Lost Pines Chapter

Texas Master Naturalist

July/August 2017 Volume 16, Issue 4

Enduring Nobly

by Larry Gfeller

Oak trees hold a special place in my heart from early childhood days. Strong and enduring, these trees have anchored rope swings over secluded swimming holes, secreted hastily constructed tree houses from unwanted trespassers and provided overhead shade for summer picnics under the lemon sun. I recall leafy, tree-lined tunnels under a radiant sky or watching shadows of great branches reaching across a creek in the slanting afternoon sun as they continue up the bank, covering us all. What kind of oaks these were, I hadn't a clue—but my elders assured me they were oaks, and I believed them.

In this part of Texas the dominant oak tree is the Post oak—it is the namesake for our ecosystem. Blackjack oaks are less prevalent but plentiful. Even more obscure in our neck of the woods is the Bluejack oak. While attributed with similar genetics as its beefier brethren, the Bluejack oak is mostly a short, scrubby understory tree, reclusive and scarce, all but lost among the more ostentatious species.

I first learned of the Bluejack oak from the Texas Forest Service. At my request, a forester visited my property to help me understand the various species of trees growing there at the time. As I recall, the Bluejack was more bush-like and easily overlooked. We only spotted a single specimen on our property tour. Its name, I was told, came from the bluish tinge to the elongated, alternating leaves. They were leathery on the upper side of the leaves but fuzzy and soft on the underside.

I never gave much thought to that Bluejack oak tree again . . . that is, until well after the Bastrop County Complex fires. You see, not only did the fire eradicate most all of my trees but it set the stage to encourage a larger population of Bluejacks than existed before. Today I can count nearly twenty of these small oak trees spread throughout the property. It's one of the new friends I made after the fire. Turns out, the Bluejack is well adapted to wildfire and thrives in places where fire is common, such as with longleaf pines in east Texas. It doesn't tolerate dense shade and requires fire to remove taller, more robust trees that would otherwise outcompete it.

The power and strength of oak trees has been prized for centuries. Down through the ages enduring structures have been constructed of oak, from great creaking ships of war to impenetrable castle doors. Arguably, the finest furniture is made of oak while the finest Scotch, Irish and

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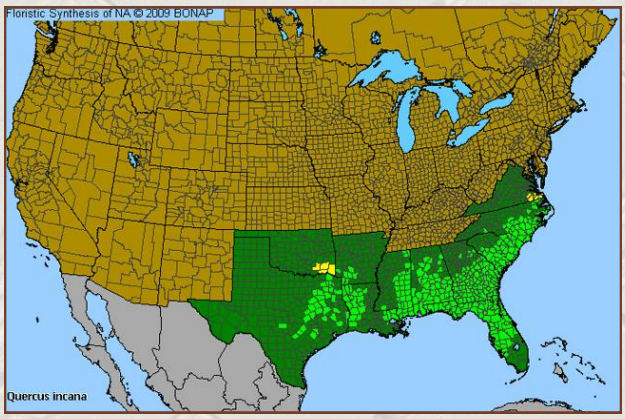
Bourbon whiskey is aged in casks made of oak. There are so many uses of this venerable, tight-grained wood. The oak tree is an ancient strain which has miraculously survived the upheavals and torments of eons, despite the extinction of lesser species along the way. It was named America's National Tree in 2004 by the Arbor Day Foundation.

All oak trees are related to beech trees, although you can't really tell by looking at them. The genus *Quercus* (literally, "oak tree" in Latin) contains some 400 species. In general, there are two families of oak tree: red oaks and white oaks. The Bluejack (*Quercus incana*) is in the red oak family. Like most red oaks, the signature single bristle on the tip of the leaf gives proof of its lineage. The leaves are the distinctive part of the tree in my opinion. Simple, alternate, oblong-lanceolate, they are, as already described, blue-green on the top surface and fuzzy underneath (in Latin, *incana* means hoary).

The biggest Bluejack oaks growing in our region are 25 feet high with six inch diameter trunks. While they are considered understory trees, that's not always the case everywhere. The National Champion Bluejack oak is found in Pasco County, Florida and checks in at 54 ft. tall with an upper canopy spread of 54 ft.



Bluejack oaks grow mostly in the southern part of the U.S., ranging from Central Florida up to southeast Virginia then west to Central Texas and up to southeast Oklahoma. In Texas they can be found on dry sand hills in East Texas as far west as the Brazos River, and scattered across Central Texas.

Bluejacks (and their close cousins, Blackjack oaks) are considered the frumpy stepchildren of the noble *Quercus* family blood line. That's because they are neither magnificent nor stately. Their bark is swarthy, black or dark gray and divided into thick, squarish blocks 1" across with irregular fissures between. Bluejacks are more like street-smart squatters, scrappy competitors which cling to some of the most godforsaken landscapes. Rough, short, scrubby with a preference for rocky, sandy slopes, the Bluejack can form feisty thickets through underground runners and will re-sprout multiple trunks from a top-killed stump after a wildfire. No long, flawless board feet of timber here—they are used instead for fence posts, firewood or charcoal.

One of the reasons we have scientific names is because common names are worse than useless to outsiders unfamiliar with those names. For example, the Bluejack oak is also known as Sandjack oak, Upland willow oak, Cinnamon oak or Shin oak, depending on where you are. The scrubby little Havard oak (*Quercus havardii*) is also called a Shin oak and grows in the sand dunes of Monahans Sandhills State Park in West Texas—totally out of Bluejack territory. Common names are, among other problems, like viruses—they're hard to get rid of.

The subject of sex naturally gains attention. As simple reproduction goes, there is nothing very romantic about Bluejack oaks, though. They are hermaphrodites—plants or invertebrates which have both male and female reproductive organs. This undoubtedly saves a lot of time and heartache compared to the

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What's Blooming?

by Liz Pullman & Judy Turner

Often I am presented with either a fuzzy looking gray plant or a picture of one and find myself giving out general common names for multiple species. Cudweed, Rabbit Tobacco and Everlasting. All these plants are part of the Family *Asteraceae* but bear little resemblance to the golden waves of Coreopsis or the purple mounds of fall Asters. The flowers seem only to have technical parts - no big colorful sepals and petals. Some are aromatic, and some have been used many, many years in dried floral arrangements (the Everlasting comes from this use). Why did it happen that the other two common names insinuate the plant is a favorite rabbit chaw? Go ask a rabbit.

First we have *Pseudognaphalium obtusifolium* (Cudweed or Everlasting). This plant was formerly *Gnaphalium obtusifolium* and you still find it listed as such in older botanical manuals. I guess it did not live up to being a Real *Gnaphalium* (no *Gnaphaliums* present in Texas) so it was tossed out and became "pseudo."

Another Genus that was formerly a *Gnaphalium* was assigned to the *Gamochaeta* Genus. These include *Gamochaeta argyrinea* (silver cudweed) and and G. *purpurea* (purple cudweed) although three more *Gamochaetas* - G. *calviceps*, G. *pensylvanica* and G. *antillana* that can be found here are labeled "exotic and present." Lots for a rabbit to chew on . . .

Next is another Genus that has survived under three names. First it was *Evax*, then *Filago* (or vice versa) and now is called *Diaperia* (Rabbit's Tobacco, Cotton Rose, Pygmy Cudweed). We have three - *Diaperia candida* (silver), *D. prolifera* (bighead) and *D. verna* (spring pygmy cudweed). This is the little fuzzy plant that allegedly you can identify by looking straight into its face and if you are seeing a white skull, then you have *Evax* - oh, excuse me, old name. *Diaperia*.

Finally we have a very early appearing spring plant with the cool name of Pussytoes (also called Everlasting and Ladies' Tobacco - don't even think of asking!). *Antennaria parlinii ssp. fallax*. Really, the cluster of "flowers" does resemble a cat's foot with fuzzy grey toes. I have seen this only a few times in these parts, only once in McKinney Roughs.

The catchall name of Rabbit Tobacco is so easy to remember that I suspect we are simply too lazy to go through all the keys and get a specific name. Being true vegans, rabbits probably do eat the plant and due to their digestive systems, do chew on a cud as well. Personally, the plant looks a bit unpalatable with all that fuzz. I just gather some and then hang it upside down to dry and have it in winter flower arrangements.

Now for the "Pseudo Latineae . . ." The Latin for *Gnaphalium obtusifolium* describes a plant with wooly (*gnaphalium*), blunt-leaved (*obtusifolium*) leaves. So can anybody tell me what the *Pseudognaphalum obtusifolium* looks like? Smooth, sharp leaves? The common genus name cud actually refers to the rounded or blunt leaves. Everlasting is probably for how long the flowers last.

The *Gamochaeta* genus name is also a "Pseudo Latineae." Its name actually comes from Greek, meaning united bristle. This description refers to the pappus (also Greek), which is the modified calyx (the collection of sepals) that surround the base of the flower. The common names for *G. argyrinea* (silvery), *G. purpurea* (purplish), *G. pensylvanica* (of Pennsylvania) are easy to discern. The common name for *G. calviceps* is narrow purple everlasting, but calviceps translates to hairless. The common name for *G. antillana* is delicate everlasting with *antillana* referring to its being native to the Greater Antilles.

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Climate Change, An Old Science

by Bill Brooks

Many people think that the science of climate change is based on new science. Actually, the beginnings of climate science started long ago.

It was in 1824 when French physicist Joseph Fourier discovered what would come to be known as the greenhouse effect. Gasses trapped in the atmosphere absorb heat and raise the temperature of the planet.

Thirty-five years later, John Tyndall, an Irish chemist, found that carbon dioxide was one of the gasses that trapped heat in our atmosphere.

In 1896, Swedish chemist Svante Arrhenius declared that burning coal contributed to the greenhouse effect.

A current study found that 97% of climate scientists agree that "global warming is real, caused by humans, and is dangerous."

Badlands National Park tweeted the following: "Burning one gallon of gasoline puts nearly 20 lbs. of carbon dioxide into our atmosphere." "Ocean acidity has increased 30% since the Industrial Revolution." "Today, the amount of carbon dioxide in the atmosphere is higher than at any time in the last 650,000 years." "The pre-industrial concentration of carbon dioxide in the atmosphere was 280 parts per million (ppm). As of December 2016, 404.93 ppm. "

Facts and quotes for this article came from "Unfriendly Climate" by Sonia Smith in the May 2016 edition of "Texas Monthly" magazine and the Badlands National Park tweets.

State Program Contacts

Website: http://txmn.org

State Coordinator: Michelle Haggerty, 979-845-5777, mhaggerty@ag.tamu.edu

The Texas Master Naturalist program is sponsored by the Texas AgriLife Extension Service and the Texas Parks and Wildlife Department.

Sponsor Contacts

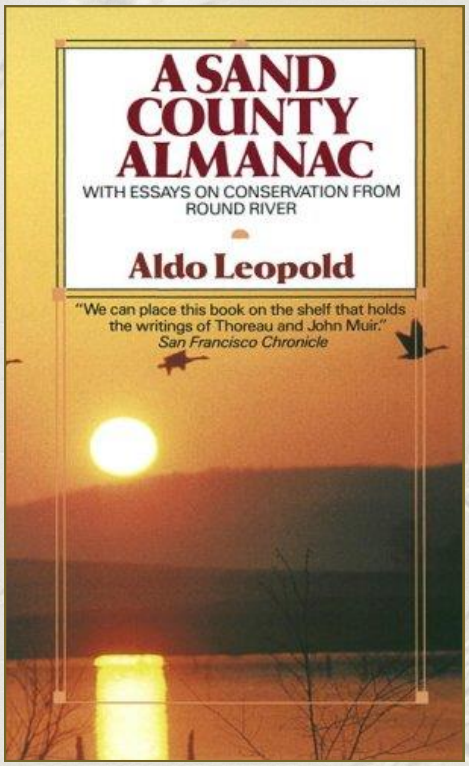
Caldwell County Extension Office: Michael Haynes, 512-398-3122, caldwell-tx@tamu.edu

Bastrop County Extension Office: Rachel Bauer, 512-581-7186, bastrop-tx@tamu.edu

Bastrop/Caldwell County TPWD Wildlife Biologist: Robert Trudeau, 512-332-7280, Robert.Trudeau@tpwd.texas.gov

Brooks on Books - An Interesting TMN Decision

by Bill Brooks



Every graduate of the Texas Master Naturalist class should have been given a copy of Aldo Leopold's "A Sand County Almanac." I hope you have read it by now. What a wonderful book it is. Last I heard it has been translated into 12 languages. You might have even been compelled to read some of the other six books Aldo Leopold wrote.

There is little doubt that Aldo is the father of wildlife ecology. One of his best ideas is that of the "land ethic," which is the ethical caring relationship between people and nature. Aldo Leopold's career is a long and storied one. He was born in 1887 in Burlington, Iowa and graduated from the Yale Forest School in 1909. Later, he worked in the Gila National Forest, which became the first wilderness area in the nation.

Aldo's first book was "Game Management." This book basically created the study of wildlife management and, 40 years later, it is still a much referred to text.

No doubt the Texas Master Naturalist organization chose to promote "A Sand County Almanac" because it is one of the most respected and quoted conservation books ever published.

A great writer is often quoted and here are some of my favorites from Aldo Leopold.

The most famous two sentences in the Almanac are, "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

"There are some who can live without wild things, and some who cannot. These essays are the delights and dilemmas of one who cannot."

Leopold also said that "the last word in ignorance is the man who says of an animal or plant: 'What good is it?"

I doubt any intelligent person should debate this. Aldo Leopold only wished that people would treat the land with the love and respect it deserves.

I am glad that he changed the working title for his book before he died fighting a forest fire on April 21, 1948. Originally it was called, "Great Possessions." "A Sand County Almanac," which sounds much better, was published after his death.

I do not wish to debate that Aldo wrote cornerstones of modern conservation, ethics, science and policy, but Texas has an author I feel was on par with Aldo Leopold.

Roy Bedichek was born on June 27th, 1878. He moved with his family to Texas in 1884.

He worked as a reporter for the Fort Worth Record. Later, he was a high school teacher and worked for the San Antonio Express. In 1917 he started working for the University of Texas in Austin and retired from there in 1948.

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Brooks, cont.

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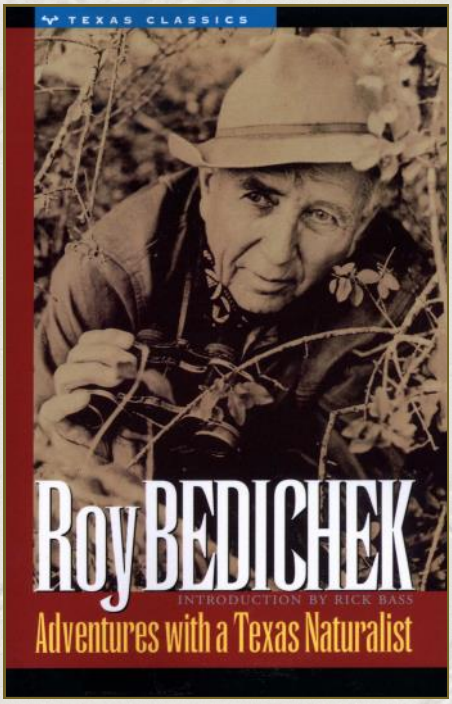


"Bedi," as he was called by his friends, was part of the U.T. intellectual triumvirate that some called the "Salon of the West." Frank Dobie, Walter Prescott Webb and Roy Bedichek would hold court on the Philosopher's Rock in Barton Springs Pool. You can see a statue of the three of them in Zilker Park. In the '60 and early '70s the Austin Independent School District even named middle schools after all three of them.

Bedichek wrote four books. To write his "Adventures of a Texas Naturalist" his friends insisted that in 1946 he take a leave of absence. During that year of solitude he penned this, his most famous book.

When reading reviews of this book one often comes across the words: thoughtful, meditative, and philosophic. Bedi wrote about Texas animals and plants and the effects of people on nature. He wrote about the nature of fences and the golden cheeked warbler. He expounded on the dangers of habitat destruction, especially in Texas.

Roy Bedichek died suddenly from a heart attack on May 21, 1958.

I doubt that I'll ever get the TMN administration to stop promoting "A Sand County Almanac," and I'm not sure I want to, but I would like to suggest that all the members of our Lost Pines Master Naturalist read the Texas Almanac, "Adventures of a Texas Naturalist" by Roy Bedichek.

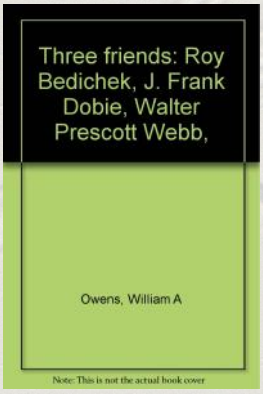
Full disclosure: My parents went to parties hosted by J. Frank Dobie on the edge of the U.T. campus while attending college.

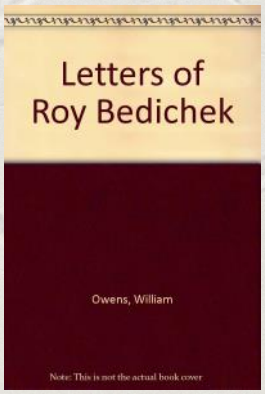
For further reading:

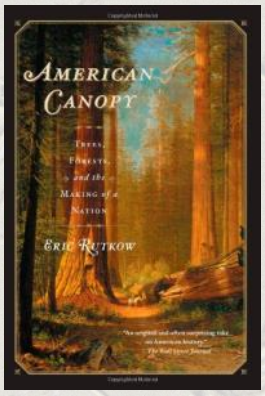
"Three Friends" by William Owens

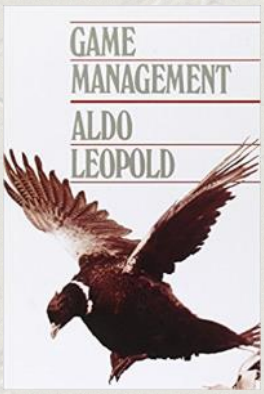
"Letters of Roy Bedichek" edited by W. Owens and L. Grant

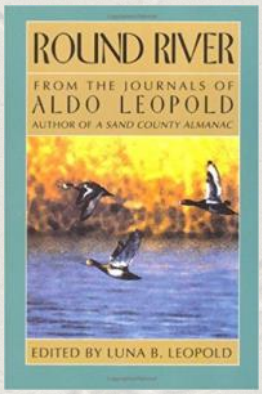
"American Canopy" by Eric Rutkow











Yegua Knobbs Up Close and Personal

by Larry Gfeller

There is a magical property situated between northwestern Lee and northeastern Bastrop counties that protects the enlightenment of nature from those who would abuse it. Indeed, it is preserved today specifically because of that abuse. This 302-acre parcel is known as Yegua Knobbs Preserve, protected by the Pines and Prairies Land Trust (PPLT)—available for visit by appointment only.

It's a case of split personalities. One is soothing pastoral scenery, complete with rolling prairie and smudges of cattle on the cloud-filled horizon, ghosts of buffalo past. It is the idyllic Post Oak Savannah of yore. The other is serene and undisturbed wild space with mixed hardwoods and pine forest, natural springs and a beaver pond. It suggests the northern limits of the Lost Pines region.

The Yegua Creek forms in Lee County (named by the Spanish, Yegua means "mare") and is the primary tributary forming Somerville Lake. The knobbs refers to a small line of forested sandstone mesas that run between the Colorado and Brazos river drainages. This area was the hideout for a band of notorious killers after the Civil War known as the "notch-cutters." There are three knobbs located on the preserve. So it was here, on tranquil land that has been the locus of conflict for more than a century, that last September our board of directors decided we should hold our first-ever chapter camp out.

Camping means different things to different people. For some it is primitive and minimalist. For others it is about amenities and comfort. But when people who appreciate nature are called to a place of beauty without the interruptions of modern life . . . well, that's when tensions ease, time melts away, laughter is easy and we all become children once again.

Ah, a chapter camp out . . . nostalgic memories of summers past with quick friends, teenage counselors and an up close introduction to swimming holes, chiggers and bad singing. The thought evokes warm flashbacks to "Hello Muddah, Hello Faddah, Here I am in Camp Grenada," a lamenting novelty hit song penned by Alan Sherman in 1963. Was this to be, then, summer camp for LPMNs?

Well, the weekend was designed to be more than just a camp out—but with loose rules. For instance, you didn't need to spend the night to take advantage of the occasion. Our 2017 Training Class completed their last field trip at this venue, The Nature of Naming Plants presented by Dr. Bill Carr. It not only drew trainees but also a number of active chapter members in search of advanced training hours. For the entire weekend there were enough scheduled training events to meet most anyone's needs. That said, everyone was free to do their own thing—you could just hang out, fish and relax if that's all you wanted to do.

The afternoon was kicked off by an official welcome from PPLT director (and chapter member) Bill Brooks, followed by comments and a reading by President Marcia Karr of a Bastrop County Commissioner's Court proclamation designating June 3rd Texas Master Naturalist Day in Bastrop County. It read in part: *"We express to this volunteer group our sincere appreciation for their exemplary work and offer a 'pat on the back' to these dedicated public servants."* Whether you were present, every LPMN needs to know about and be proud of this appreciation—your contribution to our communities is prized.

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Yegua Knobbs, cont.

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A cornucopia of advanced training opportunities focused on native plants and bird watching (the two most highly rated subjects in a chapter survey), but also included archaeology, geology, animal tracking and astronomy. Subject experts were recruited from outside as well as from within our own chapter. It was hot and our treks were challenging. The presenters gave of themselves completely—making for a tired group of naturalists at day's end.

In Saturday's aftermath, with Kathy Cox as maestro and overnighters playing support, our talented Food & Fun Chairwoman orchestrated a most delicious communal campfire meal. There was nothing primitive about it—we ate well!

As dusk began to fall and the evening cooled, the indefatigable Audrey Ambrose hustled up a competitive game of "washers." Funny how folks enjoy simple old games, given the right circumstances. Audrey never got the chance to break out the ping-pong table she schlepped from home, but it was there anyway—just in case it was needed.

As night fell, the crowning event for Saturday came from members of the Austin Astronomical Society. In the comfort of our camp chairs, we marveled at vantages of the universe from aboard the Hubble Space Telescope. Later, when the moon and Jupiter slipped from behind a lacy curtain of cloud, we all took turns staring with slack-jawed awe through a portable telescope into our cosmic origins—plenty of goose bumps to go around!

Although there was a short rain overnight, Kathy greeted a sunny morning with fresh coffee, sausage and eggs. Commuters came back again the next day. Sunday promised advanced training options for both bird watching and native plants and volunteer hours were offered for an environmental project to remove trash and install a bench on one of the knobbs. After lunch, it was time to break camp.

As is the case with most camp outs, everyone arrived home over-exposed to the sun and spent, but facing the work week with a renewed spirit.

Chapter Contacts

President, Marcia Karr
marcia.karr@gmail.com

Vice-President, Paula Weisskopf
pjweisskopf@gmail.com

Secretary, Allen Guisinger
aguisin@aol.com

Treasurer, Marsha Elrod
melrod1@earthlink.net

Past President, Julia Akin
jefakin17@gmail.com

Food & Fun, Sandi Ward
sandi.sward@gmail.com

Basic Training, Michal Hubbard
michal_firecap@yahoo.com

Public Relations, Larry Gfeller
larrydgfeller@yahoo.com

Advanced Training & Volunteer Coordinator, Vicky Gaconnet
vgaconnet@gmail.com

Education & Resources, Kathryn Hedges
kathryn_hedges@hotmail.com

Junior Master Naturalist, Kathryn Hedges
Kathryn_hedges@hotmail.com
.com

Membership, Kaye Reeser
Kmarie.reeser@gmail.com

Chapter History, Cat May
cat.greenheron@gmail.com

Environmental Stewardship, Audrey Ambrose
kc1jc2@flash.net

Nobly, cont.

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heterosexual model. Regardless, the Bluejack oak has a flower (catkins, seen falling in late spring) and a seed (acorn, produced every 2 years). The acorns, of course, provide special treats for raccoons, squirrels, deer and some birds.

These miniature oak trees are among my favorites. I find them especially beautiful in early spring, bedecked with light red flowers and cool blue-green leaves. Bluejacks will never, by themselves, become a great forest—yet some of them live among the giants. They don't receive fertilizer and will never know the artificial humus-rich earth that gardeners create. Fire doesn't kill them; it makes them stronger. I ask, what adversity in your life defines you today?

No, these trees may not have the handsome good looks their family is known for, but they have character in spades. They appear to have some autogenic trait that allows them to assess the ecological possibilities around them and then make the most of their circumstances. If their stature cannot be described as noble, I at least admire them for enduring nobly.

Blooming, cont.

(Continued from page 3)

The source for the genus name of *Diaperia* is totally unknown. *Candida* means white (with the common name of silver pygmy cudweed). *Prolifera* means having abnormally numerous parts. It's called bighead pygmy cudweed. Verna refers to springtime. And it's called Spring pygmy cudweed. Gee, who would have thought that!

Last, but not least, is Pussytoes or *Antennaria parlinii ssp. fallax.* Meaning antennae-like, named for American botanist John Crawford Parlin, but deceptive or fallacious (fallax). OK, I give. What might be deceptive about this species? Anybody???

Bill's Snippets

SEQUOIA

The genus of the California giant redwoods is Sequoia, the name of the Native American who independently created a writing system for the Cherokee nation.

OTTER FUR

Unlike other marine mammals, sea otters do not have a layer of blubber to help them keep warm. Instead, they have the densest fur in the animal kingdom, ranging from 250,000 to a million hairs per square inch, which insulates them.

FUN SKIN FACTS

Dolphins replace their outer skin about every three hours. From our understanding of dolphin skin comes the design for specialized swimming trunks worn by competitive swimmers.

Humans shed about 0.05 ounces of skin cells a day, which adds up to about a pound a year. The numbers are impressive: 10 billion particles flake off every day (The Hidden Life of Trees, p. 61).

BAD NEWS FOR MEAT LOVERS

There are seven species of ticks that bite humans and spread disease in the U.S. Five of these species are found in Texas. A bite from the Lone Star Tick can cause an allergy to red meat. This tick is found around our area and in most eastern states.

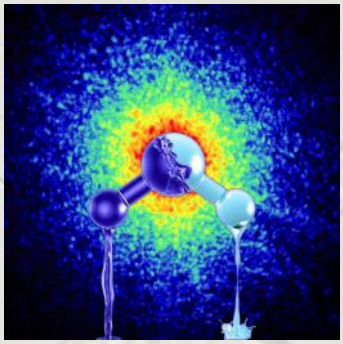
DARWIN, HOOKER & ASCENSION ISLAND

Terra-forming planets is still the stuff of science fiction ,but terra-forming an island was done back in the 1850s. Two hundred years ago, Ascension Island was a barren volcanic edifice. Today, its peaks are covered by lush tropical "cloud forest." Read the fascinating story of this island.

WHAT COLOR ARE YOUR EGGS?

White eggs usually come from chickens with white earlobes. Chickens with red earlobes usually lay brown eggs. Not surprisingly, there are exceptions to both of these “rules.”

DENSITY OF WATER



Already, scientists have identified 70 properties of liquid water that differ from other liquid substances. A recent study gives very strong support to a picture where water at room temperature can't decide in which of the two forms it should be, high or low density, which results in local fluctuations between the two. Lars G.M. Pettersson, a theoretical chemical physicist at Stockholm University, said, "In a nutshell: Water is not a complicated liquid, but two simple liquids with a complicated relationship."

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Snippets, cont.

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OLD OAKS

After the 2011 Bastrop fire it was discovered that some of our post oak trees were the oldest and slowest growing in the U.S. The average age of post oaks sampled was 218 years old (presentation by Greg Creacy, TPWD, June 16, 2017).

CIGARETTES AREN'T JUST HARMFUL TO PEOPLE

Cigarette butts help drive parasites from birds' nests

House finches use cigarette butts to fight parasites trying to invade their nests, but the practice may have some negative side effects for the birds, according to findings published in the Journal of Avian Biology. Researchers found that when they introduced live ticks into nests, the finches brought butts in to drive them away, but the scientists later found genetic damage in the birds from exposure to the butts after examining their red blood cells.

BISON MANAGEMENT

One year ago this May, President Obama signed the National Bison Legacy Act, naming the American bison as the country's official national mammal. The following July, wildlife preservationist groups filed notice of their intent to sue the Department of the Interior in order to stop the annual slaughter of Yellowstone National Park's wild bison. The park's winter cull is mandated by the Interagency Bison Management Plan, which calls for the maintenance of Yellowstone's bison herd at about 3,000 individuals (out of estimated population of 5,500 in August 2016). At the end of the bison's first year as the national mammal, over 1,200 of Yellowstone's buffalo had been slaughtered—the most killed since 2008. Read more.

IT'S ALL IN THE GENES

Female bats give birth to baby bats that weigh 30% of their mother's weight. Bats are not flying mice. Bats are more closely related to lemurs than rodents (Bat Conservation International Bat Chat newsletter, May 2017).

Newsletter Deadline

Submission deadline for the next issue is August 18, 2017. We welcome relevant contributions, photos, announcements, or other material relating to the mission of the Texas Master Naturalist program, particularly those pertaining to our local area. Submissions may be edited for clarity, grammar, spelling, and space requirements. Please send information to the editor at Roxanne.M.Hernandez@gmail.com.