HORNED LIZARD CONSERVATION SOCIETY
Post Office Box 122, Austin, Texas 78767

Phrynosomatics

The Newsletter of the Horned Lizard Conservation Society

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.

Volume 18, Issue No. 3 **AUGUST 2013**

2011 Grant Award Recipient Megan Lahti Research Results

Understanding the short-horned lizard in Colorado

by Megan Lahti

The San Luis Valley (Valley), Colorado is a unique geologic formation spanning over 20,000km2. The Valley is the result of the Rio Grande Rift formation, a geologic event that resulted in the spreading of the earth's lithosphere and subsequent formation of a rift valley that began during the Miocene (~26-5mya). Since the late Oligocene (~20-23mya), eroded materials and water have been filling the Valley floor that reaches a maximum depth of 6,400m. The Valley consists of 5 physiographic provinces based on the unique geology and topography. Within these provinces, there are various habitats and ecosystems including stable and active sand dunes, grassland, woodland, wetland, riparian, playa, and shrubland. Most species, particularly habitat specialists or those with reduced mobility, are presumably confined within the Valley because the mountain ranges that flank the Valley exceed 4,300m.

A female adult P. hernandesi from the Valley

An endemic population of short-horned lizards (*Phrynosoma hernandesi*) inhabits the Valley. Although there are 13 other species of reptiles and amphibians that occur within the Valley, populations of *P. hernandesi* are unique and of particular interest because they are significantly dwarfed. Males and females are both 30% smaller than populations surrounding the Valley. Similarly, Valley populations are morphologically unique, having relatively smaller limb lengths and smaller, more rounded heads. The geologic history of the Valley, in addition to the divergent morphologies suggests that *P. hernandesi* in the Valley have unique evolutionary histories.

In 2010 I received a grant to assist with fieldwork in an attempt to increase my sample size for genetic analyses. I was able to successfully obtain additional tissue samples from Valley populations of short-horned lizards with the help of two eager volunteers. In 2011, I received the HLCS grant award a second time to collect further samples as well as conduct genetic analyses. Unfortunately, I was not able to visit Colorado as I had anticipated. Instead, I was able to enlist a couple of herpetologist friends to collect samples while they were on a summer herping expedition in the area. Unfortunately, neither of my friends was successful

Continued on page 3

National Board of Directors

President
Bill Brooks
108 Cactus Cove
Paige, Texas 78659
512-581-0377
b.brooks@utexas.edu.

Secretary
Reilly Dibner
reillydibner@gmail.com

Member Services
Katie Talbott
katie.talbott@state.mn.us

President-Elect
Tim Tristan
exoticvet@yahoo.com

Treasurer
Carolyn Todd
512-868-0811

Director At Large
Megan Lahti
meganlahti@yahoo.com

on the web at –– www.hornedlizards.org

Colorado Contact

Danny Martin
Natural Resource Ecology Lab
Colorado State University
1499 Campus Delivery,
Fort Collins, CO 80523
dannym77@lamar.colostate.edu

Southern California Contact

Lester G. Milroy III
14321 Ricaree
Apple Valley, CA 92307
(760) 946-1094
les4toads@aol.com

Texas Contact

Lee Ann Linam
Wildlife Diversity Branch
Texas Parks & Wildlife Dept.
200 Hoots Holler Rd
Wimberley, TX 78676
leeann.linam@tpwd.state.tx.us

New Mexico Contact

Tom McCain
PO Box 53095
Albuquerque, NM 87112
tom@httom.com

Phrynosomatics Copy Editor

Leslie Nossaman
poppies14@comcast.net

Phrynosomatics Design Editor

Fannie Messec
fmessec@yahoo.com

Please Send Membership Applications or Requests for Information to:

HLCS
P.O. Box 122
Austin, TX 78767

info@hornedlizards.org

at capturing any lizards due to inclement weather during their trips to northern New Mexico.

I was able to purchase the necessary primers and some consumable supplies to conduct genetic analyses on some existing tissue samples from previous collecting efforts. To date, I have sequenced the ND4 gene for 20 *P. hernandesi* within and surrounding the San Luis Valley. Although my analyses will remain preliminary until samples are collected from additional geographic localities outside of the Valley, inferences can be made. Based on the genetic divergence levels of individuals within the Valley compared to outside the Valley (>8%), the dwarfed Valley populations have been historically isolated within Valley. This divergence is greatest among the east edge of the Valley where the Sangre de Cristo Mountain range traverses. Thus, their isolation appears to be an effect of geographic barriers. The distribution of genetic variation and haplotypes within the Valley continue to suggest that lizards most likely migrated into the Valley from the southern end and have since diverged into sub-populations that correspond with the 5 physiographic provinces within the Valley. As previously stated however, the genetic analyses remain inconclusive because samples along the west boundary of the Valley are lacking and data from only one mitochondrial gene is included. The genus *Phrynosoma* is known to show significant discordance among nuclear, mitochondrial, and morphological datasets, which further emphasizes the importance of integrating as much genetic (and morphological) information as possible when assessing genetic variation and phylogenetic histories.

A female adult P. hernandesi *from the Valley observed using cow paddies as refugia from temperature*

Habitat loss, land alteration, and invasive species continue to be immediate threats to *P. hernandesi* in the Valley, especially in light of their sensitivity to such disturbances. The quantification of their genetic diversity in addition to their unique dwarfism patterns is critical to assessing the taxonomic status of these isolated populations within the Valley. Information from this research will also further our understanding of the biogeographic histories of species within the Valley as well as evolution of *Phrynosoma*, particularly the short-horned clade.

A male P. hernandesi *from the Valley observed at its sleeping site in the early morning.*

Old Rip Festival

By Leslie Nossaman

This year the Old Rip Festival occurs on October 5, 2013 in Eastland, Texas. The festival commemorates the opening of a sealed cornerstone of the courthouse in 1928 and a horned lizard was found alive after being contained in the cornerstone for 31 years. Fact or fiction? Not sure but there is always fun for all! There is a parade, entertainment shows, fun runs, a fish fry, kid's games, bull riding, a car show, lots of food, and booths all in a family-friendly environment.

The HLCS has a booth at this festival every year to spread the word about horned lizard conservation. If you would like to help man the booth, contact Bill Brock directly through email at recycletx@aol.com and cc Bill Brooks at b.brooks@utexas.edu.

For more information about the Festival, contact the Eastland Chamber of Commerce at (254) 629-2332 or Toll Free at (877) 2 OLD-RIP or email at ecofc@eastland.net. If you go to the Eastland Chamber of Commerce website, you can find discounts for hotels in the area: http://www.eastlandchamber.com and photos from past festivals.

Recognition of New Lifetime Members and Donations for the Horned Lizard!

By Amy Trost

HLCS would like to begin recognizing its new lifetime members in *Phrynosomatics* as a way to thank them for their contribution and support. Since the beginning of 2013, John Davis, Edward Allen, Wade Phelps, Paul Rich, Richard McCarthy, Bayard Brattstrom, and David Carr have become lifetime members. Both John Davis and Edward Allen also made additional contributions, beyond the lifetime membership fee.

Robert Young, an existing lifetime member, also made a generous donation this year. HLCS and the horned lizards thank you!

Horned Lizard Research Grant 2014 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 2014. 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, 2014. The decision will be announced by January 31, 2014.

A Horny Toad Weekend
(Rip's Ribs/Horny Toad Bar & Grill/Horny Toad Harley)

By Bill Brooks

Many of you know that Eastland, Texas is the worldwide epicenter of horned lizard lore. This is the home of Old Rip, the most famous horned lizard in the world. We know this is true because the Texas legislature has proclaimed it so. Anyone who goes to Eastland can view the famous dried body of Old Rip in his mausoleum on the wall of the County Courthouse.

Old Rip remains next to the Eastland County Court House. Photo by Bill Brooks.

The HLCS has had an information and sales booth at the Old Rip Festival (the first Saturday in October) for many years, thanks to Bette Armstrong and then Bill Brock. For the very first time, Eastland hosted the Rip's Ribs BBQ Cook Off April 13th. Bill Brock, as he has done for many years, paid for our booth. I met Bette and Jim Armstrong at our booth Saturday morning. We were all relieved to see that they were not BBQ'ing horned lizards. We didn't sell a lot of merchandise or memberships that day, but we did a lot of outreach. We also had a front row seat to Wild West shootouts and some great country music. When all the judging was done, we also got to sample some fantastic BBQ pork ribs.

After saying goodbye to Bette and Jim, I spent Saturday night at the Eastland Super 8 Motel and started back toward Bastrop the following morning. I had planned a few side trips along the way. On the TV travelogue, *Bronco Roads*, I heard about the Horny Toad Bar and Grill in Cranfills Gap. It wasn't far off my path so I stopped by this family friendly biker bar with great hamburgers. I bought lunch and dropped off some of our horned lizard fact sheets and got to meet the owner and his wife.

My next stop was right on I-35 in Temple. It is always fun to go by the Horny Toad Harley Motorcycle distributorship. I love checking out all the horny toad tee shirts, koozies, patches, and statues nestled between rows of shiny new motorcycles.

This was one fantastic horny toad road trip. I encourage you to search out these little gems and discover a few on your own.

The HLCS will have a booth at the Old Rip Festival, Saturday October 5th, 2013. Please come booth sit if you can.

If you don't know the story of Old Rip, you should read *"The True Story of Old Rip"* by W.V. P'Brien.

Bette and Jim Armstrong at the HLCS booth during the Rip's Ribs Cook-off in Eastland, TX. Photo by Bill Brooks.

The Horned Toad Bar and Grill in Cranfils Gap, TX. Photo by Bill Brooks.

Member Highlight—Katie Talbott

By Katie Talbott

Katie on a herpetology field trip in Red Slough, OK.

I currently work in the Department of Conservation at the Minnesota Zoo, where I coordinate a new project that monitors native wildlife on undeveloped portions of the zoo campus. I live near the Twin Cities with my cat, Missy. I enjoy kayaking, hiking, camping, reading Terry Pratchett novels, and taking my little brother herping as much as possible. Studying wildlife behavior is my passion, and any day I can be outside is a great day! It has to be said, though, that I have a soft spot for lizards. Here is how it all began:

I received my undergraduate degree at Doane College in Crete, Nebraska, where I double-majored in biology and English. For my senior thesis at Doane, I studied the population genetics of tiger beetle *Cicindela punctulata.* Getting the chance to conduct research and observe animals in their native habitat got me hooked on field research, and I decided to attend graduate school. I earned my Master's degree in biology at Fort Hays State University in Hays, Kansas, where I studied the behavioral ecology of collared lizards. At FHSU, I was also able to work at the Wetlands Education Center in Great Bend, Kansas, home to America's largest interior wetland. I also taught introductory biology, zoology, and mammalogy labs, and helped curate the mammal collection at the Sternberg Museum of Natural History.

Katie with a male collared lizard near Liebenthal, KS.

After graduating in the spring of 2012, I took a temporary position as a horned lizard technician at Tinker Air Force Base in Oklahoma. Funded through the Southern Illinois University Cooperative Wildlife Research Laboratory, this job was a blast! I fell in love with horned lizards as I spent the summer and autumn tracking adult lizards through radiotelemetry, and conducting a census of hatchlings.

Having had the opportunity to observe and work with these animals first-hand, I was quite moved when I learned about their decline. I can't imagine that anyone who has been lucky enough to spend time watching these animals wouldn't want to help conserve them. To do my part, I joined HLCS last fall. This June, I took on the duties of membership services chair, and I am honored to be of service to the organization.

Horny Toads in Texas

By Richard Bogatto (submitted by Mary Jo Bogatto – niece to Richard)

I was born in Galveston, Texas and raised in what was then the small town of La Marque, Texas, not far away. I was a small child in elementary school during "the war." I remember well walking from my grandmother's to my house across the railroad tracks in "downtown" on that Sunday morning when someone was yelling in front of the drug store that the Japanese had bombed Pearl Harbor. I did not know how that would affect my life or the life of the Horny Toads in my town.

We had lots of Horny Toads and we boys used to catch them and tie a thread on their hind leg and put them on our shoulders for an hour or so. We thought it fun because the girls would squeal and laugh at the toad which would sit on our shoulders. The Horny Toad was fearsome looking but actually a very friendly guy. He would just sit there looking around minding his business. Then we would undo the thread and sit him on the ground. He might immediately scamper off but usually he would just sit there watching us for a while before leaving. Sometimes we would sneak the toads into the class room by putting them in our lunch sack stowed in the cloak room in the back of our class room so that we could play with them at recess. No teacher ever reprimanded us for this though I can't believe they did not know we had them in our lunches and brought them out at noon. After recess we would set them free once more in the school yard and watch them disappear in the tall grass nearby.

Shortly after hostilities started, the government bought a good size pasture about 4 miles from town and built a military base called Camp Wallace. La Marque had mosquitoes as did all of the Gulf Coast. At that time DDT was just coming into use. Thus to keep the aggravation of mosquito bites down and the chances of the trainees getting sick an aerial spray campaign was launched and it was effective. No more mosquitoes but then we young boys noticed that the Horny Toads became fewer and fewer. Finally when I was about five years older I noticed that there were no more of our little toad friends to play with. The adults were glad to have the mosquitoes gone but we were sad to see the Horny Toads gone. It took us boys a year or two but we finally realized that they were no more and we figured out that the spraying had to be what did away with them. A sad episode for a young boy, but one that I have remembered into my old age.

2013 Texas Horned Lizard Hunt

By Lee Ann Linam

Saturday-Sunday, Aug. 31-Sept.1 (Labor Day weekend) – Mason – We will be visiting Blue Mountain Peak Ranch (http://www.bluemountainpeakranch.com/), a beautiful property on the western edge of the Edward's Plateau that was a winner of TPWD's Lone Star Land Steward award. Texas Tech recently initiated horned lizard research on the property, and the site is being studied as an example of habitat restoration for horned lizards. The landowner is eager to host conservation groups and to have a more complete herp survey done on the area. Some lodging may be available. We might extend our stay at Blue Mountain Peak Ranch to two nights, or perhaps participants will want to visit nearby Mason Mountain Wildlife Management Area.

To sign up for this trip, please contact Lee Ann Linam (lalinam@txwinet.com). More details on times, directions, and logistics will be provided to registered participants.

HLCS Members Blitz High Hope Ranch in Search of Horned Lizards

By Lee Ann Linam

On the survey. Photo by Jim Baines.

HLCS members joined Texas Parks and Wildlife Biological Inventory Team (BIT) volunteers for a Bioblitz at High Hope Ranch in Somervell County recently. Tanya Philips, Chuck Reburn, Jim Baines, and Lee Ann Linam joined BIT Team Leader Mark Pyle and student Cullom Simpson to scour the private ranch adjacent to Fossil Rim Wildlife Center for herps on May 18-19. The team managed to detect 16 reptile and amphibian species during an 18-hour nocturnal and diurnal blitz.

High Hope Ranch is an 1100-acre property owned by Christine Jurzykowski, co-founder of Fossil Rim, an educational center dedicated to captive breeding of endangered species. The beautiful ranch, located on an escarpment on the northern edge of the Edward's Plateau, is managed for native wildlife conservation, education, spiritual retreats, and support of artistic endeavors. The volunteers, who also included plant and bird survey team members, enjoyed lovely accommodations and the contemplative setting, but sacrificed relaxation to focus on finding as many different species as possible in the 24-hour time period. The herp team examined numerous harvester ant beds, but no sign of horned lizards was detected—consistent with the lack of observations by the ranch owners and staff. Though Texas horned lizards are still reported from some locations in Somervell County, they don't appear to persist at High Hope Ranch.

The following species were detected by the herp team:

- Woodhouse's Toad
- Blanchard's Cricket Frog
- Gulf Coast Toad
- Rio Grande Leopard Frog
- Copes Gray Treefrog
- Strecker's Chorus Frog
- Red-eared slider
- Blotched Water Snake
- Rattlesnake (probably western diamondback)
- Western Ground Snake
- Rough Green Snake
- Yellow-belly Racer
- Southern Copperhead
- Spotted Whiptail
- Six-lined Racerunner
- Texas Spiny Lizard

More Information about Biological Inventory Teams:

A Biological Inventory Team (BIT) is a group of enthusiastic and knowledgeable experts (from groups such as master naturalists; native plant, herp and bird societies; and other nature organizations) that are able to assist landowners and TPWD biologists by conducting surveys of plants and animals on private property. These surveys will assist landowners by compiling species lists for their

Broad banded copperhead. Photo by Jim Baines.

Spotted whiptail lizard. Photo by Tanya Phillips.

property, collect census data for their wildlife tax valuations, and inform the TPWD Texas

Natural Diversity Database (TXNDD). The vision for this plan is to establish volunteer teams in each TPWD district to assist interested landowners while increasing our understanding of the distribution of rare plants and animals. These teams will be coordinated by Wildlife Diversity staff. Biological Inventory Team members are expert citizen scientists in their respective fields and will be trained by Wildlife Diversity staff on the implementation of surveys, including confidentiality and reporting requirements. Biological Inventory Teams will be able to offer assistance directly to District staff or private landowners. Team members are being sought in every part of Texas. If interested, please contact Marsha May at marsha.may@tpwd.texas.gov.

Preparing for the survey. Photo by Jim Baines.

Blanchard's cricket frog calling. Photo by Jim Baines.

Six-lined racerunner. Photo by Jim Baines.

Strecker's Chorus frog. Photo by Jim Baines.

Western ground snake. Photo by Jim Baines.

Gulf Coast Toad. Photo by Jim Baines.

Nature Report: Horny Toads Thrive on Cactus Creek Ranch

By Richard Moore

The Texas Horned Lizard, commonly called the horny toad, thrives on Mary Jo Bogatto's Cactus Creek Ranch east of Rio Hondo where she has marked 23 harvester ant beds, which are the favorite food of Texas's state reptile. Mary Jo Bogatto, Cactus Creek Ranch Owner, "All the ants here are protected on this ranch and that is to preserve the horned lizard."

On CCR, all mounds observed as being "active" are marked with a red stake. When they are no longer observed as being active they are marked with a black stake. Photo by Ruth Panipinto.

The local abundance of horny toads has attracted a visit from the Horned Lizard Conservation Society led by Texas Parks and Wildlife Biologist Leeann Linam who is coordinator for the Texas Horned Lizard Watch Program. Leeann Linam, TPW Biologist, "We are out here today at a private ranch, Cactus Creek Ranch, and recognizing that private landowners do have a big role in wildlife conservation."

Cactus Creek Ranch in Rio Hondo, Texas is an international learning center for implementing future conservation as well as to share knowledge about the great outdoors owned and operated by Mary Jo Bogatto. Photo by Ruth Panipinto.

There are three species of horned lizards in the state, and the Texas Horned Lizard is the one that makes its home in South Texas, but you don't see as many as you used to

Ranch owner, Mary Jo Bogato and HLCS member Lee Ann Linam discuss and observe the "red harvester ant" or Pogonomyrmex barbatus *mounds present on the CCR property. These mounds suggest an ample population of these ants which typically can make up nearly 70% of the Texas Horned Lizard's diet. Photo by Ruth Panipinto.*

due to a combination of factors. Linam, “We feel like habitats were getting destroyed and also fragmented and then fire ants arrived on the scene. And so the impact of fire ants on land dwelling vertebrates and on other invertebrates such as harvester ants that were the food source of the horned lizards, and then the fact that people tried to aggressively get rid of fire ants probably created the use of a lot of pesticides in habitats and inadvertently destroyed the food of the horned lizards.”

But here on Cactus Creek Ranch the Texas Horned Lizards and their favorite food are doing just fine. With your Nature Report I’m Richard Moore”

Reprinted with permission from Richard Moore and the Valley Central News (posted June 3, 2013). Photos taken on a recent survey at Cactus Creek.

*Bordering CCR to the east is this stunning natural wildlife reserve. Along the Texas coast these plants make a handsome sentinel (*Yucca treculeana *- or Spanish Dagger) in the landscape viewing Laguna Madre. This is a region of Texas some call the last great habitat with thorn forests intermingling with freshwater wetlands, coastal prairies, mudflats and beaches. Dense patches of thorny brush rise among unique wind-blown clay dunes called “lomas.” Home of horned lizards and ocelots! Photo by Ruth Panipinto.*

The Smithville, Texas Wildlife Festival

By Bill Brooks

Once again I attended the Smithville Wildlife Extravaganza on April 30th and once again it was filled with a great number of booths manned by locals promoting their own wildlife conservation causes. Smithville is just out highway 71 from my Bastrop County home. Not only did I have a reptile identification booth but also my area doubled as a HLCS information booth. Lee Ann Linam had her TPWD Wildlife Watch booth next to mine. Beth Bendik came out to lend a hand and Lee Ann had a couple of helpful interns, Amanda Franklin and Amanda Barger, in tow. Near the end of the long day, everyone left me to go visit the horned lizards living in the town of Smithville. They found a little one. This was the first time the interns had seen a horned lizard in the “wild”. A good time was had by all.

The Central Texas Reptiles and HLCS Booth at Smithville’s Extravaganza. Photo by Bill Brooks.

President’s Message

By Bill Brooks

Thank you for your support this past month. We have already had several booth sitting outreach events and a couple of fun surveys. Talk about hitting the ground running! Tanya Phillips is well on her way putting together our new HLCS web pages. I hope the next time I write this column I’ll get to announce it’s launching. We had more outreach events on July 25th, 5:30pm to 9pm at the Wildflower Center’s Reptile Nature Night in Austin. We’ll be back at Eastland’s Old Rip Festival October 5th. The next survey and board meeting will be near Mason the weekend of September 1st. Please keep the articles and ideas for even more HLCS activities coming. Help make the Horned Lizard Conservation Society the very best it can be! (Bill Brooks 512-581-0377)

HORNED LIZARD CONSERVATION SOCIETY
Post Office Box 122, Austin, Texas 78767

Return Service Requested

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. Contibutions are deductible to the extent allowable by law.

Printed on Recycled Paper

Table of Contents

2011 Grant Award Recipient Megan Lahti Research Results. . . . . pages 1 & 3
Megan Lahti
Old Rip Festival . . . . . page 4
Leslie Nossaman
Recognition of New Lifetime Members and Donations for the Horned Lizard! . . . . . page 4
Amy Trost
Horned Lizard Research Grant 2014 Applications . . . . . page 4
A Horny Toad Weekend . . . . . page 5
Bill Brooks
Member Highlight—Katie Talbott . . . . . page 6
Katie Talbott
Horny Toads in Texas . . . . . page 7
Richard Bogatto
2013 Texas Horned Lizard Hunt . . . . . page 7
Lee Ann Linam
HLCS Members Blitz High Hope Ranch in Search of Horned Lizards . . . . . pages 8 - 9
Lee Ann Linam
Nature Report: Horny Toads Thrive on Cactus Creek Ranch. . . . . pages 10 - 11
Richard Moore
The Smithville, Texas Wildlife Festival. . . . . page 11
Bill Brooks
President's Message . . . . . page 11
Bill Brooks

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