

Texas Horned Lizard Population Survey – Pixie Preserve

Article & photos by Luciano Guerra

As the Texas state reptile, Texas horned lizards, also known as “horny toads,” are among the most recognizable species of wildlife across the Lone Star State. The fact that once abundant “horny toads” have all but disappeared from parts of the state has not diminished their popularity among Texans.



Many of my childhood memories include horned lizards. In my youth, I spent countless hours outdoors communing with nature. I remember being fascinated by these modern day dinosaurs as they scurried along the ground or feasted on harvester ants (their main diet) in my backyard and around my father’s wholesale plant nursery in south Mission.

Texas horned lizard (*Phrynosoma cornutum*) -photo by Diane Hall

The fact that most kids today have never seen a horned lizard saddens me. However, I had pretty much resigned myself to accepting the fact that their dwindling numbers were an irreversible trend and that they would eventually go the way of the margay and the jaguarundi.

This all changed for me when I attended the Texas Children in Nature Summit in Austin last December. I just happened to sit in on a presentation by staff from the Fossil Rim Wildlife Center, one of whom mentioned the fact that they were working with the Fort Worth Zoo to have captive bred Texas horned lizards reintroduced at their center.

Wait...WHAT? Horned lizards are being bred in captivity and released into the wild as a way of reestablishing populations on land they once inhabited? Why didn’t I know about this? I had just heard about this project, but I instantly knew it was something I wanted to get involved with. I didn’t know in what way, where or even when, but I was going to get involved.

Upon my return to Mission, I started researching this possibility. I came across the Horned Lizard Conservation Society (HLCS) Facebook page and website and I began reading their posts and articles. That was when I discovered that the San Antonio Zoo also has a Texas horned lizard breeding and reintroduction program. I also learned that the HLCS makes grants available for individuals interested in working with horned lizards.

Even though the application deadline was only a few days away and I didn’t have a specific project in mind at the time, I decided to apply for a grant. After all, what did I have to lose? But what would my project be? After thinking it over, I decided I wanted to work toward helping reestablish a healthy horned lizard population at Pixie Preserve, the National Butterfly Center’s

recently acquired 300+ acre wildlife refuge formerly known as Chihuahua Woods. I also decided that if I was going to approach the San Antonio Zoo about acquiring some of their horned lizards a good first step toward this goal would be to conduct horned lizard population surveys there to determine how many horned lizards already inhabit this property.

I quickly put my grant application together and I submitted it to the HLCS on the day before the deadline. Approximately three months later I was notified of the fact that my project had been selected to receive a grant. While I was thrilled, I knew that in order to do a proper and accurate population survey, I needed to be able to have the ability to record each and every horned lizard's individual data by weighing, measuring, sexing and photographing them. The only way to do all of this legally would be by acquiring a permit from Texas Parks and Wildlife (TPWD).

I contacted TPWD's Benjamin Anderson, who is in charge of issuing permits. Hoping to be issued a permit in my name, I soon found out that since the Texas horned lizard is a protected species in Texas, this was not likely to happen. However, I was told that it might be possible to have this permit added to the National Butterfly Center's (NBC) Educational Display Permit, which would be fine with me since I am on staff at the NBC.

After going back and forth with Mr. Anderson via e-mail over a three to four week period and addressing all his concerns about my project, the NBC was issued a permit that would allow the hand capture of horned lizards at Pixie Preserve and the handling of them for as long as necessary to collect the target data before releasing them at the site of capture. As the NBC's executive director, Marianna Trevino Wright was designated as the permittee and Stephanie Lopez (my collaborator on this project) and I were designated as the only two sub-permittees.

I believe that one of the reasons we were successful in obtaining this permit was because I made it clear to Mr. Anderson that the volunteers we would recruit for this project would be fellow Texas Master Naturalist (TMN). I did not know how many TMN members would actually volunteer, but I figured we'd make it work with however many did. My goal however was to have four teams of four people each, so 16 was my target number.



Texas Master Naturalist volunteers at Pixie Preserve

The plan was to do an initial survey as soon as possible, and two or three follow-up surveys approximately three months apart from each other. While the initial survey had to be postponed several weeks due to scheduling conflicts, we ended up scheduling it for August 12. I contacted both the South Texas Border Chapter and the Rio Grande Valley Chapter of TMN about this

volunteer opportunity. The response we received was amazing. While we had more than 20 TMN members wanting to volunteer, several were not available on the 12th. I did however submit all the volunteers' names to TPWD so that they could be added to the permit as sub-permittees, as required by the state of all participants in a project such as this.

On the morning of August 12, we had 17 volunteers show up to assist with the survey. We met at the NBC for a review of how we would be documenting sightings of horned lizards, their scat and/or harvester ant mounds. We also demonstrated techniques we would be using to capture the horned lizards themselves. Finally we assigned each volunteer to one of the four teams and handed out supplies and maps with each team's section highlighted in a different color.



For 90 minutes or so the four teams walked their respective sections at Pixie Preserve in search of horned lizards, their scat and/or harvester ant mounds. Each of these they came across was pinpointed with GPS coordinates and was marked with a surveyor's flag. This was done to facilitate follow-up surveys, since these areas would be designated as hot spots for possible horned lizard activity.

Teams of four scout for signs of Texas horned lizards at Pixie Preserve

Knowing we would only be able to cover a small portion of the property during the time we had available to us, we focused on the more open and arid areas. These sites are the preferred habitat for horned lizards and they were more accessible to us. Upon completion of the survey, everybody returned to the NBC to review our findings and to discuss what, if anything, could be done differently during the follow-up surveys.

While no horned lizards were found during this initial survey, there were 16 harvester ant mounds pinpointed and flagged and nine lizard scat specimens found, documented and collected. Whether any of these are horned lizard scat or not has not yet been determined. However, if they are proven to be from horned lizards, the exact location they were found will be searched extensively during the subsequent surveys.

I wish to thank all the volunteers that participated in this survey for the part they played in making it such a success. Thanks to their efforts, we are now one step closer to determining the current population of Texas horned lizards at Pixie Preserve, and one step closer to the eventual goal of helping to establish a healthy population of our beloved horny toads there. Well done!