

Phry' • no' • so' • ma • tics

noun, 1. people enthusiastically dedicated to reversing the decline and supporting the conservation of horned lizards. From the genus Phrynosoma - the horned lizards.

September/October 1992

The Newsletter of the Horned Lizard Conservation Society

Marvin Stanley: Another HLCS Hero!

Marvin Stanley, the treasure for HLCS has been very quietly and efficiently dealing with everyone's favorite bureaucracy: the IRS. This has been a long time in the making; but as of September 10, 1992, we are exempt from Federal Income Tax. Thank you Marvin! ▲

Upcoming Events

Program Meeting

Tuesday, October 13, 7 PM at the Austin Nature Center. Dr. Andy Price of Texas Parks and Wildlife will be speaking on the meanings of the terms *threatened* and *endangered*, what this status provides for the species and how a plant or animal becomes listed as threatened or endangered at both state and federal levels.

Wendy Donaldson will also give us some initial impressions from her summer-long survey. She has slides and an amusing story or two.

Education Committee Meeting

Friday, October 16th, 7:30 PM at Melanie Typaldos' house. Details in Phrynosoma Phacts.

General Meeting

Tuesday, November 10, 7 PM at the Austin Nature Center.

Fund Raising Benefit

Sometime in late November. Stay tuned for details to follow later.

Membership Update

by Jack Morse

As a result of the publicity generated by the appearance of our Horned Lizard Sighting Survey in Texas Parks and Wildlife Magazine, an AP article which appeared in several Texas newspapers, and assorted other media escapades by Bill Davis and Steve Austin, we have added 111 new members since the end of July. This brings our current membership total to 295! The additional funds provided by these new memberships came just in time to ameliorate some temporary shortfalls in the funding of our status survey. Also, we have received many valuable comments and suggestions from our new members. So the time seems ripe to make an appeal to all who might be willing to take a more active role in the operations of the HLCS. Following is a list of our standing committees and the members who are currently chairing those committees. If you have ideas to contribute to any of these areas AND the time to see those ideas through to fruition please contact the appropriate person(s). You may phone, or write c/o HLCS, P. O. Box 122, Austin, TX 78767.

Research & Recovery

Wendy Donaldson 512-499-0158

Member Services

Jack Morse 512-288-4802

Marketing/Catalog Sales

Bill Davis 512-442-4995

Publications/Newsletter

Collene Sweeney 512-863-0020

Fund Raising

512-288-4802

Education

Melanie Typaldos 512-288-5291 ▲

Help Wanted - Librarian

The Horned Lizard Conservation Society needs a volunteer to assume responsibility for maintaining our Horned Lizard Literature collection which is currently on reserve at the University of Texas Life Science Library. The duties of the HLCS librarian include:

- (1) Searching through past and current research journals for articles of interest to horned lizard researchers/aficionados and making photocopies of same for our collection.
- (2) Maintaining an electronic database of the above information. (Such a database is currently being maintained in Dbase format on an IBM PC.)
- (3) Responding to requests for information from horned lizard researchers.

If you are enamored of the bright lights of the photocopy room and the drama of exploring the musty annals of scientific erudition, this position is yours for the asking. Don't delay - call Jack Morse at (512)288-4802. ▲

Research and Recovery Committee News

by Wendy Donaldson, Chair

The Texas Horned Lizard (*Phrynosoma cornutum*) Status Survey

This summer, the Horned Lizard Conservation Society and the Texas Parks and Wildlife Department entered into a cooperative agreement under Section 6 of the Endangered Species Act to jointly fund the Texas Horned Lizard Status Survey. The status survey is a statewide survey of Texas horned lizard populations. One hundred locations scattered throughout the state were chosen to be surveyed based on 1,629 historical records from museum specimens. Locations with the best historical records were chosen so they could be revisited this summer, and current existence of Texas horned lizards determined. The primary question I hope to answer is: Where are horned lizard populations today with respect to historical records?

Other questions may also be answered. For instance, if horned lizards exist at a site, how many can I find within a six hour period of time? And, after three, six-hour visits, when I don't find any horned lizards, can I confidently state they don't exist there? This second question may prove difficult to answer. Simply not seeing the lizards does not mean they do not exist at the site. The cryptic coloration of the horned lizard makes it difficult to find, especially if it never moves. I have noticed that horned lizards are

seen observers, and they seem to know a person is there before the person sees it.

Area residents provided me with affirmation of existence of horned lizards at locations where I did not find them. I maintained a good relationship with the gracious property owners and state park superintendents who gave me permission to look on lands for the Texas horned lizard. As a matter of fact, most of them kept a look-out for the lizards and talked with other residents in the area about them. At two of my 20 sites, I had property owners see horned lizards when I was not there, and they noted when, where and how many they saw. I never found horned lizards at these locations, but the property owners confirmed they existed there. They would also report other area sightings to me that came from friends and relatives. Residents also confirm the loss of horned lizards at the site. After 18 hours of searching the property and residents stating they had not seen any for 5, 10, 20 years, I feel more confident in stating they do not exist there at this time.

Will the Status Survey help save the horned lizard?

Yes! I think the most direct way the status survey is helping out the horned lizard is by creating a heightened awareness in property owners who have them on their land. This group of people now pay more attention when they are driving, resulting

in fewer lizards killed by automobiles, tractors, mowers, and plows. The HLCS Research and Recovery Committee also mailed short versions of our Sighting Survey to all newspapers in the areas being surveyed (close to 200) which also heightens public awareness.

Another way that the status survey will help the Texas horned lizard is less direct. The survey is providing baseline data about horned lizard populations at 100 locations in Texas! This may be the beginning of a long term monitoring program through out the state. Ideally, Texas Parks and Wildlife Department should begin monitoring the sites where the lizards are found to assess the rate of decline or increase in populations.

Additional information from the status survey may also help save the horned lizard. The additional information, once again, comes from interviews with area residents. Residents were asked about current and historical land-use at each study site. Based on their responses to these questions, I may be able to identify trends in the history of the area that correlate to the disappearance of the horned lizard. Questions we asked included things like: what is the land currently being used for, how long has it been used for this, do you have fire ants, how long have you had fire ants, do you or your neighbors broadcast pesticides, which ones, etc.... Comparing the number of lizards between sites may also tell us where populations are declining.

continued on page 3

Status Survey
continued from page 2

The status survey has even bigger implications for the future. The Texas horned lizard is only listed by the state of Texas as threatened. The results of the survey could up-list it to a listing of endangered in the state; however, I don't think that would happen for a variety of reasons. The results may also encourage the United States Fish and Wildlife Service (USFWS) to list the species as threatened. The Texas horned lizard is currently on the federal "watch list"; that is, it is listed as a Category 2 Candidate species for listing as threatened or endangered. The Texas horned lizard (*Phrynosoma cornutum*) would not be seriously considered for listing until additional status surveys were completed throughout its range (i.e. Oklahoma, New Mexico, Kansas, and Arizona). Oklahoma has been trying to do a status survey, and I have heard that New Mexico and Arizona may be working on a joint effort to survey populations in both states within the near future.

How does the status survey affect the HLCS?

First, knowing where the Texas horned lizard still exists and where it appears to be declining will allow us to focus our conservation efforts in these areas. We can target these areas for massive education and awareness campaigns to try and stop or at least slow down the process.

Also, knowing the areas where populations are declining allows

us to target these areas for research about what factors are causing the decline. I will not be able to directly state that agriculture, fire ants or pesticides killed the lizards because little conclusive evidence was observed. However, the status survey is showing which factors negatively affect horned lizard populations. We can use this information as a starting block to determine actual causes by initiating research at the sites where populations are declining. In turn, we can educate people about activities they are doing which affect the lizards' existence.

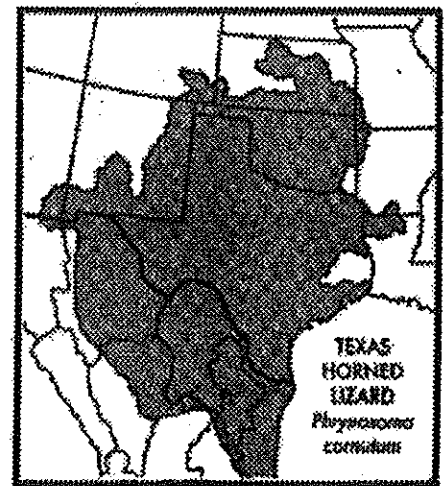
Other research can be initiated by the status survey as well. In order to determine whether or not the horned lizards seen during a visit were the same or different individuals, we identified each one by toe clipping. We collected all the toes that were clipped and preserved them. Genetic material (DNA) can be extracted from these small pieces and amplified. This information can then be used to determine the relatedness of populations throughout the state. Why is this important? Horned lizards appear to be color matched to their environment. That is, lizards that live in areas with dark red soils tend to be darker and more red while lizards in areas with light colored soil appear lighter in color. These differences in color may be expressed and passed on to their offspring in their DNA. Lizards taken from dark soil areas and put in light soil areas lose their primary defense-crypticity (camouflage), making them prone to increased predation. It is possible that the

lizards could be adapted to their local environment in other ways. For instances, the lizards living in north Texas may be able to survive better in a cooler climate than the lizards living in deep south Texas. The HLCS will have to determine the extent of local genetic variation before any reintroductions into areas where the horned lizards have disappeared can be attempted.

Lasting Impressions

Nearly every Texan I encountered had a favorite story to tell about their experiences with Texas horned lizards. These wonderful reptiles are probably the most loved lizards in Texas. An enormous potential exists to educate people about how they affect the natural world around them.

There is a general consensus among the people I talked with that the loss of the Texas horned lizard from the landscape is a sad and mournful event. They would all like to see them again, roaming the open lands, eating ants and squirting blood! And most agree, that now is the time to act, before the lizards are gone-forever.



Phrynosoma Phacts

Article by Melanie Typaldos

One of the things that I would like to use this column for is to answer questions posed by our members and the general public. Typically, if you have a question about something there will be a lot of other people interested in the same thing. Drop a line to HLCS, attn.: Education Committee and you'll probably end up seeing your question in this column. To get the letters started, here is the first one.

Dear people of the Horned Lizard Conservation Society,

I have been doing studying on the Horned Lizard. Since I have been studying on horned lizards, every article and book that I have read has not answered the question I have been wondering about. So I'm going to ask you it. How can you tell that the horned lizard is a female or a male. Please write back with answer.

Thank you,

*Brandon Barnes
Denison, Texas*

This is an excellent question! Many lizards are easy to sex due to differences in coloration, size or behavior. Horned lizards do not fall into this group though. There are three clues that can be used to sex horned lizards but all three require looking at a few lizards before you become adept at it.

Enlarged scales on the tail just behind the vent.

Most male horned lizards have enlarged scales just beyond the vent opening on the underside of the tail. The scales are symmetrically arranged on either side of the midline of the tail and may be bordered by a few

slightly smaller scales. The largest scales will be five to ten times larger than the surrounding scales.

Limitations: This method can not be used on the Texas horned lizard since this species lacks the enlarged scales. Also, the scales may be very difficult to see in small individuals.

Presence of femoral pores

Males of all horned lizard species possess a row of enlarged pores running down the inside of the hind legs out to the knee. These pores appear as slightly enlarged scales, possibly raised and with a distinct "spot" representing the pore.

Limitations: Cannot be used reliably on sub adults. Females also possess femoral pores but they are not as prominent as those of the males. This may lead to confusion until a person has seen several examples of both.

Thickness of base of tail

The presence of the paired hemipenes (copulatory organs) in the base of the tail of the male horned lizard causes it to have a broader tail base than that of females.

Limitations: This can be very difficult to judge without having viewed a large number of lizards.

So, determining the sex of horned lizards is not an easy feat. If you use all three meth-

ods together (assuming you're not looking at a Texas horned lizard) and they all seem to agree, then you've probably sexed your lizard correctly.

Education Committee News

Sorry to say that there is not really any education committee news to report. This is all my fault since I haven't had time to organize things the way I would like to. Committee members hang in there!

I would like to schedule a committee meeting for 7:30 PM Friday, October 16th. At this meeting we will work on putting together a set of slides and read-along text which can be used for presentations. This should be fun since we'll be looking at a lot of slides and discussing the interests and needs of different audiences (for example elementary school children vs. ecological society memberships). Everyone and anyone is welcome to come, even if it's just to look at the slides. I'll hand out maps at the general meeting for anyone who is interested in attending, or you can call me at home at 288-5291. (If you get one of my kids on the phone you might want to call again to be sure that I got the message.)

In the future, meetings will be scheduled more democratically but for right now I think I'd better just commit myself before I procrastinate again! ▲

Not only the State of Texas: but also my Mother!

And so do all of her children and grandchildren. Mother told all of us girls (4) to never, never kill a horned frog because the family's favorite cow would die. Be it coincidence or whatever; but whenever a horned toad was killed, a cow died. I remember distinctly once when city friends visited the farm; two of the boys killed a horned frog. We ran crying to Mother. She scolded the boys and told them they had done a horrible thing and that one of our cows would soon die. No greater truth was ever spoken. Within 2 weeks our milk cow died.

Another time Daddy accidentally ran over a horned frog with the car. A cow soon died.

I am not a superstitious person, but to this day I still protect the horned frog.

Please do something to get rid of the fire ants and you'll have many, many horned toads. We

enjoy watching the red ants, too. When they are really busy - touching heads- hurrying on their way, gathering food - we can guarantee a rain within a few days. This gives us a day of rest, and saves hundreds of dollars in fuel bills when we don't have to water peanuts. It's more sure than watching the weather forecaster on the news. Good luck in your endeavor.

Editor's Note: Jack Morse has come forth with a sampling of some of the letters he has been getting from the people who have responded to our informal survey; not to be confused with Wendy's official survey. We have kept the authors a secret so as not to discourage anyone from sending in these wonderful stories. Please keep them coming. Now for the other one.

Ceremonies
When I was small, 1959 to 1968, my brothers and male cousins

would hunt horny toads, snakes, rabbits etc. all day. The boys always tortured and killed these poor things. They had to be shot with a .22 or b.b. gun or run over with a bicycle or used as firecracker cases before, on and after the 4th of July. The girls in my family always tried to save them in huge buckets. We would get 20-30 in a huge bucket and name them all. Unfortunately, I was too small to remember what we did with them after the day or week at my grandmother's house was up. We did hold elaborate ceremonies for all horny toads, birds, etc. that the boys killed. Each one was buried in a neat hand dug grave. We recited the Lord's Prayer for each and everyone and placed a flower (from my Grandmother's garden) on each one.

Good luck on your effort to save these wonderful (scary) creatures. ▲

Texas Horned Lizard Conservation Society		My Name:	
Please enter one year gift subscription(s) to the Texas Horned Lizard Conservation Society Newsletter to the following.		_____	
		(Please Print)	
Gift for:	Gift for:	Address _____	
_____	_____	City _____	
(Please Print)	(Please Print)	State _____ Zip _____	
Address _____	Address _____	<input type="checkbox"/> Include my own subscription	
City _____	City _____	<input type="checkbox"/> New <input type="checkbox"/> Renewal	
State _____ Zip _____	State _____ Zip _____	<input type="checkbox"/> I enclose \$ _____ for _____	
		subscriptions(s) at \$10 each	
		Mail to HLCS, P.O. Box 122 Austin, Texas 78767	

Meeting Schedule

For those of you who really like to plan ahead; following is a tentative schedule for 1993.

A Conference/Program meeting will start off the new year on **January 12, 1993**. Our president has big plans for this one.

The Austin Nature Center will not be available for our use for the **February 9, 1993** or the **March 9, 1993** general meetings. Any suggestions?

April 13, 1993 will be a Program Meeting and we should be back at the Austin Nature Center.

May 11, 1993 will be a general meeting.

Sometime in **June** a big outing will be planned; similar to the trips to Chaparral Wildlife Management Area.

July 13, 1993 will be a general meeting.

Sometime in **August** will be our summer party.

September 14, 1993 will be a general meeting.

October 12, 1993 will be a Program Meeting.

November 9, 1993 will be a general meeting, plus a party or benefit.

There will be no meeting in **December**. ▲

Newsletter Deadlines

For those of you that wish to contribute articles to the newsletter; try to have them to the editor or someone who can get them to the editor by these dates.

Nov/Dec '92	November 30
Jan/Feb '93	January 25
March/April '93	March 26
May/June '93	May 28
July/August '93	July 27
Sept/Oct '93	September 27
Nov/Dec '93	November 30

▲

Benefit Concert

We have tentatively scheduled a Horny Toad Benefit Concert for a Sunday Afternoon in late November at the Waterloo Ice House on West 38 th Street in Austin. We hope that the Austin Lounge Lizards will be able to perform along with other groups.

For sale will be our T-shirts, gimme caps, jewelry, books and Christmas cards.

Just in time for Christmas.

Newsletter Input • Send articles, graphics, maps, etc to Newsletter Editor, HLCS, P.O. Box 122, Asutin, TX 78767
PLEASE JOIN US NOW! • Students: \$10, Subscribing: \$10 (newsletter only), Regular: \$25, Contributing: \$50.

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

S. Lee Stone
3503 Lafayette Ave.
Austin, TX 78722

