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.

Spring 1995

David Douglas: Discoverer of *Phrynosoma douglasi*

by Kelly R. Zamudio

Hammerson and Smith included a brief history of the life of David Douglas in their article about the renaming of the short-horned lizard (see related article on p. 5). I am paraphrasing that story here not only because of his role as discoverer of the short-horned lizard, but also because of his interesting life and untimely (and bizarre!) death.

David Douglas is little known among zoologists, although he is widely recognized by botanists and horticulturists. He was born in 1799 in Scone, Scotland to a labor class family. He was a rebellious student and an early school dropout, but his intelligence and curiosity flourished under more informal circumstances. Gardening appealed to him, and he became an apt apprentice at Glasgow University. He became a skilled plant collector for herbarium material, and in 1823 the Horticultural Society of London sent him to Southeastern Canada and the U.S. to collect for them. His success was phenomenal, and he was heaped with praise as he returned to London that year.

One year later, he returned to the U.S. to collect in the Pacific Northwest (again on assignment for the Horticultural Society). This time he stayed for three years. He traveled by boat around Cape Horn and botanized in the Galapagos Islands, arriving at the mouth of the Columbia River in 1825. For the remaining time he radiated widely from his headquarters at Fort Vancouver, exploring over primitive terrain, collecting and shipping plants (and the specimens of horned lizards) back to England in large numbers. In early 1827 he returned to England. He was received with even bigger acclaim than before. Unfortunately, his lack of formal training and his labor class origin frustrated his ambitions to publish his journal and to report scientifically on his collection. He was an inordinately shy man, wanting in self-confidence, and as a result, when his scientific study never materialized, he became powerless and distraught. He gave all his collections (which he had guarded zealously for his own study) to Glasgow University and accepted one more offer from the Horticultural Society to the west coast of America. He collected and shipped material back to London from 1830 to 1832. In early 1834, he took the opportunity to sail from California to Hawaii.

Here the story of David Douglas ends mysteriously. He continued collecting assiduously as ever on the Island of Hawaii. On July 12, 1834, while walking alone in the country, he fell into a small pit-trap containing a trapped bull, and was trampled to death. Whether it was an act of suicide, murder, or an unfortunate accident remains unknown, and always will. He may have committed suicide, as he was confused and despondent about his lack of scientific success. He also may have been murdered, because reportedly "suspicious natives" did not welcome him and could have thrown him into the trap. Ironically, David Douglas reputedly had a deathly fear of bulls.

Douglas never married, but his name lives on through his many discoveries. Mt Douglas (elev. 11,017 ft.) of the Canadian Rocky Mountains bears his name. It is only fair that the only reptile he collected should bear his name properly spelled: *Phrynosoma douglasi*.

References on page 5

Upcoming Event

June 4, 1995 — **Texas Chapter Meeting**
LCRA -Board Room, 1st Floor
-1/2 Blk. from Enfield Rd on Lake Austin Blvd., Austin
-2:00 pm

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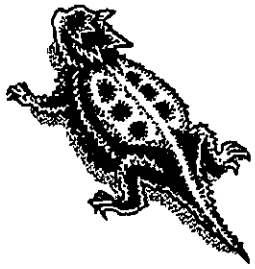

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News from Lester~Southern CA Chapter

As we begin 1995, news of the Horned Lizard Conservation Society is starting to spread. New avenues are opening to assist us in our educating others on the plight of horned lizards. New research projects are beginning to take shape and new contacts are being made to help expand our information lines. Hopefully, we will be adding new lines of products to our sales catalog in the not too distant future-more later as it develops.

I would like to give a special thanks to Susan Hazen-Hammond for her article that appears in the December 1994 issue of the Smithsonian Magazine. I hope all members are able to obtain a copy of this article and use it to help spread the word about "toads". I hope this will give HLCS a big boost also.

I attended the San Diego Zoo's Reptilemania again this year and passed out information about HLCS. This is good exposure and it helps answer people's questions about horned lizards, their behaviors, ecology, distribution, and population status. I still find that most people are not aware of the problems that horned lizards are having. That is what makes this such a valuable education and information tool.

Chrisitna Simmons, the editor of The American Association of Zoo Keepers, San Diego Chapter, Keeper Magazine, asked if I would write an article about horned lizards for their Conservation Alert section. My reply was, of course, no problem. The article appeared in the Fall 1994, Volume II, Issue 3 of Keeper Magazine. I also let everyone who reads the Magazine know about HLCS.

I also received a letter from Monsieur Loic Sautereau of France. He requested information about horned lizards for an article he wants to write for the French magazine Aquarena. He wants to focus on the protection and conservation of horned lizards and said he would also let everyone know about HLCS. Maybe we will gain an international chapter for HLCS?

Now for some bad news. Horned lizards are still showing up in the Asian and European pet trades. The species being collected are not known for sure, but it sounds like the desert and short horned lizards (*P. platyrhinos* and *P. douglasi*) and possibly the roundtail horned lizard, P. modestum. The pet trade still deals, or attempts to deal, with horned lizards. I have received calls from New York and New Jersey with questions about care for horned lizards purchased from pet stores. This is a BIG problem!

Two project ideas I would like to submit to all HLCS members. An item that we could market is a poster that would be similar to Wade Sherbrooke's range map in his horned lizard book. It would provide a more detailed map of the ranges and have names, and identification key. It could also provide a state and federal listing status. This could become part of the education packet on horned lizards. The other project that I think would do well, and be used all year, is a Horned Lizard Calendar. Pictures of the different horned lizards would be used for each month along with various facts and information. Let me know what you think.

-Phrynosomatically-Lester G. Milroy III, HLCS President and SC-Chapter President

Phrynosoma taurus scanned from Reeve, Wayne L. 1952. Taxonomy and distribution of the horned lizard genus *Phrynosoma. Univ. Kansas Sci. Bull.* 34:817-960.

Bart's Swan Song

I am writing this from Richmond, Virginia, where I have a permanent job as Assistant Attorney General. Not many horny toads are here, although I have several replicas on my desk and at home and a lovely picture on my wall. Because of my new job and residence, I have resigned as HLCS Treasurer.

I did not want to leave without saying goodbye to everyone. I will continue to remain a member wherever I go, but I will not be as active for a while. Founding the HLCS is one of the most significant achievements of my life, and I am very thankful that the organization remains active and strong.

I have several suggestions for achieving one of our main goals-restoring horned lizard populations. First, I think we need to raise the consciousness levle of our fellow Texans and those in other states. The best way I think this can be done is a "Don't Mess with Texas' Horned Toads" TV campaign. Whatever the original cause of their decline in numbers, their present scarcity presents an obvious opportunity.

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Translocation-Conservation Strategy for Endangered and Threatened Reptiles: *Summary of the controversy in conservation biology.*

by Kelly R. Zamudio

We are all familiar with the story of the Texas Horned Lizard. Many Texans have fond childhood memories of capturing and handling these charismatic creatures which were once found throughout the state in abundant numbers. Over the last 2 decades, the number of horned lizard viable populations has dropped dramatically to the point they are rarely found in some parts of the state. Absence is sometimes more noticeable than presence, and when we notice their absence, the first question we ask is "Why are there no more horny toads in my yard?", and secondly "Why can't we bring them back?".

Why are there no more horny toads in my yard?

We have some answers to this first question, although by no means the complete picture. The impact of urban and agricultural development on horned lizards is one potential cause for the decline, given these activities result in drastic habitat modification. As more research focuses on the basic ecology of horned toads, we discover that other habitat characteristics are necessary for their survival and reproduction such as the availability of basking sites, constant food source, and correct soil type for egg development. Continued studies of this lizard will hopefully pinpoint the causes of the decline we observe.

Why can't we bring them back?

The answer to the second question is more difficult, and is the focus of a great deal of controversy in conservation biology. Why can't we just take horned lizards from areas where they are found now and repopulate the areas from which they have disappeared? Intentional movement of animals for conservation purposes is termed translocation and is the subject of this review. I have drawn from three articles published in late 1991, in which scientists debate the benefits and costs of translocating animals, point out some of the potential problems, and survey the success rate of translocation programs which have been used in the past. My goal in this article is to call attention to the controversy, inform our readers of the different points of view in this debate, and clarify the procedures, goals, and commitment which must be involved in translocation programs.

Definitions

Much of the literature about intentionally moving animals for conservation purposes is loaded with technical jargon. Some confusion exists as to the exact definition of each term and many authors use them interchangeably. Here are definitions for the most commonly used terms.

Translocation: a general term which implies the movement of an individual to a place other than its local origin. This broad term includes all situations in which an animal is intentionally moved from one place to another.

Repatriation: is a class of translocations, this term is limited to cases when individuals are intentionally released in areas which were previously occupied by that species (but from where they have disappeared). Releasing Texas Horned Lizards in your backyard (where you caught them as a kid) would be an attempt at repatriation.

Introduction: this is also a class of translocations. This term is limited to cases where individuals are intentionally released in areas which were not previously occupied by that species. This has been attempted with some endangered species when their original habitat is completely destroyed and a similar habitats could act as surrogates.

Augmentation: the third class of translocation. This term is used when individuals are intentionally released in areas still occupied by the species, but where populations are dwindling. Augmentation is an attempt to "boost" dwindling populations by introduction of new individuals.

Potential problems with translocation programs

Biologists and wildlife agencies are extremely cautious about translocation programs. They cite a variety of potential problems which could prove disastrous to the species concerned, as well as to other species inhabiting the area.

Disease Transmission
One immediate concern is the potential for introducing diseases to wild populations by moving diseased animals from one population to another. An introduced disease has been catastrophic to endangered populations of desert tortoises in the western Mojave Desert. The tortoises are

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New Name, Same Horned Toad

by Kelly R. Zamudio

The short-horned lizard was first described in 1828 by Thomas Bell, at the British Museum. He described the species *Phrynosoma douglassi* from two specimens brought back to London by David Douglas, a famed British botanical explorer and collector. Douglas made several new discoveries on his collecting trips to the United States and Canada, and several species are named after him, the Douglas fir and Douglas' squirrel, *Tamiasciurus douglasi.* He collected plants primarily, thus, the only lizard named after him is the short-horned lizard.

Unfortunately, Bell misspelled Douglas' name in the text of his original description and referred to him as Mr. David Douglass and named the species which came to be known as *P. douglassi.* However, in the same article, the name given in the figure legends is *P. douglasi* (with only one 's'). These two original spellings began a century and a half of confusion about the spelling of this horned lizard's name. The short-horned lizard's name seems to be spelled differently in every museum collection or published article. Most commonly used are 4 different spellings: douglassi, douglasi, douglassii, and douglasii!

Hammerson and Smith reviewed the history of the species' name in 1991and revised it according to standard taxonomic rules. They chose to correct the spelling of Douglas' name. Douglas' Phrynosoma, known as the short-horned lizard, was given a new name, *Phrynosoma douglasi,* in honor of the famous figure in early natural history exploration.

The short-horned lizard bears a new name. Attention to detail in naming organisms may seem unimportant to people not directly concerned with nomenclature, however, standard nomenclature plays an important role in biology and also in practical issues such as conservation. The naming of newly discovered organisms and the procedures of properly renaming extant taxa when their taxonomic relationships change, are overseen by the International Commission on Zoological Nomenclature (ICZN). The ICZN is responsible for establishing the rules governing nomenclature and making sure that all newly described names abide by these rules. Most importantly, the rules of the ICZN standardize all nomenclature, facilitating communication among different organizations (for example biologists and conservation agencies). If these rules were not in effect, any person could effectively change the name of any group. This would certainly cause a lot of confusion, and no one would be able to keep track of all the different names applied to the same species! Although it would be nice to name a Milroy's Horned Lizard (!) or Donaldson's Phrynosoma (!), it benefits the group as a whole to have standardized binomials. That way, there is no confusion about what taxon we are referring to. The renaming of *Phrynosoma douglasi* is not extreme, since it only corrects a misspelled name. However, we should all attempt to adopt this standardized name and encourage other agencies and individuals to do the same.

Literature Cited from David Douglas: Discoverer of *Phrynosoma douglasi and* New Name, Same Horned Toad:

Bell, T. 1828. Description of a new species of Agama, brought from the Columbia River by Mr. Douglass. Trans. Linn. Soc. London, 16(1): 105-107.

Hammerson, G.A. and H. M. Smith. 1991. The correct spelling of the name for the short-horned lizard of North America. Bulletin of the Maryland Herpetological Society, 27(3): 121-127.

Morwood, W. 1973. Traveler in a vanished landscape: the life and times of David Douglas. New York, Potter. 244 pp.

TEXAS CHAPTER NEWS

Spike and Spot on a float

COUNT YOUR TOADS!

by Sandra Holland
Texas Chapter Public Information

If you would like to know how many horned lizards there are on your property or in your community, why not try a census?

Children and adults can participate. A template of a juvenile (<80mm) and adult (80-125 mm) can be made to compare to horned lizards you see. Do not pick your specimens up! Guestimate with the template whether your horny toad is a juvenile or adult. Mark the populations on a map of your area (topographic preferred, but highway accepted), and, after your horned lizards are hibernating this winter, send your report to the Census Reports, c/o HLCS. On a separate sheet from the map, show how many specimens were sighted on what day at each known population pocket.

Any other information you can provide would be helpful. This might include how many harvester ant hills are present per square yard, whether the site is a well-manicured lawn or a neglected field, a school yard, etc. Number your sites on the map. You could also list time of day the lizard was seen. This takes very little work, but keeping accurate records is the main thing. Your assistance will be very helpful for future researchers.

We thought of this project primarily for Phrynosoma cornutum, but anyone else who would like to participate with a different species is welcome to participate.

In Texas, it is illegal to pick up *P. cornutum* or *P. douglasi hernandesi* without a permit, so your census must be by observation only.

Texas Chapter Officers

Melisa Montemayor	President	Steve Austin	Fundraiser and Graphic Artist
Carolyn Todd	Vice President for Education	Bill Davis	Catalog Sales
Sandra Holland	Vice President for Public Affairs	Joyce Snodgrass	Secretary and Historian
Clare Freeman	Vice President for Communication,, Treasurer		

TEXAS CHAPTER NEWS

Public Information Report
Sandra Holland

Harverster Ants Needed- If you live in or near Austin and could supply harvester ants on occasion to Carolyn Todd, please contact her at (512) 255-6770. She is our Education Chair, and she also has a permit to rehabilitate lost horny toads. They will be coming out of hibernation soon and will be hungry. are not a good ant substitute, because they can carry a bacteria causing a gastroenteritic infection.

Congratulations- Clare Freeman is the new Texas Chapter Treasurer!

Booth Sitting- Lee Stone and Joyce T. Snodgrass represented HLCS at a festival in Leander. Carolyn Todd and the Hollands are planning to do a booth at the Texas Children's Festival (Institute of Texan Cultures) in San Antonio in April. They will have coloring pages for children and plan to exhibit live specimens. Clare Freeman and Carolyn Todd made over $200 with our horned lizard souvenirs during a short stay at a festival at Fossil Rim in Glen Rose. Clare Freeman will take door prizes and sales materials to the Texas Wildlife Society festival in Kerrville. Several booth sittings are planned, particularly one in October for Texas Wildlife Expo in Austin, which has been lucrative in the past. Booth sitter volunteers are needed. We have lots of plans but few volunteers. Some volunteers are also doing oral presentations.

Fundraising-At this writing, a fundraising concert is being planned in Austin for March.

Souvenirs-The souvenirs you order from our list are requisitioned, stocked and coordinated by Bill Davis. Bill works very hard to get these out to you in a timely fashion. He keeps the stock in his living room, and has had some ordering problems lately because of the separation of the Texas Chapter from the National HLCS. Write PO Box 122, Austin, TX 78767 for an order form.

Oral Records- Carolyn Todd noted many adults who visit HLCS booths want to relate their favorite horny toad stories. These stories are very interesting and may lead to additional knowledge about this reptile. She suggested that anyone who keeps a booth have a tape recorder off to the side where people can record their names, addresses, phone numbers, as well as place-specific and year-specific favorite stories. These reports may be used later. I can see a lot of very useful possibilities.

Census-Abraham and Noah Holland are excitedly planning another spring census of their city. The last one was in 1993. Any child (or adult) can do a census of their own area.

Adopt a Lizard- Texas Chapter members will someday get a chance to adopt a species. The money they pay for their adoption certificate and photo would go toward research and rehabilitation. More later.

IN TEXAS, it is illegal to harass Phrynosoma cornutum (Texas horned lizard) or P. douglasi hernandesi (mountain short-horned lizard). This includes preventing its movement, picking it up, collecting one, transporting one, or anything else that might harass it. There is a fine imposed by the Texas Parks and Wildlife Department against any person violating the law. If you see a horny toad, relish the moment and leave it be.

Extras-The Traveling Toads got a request from a Virginia reptile club comprised entirely of homeschoolers, for information on how to get their own State Reptile request out of the mire of partisan politics. Their choice is the Timber Rattlesnake. Abraham and Noah Holland have named their home school, and promised their parents they will still be happy with the name when they graduate: Horned Toad Academy....

Grants- If you have grant writing experience and would like to volunteer some time, please write to us. We are missing out for lack of volunteers.

Next Meeting-Come meet us and talk Phrynosomatics at our next Texas Chapter meeting, Sunday, June 4th, at 2:00 PM, at the Board Room of the Lower Colorado River Authority (middle building) on Lake Austin Blvd.

Lizard Program Wins Awards

For their work with The Traveling Toads, the Holland family home school was a semifinalist in the Fifth Annual Texas General Land Office/HEB Environmental Challenge.

Gasper, Sandra, Abraham, known as Spot, and Noah, known as Spike, took their program to seven Texas counties between August 1993 and January 1995.

Owl: The Discovery Magazine for Kids, published in Canada, gave The Traveling Toads its Hoot Award for outstanding achievement in working towards a better environment.

afflicted with an Upper Respiratory Disease Syndrome (URDS) which is spread between individuals by direct contact and is nearly always fatal. This agent may have been introduced to the wild by released captive animals.

Population genetic structure
Lizards living in geographically separate areas have a certain degree of genetic divergence. Repatriating horned lizards from one region in Texas to another could be detrimental. Individual populations sometimes diverge genetically from other populations to adapt to local conditions. Mixing individuals from two genetic stocks could reduce the fitnessof the mixed population. This phenomenon is called outbreeding depression. It is important to know what the genetic composition of your population is and how divergent it is from populations in the receiving area before moving animals between them.

Long-term Monitoring Needed
Most translocation programs attempted to date are criticized for the lack of suitable follow-up studies to monitor the fate of translocated animals. This lack of data makes it difficult to evaluate the success rates of different translocation programs. Many times "follow-up" data collection on translocated populations is cut short for administrative reasons (lack of funds and personnel for continued monitoring, or change in priority once the translocations are complete). Every institution or agency carrying out a translocation must be committed to monitoring the population for a sufficiently long time to determine the success or failure of the program. This information is important for decision of future management programs with the same species.

Unknown causes of decline
A sound recovery plan for any species should start with a detailed understanding of what factors have caused the species to become threatened. Many translocation programs are implemented prematurely. If the cause of the population decline is still unclear, then any attempts at translocation are bound to fail, since the factors causing the decline have not been eliminated or modified. An understanding of why a species has become endangered can only be obtained from detailed studies of the species requirements, comparisons of endangered and healthy populations and from a knowledge of the basic ecology of the species (including behavior, social structure, physiology, etc.).

Positive aspects of translocation programs

Translocations can be implemented rapidly and inexpensively In many situations endangered species come to the brink of extinction. In these cases, sophisticated genetic studies and models are not viable, because there is absolutely no time left. In these crisis circumstances it may be wiser to begin translocation programs than to wait for results of other studies, since the extinction clock is ticking rapidly. An example of this case could be when critical habitat is being destroyed (by natural disasters such as fire, flooding, etc.) and an endangered species must be moved to safety.

Translocations are popular
translocations make people feel like something is being done about an endangered species. If horned lizards are repatriated in our backyards we feel as if something has been returned to it's normal state. Other studies which are time consuming and sometimes expensive, such as ecological and genetic studies, do not give the general public the same feeling of accomplishment.

Does consensus exist?

Parties on opposite side of this debate argue over details and success rates of translocation programs with reptiles. Dodd and Seigel (1991) reviewed 25 translocation programs involving reptiles and amphibians and concluded that only 19% of these were successful (that is, a self-sustaining population was established), 23% were unsuccessful , and 58% could not be classified for lack of information. Moreover, success rates seemed to vary according to the group being transplanted. Crocodilians seem to do well when translocated, but the authors point out that up to date no translocation program has successfully established a self-sustaining population of snakes, turtles, frogs or salamanders. One lizard translocation program in England was considered successful, although 3 are classified as unknown, and may prove successful in the future. These odds are not very high, and the authors caution that translocations should be well thought out before implementation.

There are certain considerations that most everyone agrees on:

1) Translocation programs should not be attempted unless provisions are made for a biologically-based, long-term monitoring program. Non-biological priorities (e.g. funding limitation) should not eclipse the need for continued evaluation of translocated populations. All parties involved must be pre

pared to make the necessary commitment for collecting baseline data, releasing animals under appropriate conditions, providing for follow-up studies, and publishing their methodology and results, regardless of outcome. Only in this way can we learn from our mistakes and correctly evaluate translocation programs as a technique in conservation.

2) Given the great potential for deleterious effects, translocations should not be recommended under most conditions. If healthy populations still exist in other parts of the range, than protection and habitat improvement should be attempted first to halt further endangerment. Translocations may prove valuable in "crisis situations", but are probably too risky for those species still understudied and still thriving in some areas.

3) Before translocations are attempted, attention must be paid to biological detail of the species concerned. Organisms many times interact in subtle ways, both within and between species. A combined program of baseline study, habitat enhancement and protection of the existing populations should be implemented before translocation programs are attempted. This may not be as satisfying to the general public as having horned lizards in our backyards again, but these studies increase our knowledge of the species' requirements and increase our chances of conserving these species in the long run.

Conclusions

Degradation of our environment through human over-population, development, and pollution will require us to examine carefully all possible methods for maintaining biodiversity. Translocations are perceived by the general public as a proven strategy. This stems mostly from our lack of understanding of the complexity and potential impact of these programs. It is imperative that scientists and conservation agencies get involved in education and conservation efforts, and that they together scrutinize translocation programs so we may learn from what already has been done. Translocations are still at an "experimental stage" and shouldn't be considered a definite solution for all problems involving endangered species.

Repatriations may prove to be a successful option for bolstering declining populations of the Texas Horned Lizard in the future, but this conservation strategy is still under assessment. In the meantime, education, basic ecology studies, environmental assessment, and dissemination of this information are our most valuable tools for preserving this species. As a scientist and a phrynophile, I can guarantee you that we do make a difference as an organization and as individuals, even if the Horned Lizards are not in our backyards (yet!).

For further reading on this subject the following three articles are a good place to start, they include many references and alot of valuable information:

Burke, R.L. 1991. Relocations, repatriations, and translocations of amphibians and reptiles: taking a broader view. *Herpetologica* 47(3): 350-357.

Dodd, C.K. and R.A. Seigel. 1991. Relocation, repatriation, and translocation of amphibians and reptiles: are they conservation strategies that work? *Herpetologica* 47(3): 336-350.

Reinert, H.K. 1991. Translocation as a conservation strategy for amphibians and reptiles: some comments, concerns, and observations. *Herpetologica* 47(3): 357-363.

Alice Is Out!

review by Sandra Holland

The book we have been waiting for is out. Publisher, G.P. Putnam, sent me a copy of Tony Johnson's (an HLCS member) new book Alice Nizzy Nazzy: The Witch of Santa Fe. This resident of southern California has taken a famous Russian myth about a witch and transformed it into a Southwestern tale with the help of artist Tomie dePaola. This story for young children is a delight for anyone who likes make-believe. Alice Nizzy Nazzy has a giant pet horned lizard that speaks Spanish, and we see how they interact with a good little girl named Manuela (modeled after Little Bo Peep). The biggest question is how the horny toad can stand to live in a house that has roadrunner feet! Thanks to both author and illustrator for prominent mention of HLCS.

Letters, Meeting Announcements...

Dear HLCS:

Thank you for the warm fuzzy tribute to our family in the Fall 1994 issue. We appreciate it very much. Please don't forget that my husband Gasper was a part of the program, too, even though his schedule prevented him attending all of the programs. He decorated the float in Poteet, and he paid for most everything. At work, he is known as Papa Toad, and he keeps a Styrofoam red ant from the parade float on his shelf.

Sandra G. Holland

Dear HLCS:

I also believe putting Horned Lizards on a postage stamp is a great idea! I plan on writing the U.S. postage stamp committee tonight. Keep up the good work, I have enjoyed your newsletters and appreciate all the work being done for the Horned Lizard.

Susan Rice

Dear HLCS:

I am very interested in joining your conservation society. Any effort to save the horned lizard from extinction is a very noble cause.

Richard Rogers

Greetings:

Currently, I'm doing research on the Texas Horned Lizard for a geography class at UT-Austin. Recently, I was told about the HLCS, and I'm most interested. Please send me any info you have on the Texas Horned Lizard, how to join your society , and how to obtain your newsletter.

Margo Lynch

Dear HLCS:

The Dallas Morning News printed an article, "The Great Horned Toad Mystery" on January 29, 1995.

Do you still offer the slides/K-3 curriculum guide for teachers? I bought one last year and was wondering if they were still available. (YES!)

My third grade class learns about the horned lizard in the reading of the novel Blue Willow by Doris Gates. In Chapter 5, Janey finds a horny toad and wonders if her teacher will correct her by telling her that it is really a horned lizard.

My class and I enjoy your newsletter. Thank you.

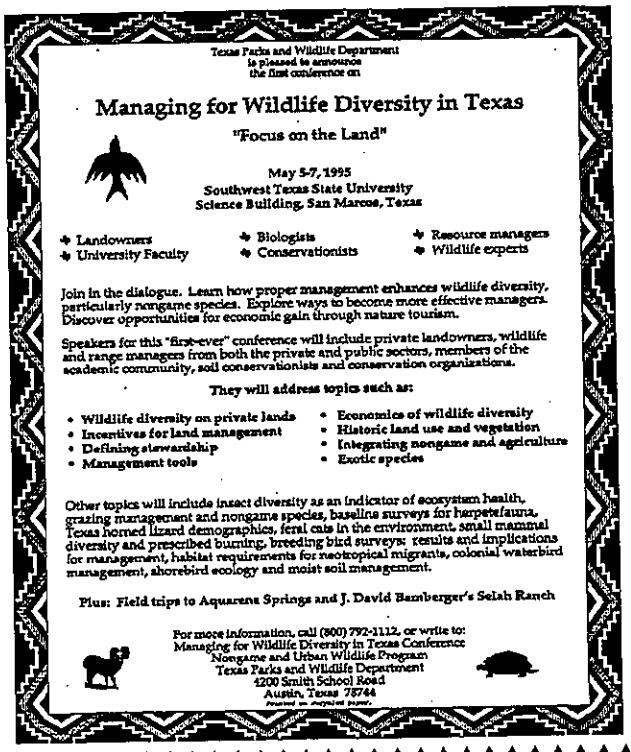
Ulana Strutz

Herpetoculture Today

3RD Annual North Texas Herp Society Spring Symposium

April 28-30, 1995, Arlington, TX: LaQuinta Inn.

Keynote Speaker: Dr. Whit Gibbons, Savannah River Ecology Lab. Other Speakers includes David Barker and Randall Gray. For info. call, 214-933-HERP, or write NTHS, PO Box 1043, Euless, TX 76039



Texas Parks and Wildlife Department
is pleased to announce
the first conference on

Managing for Wildlife Diversity in Texas

"Focus on the Land"

May 5-7, 1995
Southwest Texas State University
Science Building, San Marcos, Texas

- Landowners
- University Faculty
- Biologists
- Conservationists
- Resource managers
- Wildlife experts

Join in the dialogue. Learn how proper management enhances wildlife diversity, particularly nongame species. Explore ways to become more effective managers. Discover opportunities for economic gain through nature tourism.

Speakers for this "first-ever" conference will include private landowners, wildlife and range managers from both the private and public sectors, members of the academic community, soil conservationists and conservation organizations.

They will address topics such as:

- Wildlife diversity on private lands
- Incentives for land management
- Defining stewardship
- Management tools
- Economics of wildlife diversity
- Historic land use and vegetation
- Integrating nongame and agriculture
- Exotic species

Other topics will include insect diversity as an indicator of ecosystem health, grazing management and nongame species, baseline surveys for herpetofauna, Texas horned lizard demographics, feral cats in the environment, small mammal diversity and prescribed burning, breeding bird surveys: results and implications for management, habitat requirements for neotropical migrants, colonial waterbird management, shorebird ecology and moist soil management.

Plus: Field trips to Aquarena Springs and J. David Bamberger's Selah Ranch

For more information, call (800) 792-1112, or write to:
Managing for Wildlife Diversity in Texas Conference
Nongame and Urban Wildlife Program
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Bart's Swan Song *continued from page 3*

A "Don't mess with Texas' horned toads" campaign would do several things:

- It would alert Texans to the reality that populations have dramatically declined in the past couple of decades (believe it or not, many Texans are ignorant of this fact).

- It would alert people to the single most preventable cause for decline, overcollection.

- It would let people know about HLCS and its goals.

- It would educate young people about species they probably have had no contact with.

- It would accomplish a first step that must necessarily precede further steps aimed at restoring populations- increasing public awareness.

Second, I would concentrate on expanding existing populations. This second step would be much safer if the fierst ster-raising public consciousness- were accomplished. Many HLCS members are aware of healthy horned lizard populations living within Austin's city limits. We keep their location secret out of fear that some well meaning individual might go there to "take one home for my kids to play with."

If we get the message out that taking horned lizards from habitat where they are surviving is *extremely hazardous to their health*, even when they are later released, then we can breathe easier about publicizing efforts to expand surviving populations. I think there is considrable interest in doing that, but it has to be made safe first.

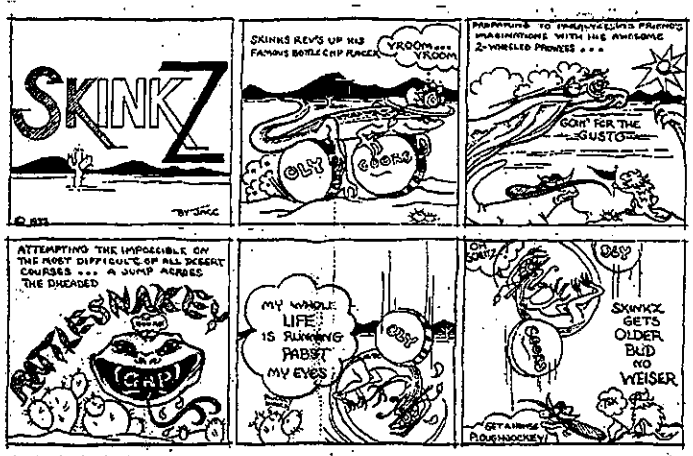
I am now convinced that the single most important reason for the dramatic decline in urban populations occurred because of property management practices that came into vogue in the fifties. Curb-to-curb grass became *de rigor* for "nice" urban homes. Patches of dirt began to be thought of as "holes" in the lawn. And, big, circular patches of dirt associated with red ant beds became intolerable.

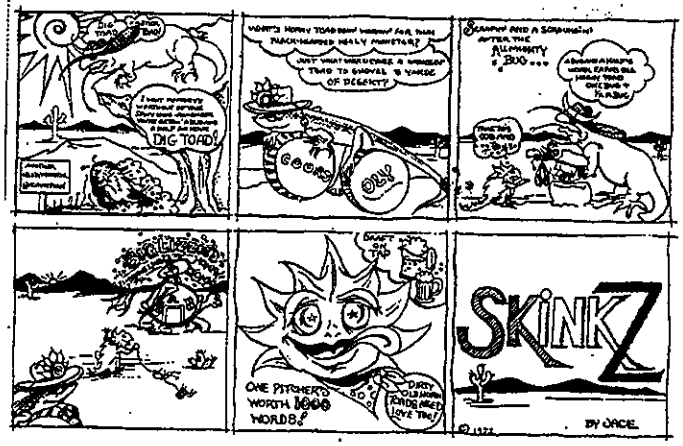
Time and again I have heard people say that "I used to have a few horny toads around until I got rid of those red ants." Of course, getting rid of ants meant the use of pesticides. Every existing population I know about exists because the property managers have carefully protected them, and a major part of that protection includes protecting red ant beds. Poison the ants, and you can say goodbye to the horny toads.

Property mangement that allows expansion of horned lizard populations is consistent with zeriscaping, and HLCS should form links with zeriscape advocates. One suggestion to add to zeriscape techniques or organic gardens and lawns is the provision of hiding places. Planter boxes, growing pots, lawn furniture and anything outdoors can be slightly raised on blocks allowing about an inch of space for horny toads (and other herps) to crawl into to avoid dogs and cats.

Well, those are my suggestions. I had hoped to start on the first one when my job situation interrupted. I do hope someone will take up the projects. Clare Freeman has taken over my duties as Treasurer, and I have no doubt she will do a better job than I did. Lee Stone is knowledgable about the people to talk with about a "Don't Mess with Texas' Horned Toads" campaign. Keep up the good work. God bless you.-Bart Cox

SKINZ-by JACE, Judith Peterson, 1982





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