

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.

## **The Actual Situation of the Horned Lizards in Michoacán, Mexico**

*by Ernesto Raya Garcia*

To describe the actual situation of our horned lizards we have to talk about many things, including, the time, the society, the environment, resources and the collective work both physical and intellectual. Today we live in a time where technology and communications are on the peak, which can represent either a positive or negative factor for Michoacán's

horned lizards, depending on the perspective, although it may help to improve teaching, the scientific research, and spread the respect and value of the horned lizard. It can also affect the situation by not knowing the correct way to use them, and we can see the reflection of that with the pollution and the destruction of their habitat, also looting and the sale of specimens, and the worst of all, the indifference.

One of the most common problems that we confront in the study of horned lizards is the existence of "social conflict" that is plaguing most of the distribution area, making it very difficult to research information on the field. On the other side, the human activities such as land conversion of deciduous forest and pine-oak forest in



*Habitat of P.asio at Nuevo Centro, La Huacana, Michoacán, México.  
February 2010*

plots for agriculture, overgrazing in the mountains and finally the extermination of these lizards. It saddens me to know that conservation levels of the horned lizards in Michoacán are very low, so I take this opportunity to call upon all those people who wish to learn, conserve or investigate these animals to join forces with me and work together to rescue the damaged

populations in the state.

Until a few years ago in all the state of Michoacán, there was no person, program, conservation, management, research, education, or scientific divulgation about horned lizards; however, from a simple idea among colleagues, I started to be a pioneer in this field on the study of horned lizards, giving some bases, actions, ideas, and future prospects for the conservation of the horned lizards of Michoacán.

In the territory of Michoacán inhabits the giant horned lizard *Phrynosoma asio* and the mountain horned lizard *Phrynosoma orbiculare* recently found at the northeast delimiting with the state

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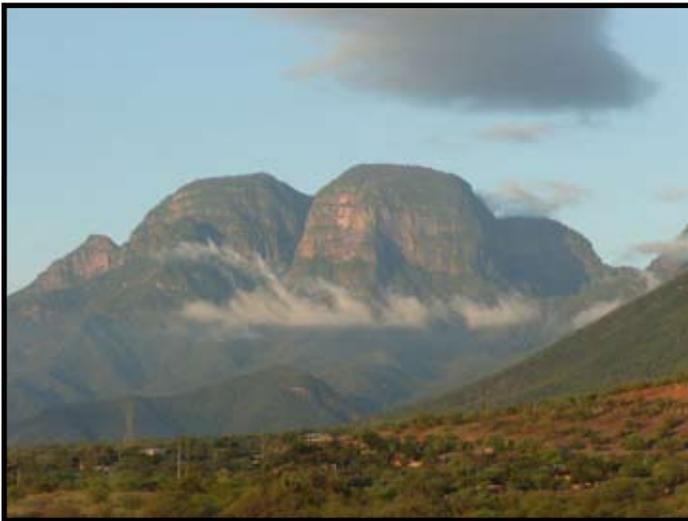
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Condembaro hill and down the community of Nuevo Centro, where it inhabits *Phrynosoma asio*.

of Mexico. There is limited information about the first species, because they are very rare, Even so we are working on strengthening the data-base to enable us to find out more about the status of their populations and to make a final report and thereby initiate a conservation plan. About the second species, is totally unknown the status of populations in Michoacán and we will need more people interested to investigate and provide that information.

A group of students of the Facultad de Biología, Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) have conducted conversations and exhibitions at schools in different towns, among them are Uruapan, Morelia, and Churumuco, where they discussed the myths that exist about the horned lizards and thereby



Conference for students in Churumuco, where they talked about the myths and realities of Horned Lizard.

they had clear up truths and lies among children and young people so they can help protect the horned lizards.

A valuable contribution about these lizards were done in 2009 by the biologists Luis Vargas Magaña, Martin Cervantes Lopez, and Roberto Diaz Sibaja who conducted a project in the town of Nuevo Centro, in La Huacana, Michoacán, where they check the people's perception about reptiles in the area, including the giant horned lizard *P. asio* and found out that most of these people tended to kill the lizards because of fear that these caused to the people, they considered these creatures as poisonous. Fortunately, this team was able to convince and to clarify to many of these people about the importance and how harmless are these lizards, trying to achieve a reduction in mortality of the lizards.

Members in the Instituto de Investigaciones sobre los Recursos Naturales (INIRENA) of the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) periodically carry out programs and environmental education events about amphibians and reptiles to groups of people of all ages, where they use a special and crucial moment to talk about ecology, also the value and respect for horned lizards, an action which certainly helps in conservation and change the false view of people for these organisms. But even this is not enough, we need to fill the knowledge gaps and take action in favor of the few horned lizards in Michoacán.



Students of INIRENA giving talks about the importance of the lizards in Michoacán.

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Figurine of horned lizard made of blown glass in Tlalpujahua, Michoacán.

I want to thank Martin Cervantes Lopez for their collaboration and information, Melina Soria Perez for their pertinent observations and corrections and Enrique Loza Tellitud for the help provided in the translation of the manuscript.



Habitat of *P. orbiculare* at Tlalpujahua, Michoacán, México. October 2010

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## Member Highlight—Ernesto Raya Garcia

By Ernesto Raya García

Hello, my name is Ernesto and I currently live and work in Michoacán, México. I will talk about how I became a lover of the amazing *Phrynosoma*. I still remember when I studied in my high school, this was the time of my life when I discovered that my vocation would be to study biology and during my time in high school I never changed my mind. So when I became an adult, I move to the capital state to study a degree in biology, then my interests were not the horned lizards but rather other reptiles, the reptiles extinct, ie, the giants dinosaurs fascinate me since I was a kid and dinosaurs continue to fascinate me, that was the main reason of why I decided to study at the faculty of biology, because I wanted to specialize in paleontology and with high hopes on finding fossilized dinosaurs, I never thought that my way was to be somewhat different.

It was not until I decided to take two courses in my career (Paleontology and Herpetology), when the decisive moment came, to learn about dinosaur fossils or continue to be amazed by these reptiles that seemed small dinosaurs alive. I decided the second one and I met my first horned lizard, an adult female *P. asio*. I have to say that before that fascinating moment, I hadn't the slightest idea of its existence; neither had



Ernesto very happy to find and photograph a mountain horned lizard *P. orbiculare*.

I know the importance of these living organisms in its many contexts. After this impressive and amazing moment, I observed in detail that strange organism, I felt like somehow the animal transmit me certain peace and for some strange reason made me feel happy, it caught my attention in that moment and it was sealed in my heart. After this I decided to find out all about them, protect them, conserve them and finally, if is possible, devote much of my life studying these reptiles, which didn't start very well at all, but even today I still have the firm conviction to continue fighting from a small trench if so.

I started working on my degree thesis, during

several field trips in the community of Nuevo Centro in La Huacana Michoacán, where I had the opportunity to study and collect data about the habitat selection and diet of the giant horned lizard *P. asio*. Unfortunately the data was inconclusive because of the low abundance of these, lack of economic resources, human support, among other things. But I concluded my thesis doing use of the Tepalcatepec Valley Whiptail (*Aspidoscelis calidipes*) lizard species that is more abundant in the same area, in which I examined their diet.

My first encounters in field with giant horned lizard (*P. asio*) fascinated me so much that I decided to observe the behavior of a specimen in captivity, and I recorded several important behaviors in a period of three years, which are in process of publication. Later I traveled with a team of herpetology to Tlalpujahua, Michoacán where we discovered the existence of a second horned lizard (*P. orbiulare*) which was a new record for the state.

Currently I am a high school professor where I teach biology, ecology and other related; also I'm a dedicated to independent scientific research of horned lizards and herpetology in general. I'm a pioneer and principal promoter for the conservation of horned lizards in Michoacán, for this I published some popular scientific texts about horned lizards (Camaleón, common name in Michoacán) for people to know them, the values and therefore protect them. I created a small working group to conduct research, divulgation, education and activism for the rescue of horned lizards in Michoacán, named Centro Michoacano para la Conservación del Camaleón (C.M.C.C) which at the moment is out of function because



Ernesto Raya García measuring an adult of *P. asio*. La Huacana, Michoacán.

of lack of proactive members and economic resources of legal constitution, so I'm open to anyone interested who wants to work with horned lizards in Michoacán, if you could contact me and together find mutual support and achieve great things.

I want to thank Enrique Loza Tellitud for the help provided in the translation of the manuscript.



Logo of Centro Michoacano para la Conservación del Camaleón, group with members that working and studying the horned lizards.

**JOIN US and Help Protect the Texas State Reptile**



[www.hornedlizards.org](http://www.hornedlizards.org)

**HORNED LIZARD CONSERVATION SOCIETY**



# Tony Burgess, a Man for Dry Seasons

by Joyce Roach

Al Gore's *An Inconvenient Truth* (2006) spotlighted Global Warming, pointing out all the horrors, naming the consequences, hopefully scaring the designer socks off us. Prince Charles's *Harmony* (Nov. 19, 2010) didn't spend time on a litany of disaster, but rather showed international examples of working with nature rather than against it. Simple. But overall that's what the Green Movement is about.

But what about right here in North Central Texas? Do we have a person of such stature doing anything? Yes. Not a politician or a prince, Tony Burgess, TCU Professor of Professional Practice in Environmental Science, is Our Man of the Brown Movement. Not enough green around Dallas or Fort Worth to call anything Green.

It is the arid prairies and plains that contain examples of land—plants, trees, wildlife—that can survive the climate with little water, adapt to a variety of changes over the eons. Even the wind and the sun, if harnessed, provide nature's support.

Teaching in a climate controlled classroom is not what he does. His classroom is more often outdoors and down in the dirt. And he's a Texan, born and bred.

Burgess's ancestry is tied to illustrious pioneer names in Tarrant County, Van Zandt and Jarvis. He grew up in Fort Worth but headed west for his education (MS, Texas Tech; PhD, U of AZ), and sojourned in the Southwest as a desert biologist.

For 19 years he worked with the Biosphere 2 Project north of Tucson. Remember Biosphere? It was described as a farfetched science experiment, wherein life was created in a self contained "terraquarium." It met its demise because it was an idea whose time had not come and at a time when global disaster was predicted but nobody believed it. We believe it now.

Burgess is a has-been: He has been a professor, botanist, ecological engineer, consulting biologist, site naturalist, coordinator for environmental and conservation work with prestigious universities and organizations nationally and internationally. He came back home, an unrepentant Texan, and to TCU in 1995.

But what about his vision as he tramped the desert like Moses wandering in the wilderness looking for the Promised Land? Burgess apparently realized that the rain starved lands of the Southwest were his promised land.

It's one thing to teach interested degree-seeking students cutting edge thinking and methods of the Brown Movement. It's another to get ordinary citizens interested. A lot of us do our part by recycling, becoming more attuned to wastefulness and such. But how do you convert large-land owners, corporate businesses, legislators, developers?

You teach, speak, suggest, encourage, but mostly demonstrate over and over again at workshops, conferences, classes, club meetings, schools, dinners, and on the street corner, if necessary, in dramatic and doable ways what can be accomplished in the city, town, ranch, campus, neighborhood. You bring to bear every nature centered group's participation in an idea larger than themselves.

Landscape with plants, shrubs, trees that require little care and minimal watering. Grow organic foods, practice water conservation, refuse and waste management; use reusable materials to build.

Among the many examples I might offer of Burgess' work, a recent one brings all his expertise and passion to bear: putting a 20,000 square foot roof on the new headquarters of the Botanical Research Institute of Texas at the Botanical Gardens in Forest Park. Using such roofing methods was an idea born of masters' thesis work by David Williams and Jon Kinder, two of Burgess' students.

It's called a living roof and constructed from native soil and plants requiring little care. Such are found on the Fort Worth Prairie, a vestige of ancient grasslands of the Grand Prairie west of the city in need of being rescued by private and public means. It was a collaboration of BRIT and the Fort Worth Nature Center and Refuge.

Burgess consults and works on the project, spending week-ends and afternoons in the field, a new kind of hunter-gatherer. He continues teaching, speaking, meeting, inspiring even while recovering from successful cancer treatment. He's the go-to guy in almost every Green/

Brown project in North Central Texas.

I believe this quiet, determined, tireless, practicing natural scientist will someday find his place among the likes of Johnny Appleseed and Daniel Boone. Someone will no doubt report seeing a solitary man, wind blowing a gray beard against his face, gathering things from plants and bushes somewhere in the Southwest.

The work of Tony Burgess fulfills the call to feed the hungry, clothe the naked, shelter the homeless who, in a few more generations, may be us.



## 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 sponsors annual research and educational grants that have direct conservation applications. In the past, priority has been given to projects that have direct conservation implications, including public education.

To learn more about the society and past grants, go to <http://www.hornedlizards.org/>. In 2014, we will be awarding two grants up to \$500 each.

To apply, send a proposal detailing a.) the goal of the study, b.) the study rationale including relevance to conservation of horned lizards and c.) how your work would benefit from this grant opportunity. The proposal may not exceed 1000

words, excluding up to 10 references. Also, please include 1.) an itemized budget requesting funds up to \$500.00, along with any other funding sources available or received for your project, 2.) a short resume or CV not to exceed three pages for the lead applicant, and 3.) a single letter of reference.

Please submit all application materials or questions to Megan Lahti: [megan.lahti@gmail.com](mailto:megan.lahti@gmail.com). By submitting your proposal, you have agreed to send at least two written articles to the HLCS newsletter editor with photographs regarding the progress and/or outcomes of your project six to nine months after receiving the grant and approximately two years after receiving the grant should you be selected for an HLCS grant.

The deadline for application submission is January 1, 2014 and the decision will be announced by January 31, 2014.



### **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:

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<i>Lifetime</i> membership .....	\$300		

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

# The Horned Lizard Conservation Society Grant Committee and the Board of Directors are Pleased to Announce the 2013 Grant Awards

By Carolyn Todd, Treasurer and Committee Chair

The following two proposals have been selected by unanimous vote by the Board of Directors for HLCS grants for 2013. Both proposals will receive \$500.00 as provided through the Tony Burgess grant, a generous contribution to the research programs and community outreach of HLCS.

## Proposal 1:

Flat-tail Horned Lizard (FTHL) (*Phrynosoma macalli*) Expeditions by Megan Lahti, Ph.D. and Cecilia Vigil, D.V.M.

Given the protection status and conservation threats to the FTHL, Dr. Lahti and Dr. Vigil believe that the root of community awareness and support towards horned lizard conservation lies in education. Their objectives include the education of the community about the importance of 1.) FTHL natural history and protection measures, 2.) Habitat conservation and 3.) The establishment of an intrinsic value towards the local environment and its protection.

They indicate in their proposal that many conservation efforts have flourished in local communities such as citizen science programs, community-based conservation programs, bio-blitzes, and educational

presentations to the community. They seek to implement conservation efforts in an economically, educationally, and environmentally disparate area; Yuma county in Arizona, and to provide an awareness of the environment that will promote the protection of FTHL and its habitat, as well as promote an awareness of the ecosystem.

Their educational objectives include two elements: 1.) In-class presentation and discussion focusing on FTHL conservation which will include natural history of deserts, scat, and track identification 2.) Hands-on experience through a half-day expedition to observe local horned lizard habitat, collect weather data, and identify flora and fauna species to assess habitat quality.

The intention is to conduct five educational outreach events; four of the events will be open to the public and available to participants of all ages. The fifth event will be specific to members of the AWC NAU-Yuma Science Club to educate the science students about the importance of continuing the horned lizard outreach to the community.

## Proposal 2:

Persistence of three species of horned lizard at known historic sites of occurrence in the Great

Plains – Phase 1: Development of volunteer training materials and an online database by Daniel (Danny) Martin, Ph.D. Student in Ecology

To evaluate the relative influence of past climate and habitat changes on the persistence of horned lizards, by revisiting sites of known historic occurrence in the Great Plains. This region serves as an ideal pilot study for this project because there are three species of horned lizard (*P. cornutum*, *P. modestum*, and *P. hernandes*) inhabiting a range of climates (i.e., temperature gradient from south to north, precipitation gradient from east to west) and across a landscape with varying degrees of habitat loss and fragmentation.

This effort will rely largely on volunteer observers, including citizen scientists and professional biologists. Volunteers will be organized using social media, newsletters, and listservs for HLCS and local and regional herpetological interest groups (e.g., Partners in Amphibian and Reptile Conservation, Center for North American Herpetology, Kansas Herpetological Society, North American Field Herpers Association, etc).

For Phase 1 (2013), Interest will be evaluated from volunteer groups, to finalize details

of a survey protocol based on evaluation of previous standardized methods used to detect horned lizards, and develop educational and training materials for volunteers.

Additionally, Phase 1 will provide educational and training materials that will be used in a proposal for Phase 2, as well as a basic online

database that will enable volunteers to enter and submit survey results.

With adequate sampling, the survey should be able to determine what climatological and habitat factors most influence local persistence or extirpation of horned lizards. This information should help guide future conservation efforts for horned lizards.

## TCU Dedicates a New Horned Frog Statue

*By Leslie Nossaman*

This Spring 2013 Texas Christian University in Fort Worth, Texas installed and dedicated a new statue of a horned lizard near the east side entrance to their Amon G. Carter Stadium with a grand ceremony. The “Horned Frog” (which is really a horned lizard) is TCU’s mascot. The location was selected so that when people, especially rival teams, enter the stadium this will be the first thing they see and it will be the last thing they see when they leave. The photos were supplied by Bette Armstrong who can be seen in one of the photos. Thank you, Bette!



# 2013 HLCS Board of Directors Meeting

*Introduction by Bill Brooks:*

Well, my first Board of Director's meeting is in the history books. Unfortunately most of the big decisions will have to be voted on with the rest of the board over the Internet, because we didn't have a quorum at the meeting. That didn't stop us from having several lively discussions on important matters concerning the future of the HLCS. Leslie Nossaman kindly consented to take notes at the meeting.

*Notes By Leslie Nossaman:*

Meeting took place at the Blue Mountain Peak Ranch in central Texas Hill Country on September 1, 2013 from 1:00 PM to 3:00 PM after a two day successful survey at the ranch.

BOD Attendees: Carolyn Todd and Bill Brooks

Other attendees: Ruthann Panipinto, Fannie Messec, Leslie Nossaman, Rollo Newsom, Perry Hudson, Lee Ann Linam

Meeting began with Bill making some opening statements about the state of the Society. He also asked that for all email correspondence regarding HLCS that everyone add "HLCS" at the beginning of the subject line.

Leslie read the meeting minutes from the Board of Directors meeting from last year.

There are four grant proposals that need rating and a decision on which to fund. The grant



*Two Board of Directors members and other attendees at the BOD meeting at the Blue Mountain Peak Ranch. L-R back row: Fannie Messec, Bill Brooks, Caroline Todd, Rollo Newsom, Jennifer Pyle, Mark Pyle, and Tim Sellers. L-R front row: Ruthann Panipinto, Lee Ann Linam, Perry Hudson and Leslie Nossaman.*

committee which includes Jill Heatly, Carolyn, Rollo, and Reilly Dibner will meet through email to rate the grants and to make the final recommendations on the awardees. Having votes from 3 or 4 of the 4 members by the deadline will make the final decision on the recommendations. Only proposals that meet the deadline will be considered. There is no set number of grants to be given. How many grants are given will be determined by the current BOD before solicitation for grants is published.

Carolyn reviewed the budget which consists of \$21,000. She mentioned that the cash flow is lower than last year.

The permit to transport horned lizards has expired with the Texas Parks and Wildlife. There are times when horned lizards are accidentally taken from their original habitat and people ask the HLCS to put

them back or take them to a zoo. HLCS needs a permit to transfer the lizards. HLCS will be getting the permit in Tim Tristan's name and add sub-permitees. HLCS is not asking for a permit to hold the lizards.

Bill mentioned that HLCS is planning a 2014 National Convention and is in the early stages of planning. Tim Tristan as President-Elect is in charge.

Lee Ann proposed that future elections take place at the convention, but the ByLaws would need to change.

Lee Ann mentioned that the Horned Lizard Watch is going more online this year. Ruthann mentioned that HLCS is getting some survey requests on the HLCS Facebook page. Ruthann is monitoring our Facebook page to ensure that only what HLCS stands for is on it.

Leslie made a request that

anyone who submits an article to the newsletter try to follow the article guidelines as much as possible before submitting. Lee Ann requested that her name be removed as the Texas contact in the newsletter.

Carolyn mentioned that the Cameron Zoo is interested in a horned lizard breeding program like the Fort Worth zoo. Leslie and Lee Ann mentioned that the Dallas Zoo has also expressed some interest in a breeding program. Carolyn said she stays in touch with the Fort Worth Zoo. Carolyn plans to contact the Cameron Zoo to offer assistance.

Carolyn and Bill mentioned that HLCS needs to look at evaluating the product list to see if we can remove some products that are not selling and look into adding some new products.

Ruthann mentioned that HLCS should expand into providing educational information for horned lizards other than the 'Texas Horned Lizard' and

update the 'Facts about Horned Lizard' brochure. It was discussed that the HLCS could create a display case with lizard replicas that Tom McCain provides with this company.

Leslie mentioned that the HLCS could do more of an international outreach to the Canadian and Mexican horned lizard conservationists. She mentioned how the Mexican conservationists are working hard on conservation and could use help. It was decided that this should wait until we handle some of the internal and U.S. related issues first.

Bill brought up an idea to have an HLCS credit card to help earn some funding which Bill offered to investigate.

Lee Ann mentioned that the Goodsearch search engine used to help earn funds for the HLCS. Carolyn offered to investigate the current status of this.

Leslie mentioned that the HLCS could handout the Eastland,

Texas brochure which advertises the Ol' Rip Festival and will contact the Eastland Chamber of Commerce to obtain copies.

Bill suggested we look into joining the United Way campaign which Perry offered to investigate.

It was mentioned that HLCS should have a database which has a list of all the events and wildlife festivals that could have an educational booth. Perry volunteered to transport HLCS booth materials to some of the events where HLCS has a booth.

Bill reminded us that Tanya designed the new website and has agreed to maintain it for a year.

Bill has a large supply of HLCS merchandize catalogs; however, the new order form needs to be inserted.

The meeting ended with Leslie reviewing the list of action items and then with Bill officially motioning to conclude the meeting and with Lee Ann seconding the motion.



## President's Message

*By Bill Brooks*

It was great seeing the people who could make it to the Mason survey. We had so much fun. We found the species we were looking for and so much more. I accomplished a personal first when out on a night hunt, the group I was with saw a family of ringtails. They were so lovely. I had read all about them and seen them in zoos, but I had never seen one in the wild.

After the survey I led my first board meeting. (See the BOD Meeting article for more information.) I thought we got a lot done under the circumstances. The problem of funding arose over and over. There is something that every computer-using member can do to help us save our pennies. (If we save enough pennies, they turn into dollars!) If you are on-line, please consider getting the newsletter digitally. If you like to read hard copies, you can

print it yourself and the pictures will be in color. This will save us printing costs which are substantial and don't do much good at all for the horned lizards out in the field. If you are on-line, each and every one of you could do this and save the HLCS some money. I guarantee you, it will go to better programs for our beloved horned lizards. Thank you. – Bill Brooks





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