



# Los Caminos

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

Award Winning Newsletter of the El Camino Real Chapter  
Milam County Texas Master Naturalist Winter 2015

The Texas Master Naturalist program activities are coordinated by Texas A&M AgriLife Extension Service 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.

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## What's the BUZZ? by Barbara Cromwell

When becoming a Texas Master Naturalist we made a decision to use our time and talents to protect and preserve the wildlife and natural habitat of our county. There was something about this group, this club, that peaked our interest enough to spend our money and time to become a part of this group. We're working hard to find programs that will not only interest our members but also educate and aide the people of Milam County. As you read this edition of the newsletter you will see and read about many of those projects. We hope your interests will be peaked again and you will join with some of our members to help make a difference in our little corner of the world. Here is just one of those projects.

In 1995, the Texas Legislature passed Proposition 11, the Texas Constitution was amended, and the Wildlife Management Tax Valuation came about. This law gave landowners a new alternative to an Agricultural land valuation for tax purposes. Now they could convert and manage their property for native habitat and wildlife for the same property tax valuation as they had with livestock or crops. The El Camino Real Chapter of the Texas Master Naturalists, with the help of Tim Siegmund from TX Parks and Wildlife, will hold a Wildlife Management Workshop. Speakers, demonstrators and members will gather at the Milano Civic Center to discuss the seven topics addressed when seeking a wildlife exemption.

There are many benefits when switching from an Ag tax valuation to a Wildlife valuation such as improved habitat, increased wildlife and returning your land to its natural habitat. Some monetary advantages for landowners are no fencing requirements and enhanced recreational value. If ranchers/farmers no longer want to continue ranching or farming but still want to care for their property this is the way to go. If they still want or need to make money off their properties they can earn profits from hunting or eco-tourism.

Diane White from the Milam County Tax Office will speak at the workshop giving information about who can apply, how to apply, and how to maintain a Wildlife Management valuation. Other speakers from Texas Parks and Wildlife will address the seven management areas involved in the Wildlife Management program: Habitat Control, Erosion Control, Predator Control, Providing Supplemental Water, Providing Supplemental Food, Providing Supplemental Shelter, and Census Counting. To maintain a Wildlife valuation a landowner must practice at least three of the above seven addressed topics. Each of these topics has several categories that apply.

Some frequently asked questions that will be answered at the seminar are:

- Is Wildlife Management a tax break?

**Did You Know?**  
Where is 85% of all plant life found?  
  
See last page for the answer.

*(Continued on page 2)*

- Can I keep part of my land for use as Ag and part of it Wildlife Management?
- Can I move back to Ag if I try Wildlife Management?
- Where do I start?

The seminar will be from 8:30 to 4:00 on February 27<sup>th</sup> at the Milano Civic Center; lunch will be provided. We hope to see many of you there and look forward to meeting the other attendees.

2015 is supposed to be the year of the cicada in Texas, a time when millions of fat little bugs should emerge from the ground and loudly buzz around. The cycle for the emergence of the **Magicicada** species is every 17 years when they come up from the ground where they have been gestating. For the first week of their debut, they bring a welcome distraction to life's problems. By week two, you wonder why you look forward to their coming when



Texas Dog-day Cicada

they strike your head and other body parts as you walk outside, or even inside if you leave the screen door open too long for a cat who just ... can't ... decide. Our grandson called them quesadilla because that's what he thought we were saying. They are a wonderful sign of summer and we look forward to them. Whatever species they are.

They were supposed to emerge last year in the Washington D.C. area but did not. Maybe they were smart. It was an election year and there was enough buzz around that town to keep every one distracted. Considering the political buzz of last year I'll bet their symphony would have been an enhancement to the sound of nature. Now I hope those of you who have been "underground" for the last year or so will emerge.

We miss your buzz.

[photos from [texasento.net](http://texasento.net)]



Superb Green Cicada

## Deformed Bird Beaks

By Genie Lindburg

For several months Chuck and I have been observing this Cardinal. It comes to a large flat feeder in our Crockett yard two times a day. I believe he chooses this feeder over others because it gives him room to lay his head on its side in order to pick up a sunflower seed. It is a very skittish bird so I have not been able to capture a picture of it feeding. Recently, my neighbor, Billy Hedrick, built a blind at his living room window and was able to photograph our deformed bird. We have both agreed that the length of the upper mandible has increased over the summer. I am guessing it currently is about an inch long.



Beak deformities were first noticed in the late 1990's in Black Capped Chickadees in Alaska. Currently Alaska records the largest number of beak abnormalities with California recording the second largest number of deformed birds. Black-capped Chickadees and Northwestern Crows appear to me to be the species most affected but other birds such as this Cardinal are being impacted by the problem.

Scientists have given this affliction the name "avian keratin disorder" because the keratin layer of the beak becomes overgrown. Other noticeable signs of deformity are elongated and crossed beaks. Bird banders have also noticed that the skin, legs, feet, claws and feathers are sometimes abnormal. They have also noticed that these affected birds are juveniles probably due to the fact the affliction affects their ability to feed and clean themselves. Thus they do not survive the

first winter.

Scientists have not yet been able to determine the exact cause of avian keratin disorder despite testing for the most likely culprits: environmental contaminants; nutritional deficiencies; and bacterial, viral, fungal or parasitic infections. But they are noticing increasing occurrences of deformities in multiple bird species across a wide range of habitats. The increasing occurrence of deformities in multiple bird species with broad geographic distribution suggests that avian keratin disorder is spreading and may be an indication of underlying environmental health problems for birds.

## Natives at "The Big Lump"

By Genie Lindburg



## REPLACE DAMAGING EXOTIC PLANTS WITH NATIVES

The area in Milan County where our property, "The Big Lump." is located is in an eco-region known as Post Oak Savannah. It is a transition zone between the Blackland Prairies to the west and the Piney Woods to the east. Our property was once dominated by native bunch grasses and forbs and scattered with various kinds of oaks. Over the years the flora on the land has changed. Much of the desirable vegetation has been replaced by yaupon holly, cedar elm and red cedar. Unfortunately, not all of these plants are beneficial.

Mankind has been responsible for this change either directly or indirectly. For example, forest fires that once were common are now rare and there are no longer large herds of buffalo grazing the land. Man has also deliberately introduced new plants into the region either for agricultural reasons or for beauty in the garden. In the case of the The Big Lump former owners grew many species of plants that were sold in floral shops.

As land owners/gardeners we are always concerned about the pests that invade our gardens but an even bigger enemy to our gardens may be imported exotic invasive plants. These are plant species that become established outside their area of origin and are plants which spread rapidly without human care. These plants have tougher survival skills than the native plants they compete with and usually no predators to keep

them in check. They are often pretty and grow well and easily. Attributes that make them desirable for gardeners. However once these invasive species are established they have the potential to change our environment forever.

Some of the significant negative impacts include:

- Reduction of native biodiversity
- Interference with ecosystem function like fire, flooding, waterway blockage
- Reduction of the value of streams, lakes for recreation, wildlife and public water supply
- Threatened fish and native vegetation by lowering light and dissolving oxygen
- Clogged irrigation canals
- Clogged intake pumps
- Changed PH level of soil

The state of Texas has identified twelve particularly worrisome species for the Post Oak Savannah eco-region. Many of these plants can be found in our personal gardens. The best way to "weed out" these invaders is to replace them with hardy native plants. Native plants usually consume less water and need less fertilizer and are more disease resistant than the exotic versions. An additional benefit of adding native plants

to a garden is that they will attract native birds and butterflies.

**TEXAS DIRTY DOZEN TERRESTRIAL INVASIVE SPECIES FOR THE POST OAK SAVANNAH.** \*Often found in personal gardens

- Giant reed - *Arundo donax*
- \*Chinaberry tree - *Melia azedarach*
- \*Bermudagrass - *Cynodon dactylon*
- Johnson grass - *Sorghum halepense*
- Japanese honeysuckle - *Lonicera japonica*
- \*Chinese privet - *Ligustrum sinense*
- \*Glossy privet - *Ligustrum lucidum*
- \*Japanese privet - *Ligustrum japonicum*
- Giant salvinia - *Salvinia molesta*
- King Ranch bluestem - *Bothriochloa ischaemum var. songarica*
- \*Heavenly bamboo - *Nandina domestica*
- Mexican Petunia—*Ruellia simplex*

Now is the dilemma. What can be planted instead of these plants that will give a similar appearance? This is not an easily answered question as many variables must be considered. For example, the amount of sunlight available or the amount of moisture needed by the plant and the type of soil. A place to begin searching for replacement plants is the web-site TexasInvasives.org. This list shows alternatives listed under each of the invasive plants. [Invasive photos from invasives.org]

- Chinaberry Tree—*Melia azedarach*

- *Sapindus saponaria* var. *drummondii* (Western Soapberry)
- *Campsis radicans* (Trumpet Creeper)
- *Prunus mexicana* (Mexican Plum)
- *Morella cerifera* (Wax Myrtle)



- Bermuda Grass—*Cynodon dactylon*

- *Cynodon transvaalensis* (African Bermudagrass)



- Heavenly bamboo—*Nandina domestica*

- *Leucophyllum frutescens* (Cenizo or Texas Barometer Bush)
- *Malpighia glabra* (Acerola or Barbados Cherry, Wild Crapemyrtle)



- *Salvia greggii* (Autumn Sage)
- *Plumbago scandens* (Doctorbush)
- Chinese privet—*Ligustrum sinense*
- *Morella cerifera* (Wax Myrtle)
- *Ilex vomitoria* (Youpon)
- *Prunus caroliniana* (Carolina Laurel Cherry)
- *Rhus virens* (Evergreen Sumac)
- *Leucophyllum frutescens* (Texas Barometer Bush)
- *Malpighia glabra* (Wild Crape Myrtle)



The plants mentioned above are the most serious concern for Post Oak Savannah ecoregion but when planting personal gardens we should consider consequences of introducing landscape plants that are commonly sold in Texas nurseries but that are considered to be exotic invasive plants. The chart below lists a few common invasive landscape plants and possible alternatives as suggested by TexasInvasives.org.

- English Ivy
- *Parthenocissus quinquefolia* (Virginia Creeper)
- *Bignonia capreolata* (Crossvine)
- *Gelsemium sempervirens* (Evening Trumpet Flower)



- Chinese Wisteria
- *Wisteria frutescens* (American Wisteria)
- *Campsis radicans* (Trumpet Creeper)
- *Lonicera sempervirens* (Trumpet Honeysuckle)
- *Bignonia capreolata* (Crossvine)



- Elephant Ears
- *Pontederia cordata* (Pickerel Weed)
- *Sagittaria platyphylla* (Delta Arrowhead)
- *Canna glauca* (Maraca Amarella)



- Honeysuckle
- *Gelsemium sempervirens* (Evening Trumpet Flower)
- *Lonicera albiflora* (Western White Honeysuckle)
- *Lonicera sempervirens* (Trumpet Honeysuckle)



- Mimosa
  - *Chilopsis linearis* (Desert Willow)
  - *Prosopis glandulosa* (Honey Mesquite)
- Chinese Tallow Tree—*Triadica sebifera*
  - *Cercis Canadensis* (Eastern Redbud)
  - *Cercis Canadensis* var. *mexicana* (Mexican Redbud)
  - *Cercis Canadensis* var. *texensis* (Texas Redbud)
  - *Acer grandidentatum* (Bigtooth Maple)
  - *Acer negundo* (Boxelder)
  - *Ulmus crassifolia* (Cedar Elm)



**WHY SHOULD I CARE?**

Everyone who lives in Texas should care because unless we can reduce or stop their spread, invasive species will continue to deplete space for natives. We need native plant varieties to provide habitat and food sources for regional birds, butterflies and other wildlife. We need native drought-tolerant plants instead of thirsty exotic invaders.

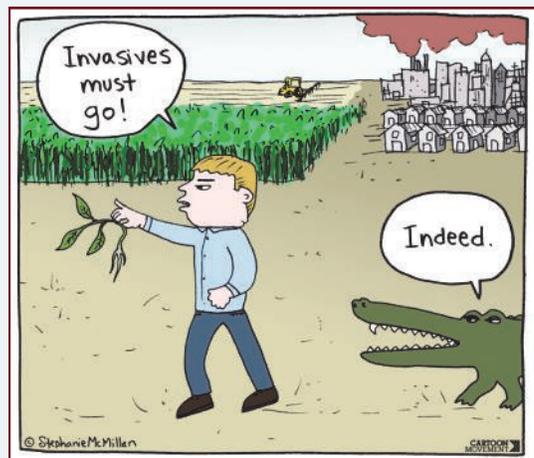
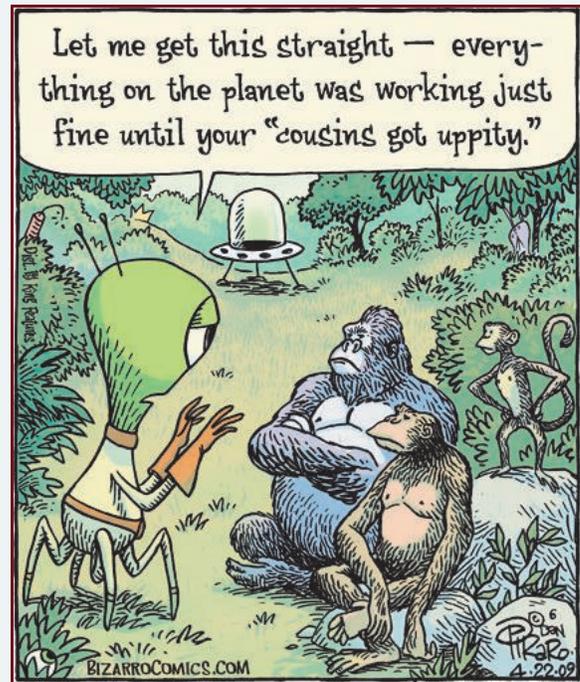
Also if you love the Texas outdoors you should care about invasive species. Whether you are a hiker, biker, camper, bird watcher, gardener, fisherman, boater, hunter, logger, forester, rancher or farmer, invasive species can have a negative impact on you.

For example, in some other parts of the state species like giant salvinia and zebra mussels are taking over lakes and making boating, fishing and general water recreation less than enjoyable. Zebra mussels can clog water pipes, which can cost millions to replace or repair. Terrestrial species like king ranch bluestem and buffelgrass can take over prairies and make the land uninhabitable for many plant and animal species.

**WHAT CAN I DO?**

The Plantwise program, a partnership between the Lady Bird Johnson Wildflower Center and several like organizations, makes the following recommendations:

1. Know your plants.
2. Use non-invasive alternatives.
3. Watch out for invasive plant hitchhikers.
4. Use only seed mixes that are invasive plant-free.
5. Use weed-free soil and mulch mix.
6. Be especially careful with aquatic plants.
7. Keep an eye on new sprouts and volunteers.
8. Dispose of invasive plants carefully.
9. If you can't part with your invasive plant, remember—contain it, control it or cage it.



## What's in the Water?

by John Pruett

It is January 9, 2015, as I sit at my desk looking out the window upon a cold rainy day. The sky is steel-gray, the temperature is hovering just above freezing, and the incessant drizzle shrouds the trees in a fog. Only a few leaves remain as they have surrendered to winter. Although this is the scene that I gaze upon, in my mind's eye I am on a gently flowing river, meandering from bend to bend. Drifting down river from gravel bar to gravel bar admiring the plants and wildlife along the bank as the river gently meanders through the countryside. As I drift through the sluggish pool that lies between bars I will eventually enter into faster flowing water as I enter the river bend at the next gravel bar. Depending upon how much the river narrows, as I enter the narrow I can even experience a near "white water" ride, only to again enter the tranquil waters of the next pool.

Have you ever considered why the river meanders? Why not just swoosh in a straight line to the gulf? The simple truth is that the meandering of a river is a fact of nature. By that I mean that it is entirely natural for a river to meander, and the health of the river depends on this meandering behavior! So, in this issue of the newsletter I will discuss the characteristics of a healthy riparian zone (RZ), and its influence upon the physical, chemical, and biologic nature of the river and the surrounding riparian ecosystem.

So just why does a stream meander or develop a sinuous nature? The formation of a meander is the result of natural factors and processes. Multiple related theories offer an answer to the question. These theories include a Stochastic (conjectural) Theory that suggests that the fluctuation in the direction of flow is due to direction changing obstacles in the path of the water. A Closely related theory is the Geomorphic and Morphotectonic Theory, which suggests that predictable tectonic structure, guides the stream. Another related theory is the Equilibrium Theory, which suggests that in order to dissipate the potential energy of the flowing water with the least amount of erosion the meander is necessary. Thus, a key benefit of a meandering stream to a healthy RZ is that it dissipates floodwater energy preventing excessive erosion.

Meander planform geometry offers a technical description of a meandering stream. The mathematical representation is an irregular waveform. The meandering stream follows a



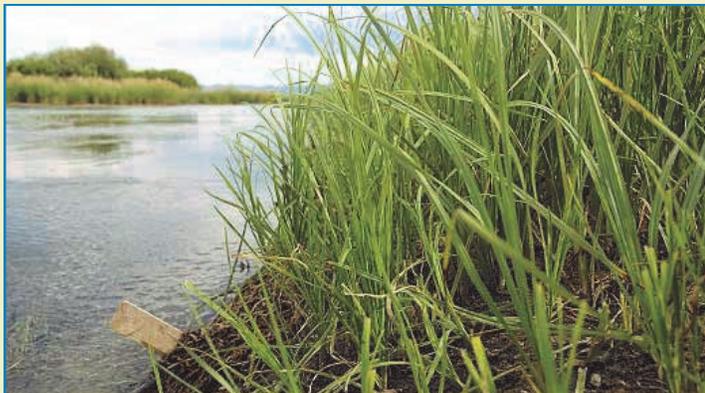
downstream axis and the sum of all amplitudes (meanders) is a net zero from the axis. The scouring effect of water flow on the outside bank of the meander is due to a helical flow of water that sweeps eroded material towards the inside of the bend where it is deposited. This action leaves the outside of the bend vulnerable to further erosion. A cross current flow at the bottom of the channel moves the eroded material to the inner bank, this secondary flow rises to the surface as it nears the inner bank and flows again to the outside forming the helical flow.

Stream ecosystems are very complex, dynamic and prone to change. Streams are closely linked to the RZ, which is the transition between upland terrestrial and aquatic ecosystems of both rivers and lakes, and the RZ is also closely linked to the stream and the alluvial groundwater. The RZ greatly influences water quality, as vegetation along the stream bank is important in filtering of water before it reaches the stream. In addition, the RZ influences the seasonal pattern of water flow leaving the watershed, thus providing enhanced flow during periods of low rainfall. Plants and microorganisms of the RZ are important as they take up nutrients, particularly nitrates, through a process of denitrification. Lowrance et al., (1984) demonstrated reduced pesticide and fertilizer movement into streams from upland agricultural activities as a result of a healthy RZ.

Vegetation within the RZ is highly varied represented by many species. With both aquatic and terrestrial species having major roles in this ecosystem. Aquatic herbaceous species have rhizomes that form a dense mat that helps hold the bank together during periods of increased stream flow. Trees also help to support the bank as well as provide shade to help maintain water temperatures at biologically acceptable levels. Trees, as they die and fall into the river, provide habitat for aquatic animal species and a physical obstacle that interrupts or reduces flow to allow deposition of silt during periods of increased flow.

Many wildlife species are dependent upon a healthy RZ. Of course survival of aquatic species is dependent upon the habitat and water quality offered by a healthy stream. Many bird species found in upland forests and meadows are dependent upon the riparian habitat at least part of the year. Because of

*(Continued on page 7)*



the varied vegetation, the RZ provides forage for game species as well as livestock. Survival of plant and animal species is directly related to survival of their habitat, and the healthy RZ offers a tremendous variety of habitats.

A healthy RZ provides us numerous benefits to include natural beauty, ecological and recreational resources, and drinking water for livestock and us. Abuse of this ecosystem can have disastrous effects. The next installment of this col-

umn will explore examples of human management blunders that have resulted in ecological disruption of healthy RZ's, and what can be done regarding the remediation of these man-made ecological problems. If we better understand these dynamic ecological systems, perhaps in the future we can make better choices.

To quote Aldo Leopold, "We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect".

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1. Meander. Wikipedia
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3. What is a Riparian Zone? Utah State University, (Internet pdf).
4. Lowrance, R. R. et al., 1984. Riparian forest as nutrient filters in agricultural watersheds. *Bioscience* 34: 374-377.

## Meet Our New AgriLife Adviser

By Micah Holcombe

Hi. My name is Micah Holcombe and I am the new Family and Consumer Sciences Agent in Milam County. I have been the 4-H Youth Development Agent in Bell County since 2007 and before that was the Family and Consumer Sciences Agent in Briscoe/Hall Counties. I have been a member of 4-H since I was 9 years old so my love for 4-H is strong.

My husband is Andrew Holcombe (of Cameron), and we have a 3 year old son named Luke and just gave birth on January 23 to twins, a boy and a girl! They're names are Mackenzie Christine "Kenzie" and James David "JD." Before we knew we were having twins, we asked Luke if he wanted a brother or a sister. He said he wanted a brother and a sister. Don't argue with a 3 year old!

I enjoy spending time with my family, going to movies, and visiting museums and zoos. I also love to cook and bake when I have the time!

I am not much of a gardener or naturalist however I love herbs and spices and how they work into cooking. We currently live in Temple but hope to move to Cameron by summer. I look forward to working, and living, in Milam County.

Stop by the office and say hello sometime (after early March!). I'll probably have some baby pictures.

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My Place in Nature by Linda Jo Conn

I am an iNaturalist Addict!

In November 2013, my sister forwarded the link to a website and added that it might be of interest to me. I visited [www.inaturalist.org](http://www.inaturalist.org) and opted to revisit the site later, i.e. "when I had nothing better to do". My initial introduction to iNaturalist is humorous, because today I consistently make the time to regularly visit the website.

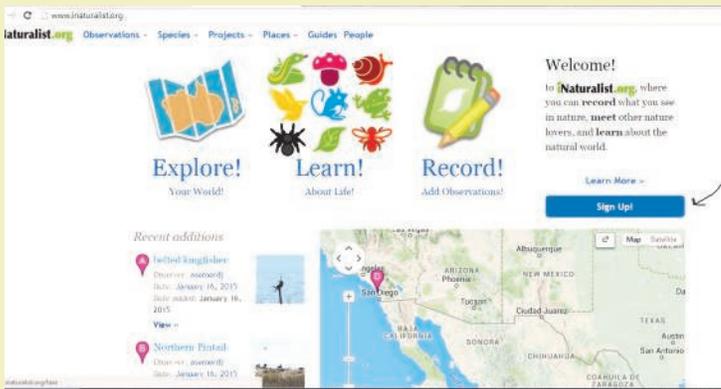
Two days after my sister's post, I attended a training class given by TAMU Herpetology expert Toby Hibbits. He mentioned his use of iNaturalist to record observations to the Herps of Texas project and to investigate herps others had photographed and added to the website. I perked up. He went on to show wildlife observations that had been entered for Milam County. Maybe iNaturalist was something of personal interest to me!

That evening on my desktop computer at home, I became an iNaturalist. I am now a "certified iNaturalist addict".

iNaturalist is an online social network of people sharing information to help each other learn about nature and biodiversity (the variety of organisms in a particular ecological community or system). It is used to record personal observations, get confirmation or help with identifications, and investigate data entered by other users.

It is also a way to collaborate with others to collect information for a common purpose. For example, the Floridus Milamexa El Camino Real Trail Project was created to document observations of flora along the El Camino Real Historic National Trailway in Milam County by members of the TMN El Camino Real Chapter.

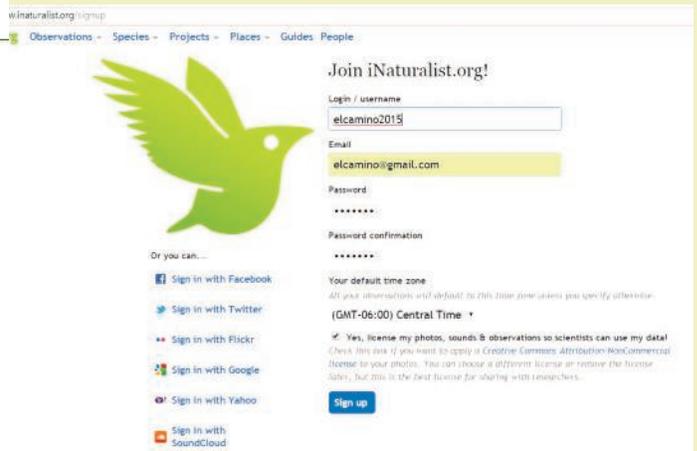
So, how does one join iNaturalist?

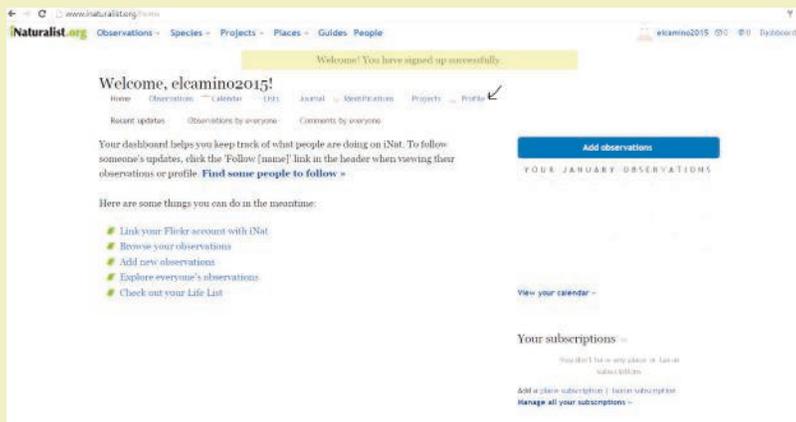


Go to <http://www.inaturalist.org/>.

Click on the "Sign Up!" box in blue on the right of the screen.

Enter a user name of your choice, your email address, password, and time zone. Click "Sign Up".





In the subsequent screen, you can click "Profile" to add a bit of information about yourself. (I personally like to view the special interests and activities of those iNaturalists who comment on my observations or enter observations for species of interest.)

Or, you can just click on "Add Observations" and jump in.

Adding an observation is a "fill-in-the-blank" exercise. An ID of the observed species to the level of your ability, the observation date, the location, and photo or sound recording of your observation are the basic entries. More information may be typed in the "Description" box. When complete, click "Save Observation" and you are on your way to getting hooked on iNaturalist.org.



Remember: You will not "break" the website. Errors and typos can be corrected by clicking on "Edit" or you can "Delete" the observation.

For more help with the website, see <http://www.inaturalist.org/pages/getting+started> and the tutorial at <http://www.inaturalist.org/pages/video+tutorials>.

The iNaturalist.org website has expanded my world. I have enjoyed the diversity of people who gladly share their knowledge, experience, and enthusiasm for living things. Since joining, I have been gratified when I correctly identified an unfamiliar plant to species on my first attempt; challenged when I was politely informed that I was not even in the right family; edified when I went back to do further research and observation; coached when given pointers, suggestions, and tips by many helpful experts; guided by thoughtful suggestions of books and internet sources to consult; and grateful to the wonderful, helpful, and even humorous folks I have "met" on iNaturalist.

Next newsletter: Using iNaturalist Mobile Apps.

(But if you absolutely can't wait, go ahead and download the iNaturalist Android or iPhone App and get started!)

## Prairie Tracks

by Katherine Bedrich

### White-tailed deer / *Odocoileus virginianus*



The Cervidae family are ruminant mammals distinguished by solid deciduous antlers which include deer and elk in Texas. The genus *Odocoileus* is Greek from the words *odous* meaning tooth and *koilos* meaning hollow. Deer have hollow teeth.

White-tailed deer are native to America. Believed

to number 40 million, the deer was reduced to less than a half a million by the end of the 19<sup>th</sup> century. Over hunting and slaughter for hides reduced the population. The estimated number of deer may now be 15 million.

White-tailed deer roam in groups of females and young. The males travel in bachelor groups until the rut. At this time males spar for the right to mate with a group of females. Females begin breeding when they are two years old. Usually the first birth is a single fawn and each year after they give birth to twins. Lifespan in the wild is less than ten years.



Each year in late winter males lose their antlers. New growth begins immediately. A furry skin called velvet covers the antlers in the summer. The velvet contains blood vessels, helping to supply nutrients to the antlers. A high protein diet develops large healthy antlers.

The deer have a small home range, bedding in grass and leaves; and are mainly nocturnal. Their habitat includes wood-

lands and scrublands; places they can blend into and hide during the daytime. They feed on fungi and a variety of flora including grasses, berries, nuts, and twigs.

The hair color will vary from reddish brown in the summer to grayish brown during winter. Winter coat hairs are very thick and hollow, providing excellent insulation. The white-tailed deer has a brown tail from above, with white hair on the underside. Thus it gets its name white tail when it raises its tail as a warning.

Snorting, foot stomping and running away in separate directions with the white-tail waving, make it difficult for predators to capture healthy alert deer. Deer that are galloping may have the dew claw showing in their tracks. Their running speed is 35 mph, they can jump over 8 feet, leap 30 feet and are excellent swimmers.



**Sweet's Nature Shenanigans**

by Sheri Sweet

Hooded Mergansers

Last year and now this year, we have been blessed with several Hooded Mergansers on our little tank here outside of Lexington. We started noticing these little ducks and wanted to know what they were. *Lophodytes Cucullatus* is the technical name for Hooded Merganser, a very distinctively-colored small duck that spends winters in this area. These little ducks are not as numerous as others. They are quiet, shy, even secretive, and leery ducks. When they see us, they leave! They prefer wooded ponds, lakes and streams and because they are so secretive, they often go undetected, so it is difficult to obtain an accurate population count.

The male Hooded Merganser has brown sides, with a black head and back, a white breast and belly, with vertical black and white stripes between the breast and the brown side. When its distinguishing hood is down, there is just a white line behind its eyes. However, when the drake is alert, it raises its hood and there appears a white crescent behind the eye. Its sawbill is black. The female is much duller in comparison. She is smaller and brownish-gray with a puffy, cinnamon-colored hood or crest at the back of the head.

The Hooded Merganser is the only merganser whose native habitat is the United States. This is a diving duck and eats approximately 45-80% small fishes, 15-20% aquatic insects, and 20-50% aquatic invertebrates such as crayfish and crabs.

These ducks form monogamous pairs and stay together until the female chooses a nest and finishes laying her eggs. After that the female incubates and cares for the brood and the male leaves. She nests in cavities in dead trees but will also use nesting boxes. She prefers to be 4 to 15 feet off the

ground. They breed between the end of February and the end of June, depending on their location. She will lay between 7 and 15 eggs, but doesn't start incubation until the last egg has been laid. This then allows synchronous hatching. The babies are all the same size which helps with the parenting of them. The female will lose 10 to 15% of her body weight during incubation. The hatchlings will generally leave the nest within 24 hours of hatching. They are then able to dive and forage, but stay with the mother for warmth and safety.

Hooded Mergansers winter where the ponds, lakes and rivers do not freeze over. There are a couple of ranges for these ducks - one is on the East coast to the Gulf coast around the Mississippi delta. The other one is from Washington State and southern British Columbia to Idaho. They will also breed from Missouri to southern Canada and from Nova Scotia to North Dakota to Saskatchewan.

Their population has declined in the past few years because of deforestation. They are also very susceptible to pollution and poisons that accumulate in their food supply.

There are a couple of things I find fascinating about these ducks. One is that when they dive, they stay submerged for so long that I begin to wonder if they have gotten caught on something underwater! But no, POP! up it comes again! I've timed them at 15-20 seconds! The other thing I find interesting is the fact that their white feathers stay such a bright white after diving in the dirty water!

The male makes a sound like a pickerel frog and the female makes a sound that is more like a quack. I haven't been close enough to them to actually hear any sounds.

My sources for this article were [www.birds.audubon.org](http://www.birds.audubon.org), Wikipedia, and the Cornell Lab of Ornithology.



## Monarch Plight

by Debbie Harris

As you may be aware, the beautiful monarch butterfly continues to be of great concern, so much so that there is a U.S. Federal Government proposed regulation that is before us. This petition was submitted by The Center for Biological Diversity, The Center for Food Safety, The Xerces Society and Dr. Lincoln Brower on August 24, 2014 and is now before the Fish and Wildlife Service. This petition can be seen on-line at:

[www.regulations.gov](http://www.regulations.gov), then enter: #FWS-R3-ES-2014-0056 in the search box provided, and is a 159

page long document which displays a lot of information, including historic data, various study findings and it outlines five monarch threats. Bottom line is: this petition is recommending that the *Danaus plexippus* species be listed under the Endangered Species Act (ESA). This specific proposed regulation is open to public comments but it must be done **before March 2, 2015**, so if you have an opinion, please voice it on-line before that date.

### So, what does this all really mean?

The ESA states that: "a species shall be determined to be endangered or threatened based on any one of these five factors:

- 1) *the present or threatened destruction, modification, or curtailment of its habitat or range;*
- 2) *Overutilization for commercial, recreational, scientific, or educational purposes;*
- 3) *disease or predators;*
- 4) *the inadequacy of existing regulatory mechanisms; and*
- 5) *other natural or manmade factors affecting its continued existence."*

For the Monarch, it has been determined that it is threatened by all five factors thus is warrants protection. Outlined below is a brief description of the monarch's plight, as outlined from this petition:

- 1) **Destruction of habitat or range:** In the United States, the loss of habitat range is due to drastic loss of milkweed, especially common milkweed (*Asclepias syriaca* L.). Milkweed loss has been caused by herbicide / pesticide use, more grasslands being used for commercial use and by increased housing developments. Each of those factors has proven to the destruction of native milkweed available for the monarch butterfly to lay eggs on and then to feed the caterpillar which continues their life cycle. In Mexico, the wintering habitat



site for the majority of Monarchs, it is threatened by illegal logging of the trees that monarchs.

2) **Disease and predation:** The mortality rate of monarchs has increased due to a protozoan parasite OE (*Ophryocystis elektroscirrha*) which is of most concern. Commercially reared monarchs are also a heightened threat. Threats of mice, birds and other invertebrate predators also exist.

3) **Overutilization:** Commercial breeding for educational and entertainment purposes pose a threat due to lack of genetic diversity, and genetic adaptations due to not following careful protocols.

- 4) **Inadequate regulatory mechanisms:** There are no existing regulations to address complex and synergistic threats for the public. There are some regulations in place for international, federal, state programs but a more comprehensive protection is needed.
- 5) **Other factors:** Some of the other factors outlined in the petition are global climate change, severe weather events, pesticides and the spread of invasive species such as tropical milkweed.

In the petition, it does emphasize permitting activities that promote the conservation of the species, such as scientific research and monitoring, citizen monitoring and tagging, and non-commercial classroom and household rearing of monarchs for education purposes, yet, it does request specific limitations in the proposal.

### So, how does this all really affect me?

Besides having the monarch listed as an Endangered / Threatened species, there are some proposed rules requested as well. If this petition is implemented, the requested rules are to allow: continued scientific research on monarchs and/or their habitat, citizen monitoring designed to conserve monarchs and educational activities that enhances the survival, such as in school classrooms provided that no monarchs are obtained from commercial suppliers, and lastly yet most importantly, the collecting or rearing of wild monarchs are limited to ten or fewer per year by any individual, household, or educational entity. For detailed reading of the proposed rules in this petition, review Appendix B.

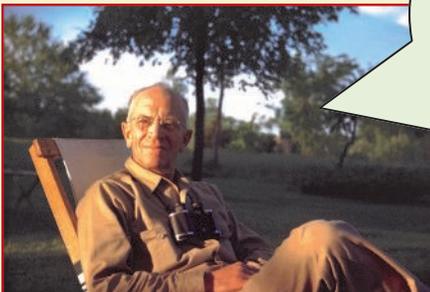
Make a difference and cast your opinion today, go to: [www.regulations.gov](http://www.regulations.gov) then enter: #FWS-R3-ES-2014-0056 in the search box provided before March 2, 2015

On "Natural Selection"

by Don Travis



Aldo Leopold Says:



"It is a century now since Darwin gave us the first glimpse of the origin of the species. We know now what was unknown to all the preceding caravan of generations: that men are only fellow voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us, by this time, a sense of kinship with fellow creatures; a wish to live and let live; a sense of wonder over the magnitude and duration of the biotic enterprise."

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## *Certifications, Etc.* By Dorothy Mayer

New since the Fall 2014 newsletter **are in this color.**

New Member 2014/15 Class Certifications: Darlene Anglen, Sheri Sweet, Wesley Sweet, Nancy Adcock, Clyde Adcock and **Mini Pesl**

2014 Armadillo re-cert pins earned as of year end include: Cindy Bolch, Don Travis, Debbi Harris, Katherine Bedrich, Linda Jo Conn, Sandra Dworaczyk, Dorothy Mayer, Donna Lewis, John Pruet, Ann Collins, Darlene Anglen, Sheri Sweet, Wesley Sweet, Cindy Travis, Sue Taylor, Kim Summers, Lucy Coward, Kathy Lester, Phyllis Shuffield, **Sherry Colley, Paula Engelhardt and Edward Dworaczyk.**



Our 2015 Re-Certification pin is the Bluebonnet. No winners as of January publication date yet, but many are well on their way already.

Highest Lifetime-to-date Milestone Achievement Levels earned by current members as of year end 2014 include:

**4000 Hour Presidential Award**—Katherine Bedrich and **Cindy Bolch**

**2500 Hours**—Don Travis, Ann Collins, Donna Lewis, and **Debbi Harris.**

**1000 Hours**—Paula Engelhardt, Donna Lewis, Sue Taylor, Lucy Coward, Dorothy Mayer and Phyllis Shuffield.

**500 Hours**—Anne Barr, **Barbara Cromwell and Linda Jo Conn.**

**250 Hours**—Lucile Estell, Shawn Walton, Vivian Dixon, Sandra Dworaczyk, Cindy McDaniels, Janice Johnson, Gary McDaniels, Kim Summers, Rusty Thomas, Cindy Travis, Sherry Colley, Kathy Lester, **Sherry Sweet and Wesley Sweet.**

Our Dec 31, 2014 Year-to-Date and Total Accumulated hours for Advanced Training are: **674 and 5,669** respectively. Our Year-to-Date and Total Accumulated hours for Volunteer Events are: **8137 and 46,212** respectively.

*Congratulations to All*

## Did You Know?

## Where is 85% of all plant life found?



In the Oceans. 85% of all plant life and 50-80% of ALL life on earth is found under the ocean surface. The oceans contain 99% of the living space on the planet. Less than 10% of that space has been explored by humans. The oceans cover 71% (and rising) of the Earth's surface and contain 97% of the Earth's water. Less than 1% is fresh water, and 2-3% is contained in glaciers and ice caps (and is decreasing). The pressure at the deepest point in the ocean is more than 11 tons/sq. meter, or the equivalent of one person trying to support 50 jumbo jets. The top ten feet of the ocean hold as much heat as the entire atmosphere. Antarctica has as much ice as the Atlantic Ocean has water. Each year, three times as much rubbish is dumped into the world's oceans as the weight of fish caught. 90% of all volcanic activity occurs in the oceans. The Pacific Ocean, the world's largest water body, occupies a third of the Earth's surface. The Pacific contains about 25,000 islands (more than the total number in the rest of the world's oceans combined), almost all of which are found south of the equator. The sea level has risen with an average of 10-25 cm over the past 100 years and scientists expect this rate to increase. Sea levels will continue rising even if the climate has stabilized, because the ocean reacts slowly to changes. 10,000 years ago the ocean level was about 110 meters lower than it is now. If all the world's ice melted, the oceans would rise 66 meters. Life began in the ocean 3.1 billion to 3.4 billion years ago. Land dwellers appeared approximately 400 million years ago, relatively recently in geologic time. Reference: see <http://marinebio.org/marinebio/facts/> for various supporting links of the above. Other data sources may vary in specifics.