

YOUTH IN SCIENCE

The following research article was submitted to us by an 8th grade student from Gretna, Louisiana. It was originally entered as a science project at her school, and, we are told, "the judges were fascinated" by it. The International Iguana Society would like to congratulate and thank this future scientist for her enthusiasm and interest in iguanas and wish her success in her new career.

The Green Iguana in Captivity: *Do Iguanas Have the Ability to Adapt to Common Environmental Stimuli?*

Jane Cagle

Introduction

This was a project dealing with the common Green Iguana. The point was to prove that iguanas can adapt to common noises and color. Basically there were two parts to my experiment. An Auditory Response part and a Color Response part (visual). For the color response part I used cloths and for the Auditory part I used a cassette tape with various sounds on it. The point I wanted to make is that I believe my hypothesis ("I think iguanas have the ability to adapt to changes in their environment") is correct.

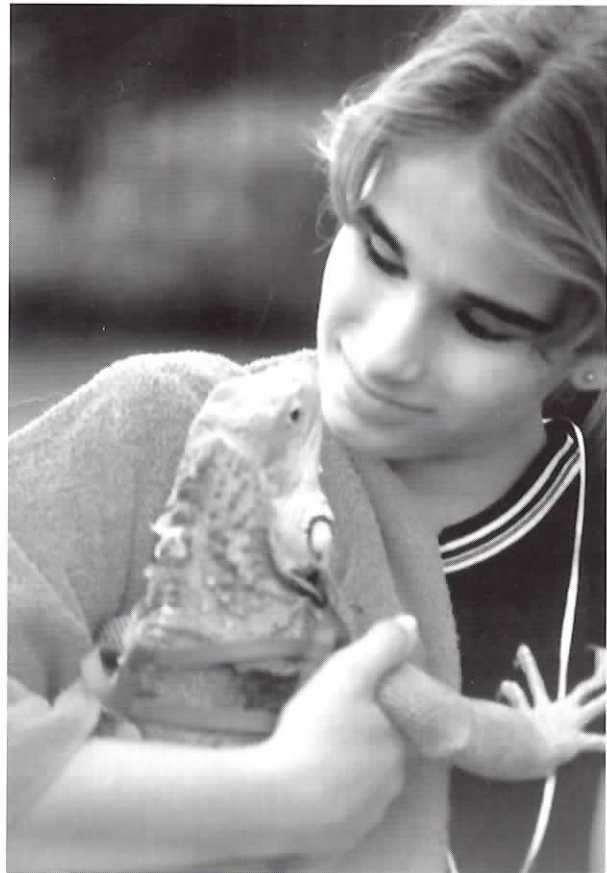
My project included 2 five and a half foot long iguanas. What I had hoped to achieve in this project is that I wanted to test them and see if they adapted to different colors and sounds.

The procedure I did is as follows: I did the Color Response test with different colored cloths such as bright red, metallic aqua, etc. I tested 9 different colors with them altogether. When they liked a color, they did not respond with any kind of enthusiasm. In other words, they just looked at it. However, when they did not like a color, they became stressed. When becoming stressed they had these symptoms: pupil dilation, the dewlap being out, heavy breathing, leaning to one side and wild eyes.

For my experiment, the iguanas were known as Subject A and Subject B. Subject A was a 3 year old male who was 5 and a half feet long and 8 lbs. Subject B was a 4 year old female who was 5 and a half feet long and weighed 9 lbs. When they were tested with colors, they responded slowly in the beginning, but more easily towards the end. The first color they encountered was hot pink. This alarmed Subject A the first couple of days, but the last recorded result was that he was mildly

stressed instead of extremely stressed. As for Subject B, she started out with almost no stress at all!

Another color they experienced was dark blue. Although it is a dull color, it still frightened Subject A. Subject B pretty much had no stress. In my opinion of the two, I think Subject A was a little more nonrelaxed. When he was bought 3 years ago, he had been wild and since then he has not



Jane Cagle with Tigger Lee, a 4-year-old, 5 foot long, male green iguana, weighing in at 8 lbs. Photograph: Florence Cagle

changed. Subject B, on the other hand, had been a stressful specimen, but adjusted better.

The next cloth material was grey fur. Subject A didn't mind this and Subject B had many written as "no stress." The next color choice was Bright yellow. Subject A of course did not like this, but Subject B was stressed—she tried to bite it. There really is one solution for this: iguanas like bananas, especially Subject B. She probably mistook the brightly colored hue for a banana.

Another color was emerald green. Subject A surprisingly did not show any stress towards this color. Subject B also had "no stress" on her part of the chart.

An interesting color tested on them was metallic aqua. Subject A was mildly stressed at this color, while Subject B was extremely stressed. Although not every color is listed, this is just a brief summary of what my experiment was like for the Color Response.

The other part of my project consists of sounds. This is my Auditory Response chart. The same subjects that were in the Color Response chart participated in this section. The following tested were different sounds such as songs, and other common noises.

One of these sounds was rap/R&B. Both of the subjects listened to the wacky, sultry group, Salt & Pepa. Neither Subject A, nor Subject B liked this selection of sound. I think they didn't like it because to them it probably had a negative tune, and created much confusion with the rapping and the bass being so loud.

The next selection picked out for them was country music sung by Merl Haggard. They also did not like this piece. There was a steel guitar in the song that they did not show much interest toward. Besides both of the iguanas reactions they got used to the sounds pretty well.

Out of all the selections, I would have to say that opera was their favorite. They made no attempt to stick out their dewlap and had no pupil dilation. They pretty much sat on their cages and acted natural.

Other than these sounds, there were some sounds that Subject A did not get used to. The sound that he never adjusted to was the sound of a weed wacker. Every time this sound was played he would run under the couch. He wasn't stressed, but he was merely trying to save himself from the dreadful noise. This, I believe, proves

that iguanas in captivity can adjust to sounds and colors. Therefore, my hypothesis was accurate: I think iguanas have the ability to adapt to changes in their environment. In conclusion iguanas are considered to be intelligent animals.

Materials and Procedure

Materials:

- Cloth (different colors)
- Audio tape (cassette)
- Tape player
- Two 5 and a half foot long, green iguanas
- Data book

Procedure:

1st step: *Color:* I showed the specimens the colored cloths. *Auditory:* I made them listen to different sounds on the cassette.

2nd step: *Color:* I copied down both of the responses in my data book. *Auditory:* same as color.

3rd step: I rearranged all my information into one whole report.

Conclusion

In my conclusion, I would like to say that I agree with my hypothesis 100%. I pretty much proved that iguanas do have the ability to adjust to their surroundings. I proved that once exposed to different colors and sounds, the iguanas would eventually get used to seeing and hearing the same things every day.

Results

As it turned out, my results agreed with my hypothesis. Iguanas can adjust to their surroundings. The male iguana just did not adjust to a couple of things but the female did fine. Even though the male did not pass every test, he still did well. My honest opinion is that females are easier to work with and it is a well known fact that females are easier to train because I trained my female iguana to go to the bathroom on newspaper like a dog.

Note: If Jane looks familiar to you, there's a good reason—this isn't her first appearance in *Iguana Times*. A photograph of her sitting with a friend accompanied an article in Volume 3, Number 1, March 1994 (page 20).