

Texas Chapter of the Wildlife Society

Excellence in wildlife stewardship through science and education



Photo by: L. Heffelfinger

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INSIDE THIS ISSUE

PRESIDENT'S NOTE.....1

TCTWS COMMITTEE

NEWS.....5

CONTRIBUTED ARTICLE:

EMMA GUEST.....20

STUDENT SUMMER

SPOTLIGHT.....22

BOTANY BRIEFS.....27

SOUTHWEST SECTION

TRACKS.....28

HOT OFF THE

PRESS.....31

EDITORS, ANDREA RICHARDS
AND SARAH TURNER

PRESIDENT'S NOTE

by John Kinsey

A Message from the President

Fall is (kind of) here and hunting season is upon us. I thoroughly enjoy all the phone calls, emails, text messages, and social media posts that come my way from all of you documenting your adventures, both your successful trips and you're not so successful ones because no time spent outdoors is truly a failure. This time of year I often reflect upon my youth, as I have such great memories of my trips afield with my father and brothers as a child and young adult. Those trips and those memories are what led me to choose a career in our field. For the past few years, I have largely lived in my hunting adventures vicariously through such communications from you all as I have often and happily traded those trips in for soccer games and dance recitals.

As I reflect, I sometimes long for the days of being able to take to the field every evening after school with my closest friends and family, remembering them as some of the best days of my life. I try hard not to live in or dwell on the past, and this spring I was given a reminder that my best days of hunting are ahead of me. My oldest daughter, who will be eight this month, told me she thinks she is ready to try turkey hunting. I now have nightmares of blowing her first hunt with my rudimentary calling skills, but I'm blowing the dust off the slate and she is the proud new owner of a single-shot .410. It may be fall now, but spring will be here again before we know it and we both have a lot of work to do.

PRESIDENT'S NOTE

The fall months will also keep your Texas Chapter board members busy with preparations and planning for the 2023 TCTWS Annual Meeting. Again, the next meeting will be held February 22nd-24th at the Omni-Houston. We do not plan to cap attendance this year, so this will be the first full-capacity TCTWS meeting since February of 2020. I want to see us set a new attendance record at this one. I look forward to seeing you all there!

Much of the meeting will look familiar to those of you who have attended in the past. We will share the latest research findings and the newest tools and technologies available during oral presentations and poster sessions. I expect another stellar lineup of Cottam Award presentations and a lively competition during quiz bowl. We currently have seven workshops lined up, including a wild game butchery class with Jesse Griffiths, Chef and owner of Dai Due butcher shop, and a student lead internship workshop. Your Activities Committee has been working hard and the lineup this year is truly amazing.

Something new is coming to this meeting that I am beyond excited to finally be able to share with you. It took more than two years of communication and a little help from our friends at CKWRI, but we were able to secure a commitment from Ed Roberson, host of the Mountain and Prairie podcast, to attend our Chapter meeting. If you are not familiar with Ed or his show, I strongly encourage you to give it a listen. Ed is one of the most thoughtful podcast hosts I have come across in any genre. His show focuses on the people, places, and conservation of the American West. He goes to great links to masterfully craft conversations with artists, authors, conservationists, and athletes who share his passion for nature as well as living intentionally and strenuously in all aspects of life. I suggest starting at, or near, the beginning of his episode list dating back to 2016. This will help you understand how and why Ed began this venture, and I think that's important to get as you move through the evolution of the Mountain and Prairie podcast. One of my favorites is his interview with Jim Howell on May 26th of 2016. Not a bad one to start with, in my opinion.

What is truly unique about Ed attending our meeting though, is that he will be recording two live podcasts featuring expert panelists during our conference. The first panel discussion topic will be equitable access to the outdoors in a private land state. This panel will feature experts from The Nature Conservancy, Texas Children in Nature, Texas Parks and Wildlife Department, and the East Foundation. Topics will range from re-wilding urban areas to the possibilities of opening private landowners' gates to public access along with examples of successes and opportunities for growth in various areas related to these efforts.

The second panel discussion Ed will be hosting and recording is our Plenary. This discussion will center on the challenges and opportunities presented to us when striving for landscape-level conservation in a private land state. The panel will consist of experts from Texas A&M University, Texas Agricultural Land Trust, Conservation Equity Partners, and Borderlands Research Institute. Topics of discussion will include the rapid change in Texas' landscape, what to expect in the future, tools available to land managers and private landowners in Texas, best practices for implementation, common barriers to entry for some landowners, and examples of success stories where conservation-minded development was achieved to benefit both our natural resources and expanding industry.

PRESIDENT'S NOTE

This is going to be an epic meeting for our Chapter and Ed is going to help us blast all the phenomenal work coming from all of you to his listeners across the globe. Big things are coming our way. Our future is bright!

Now, back to my turkey call...



John C. Kinsey, CWB®
President, Texas Chapter of the Wildlife Society
john.kinsey@tctws.org

"In playing ball, and in life, a person occasionally gets the opportunity to do something great. When that time comes, only two things matter: being prepared to seize the moment and having the courage to take your best swing."

-Hank Aaron

EDITOR'S NOTE

Welcome to the October 2022 TCTWS Newsletter! This edition contains more content than most, so please see below for an expanded Table of Contents.

Thanks, and happy reading!
-Andrea and Sarah

President's Note	Pgs. 1-3
TCTWS Committee News	Pgs. 5-20
• James G. Teer Conservation Leadership Institute	Pg. 5
• Excellence in Wildlife Conservation Committee	Pg.6
• Publication Awards Nominations	Pg. 7
• TCTWS 2023 Annual Meeting Call for Abstracts	Pg. 8
• Honorary Life Membership Call for Nominations	Pg. 11
• TCTWS 2023 Photo & Art Competition Updates	Pg. 12
• Wildlife Conservation Camp News	Pg. 16
• Webinar Series Updates	Pg. 18
• Summary of Upcoming Deadlines	Pg. 19
Contributed Article: "State of Knowledge Regarding Bats and Wind Energy" by Emma Guest	Pgs. 20-21
Student Summer Spotlights	Pgs. 22-26
Botany Briefs	Pg. 27
Southwest Section Tracks	Pg.28-30
Hot off the Press! Texas Natural History in the 21st Century	Pg. 31
TTU OLC Call for Survey Participants	Pg. 32



James G. Teer Conservation Leadership Institute
Now Accepting Applications!

Deadline to apply is November 1, 2022

The James G. Teer Conservation Leadership Institute is now accepting applications for the 2023-2024 Early Career Professional Program! Developed to ensure a future legacy of well-trained conservation leaders adept at identifying conservation challenges and finding solutions, the JGTCLI is seeking early-career professionals 1 to 10 years out of college who are working full time in a natural resource-related field and have demonstrated leadership potential. Professionals from diverse natural resource fields are welcome to apply. These fields include federal and state natural resource agencies, environmental and conservation organizations, educational institutions, natural resource policy development, private consultants and individuals from other natural resource programs.



Throughout the year-long course of study beginning in February 2023, Institute Fellows will be exposed to different types of leadership styles, conduct personality and personal growth assessments, become familiar with the policy-making process, and will tackle a problem-solving challenge on behalf of the Texas Chapter of The Wildlife Society related to current statewide conservation issues. Participants will develop lifelong relationships and work both collaboratively and independently to develop and strengthen their communication, conflict and problem solving, and project management skills while impacting real world conservation challenges.



For more information, and to apply, please contact Tucker Slack at tslack@plateauwildlife.com and visit <http://tctws.org/conservation-institute-menu/jgtcli-early-career-professional-training/>.

Excellence in Wildlife Conservation Committee

Help us honor and recognize the educators, landowners, and wildlife professionals that inspire you! The Excellence in Wildlife Conservation Committee is asking you to help us recognize exceptional wildlife conservation efforts in Texas by submitting nominations for one or more of the following award categories:

Educator of the Year Award:

The Educator of the Year Award recognizes wildlife professionals for outstanding achievements in wildlife conservation education. Since 1992, this award has honored the best wildlife educators in Texas, including 2022 recipient Dr. Heather Matthewson of Tarleton State. Nominees should be current or past members of TCTWS. Please submit a 5-point bulleted statement explaining why your nominee is deserving of the award, along with a curriculum vitae of the nominee.

Land Stewardship Award:

The Land Stewardship Award recognizes landowners who have been instrumental in the development, application, and promotion of sound wildlife management principles on their land. There are no property size restrictions or TCTWS membership requirements for this award (nominees do not need to be current or past members of TCTWS). The 2022 award went to Terry and Kelly Anderson for their excellent management. Please submit a ½ to 1 page letter of nomination explaining why your nominee is deserving of the award.

Outstanding Achievement Award:

The Outstanding Achievement Award recognizes wildlife professionals for their outstanding achievements during the course of their involvement with natural resource management and conservation. Honoring remarkable individuals and groups for their contributions to conservation in Texas since 1966, this is the oldest, recorded TCTWS award. The 2022 award honored Steve Nelle for his lifetime of natural resource management and outreach to landowners and professionals. Nominees should be current or past members of TCTWS. Please submit a 5-point bulleted statement explaining why your nominee is deserving of the award, along with a curriculum vitae of the nominee (if possible).

All nominations should be submitted to: Tim Siegmund at Tim.Siegmund@tpwd.texas.gov with the subject "Nomination for 2023 TCTWS Excellence in Wildlife Conservation Awards." The deadline for nominations is November 18, 2022.

PUBLICATION AWARDS – CALL FOR NOMINATIONS

Don't forget to submit your nominations for The Texas Chapter of The Wildlife Society's 2023 Wildlife Publication Awards!

The Society's Wildlife Publication Awards recognize excellence in scientific literature of wildlife biology and management issued within the last three years. The publications selected are characterized by originality of research or thought and a high scholastic standard in the manner of presentation.

Works published in 2020, 2021, and 2022 are eligible in the following categories:

- Book
- Edited Book
- Monograph
- Article/Journal Paper
- Student Paper
- Biography/History of Wildlife Biology

Please send nominations to ryan.luna@tctws.org

Call for Abstracts

**Presented Paper and Poster Presentation Abstract submission deadline is
November 30, 2022.**

The meeting will offer technical paper sessions and an expanded poster presentation session for students (undergraduate or graduate) and wildlife professionals. Best poster presentation by an undergraduate and graduate will be awarded as in previous years these will be judged on significance of research, scientific procedures, quality of abstract and display, presentation of results, accuracy of conclusions, and response to questions from judges. Posters selected for the competition will be identified based on the submitted abstract and its conveyance of these criteria. Students with incomplete studies or proposals are encouraged to submit but will not be considered for the competition. However, space is limited, so quality of abstract may prioritize acceptance. Only one poster will be judged per student presenter, though students may present more than 1 poster. Maximum poster size is 4ft wide x 3ft tall. Contact Heather Mathewson (mathewson@tarleton.edu) with any questions regarding posters.

Papers presenting the results of wildlife field investigations and analyses as well as topic reviews of interest to wildlife students and professionals in Texas are encouraged. Paper (oral) presentations should present results or outcomes. Abstracts reporting preliminary or no data should be submitted as a poster. Abstracts should be submitted digitally via the abstract submission website that will be linked on the TCTWS Annual Meeting website.

Please indicate your preference for presentation format (i.e., paper, poster, or no preference) and session (i.e., General Sessions, Clarence Cottam Award, or whether you would like to be included in the judging for the best poster presentation awards). Again, only one poster will be judged per student presenter, though students may present more than 1 poster. For those entering no preference, a decision will be made by the Program Committee and presenter notified via email. Any questions pertaining to paper abstract submission should be directed to Program Co-Chairs: program@tctws.org.

Contributed papers will be scheduled at 15-minute intervals to include time (2–3 minutes) for questions and comments. All presenters will be notified of the day, time, and location of their presentations, and provided with instructions on how to prepare for the sessions. Clarence Cottam Award presentations will be judged on topic originality, scientific procedures, quality of display, accuracy of conclusions, and response to question from judges. Full Clarence Cottam Award instructions can be found at: <https://tctws.org/student-menu/scholarship-opportunities/clarence-cottam-award/>.

Abstract Format

Abstracts should be no longer than 250 words and follow The Journal of Wildlife Management format. Abstracts should be concise and include general problem statement, brief review of methods/experimental design, results, and management implications. For needed statistical significance statements, report P-values only (no need for exact statistical test results). Please follow formatting instructions on the abstract submission website.

Call for Abstracts (cont.)

Sample Abstract (please note not to use scientific names in title; use only in body of abstract)

LANDSCAPE EFFECTS ON GENE FLOW AND GENETIC STRUCTURE OF NORTHERN BOBWHITE IN TEXAS AND THE GREAT PLAINS

Katherine S. Miller, Caesar Kleberg Wildlife Research Institute, Texas A&M University– Kingsville, Kingsville, TX, 78363, USA

Leonard A. Brennan, Caesar Kleberg Wildlife Research Institute, Texas A&M University– Kingsville, Kingsville, TX, 78363, USA

Randy DeYoung, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX, 78363, USA

Fidel Hernández, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX, 78363, USA

X. Ben Wu, Department of Ecosystem Science and Management, Texas A&M University, College Station, TX, 77843-2138, USA

Example:

Abstract: Northern bobwhite (*Colinus virginianus*) populations have declined due to habitat loss and fragmentation. Northern bobwhite have been considered poor dispersers, so biologists expect a moderate population structure and low genetic diversity in fragmented areas. Our goal was to determine how landscape affects the genetic structure of northern bobwhite in Texas and the Great Plains. We collected tissues from 641 northern bobwhites in 23 populations, and amplified 13 microsatellite loci. We determined population structure (F_{ST}) and genetic distance between populations (Dest). We used a land cover map (National Bobwhite Conservation Initiative) to develop a landscape resistance matrix. We compared Dest to geographic distance and resistance with Mantel and partial Mantel tests. Populations showed low levels of structure ($F_{ST} = 0.025$). We found moderate correlations to geographic distance ($r = 0.542$, $P < 0.001$) and landscape resistance ($r = 0.416$, $P = 0.001$). There was a significant correlation between Dest and geographic distance when we accounted for resistance ($r = 0.388$, $P < 0.001$), but no significant correlation between Dest and resistance when we accounted for geographic distance. A spatial principal component analysis for South Texas samples revealed a global structure. Low genetic structure and moderate genetic diversity may suggest that more northern bobwhite individuals are dispersing further than previously thought. Other possible explanations lie in the northern bobwhite's fall covey shuffle, their boom-and-bust population cycle, and stochastic events. Habitat is an important factor for northern bobwhite; determining how habitat affects gene flow will help biologists to manage northern bobwhite.

Call for Abstracts (cont.)

Abstract submission is now live via the online Submission Portal!

Link:

<https://www.xcdsystem.com/tctws/abstract/index.cfm?ID=eO6kpOq>

Submit your abstract today! Call for abstracts closes on November 30, 2022.

The screenshot shows a web browser window displaying the '2023 TCTWS Abstract Submission Portal'. The page features the logo for the Texas Chapter of The Wildlife Society, established in 1965. A note instructs users to create a profile to submit abstracts. The page is divided into two main sections: 'FIRST-TIME USER' and 'RETURNING USER'. The 'FIRST-TIME USER' section includes a 'Find My Account' button and a 'Click Here to Create a Profile' button. The 'RETURNING USER' section includes a 'Login' form with fields for 'Email' (Account Email) and 'Password' (Account Password), a 'Login' button, and a 'Reset Password' link. At the bottom, there are logos for 'SecureTrust Trusted Commerce' and 'Texas Chapter of The Wildlife Society', and a 'Support' link.

Honorary Life Membership Committee Seeking Nominees

The Honorary Life Membership Committee is seeking nominees for this honor. The Committee will continue the policy of seeking and considering nominees submitted from the membership. This was done because it was felt that a small committee limited to 3-5 chapter members could not know all of the outstanding individuals deserving of this singular honor. Certainly, the Texas Chapter is blessed with numerous members who have made outstanding contributions to wildlife conservation on a state, national and/or international scale. These individuals deserve the recognition of their peers for their outstanding long-term service to the wildlife resource.

To be eligible a nominee should have been (1) active for 20 or more years in the wildlife profession as an employee of a natural resource agency, academia, or a private organization as a wildlife biologist or consultant; or an effective non professional activist. (2) He/she should have made significant contributions to the Chapter and/or the Profession and/or wildlife conservation of Texas.

To act on a nomination the Committee needs:

1. A reasonably complete vitae for the nominee which should contain his/her full name (present position, organizational affiliation, address, phone number), and a reasonably complete history of professional accomplishments.
2. One or more letters of nomination from close friends or associates.

Nominations should be kept confidential, especially from the nominee, but you can enlist the assistance of your co-workers. Many people have vitae that they use for various purposes. Surreptitiously obtain one. If there isn't one available, patch something together, with the help of friends, associates and spouses. From those nominations that we receive the committee can select one or more recipients to be honored at the 2023 annual meeting. Dossiers of people not selected this year will be filed for future consideration. Please take a moment right now and consider who among your coworkers qualifies and deserves this honor? Set some time aside on your calendar to gather the data to support his or her nomination.

Deadline: 7 December but act now!!!

Please send nominations to honorary.life.member@tctws.org

2023 Photo & Art Contest

TCTWS Annual Conference

Updates to Submission Categories

Beginning in 2023, there will be a few changes pertaining to the categories of the annual Photo & Art Contest. As members of the Texas Chapter of The Wildlife Society, we've decided to focus on Texas-specific categories for portions of the photo contest. The Art contest will remain unchanged.

Modifications to the photo contest are as follows (changes shown in bold):

1. Wildlife Conservation
2. Remote Camera
3. Humor
4. Work-related
5. **Texas Plants**
6. **Texas Scenery**
7. **Texas Wildlife**
8. **Non-Texas Plants, Scenery, & Wildlife**

As wildlife professionals, we may travel worldwide performing work and school duties. Thus, photos from any location can be submitted to the first 4 categories. The Plants, Scenery, and Wildlife categories will now be Texas-based. We've added the Non-Texas Plants, Scenery, & Wildlife category so we can appreciate the aspects of our natural world encountered outside of the Lone Star State.

We are approximately 5 months away from the February 2023 conference. Closer to then, we will send updated category descriptions as well as rules, submission portal information, etc. As always, we're looking forward to seeing the world's beauty through your lenses. Happy photographing!

Co-chairs:

Blake Leslie, blake.leslie@tctws.org

Sonia Duran, sonia.duran@tctws.org

2022 Photo & Art Contest Winners



Wildlife- Jared Schlottman



Plants-Joseph Richards



Scenery- Levi Heffelfinger



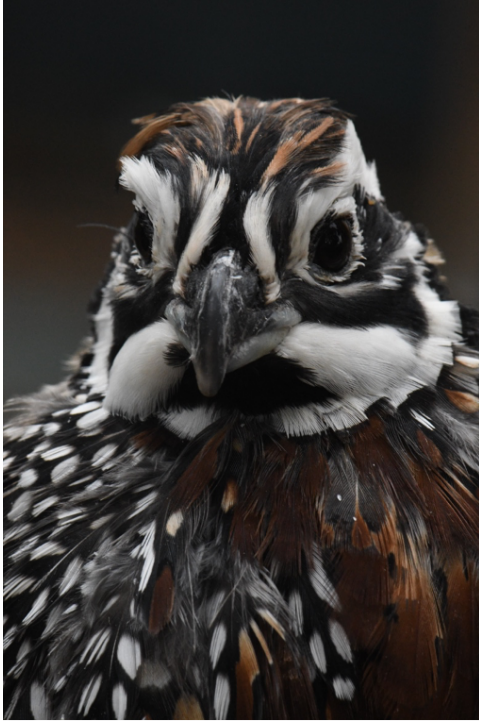
Humor- Aidan Branney



Work-related- Levi Heffelfinger



Remote Camera-
Aidan Branney



Wildlife Conservation-
Shaelyn Rainey



Art & People's Choice Award-
Catalina Berry

TCTWS COMMITTEE NEWS

Wildlife Conservation Camp

On July 9th, fifteen campers and two returning campers arrived at The BigWoods on the Trinity near Tennessee Colony, TX to attend the 28th annual TCTWS Wildlife Conservation Camp. These high school students came from across the state to enjoy the outdoors and learn about wildlife research and management from professionals. While at camp, the students maintained a field journal, notebook, and plant press while simultaneously preparing an oral presentation for the TCTWS executive board. All the materials were scored and went towards determining our top team and top camper.

Natural resource professionals prepared field activities and presentations to teach campers about wildlife research and management. Radio telemetry, herpetological sampling, mist netting, white-tail necropsy, shooting sports, the North American Model, wetland management and aquatic sampling, spotlight surveys, camera trapping, habitat management techniques, and many more topics were covered during our five days at camp. The extreme temperatures proved to complicate some of the field activities, but both campers and presenters persevered to create memorable experiences for all involved.

Wildlife Conservation Camp would not have been possible without donations from generous sponsors. Donations are used for camp materials, meals, awards, and scholarships. We would like to thank the following organizations and individuals for their donations towards the education of future wildlife professionals: Texas Chapter of The Wildlife Society, Rob and Bessie Welder Wildlife Foundation, Texas Farm Bureaus, Forestry Suppliers Inc., Caesar Kleberg Wildlife Research Institute, Texas A&M University Kingsville Student Chapter TWS, Harte Research Institute, Ed Nycz, The BigWoods On The Trinity, SWCA Environmental Consultants, Tarrant Regional Water District, Texas Wildlife Association, Texas Parks and Wildlife Department, Texas Youth Hunting Program, Slovacek's Wild Game Processing, Sound Guard Custom Hearing Protection, Olive and Alabaster Candle Co., and the Cross Family Ranch.

We would also like to acknowledge our volunteers and their dedication to providing an exceptional experience to the campers. Whether it be through providing engaging presentations or spending long hours mentoring campers both day and night, our volunteers are vital to a camp's success. Our staff of mentors and presenters included: Director, Bobby Allcorn, Former Director, Angie Arredondo, Directors-Elect, Masi Mejia-and Nicole Alonso-Leach, Mandy Krause, Taylor Garrison, Kiddo Campbell, Kelley Mundy, Monica Cortez, Sonia Duran, and Kevin Moczygemba. Additional presenters included Thomas Janke, Michelle Wood-Ramirez, Kyle Brunson, Kyle Hand, Matt Symmank, Ryan Assenheimer, Heidi Kryger Bailey, Billy Lambert, Tyson Hart, Brandon Bowers, Mikayla Killam, Lee Loveless, and Larry Hysmith.

University students and TCTWS student members that served as college mentors and presenters included: Cody Stricker (Texas A&M University), Laken Mize (Stephen F. Austin State University), Ethan Janecka (Texas A&M University), Emily Vincik (Tarleton State University), Grace Millsap (West Texas A&M University), Gracie Daugherty (Texas A&M University), and Brooke Bowman (Sul Ross State University). Returning campers Ava Snelson and Amelia Horner were also valuable volunteers and mentors throughout the week. Camp would not be a success without the efforts of our student volunteers.

TCTWS COMMITTEE NEWS

Wildlife Conservation Camp cont.

Our top camper award went to Lacie Warren. She is a Junior from Farmersville, Texas and is excited to tell us about her camper experience at the TCTWS annual meeting this coming February. In the meantime, Directors Masi Mejia and Nicole Alonso-Leach are working to prepare another great camp for 2023. For information on how to donate or volunteer, please visit our website (wildlifecamp.tx.org) or contact the camp directors at conservation.camp@tctws.org.

2022 Wildlife Conservation Camp Graduates:

Lindsay Jorgensen (Humble, TX)
Allie Jorgensen (Humble, TX)
Landry Masur (Red Rock, TX)
Jessica Alvarado (Laredo, TX)
Kyle Higginbotham (Conroe, TX)
Lacie Warren (Farmersville, TX)
Hunter Simpson (Snyder, TX)
Alyssa Vorce (Prosper, TX)

Ellie Phelps (Tomball, TX)
William Stephenson (Rockport, TX)
Jordyn Torres (San Antonio, TX)
Samuel Smith (College Station, TX)
Cate Douglas (Hebbronville, TX)
Josue Ventura (Houston, TX)
Sabra Holden (Porter, TX)



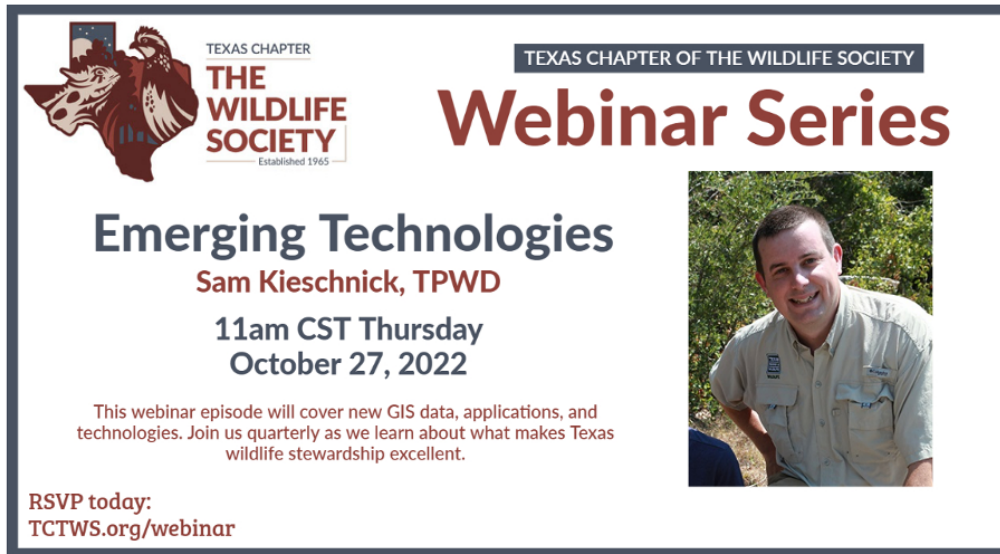
Presented by the
Texas Chapter of
The Wildlife Society

**Join the Texas Chapter of The Wildlife Society webinar at 11:00am on
Thursday October 27th, 2022.**

Emerging Technologies with Sam Kieschnick, Texas Parks and Wildlife

Register for the upcoming webinar via Webex:

**[https://tpwdevents3000.webex.com/tpwdevents3000/j.php?
RGID=r327a148525ff6352336ae5dbb73e706a](https://tpwdevents3000.webex.com/tpwdevents3000/j.php?RGID=r327a148525ff6352336ae5dbb73e706a)**



TEXAS CHAPTER
THE WILDLIFE SOCIETY
Established 1965

TEXAS CHAPTER OF THE WILDLIFE SOCIETY

Webinar Series

Emerging Technologies

Sam Kieschnick, TPWD

**11am CST Thursday
October 27, 2022**

This webinar episode will cover new GIS data, applications, and technologies. Join us quarterly as we learn about what makes Texas wildlife stewardship excellent.

**RSVP today:
[TCTWS.org/webinar](https://tctws.org/webinar)**

Sam Kieschnick is an urban wildlife biologist with TPWD serving the east side of the DFW metroplex. He previously worked as a nature educator with the City of Mansfield at Oliver Nature Park, as a naturalist at the Fort Worth Nature Center and Refuge, as a science interpreter with the Fort Worth Museum of Science and History, as a botanist with BRIT, and as an instructor at Weatherford College. He has a master's degree from Tarleton State University studying the genetics of pocket gophers. As an urban wildlife biologist, Sam's focus will be on three a's: awareness, appreciation, and action.

Learn something new at the Texas Chapter of The Wildlife Society's Webinar series. The quarterly webinar series for the Chapter features professionals, research, and initiatives relevant to our Chapter. Registration is open to both TCTWS members and nonmembers. The series will follow a quarterly schedule and rotate themes throughout the year, giving listeners a peek into topics such as emerging technologies, career skill-building, partner highlights, and knowledge deep-dives.

Join us quarterly as we learn about what makes Texas wildlife stewardship excellent. Each webinar is hosted virtually through WebEx. Register in advance for each individual webinar can be found at [TCTWS.org/webinar](https://tctws.org/webinar).

If you are interested in presenting an upcoming webinar please email the webinar chair at webinar@tctws.org

Upcoming Deadlines for Chapter Committees

James G. Teer Conservation Leadership Institute- Applications due November 1st.

Excellence in Wildlife Conservation Committee - Nominations due November 18th.

Publication Awards - Call for Nominations due November 18th.

Call for Abstracts - Submissions due November 30th.

Honorary Life Membership Committee - Nominations due December 7th.

State of Knowledge Regarding Bats and Wind Energy

By: Emma Guest

One consequence of the expansion of wind energy is bat fatalities caused by wind turbine blade strikes, which represents a stressor to numerous bat species, sparking concern among conservationists and private industries. In North America, migratory tree-roosting species, including the hoary bat (*Lasiurus cinereus*), eastern red bat (*Lasiurus borealis*), and silver-haired bat (*Lasionycteris noctivagans*), constitute most bat carcasses reported in the U.S. and Canada from wind turbine strikes and are thought to be currently the most vulnerable to wind turbine-related fatality in these countries (Arnett et al. 2005; Zimmerling and Francis 2016). In the northern hemisphere, patterns of bat activity and fatalities at wind energy facilities have been observed with peaks occurring primarily July–September depending on facility location, and nights with low wind speed conditions (Goldenberg et al. 2021). Timing of peak fatalities coincides with the mating season and autumn migration of the aforementioned species (Arnett and Baerwald 2013).

Thermal video observations of bats interacting with wind turbines indicates some bats may not be randomly colliding with wind turbines, but actively approach wind turbine components (Goldenberg et al. 2021). Actively flying near wind turbines increases fatality risk, but the underlying behavioral or physiological traits as to why bats interact with wind turbines remains unknown. Several hypotheses regarding bat attraction to wind turbines have been proposed, including attraction to wind turbines based on noise, light, foraging and water, roosting, mating behavior, and scent-marking, but research regarding these postulates is ongoing (Guest et al. 2022). Explanations related to bat interactions with wind turbines are likely species-specific and involve a multitude of factors aside from behavior, such as landscape characteristics or weather variables.

Various minimization strategies to reduce bat fatalities at wind energy facilities have been investigated, including curtailment, smart curtailment, and ultrasonic acoustic deterrents. Curtailment involves raising the minimum wind speed for turbine blades to begin rotating (i.e., cut-in speed) to produce electricity, without regard to site-specific information. Curtailment effectively reduces bat fatality but often results in a loss in renewable power (Whitby et al. 2021). Curtailment can be used in conjunction with other predictor variables, such as bat activity gathered through acoustic monitoring (Hayes et al. 2019), to form a minimization strategy labeled “smart curtailment”. Smart curtailment involves site-specific information which can fine-tune curtailment of wind turbines and potentially reduce the loss in power generation. Lastly, ultrasonic acoustic deterrents emit ultrasound to disorient bats and deter them from flying in the vicinity of wind turbines. Ultrasonic acoustic deterrents have shown to work at reducing overall bat fatalities but deterrent success at the species level is variable (Romano et al. 2019; Weaver et al. 2020).

State of Knowledge Regarding Bats and Wind Energy (cont.)

Understanding bat interaction with wind turbines will aid in improving minimization strategies to reduce bat fatalities at wind energy facilities. Additionally, as causes of bat activity around wind turbines is likely multifaceted, a combination of minimization strategies may be the solution to deterring bats from flying in the vicinity of wind turbines. Collaboration between the scientific community and private industry is necessary to reduce bat fatalities at wind turbines and avoid population-level decline of bat species heavily impacted by wind turbine blade strikes.

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STUDENT SUMMER SPOTLIGHT

Check out what some of our student members have been up to during their summer breaks in our Student Summer Spotlight! Half of our students will be featured in this edition and the other half in our January 2023 edition.

Emily Thornock, Abilene Christian University

My name is Emily Thornock. I am from Shawano, Wisconsin and am attending Abilene Christian University as a Junior. I am majoring in Environmental Science with a concentration in Wildlife and Natural Resource Management. This summer I was an intern at Martin Creek Lake State Park. I had the opportunity to work in headquarters, in the field with maintenance, and with the park police. My summer project was to remove campsites off of the island that have been hard to maintain for the park rangers. I learned how to manage a state park and what is all involved in maintaining one. Along the way I developed skills in handling money, communication, equipment operation, law enforcement, and customer service. I learned that Texas Parks and Wildlife offers a wide array of job opportunities. This internship allowed me to develop skills and gain knowledge on what it takes to run a park. I will be able to use this knowledge and the skills in the future to become a Game Warden.



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Clayton Golden, Southwest Texas Junior College-Uvalde

My name is Clayton Golden from Midlothian, Texas, and I am attending Southwest Texas Junior College in Uvalde pursuing a degree in wildlife management. Over the summer I was an intern at Lost Creek Ranch in Jacksboro, Texas. This ranch has at least 10 exotic species, such as wildebeest, eland, axis deer, and others roaming the property. I was able to learn a valuable understanding of how to manage the property with a diverse number of species. The behavioral ecology of each species and competition among other species was quite interesting. For instance, we would be tasked with identifying methods to prevent the aoudad and exotic sheep from damaging the feeders. I would monitor animals such as eland to determine which individual would be most beneficial for the herd if an animal would need to be harvested. I was



privileged to learn just how much actually went into sustaining a very elegant lodge and managing habitat of the property. Each day was different. Over several days I would operate heavy machinery to shape the lake to improve fish habitat. Another day I would help with changing bed sheets between guests at the lodge. I was able to guide hunters on various hunts. This allowed me to enhance my people management skills which are arguably some of the most important skills in this profession. All in all, this summer left me with some great friends, mentors, and memories that I would not trade for anything.

STUDENT SUMMER SPOTLIGHT

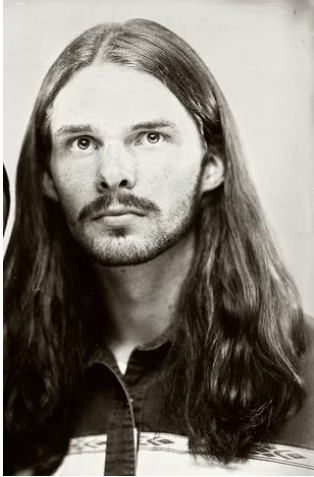
Check out what some of our student members have been up to during their summer breaks in our Student Summer Spotlight! Half of our students will be featured in this edition and the other half in our January 2023 edition.

Hayden Deppe, St. Edward's University

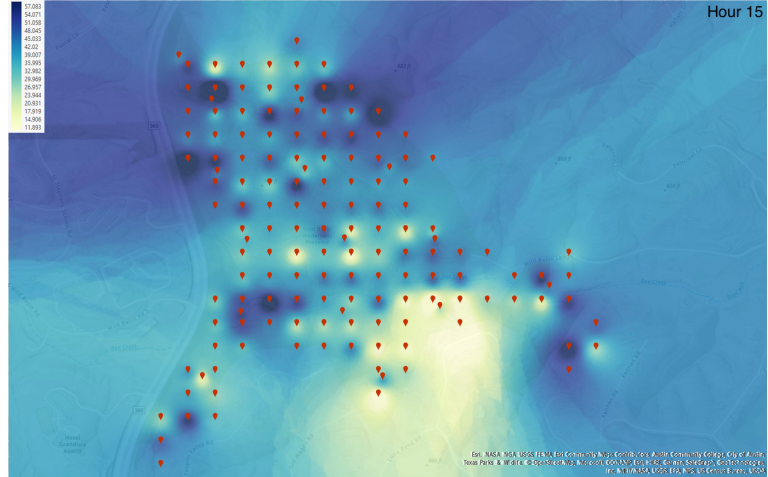
Visualizing the soundscape of a preserve

Advisors: Drs. William Quinn and Darren Proppe

Hayden Deppe is a Senior Environmental Science and Policy Major and Photography Minor at St. Edward's University. In the summer of 2022, Hayden worked with the Wild Basin Creative Research Center, which has been intensely monitoring soundscapes using passive acoustic recorders for two years. Hayden imported sound data from 149 locations on the preserve into ArcGIS to create a soundscape map of the "Average Summer Day" for the 227 acre Wild Basin Wilderness Preserve. Separate maps were created for each hour, and at three different frequency octaves. These octaves were centered at 2, 6, and 8 kHz. Sounds centered around 2 kHz are produced primarily by human activity, such as vehicle noise from an adjacent highway. Conversely, sounds produced at 6 and 8 kHz are more likely those of animals, such as birds and insects. Hayden will continue in the field and with ArcGIS during his senior year to create a "Average Winter Day" map of the same soundscape. With less animal activity during winter, the map may look very different.



Left- A photo of Hayden Deppe.



Right- A visualization of the soundscape created by Hayden on the Wild Basin Wilderness Preserve.

STUDENT SUMMER SPOTLIGHT

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Abby Buckner, Stephen F. Austin State University



My name is Abby Buckner and I am a senior at Stephen F. Austin State University studying Forestry with a concentration in Wildlife Management and a minor in Spatial Science. This past summer I had the opportunity to intern with the Texas Parks and Wildlife Department at the Gene Howe Wildlife Management Area in Canadian, Texas. Coming from East Texas, there was definitely a learning curve when it came to boots-on-the-ground work in the northern Panhandle but I enjoyed the opportunity to see how management practices were applied in such a different area. Through this internship, I was able to assist with many surveys, including rural and urban dove surveys, Bob-White Quail whistle counts, Texas Horned Lizard surveys, and the Texas Pronghorn surveys.

In addition to surveying, I was able to put my knowledge of project design to the test as I was assigned with creating and implementing several research projects. One project was focused on small mammal communities in Ravenna grass monocultures, and another was looking at reptile and amphibian species distribution throughout the WMA. I was also tasked with other basic WMA duties through which I was able to familiarize myself with the operation of WMAs and other TPWD functions.

Over the course of the summer, I learned and honed a variety of skills that will be applicable throughout my career in wildlife and natural resource management. Exposure to different ecoregions and habitats allowed me to see first-hand that while the basic principles of wildlife management and practices remain constant, the methods of application can be very different. I believe that working in an area that I was previously unfamiliar with, not only helped me to broaden my skillset and knowledge base, but also guided me to further appreciate the vast diversity in our great state that is often underestimated.

STUDENT SUMMER SPOTLIGHT

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Ty Goodwin, Sul Ross State University

Ty spent his summer working with Borderlands Research Institute in Alpine, Texas helping to create a book on forb field and histology identification. See an excerpt of his project below!

Common Forbs of the Trans-Pecos: A Field and Lab Guide

The Trans-Pecos region of Texas is one of the most diverse ecoregions in the world. However, for plants, the rich diversity makes it highly challenging to identify different species. Stochasticity in climate, and plant growth patterns, combined add to the difficulty of understanding the diverse flora of the region. The primary purpose of this work is to provide descriptions and pictures that aid in identifying common forb species in the field and cellular level. Additionally, we aim to provide reference material and bridge a gap between the biological world and the natural resource management profession. When conducting vegetative monitoring, it is common to find specimens nearly impossible to identify due to a lack of distinguishing characteristics. The same case arises when conducting dietary work. Plant material that has been mechanically masticated and chemically digested showcases no standard structural properties. Using scraped or ground samples that mimic digestive processes, we identify the defining characteristics of the dermal tissue structure and shape. These descriptions can then be utilized as a reference to identify partial cellular structures in fecal samples, stomach contents, or unidentifiable “twigs” collected in the field. The project also explains the functional livestock and wildlife value of flora. Correct identification and knowledge of a plant species can then be used in both the lab and everyday settings. Identifying plants and memorizing info can be simple, but this amounts to nothing if it is not put into practical use. The text is a collection of general knowledge, personal observations, and working science from many peer-reviewed resources brought together to help aid botanical studies in the Trans-Pecos region of the Chihuahuan Desert.



BOTANY BRIEFS

Check out our new recurring column, 'Botany Briefs.' Here we will share information about plants that are important to wildlife, whether beneficial or harmful. If you would like to contribute an article, please contact us at newsletter@tctws.org.

Celtis eberbergiana (Klotzsch) Liebm.; Spiny hackberry/Granjeno

By: Alejandra Rodriguez



Photo 1: Spiny hackberry foliage and bright orange fruits. Photo credit: Texas A&M AgriLife Extension.

Spiny hackberry is a medium-sized shrub that is found in brushlands of south Texas and into the Edwards Plateau. Spiny hackberry can be recognized by its zigzagging pale grey stems and sharp paired spines. The sparsely toothed leaves are around 3 cm long and like other hackberry species, are slightly asymmetrical at the leaf base. The small flowers are pale green and bloom from February to May in Texas. The orange fruits are around 6 mm long and are drupes, which is the botanical term for a fleshy fruit that contains a hardened endocarp with a seed.

There are many insects that spiny hackberry supports. It is a valuable nectar plant for bees and a host plant for several lepidoptera, like the American snout butterfly, red-bordered metalmark, two emperor butterfly species and several species of moths. Long periods of drought followed by heavy rains in late summer creates the perfect conditions for the large emergences and local migration of American snout butterflies that can be seen covering the skies and roads in south and central Texas. Heavy summer rains will cause spiny hackberries to put on new leaf growth, which snout butterflies need to lay their eggs. The large number of eggs laid that survive to maturity can completely defoliate the shrub. In a study by Gilbert (1985), they counted 2027 pupae on a single 3 m. diameter spiny hackberry shrub!

Spiny hackberry provides food and cover for a variety of mammals and birds, including quail, doves, cardinals, woodpeckers, wrens and thrashers to name a few. The leaves also provide browse for white-tailed deer and livestock.

Fun fact 1: The fruit tastes like cantaloupe, but don't eat the seed unless you want it to be crunchy.

Fun Fact 2: After severe flooding in September 1921, the largest emergence of snout butterflies from spiny hackberries was recorded, with 6 billion snout butterflies estimated during an 18 day flight in south Texas!



Photo 2: Zigzag stems of spiny hackberry. Photo credit: Texas A&M AgriLife Extension.

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SOUTHWEST SECTION TRACKS

by Kathy Granillo

Fall is officially upon us (Autumnal Equinox September 22)! Although it still feels like summer at my house, and my daily clothing choices are still tank tops and shorts. But the birds are migrating, leaves are thinking about changing, and soon I will not have hummingbirds at my feeders. For me, there are really just two seasons in the year: hummingbird season and crane season. As the hummingbirds migrate south, so do the sandhill cranes and the Middle Rio Grande Valley, where I live, is filled with their haunting calls. The cranes linger into March each year, then head north to their breeding grounds. Meanwhile, the hummingbirds show up in April to start their breeding season and the cycle continues. It is one of my favorite days of the year when I see my first hummingbird zipping around the yard and visiting my feeder.

Of course, we are doing our best to disrupt the natural cycles on our planet as global warming continues unabated. We continue to see record heat across the globe, and storms of incredible force. The Wildlife Society, along with many other organizations, agencies, and industries, is concerned about the impacts to wildlife and all other life on this planet, including people.

There will be several opportunities to learn more and engage with other wildlife professionals at the Annual Conference, and I'd like to highlight one event that will also be available as an online live event that anyone can attend:

November 9, Wednesday, 5-7 PM Mountain Time – Climate Change and Sustainability Roundtable and Listening Session. This will be an interactive discussion among the audience and the organizers with the goals of:

- Discussing actions taken and to be taken by TWS and the profession on climate and sustainability.
- Catalyzing action on climate and sustainability across the profession.
- Engaging membership in topics related to climate and sustainability.
- Enriching debate on climate and sustainability in the profession and TWS.

For those who attend the conference in person, there are several sessions about climate change and wildlife:

- November 7, 3:30-5 PM, Symposium: Climate Change Impacts on Human-Wildlife Interactions.
- November 9, 1-5 PM – Workshop: Habitat Restoration and Conservation with a RAD New View.
- November 10, 10:30-12 PM – Contributed oral presentations on “Climate Change: Habitat and Species Response.”
- November 10, 1:30-3 PM – Contributed oral presentations on “Climate Change: Biometrics and Modeling.”

SOUTHWEST SECTION TRACKS

Another area of interest of mine is Diversity, Equity, and Inclusion (DEI). I chair the Women of Wildlife (WOW) Community Team, which is part of the Inclusion, Diversity, Equity and Awareness (IDEA) Working Group. The Conference will have several events hosted and/or supported by WOW and IDEA.

- November 7, 3:30-5 PM – Panel Discussion: “Parenthood in the Field: Challenges and Advice for Raising Your Own Brood.”
- November 8, 12:30-2:30 – DEI Network meeting
- November 9, 1:30-5PM – Symposium: “Women in Wildlife Sciences: Building Equity, Diversity and Inclusion.”
- November 9, 7:30-9:30PM – WOW Social and Book Signing (for the brand-new book Women in Wildlife Sciences)
- November 10, 8:30AM-12PM – Symposium: “Women at Work: Stories of Wildlife Science and Management.”
- November 10, 7-9PM – Special Session IDEA Working Group Storytelling Event.

Of course, the Conference will have symposia, panel discussions, workshops, poster sessions and contributed oral presentations that address the whole spectrum of wildlife research and management. There will truly be something for everyone, no matter your area of expertise or interest. Please visit the Conference website to learn more, where the full schedule is posted. <https://twconference.org>. I hope to see many of you there! Also, I must remind you that elections will happen on **November 8th**, and those who are attending the conference will need to vote early or by absentee ballot.

TWS Council has been busy over the last several months. Just one of the things we are working on is revising Several Position Statements (PS). I urge you to visit TWS website to view these position statements. <https://wildlife.org/position-statements/>.

These statements are developed by advisory teams and/or Working Groups and are sent as drafts to all Working Groups for their review and comment before finalizing by Council. This year we have revised the PS on the use of lead ammunition and fishing tackle, and are finishing up the PS on rangelands and grazing, and one on climate change, wildlife, and sustainability. These statements are used in policy discussions with our partners in conservation, non-governmental organizations, agencies, and Congress, and can be influential in Federal, State, and local decisions.

SOUTHWEST SECTION TRACKS

An update to my last post about “Recovering America’s Wildlife Act” (H.R. 2773). It was introduced to the Senate in July and is still awaiting their action. As I said last time, I urge you to pay attention as this bill is considered by the U.S. Senate, and if you feel so inclined, please contact your Senators to voice support for the Bill.

Please take care of whatever piece of the planet that you can, be safe and be hopeful – if we all work together, we can make the world a better place.



Kathy Granillo
Southwest Section Representative
kgbirder55@gmail.com

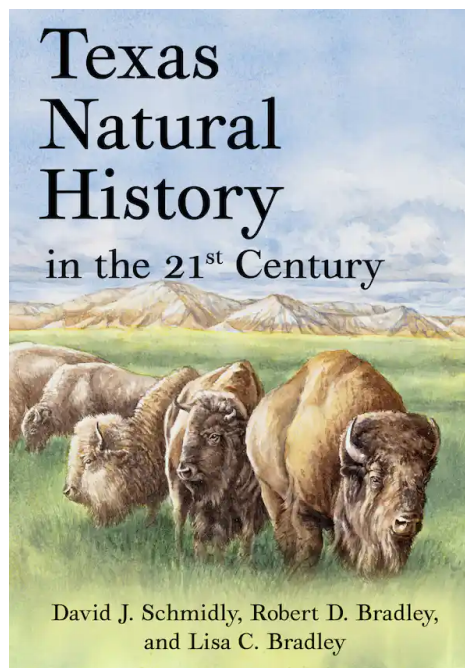
HOT OFF THE PRESS!

One hundred fifty years ago, Texas was very different. A rural population was spread thinly across the eastern and central parts of the state, and vast lands in the western regions were still undisturbed.

Texas's habitats and biota changed dramatically as its population increased and people spread across the landscape. In *Texas Natural History: A Century of Change* (2002), David Schmidly chronicled the changes that occurred during the twentieth century. In this second edition, Schmidly is joined by colleagues Robert and Lisa Bradley of Texas Tech University to extend that story over the first two decades of the twenty-first century.

The focus of *Texas Natural History in the 21st Century* continues to be on the mammalian fauna of the state, and it includes a reprinting of Vernon Bailey's 1905 "The Biological Survey of Texas" with new annotations and updates. In the rest of the book, the authors discuss changes in landscapes, land use, and the status of Texas mammals in the last hundred years. The authors present current challenges to conserving the natural history of Texas and suggest long-term solutions to those challenges, including actions focused on both private and public lands.

As Texas approaches the daunting challenge of conserving its wildlife, *Texas Natural History in the 21st Century* serves as a rallying cry for addressing the scenarios imperiling Texas's natural history in our present day and in the future.



Be on the lookout in a future newsletter for
an in-depth book review!

CALL FOR PARTICIPANTS- TTU OLC SURVEY

Texas Tech University, in conjunction with the TTU Outdoor Learning Center (OLC) in Junction, Texas, is conducting a research study about the retrospective experiences of alumni (i.e., individuals who attended the TTU OLC as a child). If you attended any of the TTU OLC activities as a child, you are eligible to participate in this study.

The study consists of one interview that asks questions about your experiences at the TTU Outdoor Learning Center, interest and/or participation in science and careers. There are no anticipated risks participating in the one-time interview, and your participation is entirely voluntary. The results from the interview will be used to inform programs at the TTU OLC. If you are willing to be interviewed, please click on the Qualtrics link below to share your contact information.

Qualtrics Link:

[https://educttu.az1.qualtrics.com/jfe/form/SV_9vP68ShHLtigfk'](https://educttu.az1.qualtrics.com/jfe/form/SV_9vP68ShHLtigfk)

TEXAS TECH UNIVERSITY*
Center At Junction

HELP US WITH OUR RESEARCH!

**DID YOU ATTEND
TTU OUTDOOR
LEARNING CENTER?**

STEM Inspired by Nature
Junction Outdoor Learning Center

**LLANO RIVER
FIELD STATION**
JUNCTION, TEXAS

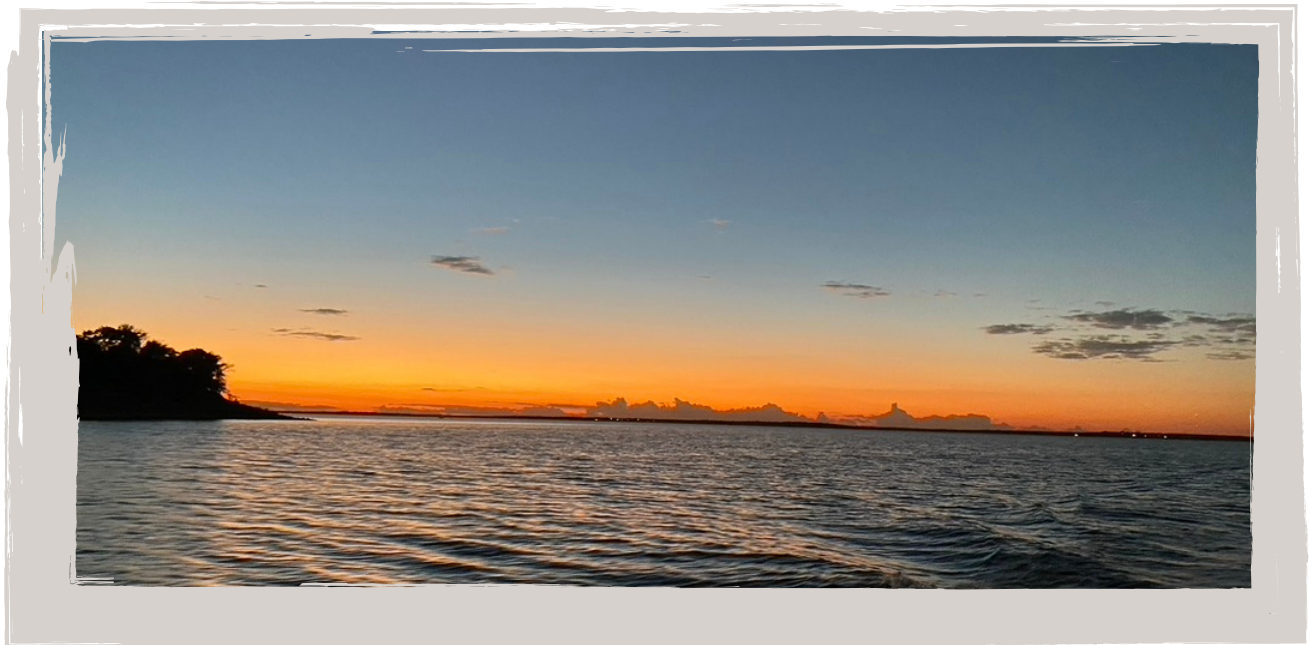
HAPPY TRAILS!

This is *your* newsletter.

To submit an article, contact us: newsletter@tctws.org.

Pay dues, read previous newsletters, and find more information online:

tctws.org



Texas Chapter of the Wildlife Society Newsletter is published electronically in January, April, July, and October. Contributions on any topic pertaining to wildlife, announcements of interest to members, or Chapter business are welcome and should be submitted to the Editors (Andrea Richards and Sarah Turner, newsletter@tctws.org) by the 15th of the preceding month. Change of email address should be submitted online through the Address Change Form.

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OCTOBER 2022
