

WATERSHED WEEK IN REVIEW



Next Week's Newsletter

We will be taking a short break from the newsletter next week.

Publication will resume on April 2nd.

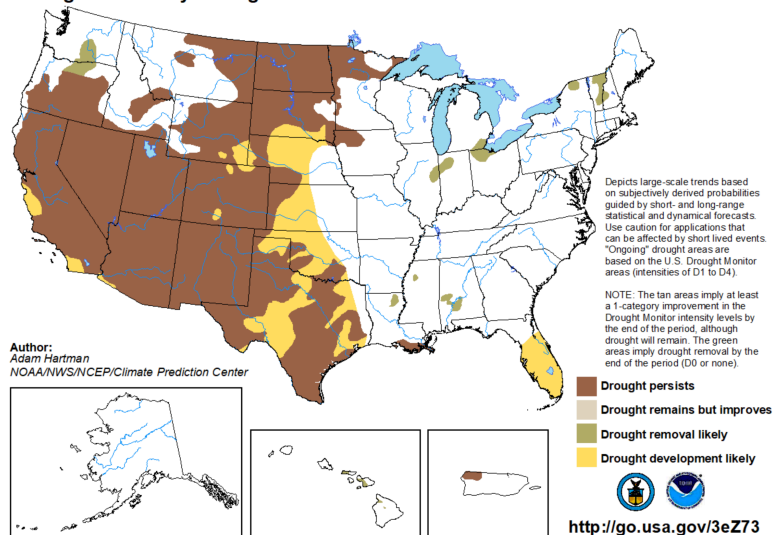
Thank you for your continued support!



Drought Outlook

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for March 18 - June 30, 2021
Released March 18



A reader recently inquired about the Drought Outlook for the coming months.

The timing of the question was perfect as the latest Drought Outlook from the Climate Prediction Center was released yesterday.

As is typical during La Niña cycles, conditions tend to be warmer and drier. Such is the case with this cycle, with below normal precipitation predicted through June. Fortunately, predictions also call for the El Niño/La Niña cycle to shift to neutral by summer.

Axis Deer Project Wraps Up

By *Daniel Oppenheimer*
Hill Country Alliance



Fredericksburg, Texas – Hill Country Alliance, Texas Tech University's Department of Natural Resources Management, and partners are grateful to the land stewards that supported the Axis Deer Control Project. Tissue samples will be used to understand the ecology and population dynamics of free-range Axis deer in the Hill Country.

Axis deer are an exotic species that were introduced from India to the Texas Hill Country in the 1930s. Since their introduction, Axis deer have proliferated, adversely impacting agricultural production, native wildlife, and creek-side habitat in several Hill Country river basins.

Matthew Buchholz, a Ph.D. Student at Texas Tech University's Department of Natural Resources Management, is studying the exotic deer and has found reports of free-ranging populations of Axis deer in more than 30 counties across Central Texas.

Based on field data of life expectancy, fertility, and fawn survival rates, Buchholz estimates that a single Axis doe could raise up to 12 fawns to adulthood. "Each female fawn has the same potential, allowing for the Axis deer population to increase substantially over a short time span," he notes.

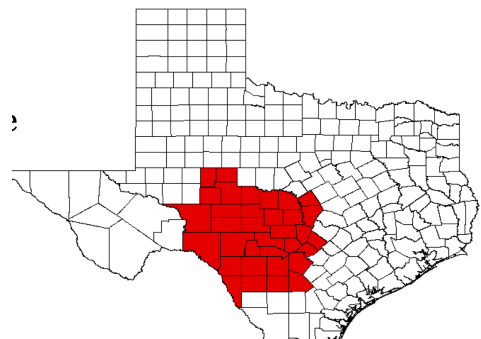
[Read More](#)

Axis Deer 101

Thanks to Matt Buchholz at Texas Tech and Daniel Oppenheimer at Hill Country Alliance (HCA) for sharing their Axis Deer 101 presentation.

Greater detail on Axis research is available from a recorded webinar with Matt Buchholz presented by HCA and found on the HCA's YouTube page.

County distribution of free-range axis deer



Golden-Cheeked Warblers Returning

*By Romey Swanson
Texas Audubon*

Golden-cheeked Warblers (GCWA) are beginning to arrive within their Hill Country haunts. The folks at Westcave Outdoor Discovery Center reported at least one GCWA on the Balcones Canyonlands Preserve on 5 March 2021 – right on time. Many more of these birds will arrive over the next couple of weeks.

The Golden-cheeked's scientific name, *Setophaga chrysoparia*, translates to golden cheek moth eater; moth eater describing the genus which now includes most New World warblers. This federally endangered songbird is an attractive member of the wood-warbler family (Parulidae) and is a Texas breeding endemic – meaning every individual is a native Texan. Golden-cheeked Warblers are overwhelmingly reliant upon that special Hill Country habitat association of mature juniper-hardwood forests, typically with high levels of canopy cover, a diverse deciduous component, and occurring along moderate to steep slopes.

Prime GCWA habitat is attractive and diverse and represents some of my favorite wooded parts of the Hill Country. These prime woodland habitats are often densely canopied and old-growth, occurring with an abundance of large attractive individual juniper, the kind of trees that are easy to appreciate as important natives instead of the noxious shrubs we regularly battle. The best GCWA habitat will hint at creeks and springs along the moist shaded slopes of valleys and ravines. These healthy forests are characterized by veins of rich dark soil high in organic material alternating with exposed limestone ridges and fractures. [Continue reading...](#)



What is a “Mature Cedar”?



Photo : Wild Basin Preserve

As mentioned in the previous article on Golden-cheeked warblers, mature cedars (*Ashe-juniper*) are an important component of the warbler's nesting season. The birds utilize long strips of bark from these old trees to construct their nests (see left).

But what qualifies as a mature cedar?

Unfortunately there is not a clear definition, but the photo below from Elizabeth McGreevy provides some perspective. Elizabeth **will soon release** her book entitled, *Wanted! Mountain Cedar-Dead or Alive.*

Elizabeth suggests cedars 100-150 years old will generally be 15-50 feet tall with a 10-48 inch trunk diameter. Trunks and branches will be twisted and bending. Most importantly, the bark texture will be coarsely to finely shredded.

Elizabeth has researched the history of the *Ashe-juniper* on the Edwards Plateau and will try to dispel some of tall-tales that have grown around the species in her book.

“The book aims to track down the origins and cedar tall tales to determine what is true, what is false, and what is somewhere in between. Through a series of revelations, the author strives to replace anti-cedar sentiments with a more constructive, less emotional approach to Hill Country land management.”



Look for an announcement of the book's availability in future newsletters.