

The Mexican Plateau Horned Lizard *Phrynosoma orbiculare* in Sonora, Mexico

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Phrynosoma orbiculare (Mexican Plateau Horned Lizard) is widespread from the Mexico City area in south-central Mexico northward to the Sierra Madre Oriental in Coahuila, the Mexican Plateau, and the Sierra Madre Occidental (SMO), which extends in western Mexico from Zacatecas and Jalisco north to Chihuahua and Sonora. The

presence of *P. orbiculare* in Sonora is poorly known. It has been found at three localities in east-central Sonora (ca. 28°19'N lat.). In August 1985, Hale and Julia V. Salmon found *P. orbiculare* in Arroyo Ciénega el Horquetudo (ca. 12 km S of Yécora). They

were part of the dynamic group of herpetologists inspired by Charles H. Lowe at the University of Arizona. In July 1997, Ferguson found another adult near Trigo Colón (13.5 km ESE of km E of Yécora). He was part of a group of botanists led by Paul S. Martin, also at the University of Arizona, working on the flora of the Río Mayo Region. In August 2010, Joseph Scheer photographed an adult on Mesa del Campanero (12 km W of

Yécora). He is an art professor at Alfred University in New York, who was working on a project to document Sonoran moths with very high-resolution scans. These three localities are at 1740 to 2064 m elevation in pine-oak forest in the Sierra Madre Occidental.

In June-August 1935, Barry Campbell from the

University of Michigan collected amphibians and reptiles in the Sierra el Tigre in north-eastern Sonora. He collected *P. orbiculare* at the Mina Santa María in upper Arroyo las Carabinas (23.7 km S of Colonia Morelos, 2036 m elev., 30°36'N lat.).

The Sierra el

Tigre is a large Sky Island mountain range in the Madrean Archipelago just northwest of the Sierra Madre Occidental. This is 248 km north of Mesa del Campanero, and 80 km south of the Arizona border. Eighty years later, wildlife biologist Pedro Rodríguez-Hernández of the Ajos-Bavispe Reserva Forestal Nacional y Refugio de Fauna Silvestre Ajos-Bavispe found a *P. orbiculare* at



Fig. 1. *P. orbiculare* from Trigo Colón. Photo by G. M. Ferguson.

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NEWSLETTER HELP NEEDED!

Our apologies for the late release of Phrynosomatics this quarter! We need layout & design assistance with the newsletter! Please contact Ruthann Panipinto at rpanipinto@gmail.com or Tim Tristan at exoticvet@yahoo.com.

Rancho el Tigre, a few kilometers south of Mina Santa María. He was a guide on a scouting trip for a Madrean Discovery Expedition sponsored by GreaterGood.org and Ajos-Bavispe. The camaleón was active in mid-afternoon in needle litter in pine-oak forest at 2250 m elevation.

F. Robinette was the zoologist on the 1890-1892 Lumholz Expedition to northwestern Mexico sponsored by the American Museum of Natural History. Carl S. Lumholz was a Norwegian explorer and ethnographer. There is specimen collected by Robinette (probably in 1890) from 'northern Sonora' in the Lumholz collection at AMNH that was identified as *P. orbiculare bradti* by horned lizard researcher Richard R. Montanucci. The Lumholz collection crossed northern Sonora from near Cananea southeast to Bacadéhuchi and Nácori Chico into the Sierra Madre

Occidental and Chihuahua. The subspecies *P. o. bradti* is in the northwestern part of the species distribution. Today, *P. hernandesi* is the camaleón of pine-oak forests in the Sierra la Mariquita and de los Ajos near Cananea. Either *P. orbiculare* was more common in the past or Robinette found it farther to the southeast.

With eight species, Sonora has greatest diversity of horned lizards of any state in Mexico or the United States. They are *Phrynosoma cornutum*, *P. ditmarsii*, *P. goodei*, *P. hernandesi*, *P. mcallii*, *P. modestum*, *P. orbiculare*, and *P. solare*. Five species of *Phrynosoma* are listed in the 2010 NOM, the Mexican endangered species law. *Phrynosoma mcallii* and *P. orbiculare* in Sonora have Amenazada (Threatened) status.


Acknowledgments. We thank Francisco Isaías Ochoa-Gutiérrez, José Manuel Munguia-Bravo, John Palting, and Ana Lilia Reina-G. for help in the field. 



Fig.2. *P. orbiculare* from Mesa del Campanero. Photo by Joseph Scheer.



Figs. 3-6. *P. orbiculare* from Rancho el Tigre. Photos by T.R. Van Devender.

Newly Elected Board of Directors Announcement

By Leslie Nossaman

The votes have been counted and we have a new 2015-2017 Board of Directors.

Please welcome:

Tim Tristan: President

Jared A. Fuller: President-elect

Reilly Dibner: Secretary

Tanya Phillips: Treasurer

Megan Lahti: Member-at-Large

Tim Tristan will be the eleventh President of the HLCS since it was founded. The Board members' bios have been added below, so you can get to know them better. What a strong team!

Tim Tristan

I received my Bachelor's degree in Biomedical Science in 1995 from Texas A&M University and my veterinary degree from Texas A&M University in 1999. Born and raised in Texas, I left Texas to work in the Florida Keys for 2 years before returning. I completed an avian and exotic animal internship at Gulf Coast Avian and Exotics in 2001 in Houston and then moved to Corpus Christi. I am the veterinarian for the ARK, Downtown Aquarium-Houston, and the Aquarium at Rockport Harbor. Though terrestrial herps have been a large part of what I work with, I also work with local rehabilitation facilities on sea turtles, Texas tortoises, and other wildlife. As founder and CEO of the Texas Sealife Center, a new nonprofit wildlife hospital and rehabilitation facility, conservation efforts are a major component of my career. Publications related to reptiles and conservation efforts have included Mycoplasmosis in Texas tortoises and fibropapillomatosis in green sea turtles on the Texas coast.

Jared A. Fuller

I am currently a 2nd year PhD student at the University of Nevada, Reno in the Ecology, Evolution and Conservation Biology program. My primary research focuses on the genetic

diversity and structure of round-tail and desert horned lizards. Additional projects underway include those related to morphology, thermal ecology, and chemical ecology. Previous research examined the effects of a severe fire event and habitat fragmentation on populations of Texas horned lizards. As an avid conservationist, I believe outreach to the local community is crucial. I annually participate in a Big Brother Big Sister event in which I introduce and teach horned lizard conservation and biology to children and their "biggs." I also present to the local herpetological society about the importance of horned lizard conservation. I look forward to serving on the HLCS board.

Reilly Dibner

I am a post-doctoral researcher in Wyoming, where I have studied ecology of the greater short-horned lizard for the past 5 years. I focus on both basic and applied ecology questions, with a particular emphasis on reptile and amphibian conservation.

It has been a pleasure to serve as Secretary of the Horned Lizard Conservation Society, and I ask for your support in continuing to serve. Many horned lizards are not formally protected, and neither is their habitat. Understanding the habitat needs and ecological limitations of these species is critical to prioritizing conservation efforts.

Tanya Phillips

Having been a member of HLCS for several years, I currently maintain the HCLS website and have previously served as Secretary and volunteered with reading the grant applications and choosing the recipients. My husband and I have also participated in a few of the Horned Lizard surveys around Texas, to include hosting the membership at our ranch near Big Bend National Park on two separate occasions. I have a BA in education and have served a number of years with other nonprofit boards helping with web design, serving as an officer, updating bylaws, legal research, and more. In

past jobs, I have worked in the military, with police, county, and fire depts., in local Austin hospitals and the state, all jobs where I have demonstrated integrity, honesty, and professional responsibility to my position.

Megan Lahti

I am currently a Professor of Biology and Environmental Science at Northern Arizona University - Yuma Branch Campus and am constantly seeking opportunities to bring awareness to horned lizards, especially the endemic species in this region (flat-tail horned lizards). My background is in herpetology, specifically the


ecology and conservation of horned lizards, and I currently participate in research activities efforted towards habitat conservation and restoration along the Lower Colorado River. These past 2 years have been valuable to me learning more about the HLCS and its mission and I would like the opportunity to continue building upon my role for the HLCS, including continued expansion of research-based education and awareness with the scientific community. The HLCS is an excellent opportunity to bridge the HLCS with research and academia to the benefit of horned lizards as well as our members.

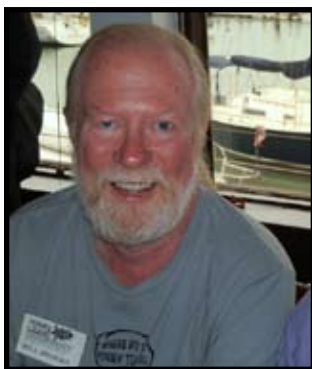


President's Message

By Tim Tristan

First and foremost, thanks to all those who attended the HLCS Conference in Corpus Christi and went on the Powderhorn Ranch Survey. The conference was a true success with phenomenal speakers and opportunities to network with like-minded individuals. As the new President, it was motivating to see the number of people supporting not only our horned lizards, but the local wildlife and their habitat. As the second half of 2015 commences, I look forward to sharing the trials and tribulations of my position and the

forward progress of this amazing organization. I encourage those of you involved to share the message of the horned lizard and our conservation efforts as the upcoming years will definitely be exciting! 




News from Bill Brooks

By Bill Brooks

This is the season for nature festivals. I had a HLCS booth at the Wild Rice Festival in San Marcos April 11th. On April 18th I manned a booth at Bastrop's Nature Festival. ***The Old Rip Festival in Eastland is quickly approaching on October 3. This is our largest outreach event of the year. If you would like to help with our booth please contact Bill Brooks <b.brooks@utexas.edu> 512-581-0377.***

If you would like to host a booth at a nature fest in your area, contact the HLCS.

There is a good article on horny toads in the June edition of Texas Monthly Magazine. The author, Alex Dropkin a UT Austin journalism grad student has been working on this article for 2 years. He has spoken to many HLCS members and several are mentioned in the article. This is great publicity for the HLCS. Thank you Alex! 

Member Highlight: A New Yorker In Texas

By Ruthann Panipinto
HLCS Newsletter Editor



Holding a yellow-bellied racer (*Coluber constrictor flaviventris*) at the Balcones Canyonland Preserve in Travis County, TX.

As a lonely and lifelong Long Islander the very first thing I did upon moving to Spring, TX was buy a map. I located all the parks and preserve areas within a reasonable vicinity of my apartment for solace and to help me feel more at home. I found Jesse H. Jones Park and Nature Preserve in Humble and the staff biologist there at the time suggested I join the East Texas Herpetological Society. Great idea! However, it was scary to drive all the way down to the Houston Zoo, where they met. I felt so at home every time I attended since I'd been a member of the Long Island Herpetological Society at home but attending meetings was stressful.

On another foray to Jesse Jones Park I discovered that there'd be a talk that week one night on horned lizards. Happy to find a more local gathering of naturalist with herp subject matter I attended. I

met Cheryl Brown who gave a presentation on various horned lizards species and invited anyone interested to join the Horned Lizard Conservation Society. This struck a chord with me for various reasons, one of which was the fact that as fascinating as they were when I was in my twenties I'd had a mountain short horned lizard, (*Phrynosoma orbiculare*) and also a Texas horned lizard (*Phrynosoma cornutum*) as pets from a local pet store that specialized in reptiles and amphibians. Of course since I was trying to sustain them on mealworms and crickets, they sadly lingered for a few months and then both died. I'd had many reptiles and amphibians as pets over the years – long before there was enough information available to the public on how to properly care for them in captivity – and most of them made it, but I'd always felt especially guilty about the horned lizards not surviving. This was a way to make my amends and enjoy doing it! So I decided to join up with the HLCS and before I knew it I was off on my first excursion with the group to The Horned Lizard Capital of the World – Kenedy, TX! Well how did I know there'd be dozens of little horny toads scattered around on an empty lot next door to the library of all places!? I met some great news folks that were knowledgeable on all kinds of native wildlife and plants and they taught me everything they knew.

From that point on I was hooked! There was another trip to Abilene, TX and then San Angelo State Park, Matagorda Island and on and on! I started to look forward to the horned lizard surveys conducted to document and record horned lizards their food sources and their habitats. Bill Brooks and Lee Ann Linam held a wealth of information in their brains about the native wildlife that shared the horned lizard's domain. And I was getting all of this knowledge for basically \$25 a year and whatever it cost me to makes the drives and camp or stay in low-budget hotels, which when carpooling with folks wasn't much!




Author with Texas horned lizard found at Blue Mountain Ranch survey 2013.



Introducing some friends to Carolyn Todd's captive Texas horned lizards awaiting pickup from the El Paso Zoo, 2011.

Then I met someone who made a very big impression on me – Carolyn Todd from the Austin area. Carolyn actually had horned lizards that people had collected when on their trips across Texas who didn't know any better and brought the lizards home with them! Without their special diets and surroundings these lizards would not live long in captivity, (I'd learned that a long time ago), and Carolyn rescued them and kept them in a very large, off the ground cage and collected harvester ants to feed them. She'd even had them hibernate in the winters which basically not many people had ever had great experience in doing and having them survive. One year a biologist from El Paso Zoo flew out to take all of the wayward horny toads (all phrynosoma


cornutum) – or Texas horned lizards) back with her for a new exhibit the zoo was starting which would feature these lizards in captivity. I was able to be present and wish them well and bon voyage and they flew - yes flew by an obliging commercial airline - to their new home in El Paso Zoo.

It was these adventures and many more which have kept me a member of the HLCS for 13 years. Being an active member of the HLCS is about so much more than horned lizards – for me it's about learning all I can about the plants and creatures that share its habitat and making new friends and being out in those wide open spaces! 

Horned Lizard Research Grant 2016 Applications

The Horned Lizard Conservation Society is dedicated to protecting horned lizards by documenting and publicizing the values and conservation needs of horned lizards, promoting horned lizard conservation projects, and assisting with horned lizard management initiatives. Towards those ends, the HLCS annually sponsors research that has direct conservation applications. To learn more about the society and past grants, go to <http://www.hornedlizards.org/>.

We will be offering grants again in 2016. In the past, priority has been given to projects that have direct conservation implications, including public education.

To apply, send a proposal detailing the goal of the study, the rationale for it including relevance to conservation of horned lizards, and how your work would benefit from this opportunity. The proposal may not exceed 1000 words, excluding up to ten references. Also include a preliminary budget with any other funding sources available or received for your project. In addition, send a short resume or CV (up to 3 pages) for the lead applicant and have a single letter of reference sent to Megan Lahti: megan.lahti@gmail.com. The deadline is January 1, 2016. The decision will be announced by January 31, 2016. 



2015 Horned Lizard Conference

By Bill Brooks

It rained before and after our April 4th and 5th weekend conference but on this weekend the weather was cloudy but fine. According to Leslie Nossaman this was our 10th biennial conference in our 25-year history. Not too bad. Our speakers this time around were marvelous. In the Aransas Room on the 3rd floor of the Corpus Christi Omni I opened Saturday's presentations at 10am.

After I welcomed our speakers and guests (there were 7 speakers and 21 attendees) I turned it over to our President-Elect (now president) Dr. Tim Tristan. Tim works at the Texas Sealife Center Corpus Christi. Tim works with injured sea turtles among other things. Tim welcomed everyone to Corpus, his home.

We couldn't have picked anyone better to kick off our programs. Shana Fredlake, a reptile and amphibian keeper at the Dallas Zoo, gave a fascinating introduction to her work breeding horned lizards.

Vivian Thomas, a zoology student at Texas A&M College Station gave us a preview of her informational pamphlet about horned lizards for kids. Many of us know Vivian. She has been on our surveys since she was 10 years old and has written for the newsletter. She is the daughter of Leslie Nossaman, our newsletter editor. Vivian applied for and received a Chevron Grant to publish this handout.

Troy Hibbitts followed with a report on how habitat change is effecting reptile populations. Troy is a high school science teacher, a lifelong herpetologist, and author. He brought a few of the latest book he co-authored "Texas Lizards" for sale and signing. Troy also co-authored "Texas Amphibians". "Texas Turtles and Crocodilians" is scheduled for release in December.

We broke for lunch early. The Omni is wonderfully located within walking distance of lots of fine eating establishments and across the street

from the ocean.

After lunch Diana Barber, the Curator of Ecototherms at the Fort Worth Zoo told us about attempts with TPWD and a private landowner to release captive hatched horned lizards back into the wild. Zoos are getting good at breeding and hatching horned lizards but an effective way to reintroduce them into the wild is of paramount importance.

When releasing horned lizards we want to make sure we don't introduce pathogens into a local population (like what has happened to the Desert Tortoise.) Michael McEntire, a second year vet student at Texas A&M, is looking for funding for his studies to identify pathogens in horned lizards slated for release.

We shifted our focus a bit for Mike Duran's program. Mike is a zoologist for the Nature Conservancy and is working on a range wide assessment of the spot-tailed earless lizard. This is yet another species which seems to be in decline.

Cullen Hanks finished off a lovely day of presentations. Cullen works with the TPWD and is working to integrate the Texas Horned Lizard Watch program into the iNaturalist application, the Herps of Texas. Horned Lizards are just one species in this huge and growing database of location data for reptiles, other animals, and plants. Cullen Hanks replaced Lee Ann Linam, a friend and past HLCS president, after she retired.

We wrapped up the programs around 4pm and at 5:30 many of us walked to Landry's for a wonderful seafood dinner. We tried to show the movie, "What Happened to the Horny Toad?" but the little computer speakers just weren't powerful enough for the room. That was really ok. Our conversations would have drowned out the movie anyway.

The next morning started early. We met at 6:45am to leave for the Powderhorn Ranch. Powderhorn Ranch is a newly acquired proper-

ty destined to become a state park. It isn't open to the public yet but park zoologist John Karges offered to give us a tour of the preserve. Nine of us carpoled to the preserve and met John at the gate at 9am.

We made several stops looking for horned lizards to no avail. We did see pigs (they are everywhere), exotic deer, a cottonmouth, a flat-headed snake, a ribbon snake, a checkered garter snake, and a large western diamondback rattlesnake. We saw a couple of young dead green sea turtles along the bay. We guessed that they had been cold shocked the week before and floated to shore only to be killed by scavengers. We also watched dolphins in the

bay herd and feed upon a school of fish. It was cloudy but delightful day.

Most of us left early to get home to our families on this Easter holiday. I must really apologize for putting this program on Easter weekend. It was really bad planning on my part. I announced the weekend convention before I realized the conflict.

This made me even more appreciative of the people who attended. We had representatives from five TX Master Naturalist chapters, two zoos, the TPWD, the National Park Service, the Nature Conservancy, two authors, and at least two colleges. 🐢



Can you guess which one of these horny toads we call Amy?

HLCS Booth at the Austin Lady Bird Wildflower Center

By Bill Brooks

In Austin, the Lady Bird Wildflower Center has a series of wonderful free summer lectures called Nature Nights. For several years the Horned Lizard Conservation Society has been part of Snake Night. (Horned Lizards aren't snakes, but they are reptiles.) On July 10 Amy Trost, Ruthann Panipinto, and Bill Brooks sat at our booth and talked about the organization and the animals to many adults and kids. It was a fantastic evening of outreach. 🐢

Please renew your annual HLCS membership!!!
HLCS depends on its membership for its conservation and educational presence in the community.

Categories for *annual* memberships include:

	Regular	\$25	
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	Contributing	\$50	
	Corporate	\$250	

Lifetime membership \$300

The HLCS welcomes contributions in any amount you wish to submit and is a 501(c)3 nonprofit organization.

2015 Horned Lizard Conference Photos

Photos by Leslie Nossaman and Ruthann Panipinto



Amanda Terry and Shana Fredlake.



Vivian Thomas presenting plans for a new Horned Lizard brochure.



Bill Brooks and Margie Crisp



Wade and Mary Phelps



Cullen Hanks, TPWD



John Karges taking photo of cottonmouth snake that is hiding in a prickly pear cactus at Powderhorn Ranch Preserve on a field trip that took place the day after the convention.



Handouts and display tables



Shana Fredlake presenting the breeding program



Troy Hibbitts presenting a report on effects from a habitat change



Carolyn Todd working the busy welcome table



Bill Brooks giving the introduction presentation



Newly elected president, Tim Tristan giving the welcome presentation



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Families: \$25 for the first person and \$10 for each additional member
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