

Our purpose is to document and publicize the values and conservation needs of horned lizards, to promote horned lizard conservation projects, and to assist with horned lizard management initiatives throughout their ranges.

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## Chronicles of *Camaleónes Sonorienses*

by Thomas R. Van Devender and Dale S. Turner

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In Spanish, horned lizards (*Phrynosoma spp.*) are called *camaleón*; they do not change body color often but often match the substrate color in their habitats very well. The Ditmars' or Rock Horned Lizard (*Phrynosoma ditmarsii*) is one of the most fascinating lizards in North America. Carl von Lumholtz was a Norwegian explorer and ethnographer. On his 1890-91 Archaeological Expedition to Mexico sponsored by the American Museum of Natural History, F.

Robinette collected a horned lizard in Sonora near the Arizona border. Two more were found by M. Eustace in 1897. Leonhard Stejneger, herpetologist at the United States National Museum, named the lizards *Phrynosoma ditmarsii* in honor of Raymond Ditmars of the New York Zoological Park, where one was kept alive for a year. This lizard was not to be seen again for 73 years.

Charles Lowe, herpetologist at the University of Arizona, search for this enigmatic lizards in the 1950s and 1960s without success. In the late 1960s, his student Michael Robinson was researching the route of the Lumholtz Expedition. Sleuth Vincent D. Roth, entomologist and Director of the American Museum's Southwest Research Station, tracked it down using clues worthy of a CSI television mystery - identification of grass seeds, ants, grasshoppers, and gravel in gut contents and inferences about seasonality, elevation, habitat, and location from them! Roth



*Phrynosoma ditmarsii* at the Sonora Rancho La Palma.  
Photo by Erik F. Enderson.

failed to find them on numerous forays to Sonora, but at his request Paul Geiger, mining engineer at the Mina el Alacrán (Mine of the Scorpion) in the Sierra Manzanal southeast of Cananea, delivered a *P. ditmarsii* to Roth and Lowe in September of 1970 (Lowe et al. 1971).

For the next 15 years, Lowe and his students Wayne Howard, Wade Sherbrooke, Brent Martin, and Steve Hale studied this *camaleón* in the

Sierra Manzanal and the Cerro la Palma northeast of Babiácora in oak woodland habitat. Wendy Lea Hodges in 1988 and Lowe and Martin in 1984 discovered *P. ditmarsii* at Rancho el Chorro near Nácori Chico in the Sierra Madre Occidental in eastern Sonora. In 1983, Robert H. Perrill at the



Adult *Phrynosoma ditmarsii* from northeast of Babiácora. Photo Erik F. Enderson.

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Arizona-Sonora Desert Museum photographed a juvenile *P. ditmarsii* at Rancho la Mula along MEX 16 highway to Yécora, ca. 280 km south-southeast of the Sierra Manzanal and in tropical deciduous forest (Perrill 1983). The only recent observations of *P. ditmarsii* were from the Sierra Lampazos, southeast of Tepache by Samia Carrillo-Percástegui in 2002, and from Rancho Toribusí in the Sierra de Murrieta, southwest of Bacanora by Michael F. Wilson in 2008. These localities were on rocky mountainsides in oak woodland or the ecotone with foothills thornscrub.



View from the Sierra la Púrica in September 2013. Photo by S. L. Minter.

In 2009, Sky Island Alliance, a non-profit organization in Tucson, Arizona, began the Madrean Archipelago Biodiversity Assessment (MABA) program to document distributions of all species of animals and plants in the Sky Islands Region in an online database (Madrean.org). Each year there are MABA Expeditions of 30-45 participants to make new observations in isolated Sky Islands in Sonora. MABA herpetologists Jim Rorabaugh, Robert Villa, Tom Jones, Steve Hale, Eric Wallace, Charles Hedgcock, Turner and Van Devender have been looking for *P. ditmarsii* for decades; only Hale had seen them previously.

Finally, this elusive, secretive *camaleón* was seen in the Sierra la Púrica, a Sky Island located between Cananea and Nacozari de García, on the seventh MABA Expedition in September 2013. Three days of rain dampened animal activity, but on the final sunny day, Turner, Hedgcock, and Chris Roll encountered a juvenile *P. ditmarsii* in the ecotone between oak woodland

and desert grassland. About the same time, several MABA biologists met Mexican soldiers on patrol, told them about the bioblitz in progress, and shared Gatorade with them. A few hours later, a Gatorade bottle was tossed out as their truck came down the mountain. Inside were three juvenile Greater Short-horned Lizards (*P. hernandesii*) and a large, angry red wasp from the pine forest on the summit of the mountain. That evening after dinner while plants were being pressed and notes recorded, the two species of horned lizards were compared. They differed in head shape, body proportions, tail and leg lengths, and lots of other characters visible with a hand lens, notably the keeled ventral scales of *P. ditmarsii*. Although they superficially look alike and are live-bearing, they are not closely related.



Juvenile *P. ditmarsii*. Photo by J.C. Rorabaugh.



Right. Juvenile *P. ditmarsii* and *P. hernandesii*. Photo by C. Hedgcock.

Today, with public opinion and strict Mexican collecting permit requirements, most MABA records are observations, often with images.

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MABA herpetologists have not preserved specimens for museum collections for more than 15 years, but decided that this was a special case of an endemic species from a new mountain range. Rorabaugh has a close relationship with herpetologist Julio Lemos-Espinal and Van Devender with entomologists in the national collections at the Universidad Nacional Autónoma de México (UNAM) in Mexico City. So Van Devender went in search of formaldehyde and discovered that pharmacies and health clinics in Nacozari did not have any. Finally, he obtained a pint of Permaglo (the purple, not



the green!!) embalming fluid in a funeral home. The preserved *camaleón* was included in a box of *chinchés* (true bugs) and scorpions mailed to UNAM on September 13. These packages usually take three or four days to arrive. But the week of September 16 was the Mexican Independence Day holiday, and in the confusion, the box took

three weeks to arrive in Mexico City, was declared lost, and then was delayed in the UNAM post office for another week. When it surfaced in the Colección Nacional de Insectos, the horned lizard was misplaced for a few days, but eventually went to Lemos-Espinal, the first specimen of the species in the herp collection at the Iztacala Campus of UNAM.

To our surprise, *P. ditmarsii* were seen in two other areas in 2014. In July, we returned to the Rancho Toribusí area where Wilson saw an adult Ditmar's in 2008. Robert Villa and Skye Jacobs found a neonate *P. ditmarsii* on a steep limestone slope in dense oak woodland with a grassy understory at 1448 m on Rancho las Tierras de Jimenez. A few minutes later botanist Ana Lilia Reina-G. Exclaimed "Here's it's mother!" She found a motionless large adult female with a massive bony head a few meters upslope. Unlike Wilson's 2008 animal which was orangish, this was charcoal gray with two darker transverse bands.

Two more juveniles were found on a September 2014 trip to Rancho el Chitepín in the Sierra Manzanal, the same Sky Island Range south of Cananea where *P. ditmarsii* was rediscovered in 1970. The first one was found as we stopped to examine a large Regal Horned Lizard (*Phrynosoma solare*) on a gentle rocky slope in desert grassland at 1260 m elevation. Returning to our vehicle botanist Ana Lilia Reina-G. found a juvenile *P. ditmarsii* –

the two species are sympatric. The next day botanist Kimberly Hanson and wildlife photographer Chip Hedgecock found a second juvenile in a deep rocky canyon in desert grassland at 1264 m elevation. This juvenile had a very unusual gray mid-dorsum contrasting nicely to the reddish body color. However, a few hours later it had warmed up and the pattern became much more suffuse hinting at two dark dorsal bands. By the next morning it was back to the gray back.



Juvenile *P. ditmarsii* from the Sierra Alacrán. Photo by C. Hedgecock.

Locality details and images for all of these new *Phrynosoma ditmarsii* are in the MABA database (Madrean.org).

#### References

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*Phrynosoma ditmarsii* from the Sierra de Murietta, Sonora. Upper left photo by Michael F. Wilson. Others by Thomas R. Van Devender.



## 2012 and 2013 Grant Recipient Research Summaries

In 2012 HLCS awarded a grant to Reilly Dibner on diet diversity for the Greater Shorthorned Lizard in Wyoming. In 2013 HLCS awarded a grant to Megan Lahti and Cecilia Vigil for recording findings on the Flat-tail Horned Lizard in the desert southwest.

These recipients' summaries of their work is included in this issue of *Phrynosomatics*. The summaries are informative and include lots of photos. The one on diet diversity for the Greater Shorthorned Lizard is on pages 6 - 8. The one for Flat-tail

Horned Lizard is on pages 9 - 11. HLCS would like to thank Reilly, Megan, and Cecilia for summarizing their research for our membership. Our grant money was well spent.



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# Finding the Elusive: Flat-tail Horned Lizards in the Desert Southwest

By Megan Lahti, Ph.D. and Cecilia Vigil, D.V.M.

Silence struck a classroom full of elementary students when they were asked if a horny toad was actually a toad. After several seconds of intense thinking, one eager student shouts, "That's not a lizard, that's a toad!" What followed was a cascade of responses from nearly every student: they don't have scales, they croak, they live in the water, babies are tadpoles, and our favorite response—they don't squirt blood from their eyes! Julio Ibarra, our student presenter, had his audience captivated. Many of these students had no idea what a horned lizard was, let alone seen one! While asking a classroom of college students the very same question did not quite rouse the same eager enthusiasm, the responses were nearly the same.

This was the official start of our flat-tail horned lizard (*Phrynosoma mcallii*) training that included classroom presentations and discussions as well as field trips to search for *P. mcallii* in their natural habitats. We hosted trainings in conjunction with elementary students visiting the College to learn about science and for science students attending Arizona Western College, many of whom are members of the Science Club. Our goal was to provide community outreach to educate others about the *P. mcallii* that is endemic to our region, and threatened with significant amounts of habitat loss and destruction.

On a warm, early morning in April we headed to the sandy creosote flats south of Yuma to find and detect for signs of *P. mcallii* in their natural habitat. Students collected data on the

weather conditions to assess the likelihood of seeing lizards; too cool and the lizards remain buried under the sand, and too warm and the lizards retreat to shrubs and burrows to escape the heat. With the morning temperature already at 31°C, we knew we had a relatively short window to find the lizards. After a brief safety and field techniques session, students quickly dispersed across the landscape. Now, no one's excitement was hidden as we scoured the terrain in search of the cryptic *P. mcallii*.

Flat-tail horned lizards are endemic to the desert southwest, from the northern limits of the Sea of Cortez in the Sonora, Mexico into southern California. Though, local population sizes are small because they are most commonly found in sandy, sparsely vegetated habitats where human activities such as



Students were eager to participate in the flat-tail horned lizard presentation with insightful, and sometimes silly, observations.



Students walking across the terrain in search of the day's first flat-tail horned lizard.

development, agriculture, and off-roading, interfere. Students learned that because this lizard is endemic to such a small area, we have to work extra hard to make sure we protect it. Even the elementary aged students knew exactly why these lizards are disappearing: they are losing their habitat. Currently, over 50% of their habitat has been lost, and the Flat-Tail Horned Lizard Rangewide Management Strategy was implemented in 2003 to prevent these lizards from becoming federally listed as endangered. Efforts to protect remaining habitat and establish protocols have been considered fairly successful thus far, though less than 900,000 acres of available habitat remains.

Patience and long periods of wandering are perhaps the most important skills needed to find horned lizards. Even those with trained eyes, actually seeing a *P. mcallii* is still a great challenge; Yuma's local *P. mcallii* experts Kevin and April Young only have about a 25% detection rate of these lizards! The most difficult challenge for students searching for lizards is remembering that the faster one navigates the terrain, the less likely s/he is to sight a lizard. This becomes difficult to reconcile when you are limited on time and you want so badly to find a lizard yourself. Mostly, seeing a lizard happens to be at least partially due to luck in

what many consider a luckless landscape with minimal shrub cover and maximum temperatures. But, for those that have knowledge of the natural history of the Lower Colorado subdivision of the Sonoran desert that envelops Yuma, the biodiversity and adaptations to a rather inhospitable landscape is a biologist's dream.

"I found one, I found one—over here!" shouts a student. Everyone in hearing distance runs over to catch a glimpse before the lizard disappears. Standing back, the student points exactly to the lizard but no one can see it. He describes the lizard's size, orientation, and location relative to the shadow from the above branch. There are a few "oooohhhh—I see it now" responses, as the lizard remains motionless as though it's still undetected. As we stand there, talking about the lizard's crypticity, the lizard retreats into the bursage shrub only to become even more hidden among the branches and their shadows. Students are amazed

at the simplicity of the lizard's capacity to literally hide in front of your eyes. Now, everyone understands a bit more just how difficult it can be to sight a *P. mcallii*.

Still eager to find more lizards, the students head back to wander even more slowly throughout the terrain; this time their walking speed is hindered only by the heat of the sun. We come across sidewinder tracks and find a large adult coiled under a creosote shrub. Excited but timid, the students decide to instead follow only horned lizard tracks. Just before the sun reaches too high in the sky to discern the tracks, we find a second horned lizard, foraging for food. This lizard becomes even more difficult to sight, as the students form a large circle around the lizard in hopes of finding it without being told where. Here, the lizard becomes a part of the seemingly desolate mosaic of pebbles and vegetation debris covering the sand.



Students literally dove into shrubs to catch lizards; here, a student attempts to catch a whiptail lizard. After a 10-minute chase, the lizard was successfully captured.

The college students that participated in this training now have the first-hand experience to share with others the natural history, conservation, and techniques to find horned lizards in the field. As members of the Science Club, some of these students are looking forward to conducting future horned lizard presentations, such as to the several 5th grade classes that visit Arizona

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Western College for the annual “I’m Going to College” outreach day. Many of students, whether in 5th grade or college, are greatly detached from their outdoor surroundings. This is known as Nature Deficit Disorder, and reconnecting them with nature and allowing their innate curiosities to take over is how we can reconnect students. For some students, these small and seemingly simple events are precisely what drive them to become wildlife and conservation biologists. For others, it means they will be more considerate to native habitat, such as respecting Off-Highway Vehicle boundaries. And for some, especially those pursuing a higher education, simply learning more about their backyards is an empowering moment. One of the most effective

tools to conservation is awareness and education, and what better way to instill these values and opportunities than thorough searching for horned lizards.



Flat-tail horned lizards literally disappear before one’s eyes due to their crypticity, which makes them especially difficult to detect. (clue – in the very middle of the photo)



A nonchalant flat-tail horned lizard orients his dorsal surface to thermoregulate in the morning sun.



Zoomed in on the lizard to show how it has flattened itself to avoid detection.



Photos of the greater short-horned lizard (*Phrynosoma hernandesi*) scat related to the Dibner grant summary article on pages 9 - 11.



This horned lizard scat contains parts of ants, grasshoppers, and beetles. Note the calcium cap that has separated from the rest.



A western harvester ant (*Pogonomyrmex occidentalis*) explores a horned lizard scat with the separated calcium cap to the left.

# Diet Diversity Varies Among Greater Shorthorned Lizard *Phrynosoma hernandesi* Individuals and Regions in Wyoming

By Reilly Dibner

## *The scene*

It's 8:15 on a Saturday morning in early June and the sun is casting low sagebrush shadows across spring wildflowers in Shirley Basin, WY. Our wind and temperature gauge reads 10°C (~54°F), with an average wind speed of 14.2kph (~9mph) at the ground, which means that the wind that whips around our heads moves more quickly and feels much colder. We are surveying for greater short-horned lizards (*Phrynosoma hernandesi*) and the weather conditions do not yet seem ideal for encountering small reptiles. Even so, just five minutes later I see the twitch, turn, and scurry of a large female horned lizard heading full-tilt for a sagebrush. I call "LIZARD!," make a successful grab for our find, and my field technician and I set to work collecting our standard measurements.

This particular lizard was the 234th individual that I had encountered in our efforts to identify the factors that most limit horned lizard distribution and abundance in Wyoming. I sought to quantify how diet diversity and specificity determines lizard distribution, abundance, and response to environmental change. In Wyoming, the greater short-horned lizard is classified as a Species of Greatest Conservation Need, based on its 'vulnerable' population status and unidentified associated 'limiting factors.' While broadly distributed, populations are highly patchy—there are many lizards in some places and none in others—but it is unclear what factors determine those concentrations. The most pressing threat at this time is energy development, which will result in dramatically reduced sagebrush acreage, an important horned lizard habitat, over the next 50 years.

Horned lizards are classically specialized species, with narrow diets consisting primarily of ants.

Some short-horned species, however, have more varied diets that include beetles and other invertebrates. It is unclear, however, how diet composition varies within the species. I asked 1) how does diet vary among individuals and regions? and 2) how is prey availability related to lizard densities at different development intensities?

## *The plan*

To address my first question, my team and I searched systematically for lizards and collected lizard scats in 100 half-hectare plots (50m x 100m) across eight regions in Wyoming. We also sampled these same plots for relative invertebrate abundance and composition by setting out unbaited pitfall traps and mapping all large ant mounds. I calculated the diversity in content for each scat sample, which is a combined measure of the number of different items in each scat and how even the numbers are among those items. For each lizard encounter we also clipped a few claws and collected them to use for stable isotope analyses, which gave me an additional method to compare diet diversity among lizards.

To answer my second question I focused on the Jonah Natural Gas Field, one of the 10 largest reserves in the US, and representative of the disturbance threat that extractive energy devel-



*A small adult female climbs into a sagebrush and gapes to catch some breeze and cool down.*

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opment poses to horned lizards in Wyoming. We surveyed 21 plots in and around the Jonah Field at three development levels: reference (0 wells/km<sup>2</sup>), low well density (1–3 wells/km<sup>2</sup>), and high density ( $\geq 4$  wells/km<sup>2</sup>). We excluded data from the developed areas of the Jonah Field in our analyses of our first question.

#### *Diet variability*

We found that most greater short horned lizards ate mostly ants, but there was a lot of variation in the types of ants that lizards tended to eat. Additionally, in some regions individual diets were highly variable, with some lizards eating a more substantial proportion of beetles, flies, and grasshoppers than others. In other regions, diets were more consistently ant-based. Prey diversity and availability were unrelated to lizard densities, though it is possible that the abundance of specific prey items is more important than overall abundance—a relationship that we may be able to investigate in the future.

#### *Environmental disturbance*

One of the most definitive patterns to emerge from the Jonah Field sampling efforts was that lizard sign was absent from all of the plots in high well density areas, compared with scat or lizards present in 70% of the reference plots surrounding the complex. There were also lizards in the low density development plots, which could mean that there is a development threshold at which lizards cannot persist, or it could indicate a delayed population response to development.



*An adult male suns himself on an early summer morning.*



*This horned lizard surveys her sagebrush steppe habitat and common plant species, such as stonecrop (*Sedum* sp.) and Phlox sp.*

There was no difference in prey availability among the plots, but there were a significantly higher proportion of non-ant invertebrates in the high well density plots than in either the reference or low well density plots. It is possible that diet is a limiting factor for the population in this area and that prey composition is related to development intensity.



*Peering out from underneath a sagebrush, this lizard remains motionless as I take her portrait.*

#### *Deductions*

Overall, our results suggest that this species is more general in its dietary habits than other horned lizard species, and its food use shows strong spatial variation. Specific prey availability may be an important factor for population growth in some areas but not in others. Our research highlights that it can be a mistake to identify a single factor, diet in this case, as the most important limitation to a species across a broad range.

## *Closing*

As we finish clipping claws from lizard 234, I scan the vast sagebrush sea around us. There's not a single large ant mound in sight, and I find later that this particular lizard had dined exclusively on a buffet of some of the smallest ants in Wyoming. I'm still wearing a down jacket and wind shell and marvel at this animal's ability to survive and thrive in this harsh environment. With a short growing/dining/reproducing season of only about three months, these lizards may need to take what they can get—anything that walks by. If development interferes with a population's ability to access food, even for a single season, it is possible that that change is enough to make that population vanish.



*Male greater short horned lizard stands his ground during an early evening encounter.*



*The loose skin on the sides of this female is one sign that she recently gave birth.*



*Neonate lizard rests on my thumb. This individual will soon face up to eight months of hibernation.*



*Gaping is an expensive cooling mechanism as it increases evaporation of precious moisture, but it can also be a defensive move--the most likely reason for this lizard's behavior.*



*A newborn (neonate) horned lizard checks my watch--yes, definitely time to stock up on ants for winter hibernation.*



# Member Highlight—Reilly Dibner

By Reilly Dibner

In the foggy coastal California town where I grew up, the best opportunities for entertainment were outside. There were wild strawberries in the woods, colorful mushrooms beneath every pine tree, and adventures in puddle stomping whenever it rained. One of my favorite



*The search for lizards began at an early age*

places was a small, shallow pond edged with reeds, clear to the muddy bottom, and full of amphibians. I loved hunting for frogs and watching them swim around my bucket, eyes bulging and long toes reaching for open water. I always put the adults back, but every spring I would catch tadpoles to bring home and rear in large jars in the kitchen. By the time they became metamorphs, with fully developed legs and shrinking tails, I could identify them—usually tree frogs, but sometimes California toads. My parents

were supportive and always helped me to return the little hoppers to their home pond.

In those days, I was equally interested in catching lizards but had limited success in doing so. For one thing, they were fast! Also, many would hiss and try to bite me if I didn't hold them properly. Despite these setbacks, I zealously pursued alligator lizards, fence lizards, and skinks with brilliant blue tails. I was delighted to discover Robert Stebbins' wonderful drawings of horned lizards in my parents' well-worn Peterson field guide. With their pancake shape and short legs, these miniature dragons looked easier to catch than the slender lizards I was used to and they didn't appear to have much of a gape—or sharp teeth, for that matter. Horned lizards were conspicuously absent from our damp, cool coastal environment, but the possibility of finding one kept me searching on many summer days. It would be about 10 more years before I finally saw a horned lizard.

My first horned lizard encounter was on the side of Highway 14, between Bryce Canyon and Cedar City, Utah. I was on a cross-country bike trip after my junior year in college, and had stopped for snacks and a rest near the top of a climb before flying down the descent into Cedar Canyon. A slight movement caught my eye and I turned to see, just inches from my stack of Oreos, a pygmy horned lizard

(*Phrynosoma douglasii*). It was very real and sitting next to me! No dragon, just the most amazing lizard around. I was so surprised that I couldn't reach out to touch it, or even remember to take a picture; I just watched it watching me.



*A European common frog swims among spawn clumps in Connemara, Ireland*

I carried my early experiences in frog-catching to graduate research on frog habitat ecology in California and then in Ireland. I worked on identifying environmental factors that affected habitat quality for amphibians (and then reptiles), for better or worse. Global amphibian declines were gaining public attention and widespread concern, but my immediate motivation was closer to home; a multi-million dollar house had taken the place of my beloved pond. With its pink stucco and six-car garage I doubted that it would make a great home for those tree frogs.

In recent years, I have been lucky to study the ecology of greater short-horned lizards (*Phrynosoma hernandesi*) and their sagebrush habitat across Wyoming. I have now seen hundreds of horned lizards and can quickly spot their fecal pellets from several meters away: the exoskeletons of ants and beetles sparkle in the sunlight. I know many individual lizards by

sight, including "Short Tail," a large female with an extremely short tail, and "The Pirate," an aged male with a missing eye and a permanent sneer frozen in scar tissue.

If I had been told that catching lizards and frogs could be part of a real job I probably would not have believed it.

Now I am finishing my PhD in the Program in Ecology at the University of Wyoming and my research has me catching lizards every day, all summer long. Outside my professional activities, I am an enthusiastic photographer, skier, mountain biker, hiker, and trail runner. I still find the best opportunities for entertainment are outside.



*I have my hands full studying greater short-horned lizard ecology!*



*When traveling, I still manage to spend much of my time with the nearest available lizards*

## President's Message HLCS Convention 2015

By Bill Brooks

We are planning a convention in Corpus Christi April 4 & 5, 2015. Saturday will be a day of lectures and Sunday will be a tour and survey somewhere. Details are still being hashed out.

Have you done a research

project on horned lizards and would like to present your data to the members? Send your information to me, Bill Brooks (b.brooks@utexas.edu) or Tim Tristan exoticvet@yahoo.com, the president-elect. Would you like to become more involved with the HLCS? We need a Convention Planning Com-

mittee. There are jobs for all abilities. Please contact Tim and me to be on the committee or for any program suggestions. This spring meeting will be here in no time so put the date on your calendar and start making plans to attend now.

See you there.

# Lizard Sighting While Hiking

By Steve

On Monday, October 13, 2014, I was very surprised (and thrilled!) to encounter a very small horned lizard very close to elevation 10,550' just below the parking lot and visitor center on the north Sandia [Mountain in New Mexico]. I had hiked up La Luz [Trail] and was going back down. The sighting of a baby a bit above the "up to" elevation of 10,400\*, especially in October, really surprised me.

\* As published in Wade Sherbrooke's "Introduction to Horned Lizards of North America" page 39.



## Calling All Horned Lizard Survey Ideas

By Bill Brooks

Do you know of some great locations for horned lizard surveys? Are you involved in a horned lizard project where you need some volunteer help? Is

there just a neat place that you think we should explore?

We're looking for horned lizard survey ideas for 2015. We'd welcome ideas for any state or any horned lizard spe-

cies. Please send ideas to Bill Brooks (b.brooks@utexas.edu) to help HLCS offer some great opportunities to its members.

Watch for details in upcoming newsletters.



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

# Become a Horned Lizard Leader!

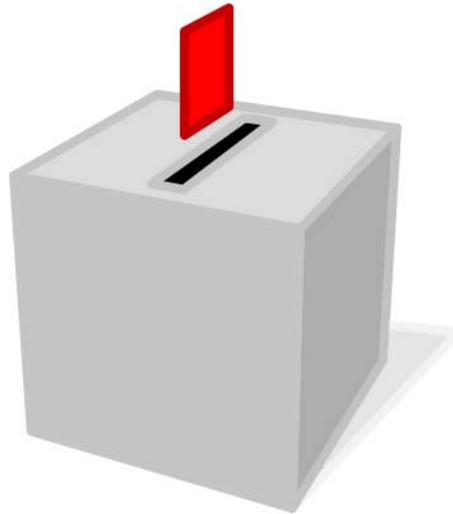
HLCS is currently seeking nominations for 2-year terms for the 2015-2016 Board. If you would like to help out on the board of the HLCS please consider nomination yourself or some other worthy individual. Current board members can nominate themselves for another term.

Please provide a brief (up to 6 sentences) biography describing any leadership expertise, horned lizard conservation efforts or new or improved programs you would like to see the HLCS take on. No prior experience is required. Board members are expected to be available for correspondence via e-mail, occasional conference calls or in-person meetings. In addition to the specific duties mentioned below, board members are expected to participate in at least two board meetings per year. HLCS can opt to provide travel funds to board members to attend meetings if needed. You can submit nominations (with biographies) to Bill Brooks [b.brooks@utexas.edu](mailto:b.brooks@utexas.edu) until we get an election committee chairperson.

Elections will be held the end of April 2015. Tim Tristan is our president-elect and will take over with the rest of the new board sometime in May 2015 for their 2-year term.

If you would like to serve in the Nomination/Election Committee please contact Bill Brooks [b.brooks@utexas.edu](mailto:b.brooks@utexas.edu). With your

help we will continue being the information hub of all things related to horned lizards. Below are the offices we will be filling and their duties: Nominations must be received by April 6, 2015.



*President-elect* - The President-Elect shall serve in the absence of the President or in the event of the incapacity or resignation of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. The President-Elect shall plan and recruit committees and plan and execute the biennial national meeting. The President-Elect becomes the President at the end of a two-year term.

*Secretary* - The Secretary shall be responsible for Corporate records, keep the minutes of all general membership and Board Of Directors (BOD) meetings, and in general perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned by the President or the BOD. The Secretary shall also

be responsible for cataloguing and maintaining the supply of all publications of the Corporation and responding to requests for information from the membership and general public.

*Treasurer* - The Treasurer shall be responsible for all funds and securities of the Corporation; receive and give receipts for moneys due and payable to the Corporation from any source; and deposit all such moneys in the name of the Corporation in such banks, trust companies, or other depositories as shall be elected by the BOD. The Treasurer shall advise the BOD in preparation of an annual budget, be responsible for all financial records, and provide the BOD and the membership with written financial reports, including an annual report, sit on the Fund-Raising Committee, and in general perform all duties incident to the office of Treasurer and such other duties as from time to time may be assigned by the President or the Board of Directors.

*Director-at-large* - The Director-at-Large shall be responsible for development of special projects as assigned by the Board, particularly related to integration of scientific knowledge and conservation issues – this position has been filled by a professional biologist/ecologist in the past. Whenever possible, nominees for this position should be drawn from states not otherwise represented on the BOD.



Post Office Box 122, Austin, Texas 78767

Return Service Requested

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PLEASE JOIN US! Students/Seniors: \$10; Regular: \$25; Contributing: \$50; Corporate: \$250; Lifetime: \$300  
Families: \$25 for the first person and \$10 for each additional member  
HLCS is a 501(c)(3) non-profit organization. Contributions are deductible to the extent allowable by law.

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***Phrynosomatics* is now sent electronically.**

To receive the electronic copy and be taken off the newsletter print list, please contact Katie Talbott at [kmtalbott@mail.fhsu.edu](mailto:kmtalbott@mail.fhsu.edu).