

# NEW MEXICO CHAPTER OF THE WILDLIFE SOCIETY

FALL 2024



## PRESIDENT'S MESSAGE

As we enter the first week of October, and the beginnings of autumn, we are reminded of the beauty and majesty of the fall season. As nights and mornings become cool and crisp, the fall colors begin their inevitable march down the mountains as deciduous trees, shrubs and forbs pull back their energy reserves in preparation for the difficult months ahead. As the earth enters this phase of its orbit, the tilt of the axis shies the northern hemisphere away from the sun, gradually receding the length of each day. Changes in photoperiod act as cues for many species to shift their behaviors - bears engorge themselves on the bountiful acorns, migratory birds begin their long journeys to warmer climates, and the echoes of bull elk bugles fill the air as they are enraptured in the rut.

Wildlife and the vegetation communities in which they inhabit are not alone in their recognition of this change in the seasons. For eons, humanity has acknowledged the importance of this season as the time to draw back, to collect and conserve resources, and celebrate the bounty provided by the earth throughout the growing season. For farmers and hunters alike, fall is the season of harvest. Those of us fortunate enough to be headed to the mountains this fall for our chance to fill the freezer look back to those who preceded us and thank them for their lessons of ethical stewardship and connection to the land. We cannot help but be reminded of our place upon the earth as we reset our daily rhythms among the pines, drinking in the beauty of each sunrise and sunset; unencumbered by the schedules of societal living. When it comes to seeking a deeper meaning for ourselves or finding relief from the busyness that is much of our lives, there is no place like getting lost in the wild.



The American Southwest is unique in its geology, climate, history, and mosaic of cultures and peoples. The wide-open spaces, relatively mild climate, nearly full-year sunlight, and lack of weather-related natural disasters is, in part, the reason this region of the United States is so appealing. For similar reasons, the American Southwest is also a prime location for the development of renewable resource infrastructure. Much like the vegetation and wildlife conserving resources, the United States is joining much of the rest of the world in its search for more energy. Fossil fuels still have a strong impact on the economies of the communities in which they are collected, and still support much of the New Mexican population living on or near the Permian basin. However, as we learn more of the ecological impacts of continued fossil fuel development, the world's developed nations are beginning to invest more seriously in renewable energy sources such as solar, wind, tidal, and geothermal energy.

Much like the changes we see on the landscape in the fall, New Mexico is also seeing changes on the landscape as more and more of these renewable energy projects are approved and developed. However, renewable energy sources may have a lighter carbon footprint, but their actual footprint has the potential to disrupt natural cycles that have existed for millennia. Large-scale infrastructure development has already been shown to disrupt migratory patterns of birds and ungulates, and direct habitat loss often accompanies the installation of wind turbine and solar facilities. The promise of new technologies and renewable energy can be exciting for the immediate future, but as conscious stewards of the land and its inhabitants, we must take pause to consider the indirect effects of our actions – even if they are well intended.

Much like a mature bull elk must be cautious walking into the clearing in search of a harem of cows, and thus increase his potential to have an impact on the next generation, we too, must take every measure to ensure that our next steps are well considered for the next generation of both humankind and our wild counterparts. For this reason, the New Mexico Chapter of The Wildlife Society will be hosting the 2025 Joint Annual Meeting (JAM) under the banner “Renewable Energy: Planning, Mitigation, and Impact”. How can we better understand the impacts of renewable energy projects, and how can we better incorporate this knowledge into the planning phases of these projects to help mitigate these impacts? We invite you to join us at Hotel Clyde in downtown Albuquerque, February 6-8th 2025 to collaborate with other TWS members, state and federal agencies, and partner universities in discussion of the next steps in our search for clean, responsible, and ethical energy sources. Be on the lookout for upcoming calls for abstracts, announcements for conference registration, hotel bookings, and more!

Travis Zaffarano  
President  
NM Chapter TWS  
Elk Program Manager  
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# STUDYING COMMON SNAPPING TURTLES IN NEW MEXICO

Article and photos by Dorian Miranda

Born in El Paso Texas and raised in Ciudad Juárez México, I was surrounded by the Chihuahua desert which is teeming with a diversity of life. Like many others in this field, my love for animals began at a young age. One of my earliest memories is being around four years old and going to El Paso Zoo for my brother's birthday. I was completely enamored and fascinated by all the animals I came across that day. The love and the curiosity to learn more about these creatures continued as I grew up watching animal documentaries and the famous characters such as Steve Irwin among others. I remember being a young boy staring at the TV and telling myself "I want to be that". Although my passion is indeed all animals, my interest has always leaned towards herpetology. There's something about these "cold-blooded" and misunderstood creatures that has captivated me from the start.

After graduating from high school, I began my journey at New Mexico Highlands University, where I obtained a Bachelor's degree in Wildlife Biology & Conservation. There, I met the amazing faculty who have supported me since the beginning of my academic career, including my advisors, Dr. Jesus Rivas and Dr. Sarah Corey Rivas.

This lifelong interest in herpetology, combined with my ambition to further my education, led me to pursue a Master's degree focused on the common snapping turtle (*Chelydra serpentina*). From conversations with other herpetologists and my own literature research, I learned that our understanding of these turtles in New Mexico is limited. Basic aspects of their ecology in this region had not been thoroughly explored. Interestingly, this area represents the farthest west and highest elevation where snapping turtles are found within their native range. Given that geographical differences like these can significantly influence the ecology and behavior of reptiles, I was curious about what might be occurring with these turtles in New Mexico.

To investigate, I attached temperature data loggers to the turtles' carapaces to record their body temperatures. I then compared these body temperatures with habitat temperatures to understand their thermal behavior. In addition to the thermal study, I expanded my research to include other ecological aspects, such as movement patterns and overall biometrics, both of which could be impacted by the geographical variation.

So far, my results indicate that this population has a lower preferred body temperature than those found in the eastern part of their range, with a range between 16.97 to 24.3°C. While one might assume they stay cold simply due to the cooler temperatures available in this region, my data shows that these turtles are actively thermoregulating to achieve these specific temperatures. These findings align with the Adaptation of Local Optima Hypothesis, which suggests that ectotherms at higher elevations adapt by selecting colder temperatures, resulting in a lower body temperature. Additionally,



Figure 1. Dorian Miranda with common snapping turtle.

although this species is known to travel long distances both in water and on land, my observations revealed that this population remained mostly stationary. My results also suggest a potential size difference compared to other populations, as these turtles appear to be slightly smaller, possibly as an adaptation to the colder environment. However, further analysis is needed to draw a definitive conclusion. Other things to remark of my research is the sex ratio and size as the majority of the turtles I collected were adult males with only a few juveniles captured.

I see this research as just the beginning of something much larger, both in advancing our understanding of snapping turtles and in my own personal journey. While my findings may only be a small piece of the puzzle, they have deepened my commitment to exploring the complexities of herpetology. Every step of this project has reminded me why I embarked on this path in the first place. So, when people ask what I wanted to be when I was a child, I simply respond with; "This."

### TOADS, TOADS, AND MORE TOADS

by Leland J.S. Pierce, Wildlife Management Division, New Mexico Department of Game and Fish

The New Mexico Department of Game and Fish is currently engaged in the conservation of the toads of New Mexico (family Bufonidae, true toads). One long-running project concerns restoration of Boreal Toad (*Anaxyrus boreas boreas*). The species had been extirpated from the state since the 1980s and NMDGF has been working with the Southern Rocky Mountain Boreal Toad Conservation Team to bring the species back to a site in northern New Mexico, using tadpoles from a Colorado Parks and Wildlife hatchery in Alamosa, Colorado (the tadpoles reared from eggs collected in Colorado or Wyoming). A recent survey in August confirmed that adult toads continue to persist but breeding has not occurred, to date.



Figure 2. A 2-year old Boreal Toad. Photograph: J. Stuart, NMDGF



Figure 3. Boreal Toad survey crew, August 2024, composed of NMDGF, US Fish and Wildlife Service, New Mexico Highlands University, and US Forest Service.

NMDGF is also engaged with assessing the status of another toad, found in southwestern New Mexico, as well as Arizona and Nevada, namely the Southwestern or Arizona Toad (*A. microscaphus*). Contractors with NMDGF have continued yearly surveys for the toad via audio recorders and this information will greatly benefit the upcoming Species Status Assessment by US Fish and Wildlife Service, which will help determine if *A. microscaphus* warrants protection under the US Endangered Species Act.

Another toad, found in the bootheel of New Mexico, is of concern due to the threat of collection. Some people take the Sonoran Desert

Toad (*Incilius alvarius*) for the use of its skin toxins. Specifically, they harass a toad so it will secrete the toxin, then they scrape the toxin off and dry it off-then they smoke the toxin for its hallucinogenic effects. NMDGF is using citizen observations to monitor the species, the largest native toad in North America, and 2024 appears to be a good year for breeding by *I. alvarius*.

Lastly, given how complicated the lives of toads are, NMDGF is working on ways to keep common toads-such as Chihuahuan Green, *A. debilis*, or Texas, *A. speciosus*- common, such as integrating their conservation into programs of other species of concern.



Figure 4. Adult Southwestern (Arizona) Toad. Photograph: C. Painter, NMDGF.

## TWS OVERVIEW AND OPPORTUNITIES

by Kathy Granillo

I have been mulling over TWS membership – we have various levels within our organization and currently a person can pick and choose which levels they'd like to belong to. We have Chapters, Student Chapters, Sections and the Parent Organization.

There are 55 Chapters, usually state or province based, and there are 8 Sections, which are regional networks of states, provinces, and republics. We have 147 Student Chapters with more forming every year. These are based at college campuses across North America and beyond. Each one of these levels within TWS has their own bylaws, officers and events and activities, and each of these levels of organization synergistically support the mission of The Wildlife Society. What I have been mulling over in particular is why some members only maintain membership at the Chapter and/or Section level and not the parent organization and vice versa. I presume it is because of the perceived benefits or lack of benefits.

If you are one of those people who belongs to the NM Chapter, and perhaps the Southwest Section, but not the parent organization I'd like to encourage you to examine why that is. I've heard many reasons from members over the years. I commonly hear they get what they need from their local organization and the parent organization dues are too expensive, they can't attend the annual conference, and so why join?

Many think that the main reason to belong to the parent organization is to get a break on registration for the annual conference, and yet they cannot attend the annual conference for one reason or another. Their employer won't allow them to attend the annual conference with pay on work time; it is almost impossible to get permission to attend on work time for federal government employees; it is too expensive to attend the annual conference out of your own pocket; or perhaps attending the annual conference eats up your entire travel budget for the year.

I grant you that these are valid concerns and are topics of concern to Council as well. However, TWS is way more than the annual conference. Do you know about the other benefits of TWS membership? Have you visited the website lately and seen what TWS has to offer? As wildlife professionals, many of you are involved in research and/or management. What do you do to stay up on your profession, and to contribute to your profession? Do you seek to publish your research findings or to learn more about your field of work? Access to TWS publications comes with your membership. This includes the Journal of Wildlife Management, the Wildlife Society Bulletin, Wildlife Monographs and The Wildlife Professional. These are premiere wildlife publications. Membership gives you access and helps support the publication of these resources.

As a member of TWS you can join and participate in Working Groups. Working groups are forums for members with common professional interests to network, exchange information and promote science-based decision making and management of wildlife and its habitats. Working groups publish newsletters, hold meetings, conduct policy analysis, and organize technical symposia and workshops. Working groups can help you advance your skills in core or emerging areas of the wildlife profession, advance science about a particular area of concern by the profession, network with colleagues in your area of expertise, keep up with the latest information in your professional subdiscipline, participate in special projects related to your professional interests, promote science-based policy and management of wildlife and habitats.

TWS offers a host of resources for students and for early career professionals. Perhaps you are a current student or early career professional and if not, you used to be one! Take a look at what TWS offers and take advantage or help support these efforts.

TWS has a strong role in the policy arena and in promoting legislation and regulations that are beneficial to wildlife. TWS also supports local efforts by Chapters and Sections to engage in both North American and more local conservation concerns through the Conservation Affairs Network.

Membership includes many resources such as continuing education opportunities, mentoring programs, and leadership programs such as the Leadership Institute. For me, one of the main benefits of membership is knowing that I am supporting my chosen profession and my passion for wildlife and wild places.

If you are not a member of the parent organization, or have let your membership lapse, I hope I have intrigued you enough to check out what TWS has to offer these days and how you might benefit and also how you might contribute to keeping your profession vibrant.

As always, I welcome your comments and questions. My email is KGBirder55@gmail.com.

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