



Detail of the external appearance of one hide area constructed for Guatemalan Beaded Lizards (*Heloderma horridum charlesbogerti*) at Zoo Atlanta. The plastic tube connects to the deep shelter surrounded by flat stones.

The Guatemalan Beaded Lizard Breeding Program at Zoo Atlanta

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Photographs by Jason Brock, Zoo Atlanta



In the ongoing effort to reproduce potential founder animals at Zoo Atlanta, we have recently modified an outdoor enclosure to hold our Guatemalan Beaded Lizards (*Heloderma horridum charlesbogerti*). The captive reproduction of these specimens is an important part of the overall “Project Heloderma” program for Zoo Atlanta and its partners, the International Reptile Conservation Foundation and Zootropic. Our lone female and our three males were wild-caught adults when brought into captivity and are of unknown ages. Thus, with every year that goes by, they get that much closer to being non-

reproductive. In addition, the female has had two surgeries to remove cystic (fluid filled, non-viable) follicles from her ovaries. The good news is that prior to the surgeries that removed the diseased follicles she had not produced any eggs — but has since ovulated successfully. In 2005, she produced six yellow, non-calcified, and non-viable eggs, and, in 2006, she produced four similar eggs.

To no one’s surprise, when the lizards were placed outside in the sun, their behavior changed to more closely reflect that of their wild counterparts. With that information, all five animals



Outdoor habitat for Guatemalan Beaded Lizards (*Heloderma horridum charlesbogerti*) at Zoo Atlanta.



The outdoor Guatemalan Beaded Lizard enclosure showing the hide areas and logs used for climbing.



Male Guatemalan Beaded Lizard taking advantage of a sunny patch for basking on a cool morning.



were placed outside this past June. The enclosure and the hide areas were designed to “resemble” some of the structures we had seen in their native habitat in Guatemala. The hide areas were

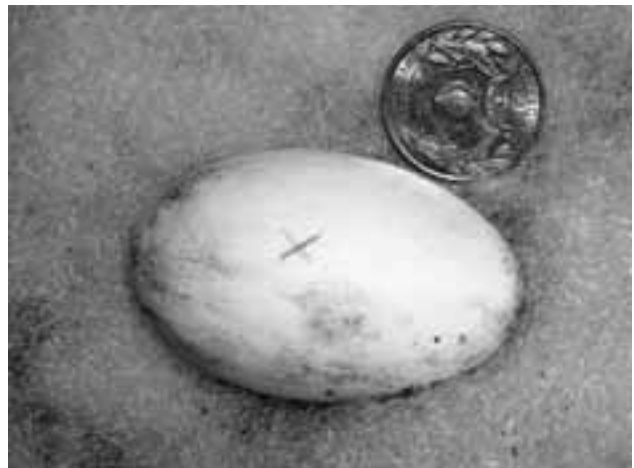
dug into the ground so that a cool, dark, humid environment was created. Logs and grasses were placed in the enclosure for security and to provide climbing structures. After a very short



Detail of the hide area. They are dug into the ground to provide a cool, humid, and dark shelter.

(2–3 day) exploration period, during which the lizards were constantly on the move, tongue-flicking every inch of the enclosure and the structures within it, they settled into a routine. This routine, however, was much different than the behaviors observed in their indoor enclosures. Inside, lizards moved very infrequently and were very docile in interactions with the staff. Outside, they would lie at the entrances to their hide areas until the sun struck the enclosure, and then they would bask for a few hours, especially on cool mornings. If a person entered the enclosure when a lizard was out exploring, that animal would “run” very quickly to a shelter and “dive in.” In addition, if the entrance to a hide was blocked, the animal would rear up and give an open-mouthed hiss.

All of these new behaviors were great! In September the males began to fight, and were observed copulating with the female. Soon, she was evidently gravid and ultrasound revealed large follicles, but without the extra fluid usually seen in her coelomic cavity. In the previous two years, when she had large follicles or eggs present, she retained a large amount of fluid along with them. This time, however, she did not. An ultrasound a few weeks later revealed six shelled eggs. Over a four-week period in late September and November, she laid six eggs, and four appeared viable. Those four were very white in color and had nicely calcified shells. Unfortunately, none of the eggs had the blood spot that is present within a day or two and sig-



Guatemalan Beaded Lizards have relatively small eggs. This is an egg from 2007 that is the normal white color with a nicely calcified shell.

nifies viability. Over the next three to four weeks, no development was observed and the eggs contracted.

During the upcoming breeding season, we will place all of the animals in outdoor enclosures in the early spring and leave them there until fall. We are very excited that this year will be the year during which the first fertile eggs are produced in captivity. Stay tuned.

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