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*Celebrating and sharing our experiences along "**the roads**" we take through nature.*

A Quarterly Newsletter of the El Camino Real Chapter

Milam County Texas Master Naturalist Spring '09

The Texas Master Naturalist program activities are coordinated by AgriLife Extension and Texas Parks and Wildlife. Texas Master Naturalist and Extension programs serve all people regardless of socioeconomic level, race, color, sex, religion, disability or national origin.

Spring '09 Issue Contents

Our Motto

- Look
- Learn
- Teach
- Conserve

Our Mascot
Green Tree Frog

Did You Know?

What is the largest insect known to exist on Earth?

Hint: You may be wearing one in the form of a pin.

See Answer on the last page.

Time to Care for your "Pet", by Paul Unger

Our new training class has been very instructional as well as inspirational to the current chapter members.

First, the presentations and subject matter we struggled with last year have now found new relevance. They are packed full with amazing information, the importance of which did not seem so obvious then as now.

Not that the presentations changed, they remain enthralling and interesting. but our perspective and understanding have changed. We are learning the significance of the interconnections between the 'ologies. Our little pod of members sitting at the round table are continually poking one another with "Wow! That is awesome". Makes me wonder where I was last year.

Well, I know where I was. I was set in my confidence of my knowledge and experience, not realizing "there is a world out there" very skillfully disguised, of which I was not aware. Last year's training experience damaged that smugness.

Our presenters do not foster that smugness. Their brilliance is very humbling, impressive, and inspiring. Their presentations effectively encourage us to dig deeper and learn more on our own. The presenters are so refreshing as they do not promote a personal agenda other than to teach others about their love of nature and their mission to conserve our resources through knowledge.

The current class of trainees started their first class rather wide eyed, wondering "What have I got myself into?". One presenter quipped recently that last year's class had the same "deer in the headlights look". He also noted the intensity at which last year's class members were following his presentation this time around. He found that very encouraging and rewarding. We got it!

By observing their emerging enthusiasm for nature as the current class progresses, we have learned a greater appreciation for the process we went

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Adopt a Pet *(Continued from page 1)*

through last year. It was that process and a year's experience in looking and learning that prepared us to soak up the presentations this time to their fullest. They do not quench our thirst for knowledge, nor are they intended to, but to reinforce the fact "there is a world out there". One only has to look.

The new trainees are an impressive lot. No less than 12 new special interest committees have formed, mostly around sections of the Milam County Nature Resource Book. Soon we will start to see the fruits of this effort as pages for the Book are developed and installed. Some of the sections are even planning to move past Look and Learn to using the information to Educate the Chapter and the public.

I do have a dilemma. The new members have invigorated me to the extent I want to be on all the committees. I have so much to learn and the best way to learn is to be active on all the committees. Unfortunately, that is not possible and is frustrating.

So I try to pick and choose. As a result I recently missed two fabulous events. The Bird Banding was a rare opportunity to study birds up close instead of through binoculars and photos. And I missed learning about the changes the watershed is currently undergoing as a result of environmental and manmade influences.

The new class is certainly "adopting their *Pet*". As some have observed, *Pets* are all so cute - I want to adopt them all. I will just have to pick one or two and give them my full attention, dedication, and care.

Paul Unger, Chapter President

How Old is Your Pet?

by Don Travis

I found some interesting data on the oldest recorded life spans of various animals. Data is from the National Wildlife Federation's National Wildlife Magazine, Feb/Mar 2007, and www.extremescience.com

- Mayfly: 3 hours
- Pygmy goby: 8 weeks
- Housefly: 6 months
- House mouse: 5 years
- Domestic dog: 29 years
- Domestic cat: 34 years
- Orangutan: 59 years
- African elephant: 80 years
- Human: 122 years
- Madagascar Radiated tortoise: 188 years
- And the Winner! A Quahog clam: 405-410 years

From Foxnews.com came this verified report.

"British marine biologists have found what may be the oldest living animal — that is, until they killed **it."**

The team from Bangor University in Wales was dredging the waters north of Iceland as part of routine research when the unfortunate specimen, belonging to the clam species Arctica islandica, commonly known as the ocean quahog, was hauled up from waters 250 feet deep.

Only after researchers cut through its shell, which made it more of an ex-clam, and counted its growth rings did they realize how old it had been — between 405 and 410 years old.

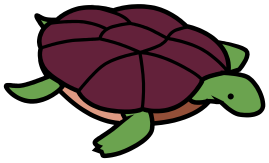
Another clam of the same species had been verified at 220 years old, and a third may have lived 374 years. But this most recent clam was the oldest yet.

What's the oldest known age of your favorite "pet" species?

What is "Texas Nature Trackers"?, by Lee Ann Linum

Have you ever wished that you'd taken a few more biology classes in school? Ever dreamed of being the Marlin Perkins or Steve Erwin of your day? Ever thought, "Those Texas Parks and Wildlife biologists sure look like they're having fun?" Well, it's not too late for you to be a scientist in the biological field—a citizen scientist, that is!

Texas Nature Trackers offers interested volunteers a chance to help gather data on species of concern throughout the state. The program emerged in the 1990s as biologists at TPWD realized that there were many more species than biologists in the state and that we needed help in making sure those species were not on their way to becoming endangered or threatened. Since the initiation of the program thousands of volunteers have helped us better understand the status and conservation needs of hundreds of species.



There are several different monitoring or "Watch" programs offered under Texas Nature Trackers addressing a wide variety of species. Each program and its materials have been designed by a TPWD biologist, and biologists regularly review the data to examine the insights that citizen scientists provide. Currently, Texas Nature Trackers offers the following watch programs:

- Texas Horned Lizard Watch – free monitoring packet available; occasional workshops
- Texas Hummingbird Roundup –monitoring packet available; occasional workshops
- Texas Monarch Watch – info available online
- Texas Mussel Watch – workshops available
- Texas Amphibian Watch – free monitoring packet; $5 CD of frog calls; workshops available
- Texas Black-tailed Prairie Dog Watch – free monitoring packet available
- Texas Box Turtle Survey – free data form available
- Texas Nightjar and Owl Survey – in development

In addition, Texas Nature Trackers, with assistance from other staff in the TPWD Wildlife Diversity Program, sometimes offers site-specific training to help volunteers recognize and monitor other species of concern, such as rare plants, that may occur in their area.

The El Camino Real Chapter of Texas Master Naturalists is already on their way to becoming partners in Texas Nature Trackers. In 2008 the chapter hosted a horned lizard workshop that trained volunteers to participate in Texas Horned Lizard Watch and in a statewide genetics project for horned lizards. The City of Rockdale will continue to support these efforts by hosting a public presentation on ants and horned lizard habitat on April 23, and amphibians on May 28. Also in May, the Chapter will host training workshops for Texas Amphibian Watch and Texas Horned Lizard Watch. Info on these and other programs is available at www.tpwd.state.tx.us/trackers/.

Don't miss your chance again! Amaze your friends and become a citizen scientist through Texas Nature Trackers!

Wild at Heart

By Shawn Walton

Have you ever noticed how good you feel when you get outside on a glorious day? Particularly, when you find yourself out in the country, away from houses, where you feel like you are in the 'wild'? The feel of the breeze against your skin, the sound of the birds calling to each other. It's so quiet, and yet it's not.

The quiet is the lack of human sound. The noise is that of nature. We feel peace in these places because somewhere deep down inside of us, we feel at home. It's not landscaped, but it still has symmetry. It's not watered regularly, or fertilized, or mowed, and yet it is still beautiful. The taste of wild dewberries or blackberries is still sweet, and yet, there has been no human there making sure they get water and fertilizer. Nature has a balance that resonates deep inside us.

Why can't we bring that symmetry, that peace, back home with us? I think we can. I think that is what draws us to the idea of a Master Naturalist. I also think that is why people become Master Gardeners.


TPWD 2006

All of us know the importance of the native landscape. Why it needs to be preserved, and why we should bring it back to as many areas as possible. But, there comes a point where the idea of the native, 'wild' country stops, and your house, your human habitat, starts. How much of the 'wild' do we need around us, and how do we live with it?

In taking the Master Naturalist and Master Gardener classes at the same time, I am struck by the similarities between the two, and the fact that their differences are not that many. I actually get confused when trying to separate what it means to be a Master Naturalist versus what it means to be a Master Gardener. They are both a side to the same coin.

In an existentialist, stream-of-consciousness sort of way, what I'm trying to figure is why we need to separate this idea that we have 'wildscapes', and we have landscapes, and that the plants we grow for food are separate from both of those. These should not be compartmentalized as separate things.

In fact, both Master Gardeners and Master Naturalists espouse many of the same ideals, such as rainwater harvesting, landscaping with native plants, mulching, composting. The difference is that one focuses on these ideals mainly for human use and consumption, while the other focuses on them for wildlife use and consumption.

Yes, there are areas where these two diverge, specifically when looking at it from a science perspective. However, for real life, real world living, the need to create, or maintain, a symbiotic relationship between what wild nature needs, and what 'civilized' humans need is imperative if we want to preserve our natural resources.

It's a question of how we co-exist with the plants and animals around us. And, it's a matter of scale. If you are a homeowner that wants to attract birds and wildlife, then the idea of a wildscape for your backyard may sound good. You also want to xeriscape to conserve water in the rest of your landscape, so why think of the two as separate. As a matter of fact, you may also want to grow some tomatoes, peppers, and onions so you can make your own salsa. Why not include those as part of your landscape? Wouldn't planting your vegetable plants near plants that draw butterflies, bees, and other beneficial insects work great in pollinating your food plants, plus keeping the bad bugs at bay?

Getting people to look at all their plants as part of the landscape, and, hence, their own stretch of 'wilderness' would be a first step. After all, the plants we eat for food, and the plants we use for 'non-wild' landscapes, came from a wild source from somewhere.

From a homeowner perspective, this may work out great. Now, take it up a notch to the small family farm – maybe one that is providing food (maybe both plant and animal) to a small to medium-sized group of families.

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Wild at Heart *(Continued from page 4)*

preserving our native heritage, while also bringing the peace we feel when 'out in the country' back home.

I have been to small family farms where the 'wild' is literally non-existent. These are organic family farms, so their minds and hearts are in the right place. But, mention the idea of native plants, or wildscaping, to them, and you get blank eyed stares. These farms concentrate on maintaining organic practices to care for domesticated plants and animals. The organics revolve around using compost and organic fertilizers, or, if you have livestock of any kind, using them to maintain healthy pastures and fields. That's great. It works. But, where are the native plants? Where is the idea of creating an ecosystem where the benefits of native plants, and animals, can be adopted for use with organic agricultural practices? I guess the lesson here is that organic farming practices do not necessarily equal living in harmony with the native wildscape.

I believe this is an idea that can be expanded into large scale agriculture, however, I think starting with the homeowner, and having them look at creating an ecosystem within their own yards that benefits wildlife, as well as satisfies our human needs, will go a long way into

Debbie Roos, NC Agricultural Extension Agent

Above photo of Ayrshire Farm, Bill Dow, Pittsboro NC where lettuce, fennel, and greens are intercropped with crimson clover, a cool-season cover crop that improves the soil, provides nutrients to the crops, and serves as beneficial insect habitat. It demonstrates building biodiversity into a cropping system as an important part of an organic approach to farming.

The Complete Master Naturalist

by Paul Unger

The Chapter Motto of Look, Learn, Teach, and Conserve, accurately describes a Master Naturalist path to higher skills in discovering nature. Today we will focus on expanding the concept of Look.

To Look is easy, some say. Just open your eyes and one will see the "world out there". That does help. As I set on the porch in the morning I no longer read the paper with my morning cup of coffee. Now I sit there and Look. I have begun to discover many things have gone unnoticed in the past. Leaves, grass blades, birds, bark, and yes, weeds. They are all there as well as a host of other things. Today I saw a plant with yellowing leaves. Better check on that. A lot can be seen from your chair.

The same when driving down the road even at 70 mph. Tree species, drainage patterns, soils, vegetation, animal and bird life. Lots to Look at.

Sitting on a porch, however, is a passive endeavor. The "World out there" remains hidden to a passive observer. One can just sit there waiting for the "World" to come to them, or one can get up, go and find it. The Master Naturalist actively

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Public Invited to Assist Texas State Reptile

by Lee Ann Linum

What looks like a miniature dinosaur, has horns on its heads, spikes on its sides, can harvest rainwater with its scales and squirts blood from its eyes? Everyone (or at least every Texan) knows that's a horned toad!

Whether you call it a horned frog, a horny toad, a horned toad lizard, or *Phrynosoma cornutum*, the Texas horned lizard is probably Texans' favorite reptile. Many people tell fond stories of growing up playing with horny toads. In fact, in recognition of that affection, in 1993 the Texas state legislature named the Texas horned lizard as the official state reptile.

But all is not well in this unusual love story. For many Texans, the ferocious-looking, but docile, lizard is now only a childhood memory.

Once scattered across most of Texas (and into Oklahoma, Kansas, Colorado, New Mexico, Arizona and northern Mexico), Texas horned lizards have disappeared from much of the state. According to anecdotal accounts, declines began in the 1950s, and accelerated during the 1970s. At the same time, human populations were increasing, road-building and urbanization was rapid, persistent pesticides were still common in the environment, and red imported fire ants were spreading across the state. Probably as a result of the interaction of many of these factors, horned lizards are now primarily restricted to West and South Texas and to some of the state's barrier islands. Because of these declines and concerns about over collection for the pet trade, in 1977 Texas Parks and Wildlife Department listed the Texas horned lizard as a threatened species.

Knowing that many Texans are concerned about horned lizards, in 1997 Texas Parks and Wildlife Department initiated a volunteer program called Texas Horned Lizard Watch. The goal of the program is to get lay people involved in gathering data about where horned lizards still do or do not exist and the habitat that supports them and then to have those "citizen scientists" monitor changes taking place over time.

According to Lee Ann Linam, coordinator of the program for TPWD, Texas Horned Lizard Watch has helped to shed valuable insight into the status of the horned lizard across the state. Volunteers have confirmed that horned lizards are more common in West and South Texas, but they also provided unexpected optimism for some counties found in the Post Oak Savannah ecoregion of the state, including Milam county. Volunteers also found that horned lizards are more likely to be present where big red ants, the primary food for horned lizards, are found and less likely to be found where red imported fire ants occur.

One of the goals of Texas Horned Lizard Watch is to help conserve and hopefully restore horned lizards. Linam believes that data about habitat conditions from horned lizard watchers may help people who want to manage their lands to benefit horned lizards. In addition, TPWD is trying to learn more about the genetics of Texas horned lizards around the state through a project currently being conducted by Dean Williams at Texas Christian University, an effort that is also inviting volunteer participation. "Through understanding how

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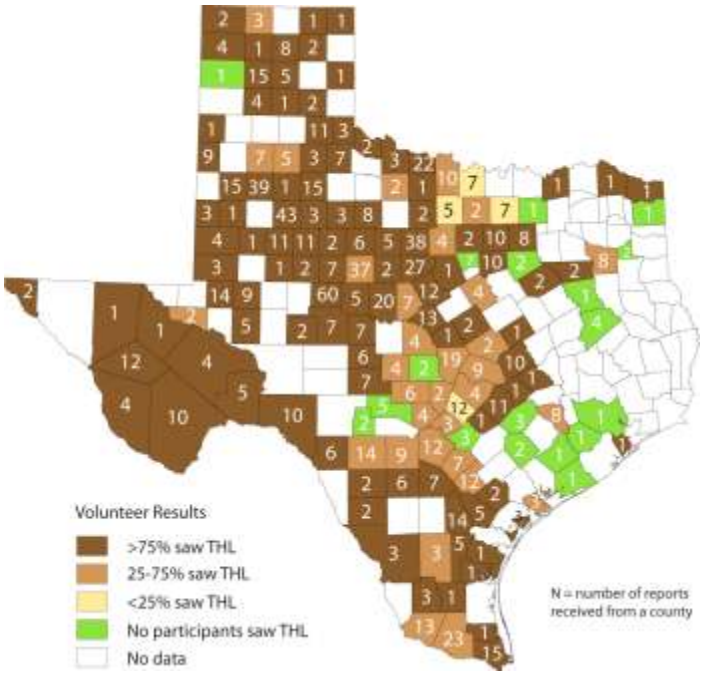
Horned Lizard *(Continued from page 6)*

related horned lizard populations are, we may be better able to understand how vulnerable small populations are and if horned lizards from one part of the state can survive in another part of the state," said Linam.

In August 2008, the El Camino Real Chapter of Texas Master Naturalists hosted a workshop to provide information on horned lizards and train volunteers to participate in the genetics project. Master Naturalists who are interested in getting involved can contact Paul Unger. Additional information about horned lizard habitat and the ants that feed them will be offered in a presentation by Linam and Texas A&M entomologist Bart Drees at 7:00 p.m. in Rockdale on April 23rd.

In the meantime, Linam notes that anyone can get involved in Texas Horned Lizard Watch at any time. More information about the monitoring program, including a downloadable monitoring packet and a summary report from the first 10 years of the program, can be found at www.tpwd.state.tx.us/hornedlizards/. Linam also welcomes casual reports of horned lizard sightings at any time.

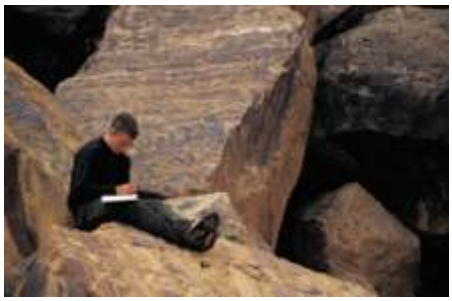


Map above shows prevalence of horned lizard sightings across Texas during 1997-2006. Data from Texas Horned Lizard Watch, TPWD. Milam County is dark brown, with the number 10 in it.

The Complete Master Naturalist *(continued from page 5)*

pursues the truth as revealed in nature.

However, to reveal the hidden "world", the Master Naturalist must use all senses to Look. Hearing, touch, smell, and, yes, taste are essential components of Looking. Master Naturalists get their "hands dirty". Looking is proactive, an active intimate involvement with nature in nature's environment. That can only be done when one gets "hands dirty".



Look does not end with the senses, but necessarily includes recording as a link to the next Motto step. Written and photograph documentation is invaluable and a necessary component of the Learning process.

One can read about nature, but until one experiences nature Learning will be limited. Looking is the necessary stepping stone to Learning. Without the experiences of Looking, the second step is greatly diminished as well as the Naturalist's ability to Teach and Conserve.

Look is the foundation of a complete, well rounded Master Naturalist. Look becomes the solid rock foundation on which the Complete Master Naturalist builds his house of skills.

To Cull or not to Cull

By Billy Lambert, Wildlife Biologist, TPWD

Few aspects of deer management have gained as much interest, and confusion, as the use of selective harvest to manage the buck segment of a deer herd. While removing certain deer can be an important part of an overall successful management strategy, oftentimes well-meaning hunters mistakenly shoot what they perceive to be inferior bucks for all the wrong reasons and ultimately do more harm to the deer herd than good. However, hunters armed with the right information can make good harvest decisions that will ultimately benefit the deer herd.

One only has to watch hunting shows on television or read a few articles in hunting magazines before hearing that they should shoot a particular deer 'before it has a chance to breed' or that a deer needs to go in order 'to remove that gene from the gene pool'. In reality though, it is most likely not possible to manipulate the genetic capability of deer herd through selective harvest.

No research has indicated this better than an 8-year study conducted in South Texas on thousands of acres where they targeted all yearlings with 5 or fewer points and all 2.5 year-old and older bucks with 8 points or less. At the end of the 8 years, it was determined that the intensified harvest of 'inferior' deer did nothing to reduce the production of 'inferior' deer recruited into the deer herd, and when compared to an adjacent area that did not cull these deer, there were no differences in the number of 'inferior' deer that were being produced. While they were not able to harvest all of the deer that met the culling criterion, the actual harvest was much higher and over a much larger acreage than the majority of hunter/landowners could ever achieve.

Research with penned animals has shown that antler quality can be improved through selective harvest, or removal. But, it is very important to note that this type of setting ensures that not only can you control which bucks and does do the breeding, but you also can completely remove certain animals from the population. This is not even remotely possible in a free-ranging setting or even in smaller enclosures that contain multiple deer.

Even antler heritability rates are a cloudy issue. Heritability relates to the ability of an animal to pass his/her traits on to their offspring. Some traits are highly heritable (meaning that there is a high probability of passing a trait along) and other characteristics have a low heritability (meaning that the trait has a low probability of being passed on to offspring). One research study conducted in Texas on penned deer has indicated that antler traits such as mainbeam length, inside spread, basal circumference, etc. are moderately-highly heritable. But, another study on penned animals in Mississippi indicated just the opposite; that antler heritabilities are low-moderately heritable. To further confuse the issue, the Texas study did not use the most preferred and accepted analysis for the data because the sample size was limited, meaning that they were forced to use a less-accepted analysis to analyze the data. When an independent researcher analyzed the exact same data set using the most-accepted analysis, it was found that the heritiabilites were substantially lower than previously indicated. But again, there was a sample size issue.

Does all of this mean that there is no reason to use selective harvest to remove undesirable bucks? Absolutely not. But, it is important to realize that you're not doing it for any sort of mythical genetic reasons, but simply removing deer that will never reach the ultimate antler size or quality that you desire as a manager.

So, when is a good time to try and remove bucks with undesirable antler characteristics? The only time any buck should be 'culled', is after your deer density is good (the overall number of animals on the property in relation to the habitat), after your sex ratio is good (no more than 1.5 does per buck), and after your buck age structure is consistently at least 25-30% (1 out of every 3 or 4 bucks is 4.5 years old or older). Culling *any* bucks before then only slows your progress towards these goals. And even then, you would only want to 'cull' deer that would never make the top 15-20% of your buck herd in a future year. Given these criteria, very few properties in the Post Oak Savannah or Blackland

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Culling Deer *(Continued from page 8)*

Prairie, should be culling bucks. Culling is worthless as a management technique if you do not have a good number of deer reaching a mature age class, as the whole idea is to remove a deer so that you free up resources for a another (better) animal to continue on to maturity.

Instead of attempting to cull bucks, hunters and managers in our area that are interested in increasing antler size need only to focus on increasing their age structure. Bucks in our area rarely make it to even 4.5 years of age (85% of the annual harvest is made up of bucks that are 2.5 years old or less), but we know that antler size is not maximized until at least 6.5 years of age. So, rather than increasing buck harvest through culling or selective harvest, it is more important to reduce overall buck harvest in order to allow a greater percentage of the bucks to reach maturity. Many of the bucks that are currently culled now, including spikes, will ultimately be larger than the average deer killed now if allowed to reach maturity.

Regarding spikes, many myths still exist. First, the saying that 'once-a-spike-always-a-spike' is most definitely not true. All spikes will eventually branch out to have more than 2 points, usually by the second antler cycle. Along the same lines, the vast majority of spikes, even the 'long-horned' spikes or 'cow-horned spikes', are simply yearlings displaying their first set of antlers. Only very rarely will you see a spike that is older than a yearling. The reason is simple. When a buck is a yearling (i.e. 1.5 years old), most of the nutrition that he consumes is used to develop the body (muscle development, tissue and organ growth, bone structure, etc.) and just a little bit of the nutrients are funneled into antler growth, thus a typically small set of antlers. As the body matures, more of the nutrition is funneled into antler growth and the antlers typically grow larger. Accordingly, one would guess that the maximum antler size is then achieved after the body is fully mature, and this occurs on average at 6.5 years of age (or older). Many hunters have attempted to 'cull' a deer only to find out that what they harvested was actually an immature deer that simply didn't have time to develop a good set of antlers.

So, should spikes be protected or targeted? Two different studies have followed free-ranging (not penned) yearling spikes to maturity. The first showed that spikes continued to lag behind for the rest of their life, compared to yearlings that were more than a spike, but they also showed that while they continued to lag behind, a good percentage still grew a good set of antlers at maturity. There are records of spikes growing extremely large at maturity, although this is the extreme. But, even if just the average spike will be larger that the average deer killed currently (as is the case throughout the Post Oak and much of Texas), there is no reason to kill them. All you end up doing is keeping your age structure suppressed (which limits overall average antler size in the deer herd), with no real benefits provided. Under this scenario, if you get to a point in management that a 150-class deer means nothing to you and is considered undesirable, then you may consider shooting spikes (the vast majority of properties never reach this level of management). In the other study, spikes caught up to non-spikes antler-wise by 4.5 years of age, meaning that there were no differences between spikes and fork-antlered yearlings at maturity, meaning there is no point at all in culling them. I tend to agree more with the first study, that they do continue to lag behind, but that they absolutely can still produce a good set of antlers if given time to mature. And, a few can turn into really large deer.

Remember that you should only cull deer under certain conditions, and this is when your deer density is good, your sex ratio is good, and that you have many mature deer on the property. When you achieve this point in management, then it is simply a matter of calculating your annual harvest recommendations based on annual surveys. From the surveys you will be able to estimate the number of deer coming into the population (fawn recruitment). If your deer density is good and where it needs to be, then you simply want to remove the same number of deer from the population that will be recruited into the population (i.e. if 10 fawns will be added to the herd, you would want to remove 10 animals from the population to make room for them). Now, if your sex ratio is also good, you would want to remove equal numbers of bucks and does to maintain the tight sex ratio. In the example above, that means of the 10 deer

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Culling Deer *(Continued from page 9)*

that need to be removed, 5 should be does and 5 should be bucks. Which 5 bucks should you remove? This is where selective harvest becomes applicable. You wouldn't want to remove all 5 of the very best bucks you have because this would end up reducing your overall age structure and limit the availability of large deer next year or the year after. Depending on what the actual estimated age structure is, you might only want to harvest 1 or 2 of the really large bucks and leave the rest for future years. The remaining 3 or 4 bucks that need to be removed, then, should be those animals that will never reach the antler quality that you would like. This is where selective harvest, or 'culling' comes in to play.

Continuing with the above-example, we know we need to cull a few animals, but which ones are best to remove? You know that you wouldn't want to remove an animal that has the potential to grow into something good down the road. Several researchers have looked at how successful a manager can be at determining a deer's future antler size based on what he has on his head currently. There is no question that as a deer gets older, the better idea you will have of what potential he has to turn into good deer. The question then becomes, at what point do you give up on him and remove him from the population? You should normally cull from the top end (mature deer) first. As a manager, you've given these deer every chance to develop into something good and they just never turned out to be a quality deer. Once the culls are removed from the older ages (5.5+ years of age), if you still need to remove additional deer (based on the harvest recommendation), you can move into the younger age classes (3.5-4.5 years of age). Now it gets a little more tricky because you don't want to remove something that can still turn out to be a good deer later on. Remember, you don't want to shoot something that could end up being in your top 15-20% down the road. A very good rule of thumb for managed properties is to remove anything 3.5 years of age or older that has 7 points or less. Culling prior to 3.5 years of age, and even some that are 3.5 is tricky because they still have a lot of potential left and as mentioned earlier, you'll have a much better idea of what he'll turn into at later ages rather than younger ages.

Some of the deer that you end up culling at later ages may very well have been yearling spikes or small-antlered 2.5 year-olds and you may ask, "Why didn't we just cull them then?" The answer is that you just don't know what their potential was at a young age. Some can, and will, develop into good deer. You're better off leaving the deer out there until you know what they can produce. For those that have the mind set of 'but we don't want those deer breeding while they are alive', there have been 2 separate studies that conducted DNA analysis to determine which bucks are doing the breeding. The first was done using deer herds from Mississippi, Oklahoma, and Texas and the second was also done in Texas. Both found that the majority of the breeding was done by mature animals. Plus, the second was done with a very skewed sex ratio, so the few juveniles that did some breeding may have done so simply because there was more 'opportunity' than a property that had a good sex ratio. Plus, remember that it is doubtful that you can alter genetics on any significant acreage through selective harvest.

As you can tell, there are a lot of things to consider when culling deer. Given the high harvest rates on bucks that occur throughout the Post Oak Savannah and Blackland Prairie regions, landowners and managers should be extremely cautious when considering the implementation of a selective harvest strategy. But remember, the key to successful deer management is to get a large percentage of deer into a mature age class and provide good nutrition through native habitat management. Good luck with it!

Logos, Logos, and more Logos

by Paul Unger

Do you want a logo for a shirt, or a cap, or something to put on a sign post or fence?

With concepts by Paul Unger, and graphics by Rusty Thomas, the following are published here to provide a copy-right for them, and for use by members of the El Camino Real Chapter of Master Naturalists and the Little River Basin Chapter of Master Gardeners. These are posted on http://grovesite.com/tmn/ecrmn under Library - Graphics and Logos. Can you tell what they stand for?

Texas Star based Master Naturalist:

State of Texas based Master Naturalist:

Master Gardiner:

Milam County **Los Caminos** Spring '09

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Los Caminos is a quarterly publication of the El Camino Real Chapter of Texas Master Naturalists.

Upcoming Major Events:

- 3/21 Adv. Training, Adv. Storm Spotters, Killeen
- 3/26 Adv. Training, Rockdale Forum, Milam Aquifers,
- 3/30—31 Millennium Seed Bank
- 4/9 Richardson Farm tour, member mtg.
- 4/23 Adv. Training, Rockdale Forum, Ants and Horned Lizard Habitats
- 4/28 Chapter Spring Celebration! Yea!
- 5/12 2009 Class Graduation!! Double YEA!!
- 5/15—16 Amphibian and Mussel Watch days
- 5/28 Adv. Training, Rockdale Forum, Amphibian Watch

Certifications, Etc. By Cindy Bolch

Our second year as a chapter is off to an great start.

Achieving 2009 Annual Re-Certifications year to date include:
Cindy Bolch, Katherine Bedrich, and Don Travis

Lifetime to date Milestone Achievement Levels Awarded include:
250 Hours—Ann Collins, Cindy Bolch, Katherine Bedrich, and Paula Engelhardt
1000 Hours—Paul Unger

Congratulations to All! It looks like 2009 will be another wonderfully fulfilling year for the Chapter and all its current and new members. As you all may have heard, the 10 year old Texas Master Naturalist Program recently recorded its 1 millionth hour of volunteer service work!

Did You Know?

What is the largest insect known to ever exist on Earth?

Fossils of a prehistoric dragonfly Meganeura monyi in the order Protodonata makes it the largest insect ever to be found with a full wingspan of 30 inches and a body length of 18 inches. The Meganeura dragonfly lived about 250 million years ago until it became extinct at the end of the Paleozoic Era. (Courtesy of www.entomon.net/insect-facts-and-information.htm).

So our Texas Master Naturalist Dragon Fly pin has some real interesting history!