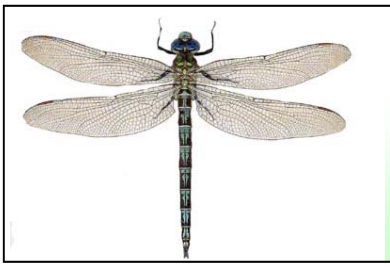
FALL 2007 Volume 1, Issue 4



Texas Master Naturalist the Cyrano

The Newsletter of the Brazos Valley Chapter

President's Corner *by Jo Anne Bates*

As I leave this President's chair it is with bittersweet thoughts. I could not have done this without all of you. The officers, Dwight, Lucy, and Punnee, all of the committee chairs and their committees gave many hours of their time. I think the general membership volunteered across the board. Everyone can help with something, if not all events. And I think that did happen. Things were not perfect, but I hope we made a contribution and we had some fun.

Jo Anne Bates, exiting president of the TMN Brazos Valley Chapter

We are still finding our way in this chapter, but I see many good things that happened this year. Our group is very diverse. We have our birders, our trail makers, the book worms, butterfly lovers, mushroom connoisseurs, slime mold lovers, mussel and amphibian watchers, aquatic waders. Some of us are experts in grasses and trees. I think the TCWC flowerbed is growing because of all the hard work from our gardeners. The community is learning about us because of the outreach we did this year. The Bio Blitz and Planet Earth Day are examples of this. Little by little we are making a difference in the Brazos Valley. If you have a passion, make a bid for that to become an approved project and infect your fellow naturalists.

According to Ron Smudy, retired employee of the San Antonio Parks and Rec Department, the Master Naturalist program is the fastest growing volunteer program in the nation. It started with the San Antonio Chapter 10 years ago. States across the nation use the Texas program as their prototype when forming their own state programs. Our chapter is graduating our third class and we look forward to the future.

As John James Audubon said, "The woods would be silent if no birds sang there except those that sang best." We all have a song to sing, so start belting yours out loud and clear. It has been fun and I will continue singing from the choir next year.

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Texas Master Naturalists will be invited to vote for the best article in this issue of *The Cyrano*. The author getting the most votes will receive a Christmas ornament handmade by Mark Ojah out of all natural materials as well as five pounds of fresh pecans donated by our own pecan specialist, Leo Lombardini. Please send your vote by December 12 to Jimmie Killingsworth, editor of the Fall issue, at killingsworth@tamu.edu. The winner will be announced during the Holiday Gathering, on December 14 (see p.10 for gathering details). Please note that the article on fire ants on p. 4 is not eligible for the award.

The Editors

TMN Holiday Gathering is coming up

See details on p. 10

Breakfast on the Little Brazos *text and photos by Jackie Palmer*

When the 2007 TMN trainees gathered on the banks of the Little Brazos River with their dogs and children the first Saturday morning of the fall season, we witnessed an astounding saga—at least it was astounding to us—but to the critters involved, it was breakfast as usual.

A bright green-striped ribbon snake the diameter of a pencil and about a foot in length caught a juicy cricket frog. (See the photo progression below.)

Even though the frog's head and body were two or three times the width of the snake's head, it had no chance. Running commentary amongst the TMN folks was that the frog was too big and would escape. However, once the snake latched onto a hind leg (Figure 2)—and in spite of a child's hysterical screams and frantic attempts to rescue the frog—the ribbon snake never let go.

Effective tactics included shaking the frog vigorously (Figure 3) —perhaps to wear it down or cause it to go limp so the snake could move its bite a bit farther up the leg—and wrapping its tail (do snakes have tails?) around a clump of grass so as to provide leverage for pulling the frog away from the direction it tried to move. This latter move was especially necessary once the snake got both hind feet in its mouth and the frog started kicking (Figure 4). At one point, the snake twisted its body vigorously and flipped the frog into a hole as it moved its mouth up even farther over the body (Figure 5).

So how did the thin snake swallow such a large frog? In the videotaped sequence I captured, you can actually

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see the lower jaw unhinge as the frog's body disappears into the snake's mouth (Figure 6). For several minutes, only the front legs and pointed nose of the frog were visible in the snake's mouth (Figure 7).

The entire process took about 15 minutes—not a bad morning's work for a good hearty breakfast!


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Twig Girdlers *by Leo Lombardini*

My neighbor stopped me one day in October and told me that the strangest thing had just happened to her. "It looked like someone walked in my yard," she said, "and started clipping twigs and small branches off of my trees. I really do not know what is going on." Luckily for her and for the neighborhood's harmony, I knew exactly what was going on, because I have seen the same phenomenon in my yard and even more frequently in pecan orchards. The responsibility for this damage was not some neighbor's kid having fun cutting branches (he would probably be too busy playing videogames nowadays) but an insect appropriately known as twig girdler (*Oncideres cingulata*). Girdlers belong to the wood-boring beetles' family (*Cerambycidae*). The damage (see photo on right) is done by the females, who chew the groove around a twig before laying an egg beneath the bark, beyond the cut. After the twig falls off, the larva hatches and bores into the dead twig to feed. The larva will excavate the center of the twig where it will overwinter. Girdlers never cause enough damage to require control, but if you are really concerned, the best way to do it is to collect severed twigs, both on the ground and still on the trees, and burn them. However, keep in mind that likely more girdlers will fly in and continue doing what they have done with skill for thousands of years.

Twig girdler. ***Photo by Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org.***

Fire Ants Killing Baby Song Birds at High Rates *by Edith Chenault*

Red imported fire ants may be killing as many as a fifth of baby song birds before they leave the nest, according to research recently completed at Texas A&M University.

Andy Campomizzi, graduate research assistant in the department of wildlife and fisheries sciences, studied black-capped vireos and white-eyed vireos in Coryell County over a span of two years. Campomizzi kept records on a total of 72 nests of both species. Of the nests where there was no pesticide treatment, only 10% of the young birds fledged and were able to leave the nests. Of the nests with treatment to protect them from fire ants, 32% fledged. Nearly 70% are lost to other causes, and fire ants knocked the survival rate down an additional 22%.

A young, white-eyed vireo lies in its nest. ***Photo by Andy Campomizzi, the Texas A&M University Institute of Renewable Natural Resources.***

"That was a bigger difference than we thought it would be," he said. "Fire ants were definitely a mortality factor for song birds."

The black-capped vireo – which breeds only in the Edwards Plateau of Texas, a couple of areas in Oklahoma and northern Mexico – is an endangered species. The white-eyed vireo is found more extensively throughout the southeastern U.S. and is not endangered.

In his research, Campomizzi would find nests with eggs and attach Arinix – a nylon plastic cable wrap developed for use in protecting electrical equipment from fire ants – around branches. Some of the wraps were permeated with permethrin insecticide and some not. A sticky insect trap coating was applied to the branch on the limbs with the insecticide, so the ants could not get around the trap to the nest, he explained. Nests were isolated so access was limited to one or two routes for the fire ants, he said.

He checked the nests every three or four days. He counted the nest as a success if the adults could raise at least one of their young until it could fly out of the nest, which takes about 10 to 12 days from hatching. Campomizzi believes fire ant predation may occur among any song bird species, although mortality rates would vary depending upon local populations of the red imported fire ant and how close to the ground the birds were nesting.

Management for black-capped vireos is ongoing on both public and private land, he said. "Current management includes providing breeding habitat and removing brownheaded cowbirds, a brood parasite," Campomizzi said. Land managers interested in improving black-capped vireo habitat may want to consider managing fire ants around nesting areas to increase the chances that they can successfully raise their young. This will perhaps contribute to the species' recovery from being endangered, he said.

The research was funded by the Texas A&M Institute of Renewable Natural Resources.

Andy Campomizzi wraps Arinix, a nylon plastic cable wrap, to a branch that leads to a songbird nest. ***Photo by Juan Pablo Assmus, Texas A&M University Institute of Renewable Natural Resources.***

Edith Chenault is a Communications Specialist at the Texas A&M Agricultural Communications. This article was reprinted by permission of the Texas A&M Agricultural Communications (http://agcomm.tamu.edu/).

The Turf Farm *by Jackie Palmer with photos by Myrth I. Killingsworth*

Off we go, armed with only camera, tripod, and binoculars, in search of snowbirds: down Highway 21, past the Little Brazos (site of the snake saga), past cotton fields shining white in the morning sun, their once-green leaves now brown, drying up in preparation for the impending harvest. After a brief stop at the pecan orchard, only to find we were a week early (nuts!), we backtrack to Highway 50, a narrow road lined with white fur—no, that's cotton too, escaped from truck beds hauling huge rectangular-shaped bales to the gin. Down the road a ways, then left at the turf farm, the giant water dragons meticulously feeding moisture to the new grass shoots. (Did you know they move automatically? Just a foot or so every few minutes, the half-mile long beasts roll gracefully in tandem over the fields.)

Although this is our first visit to the area, we are inexorably drawn to the levees. Pulling our red Prius to a quiet stop, we are immediately rewarded with the sight of what we think to be a small flock of snow geese swooping low over the raised banks of water—visible now, then lost in the shimmering reflections of the sun on the water, then visible a few seconds later as the white breasts and black-tipped wings move as one to dip and sway this way and that, in an artful dance that at times seems choreographed. We wonder if they are just passing through or if changing global weather patterns will keep them here all winter.

But wait! A closer look and a little time with the bird book prove the birds are American avocets with their upturned beaks and legs stretching out behind. In their non-breeding plumage (without their orange heads and necks), their markings are remarkably close to the snow geese.

Amazing! But even before we've made it to the top of the levee, a hawk-like bird captures our attention—large wing span, brown feathers, white tail, white head. Binoculars and cameras quickly hone in on the elusive symbol of our nation's fierce independence—the bald eagle! (Yes, folks, right here in River City!) Flying higher than the avocets, it alternates spy missions over the water with brief sojourns into the taller surrounding trees, where it is effectively camouflaged. Still, we manage to capture it on film (see p.10).

We meander around the levee—stopping to photograph a few great American egrets roosting on the bank and in trees—and share stories of previous sightings. While living in New Mexico a decade earlier, we'd frequented Bosque del Apache, a national wildlife refuge that seasonally drew huge flocks of snow geese and sandhill cranes, and occasionally even a whooping crane or two. And when living in Tennessee even earlier, we'd spied a bald eagle at Reelfoot Lake. Jimmie recalls an instance of driving cross-country and seeing a bald eagle flying above the interstate. (And just this past summer, he and I watched a whooping crane fly over a Georgia interstate.) Then there's the Asian crane he saw while touring the demilitarized zone on the North/South Korean border with his step-dad in 2000.

I wonder if this is partly why birders seem so passionate about what they do. Not only do we feel blessed each time we catch sight of an elusive eagle or crane, but going to sites where birds hang out brings back memories of other times, places, and special people who have shared our good fortune.

Musseling in on the Brazos River *by Ken Hasson*

On behalf of the Mussel Watch group we want to thank everyone who participated in identifying the mussel specimens during our October TMN meeting. The mussels were collected from two separate river sites just two days earlier, one on the Little Brazos and the other on the Brazos. The survey group was small (Dwight Bohlmeyer, Mark Ojah, Lourdes Hasson, and myself), and we hope more TMNs will join us for the next outing.

Seven different species were found on the Little Brazos (3 whole specimens) and 10 different species on the Brazos (126 whole specimens), which included the following: Three Ridge, Smooth Pimpleback, Pistolgrip, Tampico Pearly mussel, Pink Papershell, Maple leaf, Yellow Sandshell, Fragile Papeshell, Louisiana Fatmucket and Texas Fawnsfoot. The majority of the shells were long dead to relatively recent dead from the Little Brazos (1 live specimen found), whereas those from the Brazos were relatively recently dead to very-recently dead. Many fine complete mussel specimens were collected and used to augment teaching kits being assembled by Dwight. After faxing the mussel survey forms to Marsha May (TPWD) we spoke by phone. She was excited about the findings of the Louisiana Fatmucket and Texas Fawnsfoot, which she stated are rare and requested that we e-mail photos of these specimens.

In terms of fossils, we found 6 fossilized bone fragments; one, possibly two camel's teeth; one horse or bison tooth, and another unidentifiable tooth fragment from the Brazos site. I found some of these fossils on the previous Friday evening when I scouted the site (in case Dwight or Mark are wondering how the list got so big). While we were collecting mussels, a family of five or six motored to the sand bar in a john boat with a canoe in tow. Within about 5 minutes of disembarking, their young boy found a beautiful small plant fossil (fern-like), which made us all envious. This sandbar is continuously changing/shifting, and it seems that new fossils are exposed all the time.

Apart from mammalian, marine invertebrate and plant fossils, the Brazos river site that we surveyed is home to numerous live mussel populations as well, which I have seen during past years when the water level is low. We were unable to see them on this trip because of high water, turbidity and swift current. However, we hope to visit this site at least once a month until early next year to continue the mussel survey and, of course, look for fossils. I will keep you posted about the next trip for those whom might be interested in joining us.

Shells of mussel species commonly found in the rivers of the Brazos Valley. ***Photo by Jason Kinney.***

A Wall of Controversy *by Leo Lombardini*

In October 2006, the 109th Congress passed the Secure Fence Act (H.R. 6061), with the intention of controlling illegal immigration into the United States of America. The Act included a provision calling for varying amount of wall, fence, and vehicle barrier construction along the border between the United States and Mexico. The Act was then signed into law by President Bush. Despite the fact that no funding was allocated to the fence at the time the bill was passed, the legislation required the Department of Homeland Security to have funds to cover the costs of the barrier in place by 2008. How much of the fence is to be built will be determined by the amount of funding that will eventually be allocated to the project.

The controversy about the building of the wall has so far focused on the effect it will have on people crossing the border. But as naturalists, we might want to think about how it could affect other species. The border between United States and Mexico is approximately 2,000 long and spans four U.S. states and six Mexican states. From the Gulf of Mexico, it follows the Rio Grande to El Paso, TX, continues westward across the Sonoran and Chihuahuan deserts in New Mexico and Arizona, then the northern part of the Baja Peninsula, and ends near San Diego, CA. About half of the land along this border is owned by the federal government and includes national forests, national wildlife refuges, and national parks. The land, both federal and private, contains many unique ecosystems, which are home to many endangered species, such as ocelots and jaguars.

Picture of the US-Mexico Border, taken from Nogales, Arizona. The USA side of the border is on the left of the picture, while the Mexican side is on the right. ***This image has been released into the public domain by its creator, Darkros, via Wikipedia. This applies worldwide.***

To understand how the fence is likely to affect these animals, we need to know what kind of structure is under consideration. The Secure Fence Act requires the construction of 700 miles of double-steel walls along the U.S.–Mexico border. The partition will be accompanied by floodlights, motion detectors, cameras, and other surveillance technology. It will be built in five segments in regions which are known for high levels of illegal border crossings. The fenced border will cover approximately a third of the border with Mexico, almost all the Arizona border and large portions of the Texas and California borders. The fence along the U.S.–Mexico border is obviously not a new concept, as about 100 miles of fence is already in place, mainly near urban areas, such as El Paso, TX; San Diego, CA; and Nogales, AZ. However, except for a few portions where the fence was built using panels of corrugated steel, most of the existing border is delineated with a simple six-strand barbed wire fence or, in extreme cases, by vehicle barriers made by vertical posts and horizontal rails. These latter types of barriers, often erected on federal land, are considered very wildlife-friendly, not only because they protect the natural habitat from illegal off-road traffic, but also because they allow animals to pass through. The problem with these "porous" barriers, however, is that they are not very effective in preventing the passage of people on foot, which makes them unpopular with Homeland Security and Congress.

There is no doubt that solid structures are more effective in high-traffic areas, but the effects of these barriers on wildlife populations could be very severe. A barrier made of 15-foot steel walls, such as the type proposed by Congress, would impede many animal species, such as the desert tortoise or the jaguar, from moving between U.S. and Mexican habitats, thus creating genetic barriers and preventing interbreeding between U.S. and Mexican populations.

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While certain barriers could be designed to allow smaller animals to cross, while maintaining the original purpose of preventing human passage, little can be done to allow crossing of larger animals, such as the pronghorn antelope. The pronghorn is the only animal in the world with branched horns (not antlers) and the only animal in the world to shed its horns, as if they were antlers. Pronghorn cannot leap fences, as deer can do, so fenced rangeland has already hampered their migration and survival in the past century. It is estimated that in the mid-1800s, pronghorn numbered in the many million, second only to the American bison. By the 1920s, the U.S. population had been reduced to about 20,000. Current estimates place the number of these antelopes living near the border at 256 in the U.S. side with another 220 in Mexico. Until now, these animals have been able to move more or less freely across the border, but if a fence is built, they will be unable to jump across. This limit would split the population in two smaller groups, thus limiting genetic mixing and reducing diversity in future generations.

Pronghorn antelope (*Antilocapra americana*)
Photo credit: www.naturespicsonline.com, which explicitly releases its images to public domain.

Right now we can only speculate about these and other effects because very little research has been conducted about the possible effects of walls on wildlife. It may be possible, for example, that the proposed barriers would actually help protect the habitat of some endangered species from the continuous habitat disturbance caused by the hundreds of people crossing the border illegally. To answer some of the questions and predict some of the consequences that the construction of walls along the U.S.–Mexico border would cause on wildlife, federal agencies such as the Forest Service have recently started working together with the Border Patrol. This admirable effort, however, will not eliminate the risk that impenetrable walls will harm some of the fragile wildlife populations that live in those very unique ecosystems present along the border.

The question that remains for naturalist-citizens on this delicate topic is this: Is the construction of a 700-mile-long wall, which may or may not effectively reduce illegal immigration, worth the cost of preventing the movement of wildlife across a purely political (and from the animals' viewpoint, invisible and nonexistent) boundary?

TMN Members' Spotlight

Jo Anne Bates

My love of nature came through the "garden gate." My grandmothers were both gardeners. They grew flowers, fruit trees and vegetables. Both had grown up in the country where they raised their own chickens and lived close to the land. My childhood was spent living on the "near north side" of Houston. Back in the good old days there was more room to roam in the city than there is now. We were told to "go play outside" and we did. Living in Lubbock, during my Red Raider days, exposed me to the wonders of the plains. Dust an inch thick all over my dorm room after a dust storm was the norm. I did appreciate the vastness of the plains, the contrast with the closeness of Houston. As an adult, I spent 20 years living in the Panhandle of Florida. The beaches in that part of Florida are as white as sugar, and the water is clear enough to see your feet in waist high water. The sunsets there are awesome. It is sad to see the natural beauty of Florida being destroyed by overzealous building. During the time I lived in Florida, I traveled with my "road warrior" husband across this country. We drove from Key

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West to New England, across the great plains to California and back on 110 from L.A. to Jacksonville, Florida. Spring in Virginia, July in Minnesota, November in Phoenix and always back to Texas in December. That was not a yearly trip, but there were always roads to take to somewhere. I joined the Texas Master Naturalists because I think every place has its own special feel and I would like to help the Brazos Valley, my home now, explore and protect our unique habitat. My year as President has expanded my appreciation of this area because of all of you and your contributions to this fun and crazy group we call the TMNers of Brazos Valley.

Jim Waldson

I was raised on a dairy farm in central Wisconsin. Our farm had a small river running through it and 20 acres of woods. Ever since I can remember, I've had an affinity for the outdoors and nature. As everyone knows winters in Wisconsin are brutally cold, and every thing that doesn't hibernate freezes or migrates. I chose the latter.

As soon as I discovered that Texas existed with all its natural wonders, I got here. That was in 1975, the place was Tyler, TX. I had to relearn the flora and fauna, which is half the fun. Poisonous snakes, armadillos and plants that actually lived through the winter. I spent 15 years in Tyler, working in the home-building industry, after which I moved to the Dallas-Ft. Worth area. There I worked as a commercial construction project manager, building grocery stores and shopping centers. My two children, ages 26 and 29, were born in Tyler and presently reside in Ft. Worth. We have one grandson, 9 months old whom I am looking forward to exposing to the world of nature.

In 2000 my wife Mary and I purchased 30 acres in Milam County near Gause, in the enchanting post oak savannah. Hence, another learning experience. As soon as the opportunity presented itself (2005), we made ourselves permanent residents of Milam County. Now, as a project manager for TXDOT, I have the good fortune of working outdoors on a daily basis.

We enrolled in the Master Naturalist class, primarily to learn more about nature in this area. Throughout the course of the class, I became aware that the concept of the Master Naturalist is much more than just to educate oneself. It exists also to take to the community an appreciation of nature and to promote its magic to anyone who cares to listen. All being said, I am looking forward to an enjoyable and productive year with BVTMN.

"Be the change you wish to see in the world."

Kate Kelly

I was born in Oakland, California in the late 1940s, before the state looked like one solid subdivision stretching from San Francisco to San Diego. Before the freeway system filled in, we'd travel through sleepy towns and back roads on our way to Felton, a small town in the Santa Cruz mountains, where my grandfather and father had built a cabin in the 1930s. We'd drive by miles and miles of orchards between Oakland and San Jose, bursting with all kinds of apples, peaches, cherries, and plums growing on large swaths of rich land, each tree ringed round with a white stripe of insecticide. Felton was our family retreat and our gateway to the natural world. Henry Cowell Big Trees State Park, 1,750 acres of trees and shrubs, including Coastal Redwoods hundreds of years old and hundreds of feet tall, was our Disneyland. Playing hide-n-seek under the huge trees, picking wild sweet peas, watching the California Quail skitter across the dirt road trailing a line of chicks, peeling the bark from Pacific Madrones, this was how we frittered away foggy mornings at Felton. In their own quiet way, my parents taught us by example to love the smell of damp earth, to sweat over growing Swiss Chard, to learn the names of plants and birds. My parents would have been Master Naturalists if they'd had the time and the energy to attend classes and volunteer. My own interests are an extension of theirs.

Visit us on the web at:
http://grovesite.com/tmn/bv

Our Final Thoughts

Left: A rare but welcome sighting in the Brazos Valley: a bald eagle (*Haliaeetus leucocephalus*). For the complete story, read "The Turf Farm" on p.5. *Photo by Myrth I. Killingsworth.*

Below: A more common presence in Texas landscapes: a Yellow Garden Spider (*Argiope aurantia*) lapping up the droplets left on its web by an irrigation sprinkler. *Photo by Leo Lombardini.*

If you would like to have one of your photos featured in one of the next issues of the Cyrano, you can do so, by submitting it electronically to Leo Lombardini

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Mark your calendar!

2007 TMN Holiday Gathering
When: Friday, December 14, 7:00 - 10:00 p.m.
Where: The home of Jimmie Killingsworth and Jackie Palmer
2908 Aztec Court, College Station, TX
The chapter will provide the meat, but please bring a side dish, dessert, or wine to share