

Texas Master Naturalists ROLLING PLAINS CHAPTER

NEWSLETTER

Vol. 8, No. 5

<http://txmn.org/rollingplains>

May 2016

Presidents Report

Terry McKee

Our first ever BioBlitz is coming up Saturday, May 14 at Lake Arrowhead State Park.



What is a BioBlitz? This is an intense period of discovery where citizen scientists and community members work together to document, map, and learn about all the

living organisms in an area. The fieldwork is crucial to understanding what kinds of plants and animals live in a specific spot and will add to Lake Arrowhead State Park's official species list.

For those of you doing i-Naturalist, this is an opportunity to put your skills to the test. For those of you that haven't started i-Naturalist, we will show you how, so bring your smartphones and cameras.

The event will start May 14 with a bird walk lead by Penny Miller at 8:00 a.m. and continue at 9:30 at the wildscape display near the dining hall and the restroom by the swimming beach. We will attempt to document anything that crosses our path, so it could be lots of fun and lead to many discoveries. Don't worry if you are unable to identify everything you see. With a photo on hand we can collaborate to find it. By noon, we can gather together and discuss our findings.

After that...we can plan another BioBlitz! There is still lots of park left.

Greater Roadrunner (*Geococcyx californianus*)

Although the Greater Roadrunner occurs throughout Texas, is well known, is the topic of much folklore, and is a very popular cartoon character, the only field research studies that have been conducted are in desert scrub or brush-grassland habitats in South Texas. As a popular multicultural iconic bird, from prehistory to modern time, it is surprising that it was one of the last bird species to be given state protection because of the mistaken belief that roadrunners were a threat to declining quail populations.

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MAY 3: Rolling Plains Chapter monthly meeting is at River Bend Nature Center. **Location:** 2200 3rd Street, Wichita Falls, Texas. **Time:** 7:00 PM. **Program:** Bryan Rupp, meteorologist with KFDX will be our May speaker.

MAY 7: 2016 Wildflower Walk **Location:** Lake Mineral Wells State Park & Trailway **Time:** 9:00 AM to 10:30AM. Join us for a walk in the park to observe and identify wildflowers. Along the way park interpreter, David Owens, will stop and identify plants and tell about the plant's nature and folklore. Reservations are required. Call 940-328-1171. Held at Lake Mineral Wells State Park, 100 Park Road 71, Mineral Wells, TX, 76067. The program is free with paid park entrance fee or a State Park Pass.

MAY 14: After School Fishing **Location:** South Weeks Park **Time:** 4:30 PM to 6:00 PM. *This counts as volunteer time.*

MAY 14: Rolling Plains 1st ever BioBlitz **Location:** Lake Arrowhead State Park **Time:** 9:30 AM to Noon. Meet at the wildscape display near the dining hall and the restroom by the swimming beach. Bring smartphones and cameras.

DISTRIBUTION: The Greater Roadrunner is a resident of Texas, recorded in all counties (Maxon 2005), but is most common in the Chihuahuan Desert of West Texas and the South Texas brushlands (Sauer et al. 2005). However, the author sighted many roadrunners from August 16-18, 1999, in Cottle, Foard, King, and Knox counties in the northwest Rolling Plains ecoregion. They are locally uncommon to common in all other areas except the forested eastern and northeastern sectors where they are rare to locally uncommon (Lockwood and Freeman 2004).



SEASONAL OCCURRENCE. Greater Roadrunners are year-round residents in Texas. They breed from early March to late-October; based on egg dates from March 5-October 10 (Oberholser 1974) and may nest as many as 3 times during a favorable breeding season (Maxon 2005). Greater Roadrunners occur alone from late fall through winter and in pairs or family groups during the breeding season (Maxon 2005).

BREEDING HABITAT: Major habitat types used by Greater Roadrunner include desert scrub, chaparral, savannah, open brushlands, open woodlands, and wooded stream corridors including myriad plant communities within each habitat type; and, in urban and suburban areas such as yards, parks, agricultural lands, school grounds, cemeteries, and vacant lots. Roadrunners are, rare in dense unvegetated urban areas, dense brushlands, and woodlands with thick undergrowth (Maxon 2005).

All habitat types are similar in general vegetation structure — a mix of open area with sturdy vegetation. Ground cover may range from bare ground to sparse, short bunchgrass or short lawn grass, and the tall vegetation may be cacti, small bushes, or trees. The open areas are essential for feeding. Tall vegetation or artificial structures provide nesting and roosting sites (Maxon 2005). In general, Greater Roadrunners nest in thorny shrubs, low trees, thickets, and clumps of cacti. Specific nest distribution and nest site parameters were analyzed in South Texas by Folse and Arnold (1978) and Trans-Pecos (Hughes 1996).

STATUS: Between 1830-1900, the Greater Roadrunner extended its range in Texas to include the southeast, southwest, central, and Panhandle areas; and, between 1900-1940, its range extended into East Texas. This expansion coincided with conversion of grasslands to farms and ranches. Woody plant invasion of these modified areas was facilitated as a result of the end of American Bison (*Bos bison*) grazing, fire suppression, overgrazing by cattle, tree planting for windbreaks, over-farming, and farm abandonment. Thus, most of Texas provided ideal habitat — mixes of open land with shrubs or trees (Maxon 2005).

Historically, this is an unusually fast expansion for a ground-dwelling species whose individuals move only a few miles during their lifetimes. Therefore, further explanation is necessary to understand this range expansion. Three factors are involved (Maxon 2005). First, the prehistoric habitat of the Greater Roadrunner (33,500 years ago) was cool, open woodlands, rather than that of present-day desert scrub which is commonly thought of as its primary habitat. Thus, adaptation to a drying desert scrub-grassland environment required thousands of years; but it remains a woodland species more common near wooded areas than in the midst of low desert scrub. Second, extreme adaptability and flexibility involving simple habitat requirements (open areas in which to feed and tall vegetation nearby in which to roost and nest); omnivorous opportunist-

Naturalist Apps



BeeSmart Pollinator Gardener- Compatible with Android, iPhone, iPod touch, and iPad. Requires

iOS 5.1 or later. FREE

Beesmart The BeeSmart™ Pollinator Gardener is your comprehensive guide to selecting plants for pollinators specific to your area. Never get caught wondering what plants to buy again! With the BeeSmart™ Pollinator Gardener's easy user interface, browse through a database of nearly 1,000 native plants. Filter your plants by what pollinators you want to attract, light and soil requirements, bloom color, and plant type.



iTrack Wildlife- Compatible with iPhone, iPod touch, and iPad. Requires iOS 5.0 or later. \$14.99

iTrack Wildlife is the most comprehensive digital field guide to animal tracks ever made. Whether you're a naturalist, a hunter, a nature lover, an outdoor enthusiast, or a wildlife biologist, you will find iTrack Wildlife to be a terrific companion on your outdoor adventures. While the simple and intuitive design make this app accessible to the novice, the wealth of accurate information and powerful search tools will appeal to experts and wildlife professionals.



Raptor ID- Compatibility: Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.

\$9.99

Raptor ID is the first raptor identification app designed for mobile devices; "HawkWatch International's Identification Guide to Raptors" puts expert hawk identification content in the palm of your hand. In this guide to North America's 34 species of diurnal raptors, you'll find nearly 1000 annotated photos, and cutting edge identification video for each species, geared toward helping you identify raptors in flight. If you're just getting started with birding, this app covers the basics; if you're already an expert hawk watcher, this app covers all the variation that can lead to identification confusion, even among the most seasoned birders.

Invasive Spotlight

Trifoliate Orange (*Poncirus trifoliata*)



Trifoliate orange, also known as hardy orange, is a deciduous shrub or small tree

that invades woodlands, forest edges, fence rows and urban green spaces. It can grow into large thickets, crowding out all other plants. Its large thorns make it especially problematic.

It grows from 8 to 30 ft. (2.4-9.1 m) high. The leaves are alternate, compound with three leaflets (trifoliate), up to 2 in. (5.1 cm) long and have a winged petiole. The twigs are green with stout, 1 in. (2.5 cm) or more long thorns. The bark is conspicuously green-striped. Spring flowers are white, 5-petaled, 1-2 in. (2.5-5.1 cm) in diameter and showy. Its fruit looks like a dull miniature orange, 1.5-2 in. (3.8-5.1 cm) in diameter, with a downy skin.

Hardy orange spreads mainly by dispersal of the fruit, which contain several seeds. Fruit can be carried downstream, where they come to rest in bottomlands; the several seeds then sprout, creating a new population.



Trifoliate orange was introduced from northern China as an ornamental due to its unique form and green color, beauty when flowering, and interest provided when fruiting. It was likely also planted as impenetrable hedges. Due to its hardy nature it is often used as rootstock for citrus trees.

Trifoliate orange needs to be watched closely since it can easily become established and create even more competition for desirable trees in forest settings. To prevent the spread of trifoliate orange, do not plant it; choose alternative plants, and eradicate the plants you find outside of a landscaped setting. Control can be achieved by hand pulling seedlings or, for larger specimens, the cut-stump application of an herbicide. Contact your local Texas A&M Forest Service or AgriLife office for specific recommendation and as always follow label directions. To be safe use basic precautions like gardening gloves, long pants & long sleeved shirts, and eye protection.

In Texas this invasive plant is found in mainly in the eastern woods. It is found throughout the southern United States and up into Pennsylvania.

tic diet; nest site flexibility (almost any sturdy vegetation or artificial structure); large clutch size (usually 3-6, with a mean of 4 but occasionally from 2-12), and asymmetric hatching offset predation, especially of snakes (the major predators); long breeding season with up to 3 nesting attempts/season during favorable years; and, longevity (at least 7-9 years). Third, human changes in the landscape that enhanced habitats (clearing of plains and prairies, elimination of bison and fire suppression, both of which allowed trees and shrubs to invade grasslands, planting trees in former grasslands around homes and fencerows, clearing openings in closed-canopy woodlands and forests, and draining wetlands for farming, and human tolerance of suburban areas that still retain natural habitat features.

In the Coastal Bend region of South Texas, local populations fluctuated considerably depending upon the relative success of the previous breeding season (Folse and Arnold 1978). North American Breeding Bird Survey data for Texas (Sauer et al. 2005) give annual trends of 6.4% (1966-1979), 3.2% (1980-2005), and 2.1% (1966-2005); thus, showing a slight overall decreasing trend. Six regions show both increasing and decreasing trends with general stability: Upper Coastal Plain (1.8% 1966-1979, -6.5% 1980-2005, -5.2% 1966-2005), South Texas Brushlands (4.6% 1966-1979, 7.1% 1980-2005, 2.1% 1966-2005), Osage Plains/Cross Timbers (-6.3% 1966-1979, 1.4% 1980-2005, 0.1% 1966-2005), Edwards Plateau (1.7% 1966-1979, 2.4% 1980-2005, 2.5% 1966-2005), Rolling Red Plains (-22.5% 1966-1979, 14.5% 1980-2005, 10.9% 1966-2005) and Chihuahuan Desert (13.8% 1966-1979, 1.3% 1980-2005, 3.3% 1966-2005). However, in the East Texas Prairies, there has been a significant decline (18.5% from 1966-1979, -18.5% from 1980-2005, and -0.6% from 1966-2005) where there has been significant vast urban-suburban development, planting of nonnative monoculture pasture grasses, overgrazing, cleanly farmed croplands, surface mining, and transportation corridors (Gunter and Oelschlaeger 1997, Telfair 1999).

Literature cited:

Emlen, J. T. 1972. Size and structure of a wintering avian community in southern Texas. *Ecology* 53: 317-329.

Folse, L. J., Jr. 1974. Population ecology of Roadrunners (*Geococcyx californianus*) in south Texas. MS thesis, Texas A&M University, College Station.

Folse, L. J., Jr. and K. A. Arnold. 1978. Population ecology of Roadrunners (*Geococcyx californianus*) in South Texas. *Southwest. Nat.* 23: 1-28.

Gunter, P. A. Y. and M. Oelschlaeger. 1997. *Texas land ethics*. University of Texas Press, Austin.

Hughes, J. M. 1996. Greater Roadrunner (*Geococcyx californianus*). In *The Birds of North America*, No. 244 (A. Poole and F. Gill, eds.) The Birds of North America, Inc., Philadelphia, PA.

Lockwood, M. W. and B. Freeman. 2004. *The TOS handbook of Texas birds*. Texas A&M. University Press, College Station.

Maxon, M. A. 2005. *The real roadrunner*. University of Oklahoma Press, Norman.

Oberholser, H. C. 1974. *The bird life of Texas*. University of Texas Press, Austin.

Sauer, J. R., J. E. Hines, and J. Fallon. 2005. *The North American Breeding Bird Survey, results/analysis 1966-2005*. Version 6.2.2006. USGS Patuxent Wildl. Res. Cnt., Laurel, Maryland. <http://www.mbr-pwr.usgs.gov/bbs/bbs.html>.

Telfair, R. C. II, ed.. 1999. *Texas wildlife resources and land uses*. University of Texas Press, Austin.



The Rani-
tomeya ama-
zonica frog is
one of more
than 1,000
new spe-
cies recently
discovered in
the Amazon.

Wolves are digitigrade, which means they walk on tip-toes. The rest of the foot extends the effective length of the leg and allows longer strides.



Snakes do not have a diaphragm, so the heart is free to move out of the way when swallowing large prey.

Reinventing the Rattrap

A team at Simon Fraser University is reinventing the rattrap. They are creating a rattrap that is effective and minimizes collateral damage by using a snap mechanism and three methods of attraction: pheromones, vocalizations and food. By using rat communication methods,



the trap is designed to enhance capture and eliminate bait stations.

Scotts Canada Ltd. is funding the research and hopes to commercialize the trap.

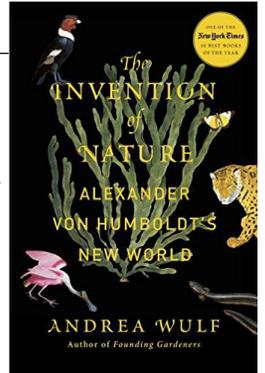
At a time when rat populations around the world are inflicting serious harm, understanding rat behaviour and preferences is important. Rats spread disease and allergens, diminish agricultural crop yields, and threaten animals and endangered seabirds. The brown rat is the world's most common rat, and its population is growing, in part because rats have evolved to avoid newly placed traps in their natural habitat. Read more at: <https://www.sciencedaily.com/releases/2016/04/160411152826.htm>

RESOURCE CORNER

The Invention of Nature: Alexander von Humboldt's New World

by Andrea Wulf
Hardcover: 496 pages
ISBN-10: 038535066X
Price:\$30.00

Alexander von Humboldt (1769–1859) was an intrepid explorer and the most famous scientist of his age. In North America, his name still graces four counties, thirteen towns,



a river, parks, bays, lakes, and mountains. His restless life was packed with adventure and discovery, whether he was climbing the highest volcanoes in the world or racing through anthrax-infected Siberia or translating his research into bestselling publications that changed science and thinking. Among Humboldt's most revolutionary ideas was a radical vision of nature, that it is a complex and interconnected global force that does not exist for the use of humankind alone.

Now Andrea Wulf brings the man and his achievements back into focus: his daring expeditions and investigation of wild environments around the world and his discoveries of similarities between climate and vegetation zones on different continents. She also discusses his prediction of human-induced climate change, his remarkable ability to fashion poetic narrative out of scientific observation, and his relationships with iconic figures such as Simón Bolívar and Thomas Jefferson. Wulf examines how Humboldt's writings inspired other naturalists and poets such as Darwin, Wordsworth, and Goethe, and she makes the compelling case that it was Humboldt's influence that led John Muir to his ideas of natural preservation and that shaped Thoreau's Walden.

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