

Can Burmese Pythons Learn To Hibernate?

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Introduction

This was going to be my science project for the Science Fair in April, but it didn't work out like I planned. I like snakes and I wanted to do an experiment with snakes. My cousin is 19 and he's real smart about snakes. He has a Burmese python and he lets me play with him so I know all about them. My cousin told me he heard on television that Burmese pythons got loose in Florida and we could go down there and catch some and maybe we could be on TV, too. He said he read in the *Christian Science Monitor* that pythons were going to invade the United States. I said I thought it would be cool when they live here, but he said he didn't think so because they don't hibernate and all the snakes around here have to hibernate real tight. I got to thinking about that and I remembered that Mr. Robal always says that "don't" doesn't mean the same as "can't." I figured that maybe those pythons might be able to learn just how snakes around here hibernate if they had the same kind of hiding places. I thought maybe I could even get on a TV show on that Animal Planet channel if I could teach those pythons how to hibernate.

Materials and Methods

First I had to get some pythons. I asked my cousin and he checked with a friend he knows who has lots of babies every year. He said sure, he'd help with my experiment and he gave me 10 pythons that he hatched right here in Sreland at the beginning of summer. He said they were eating him into the poorhouse and he'd like to get them a good home. Actually I heard from his sister that my cousin gave him some money for them, which was real nice but they must have not cost too much since my cousin never has any money.

Then I had to figure out how I could do my experiment. My Uncle Twit was over for dinner one night and I had a brilliant idea. See, Uncle Twit is the manager of the county public swimming pool. Only he was all mad and sad because the county doesn't

have any money and they decided to close the swimming pool. In fact, they were already beginning to fill the swimming pool with gravel to make it into a tennis court on account of the daughter of the mayor playing tennis and making it to state last year. So I asked Uncle Twit if I could do my experiment in his swimming pool and he thought it was a great idea because maybe if they didn't fill the pool all the way up this winter, then come spring maybe they might get some money and open the pool back up. He said they don't have money to make a tennis court anyway. He figured the county chain gang could shovel all that gravel back out in a couple of days if they decide to open the pool.

So Uncle Twit asked the mayor and everyone said it was OK since it was science and all, and I got to use the swimming pool. The pool was 50 feet wide and 110 feet long. The shallow end was 30 inches deep, which was a problem since my longest snake was 38 inches. The deep end was all filled in with gravel and it was about 4 or 5 feet deep, so I had my daddy build a divider out of some old sheet metal roof panels across the pool so I could keep the snakes on the gravel. He built a gate in the divider fence and to get in to where the snakes were I jumped down into the shallow end and then went in the gate. The gravel was about 4 or five feet deep down to the concrete bottom of the pool out in the middle. I had my daddy put some sheet metal around the two ladders so the snakes couldn't crawl out up them. Then we all figured it was pretty much escape proof.

I don't think my teacher Mr. Robal really thought I was going to do this project, but then when I told him that I got the snakes and I got the pool to keep them in, he told me I had to get special permission to do a science project with live animals. I had to write a little paragraph about what I was wanting to do and how I was going to do it. We sent it off to the University of Georgia Animal Care and Use Committee. They wrote back and said that since it was snakes, they didn't care and just go right ahead.

I figured that if I called the pool an "environmental chamber" it sounded a lot more like science. So I set about outfitting the environmental chamber. First I got a big old round stock tank, 10 feet in diameter and 20 inches deep. It's a low tank because it's made for hogs, and it made for a perfect pond for the snakes. My daddy got the tank from a neighbor that doesn't raise hogs any more since the giant commercial hog farms put all

the local people out of business and it was still in pretty good shape. I put about four or five long branches in the tank.

Then I made some good places for the snakes to hibernate. I buried a plastic 30 gallon trash can so that about 8 inches was up out of the gravel. I cut about a 3 inch hole in the top level with the gravel and I put a bunch of straw down in the trash can. That way the snakes could go down in the trash can, get down about 30 inches in some nice dry straw. I could pop open the trash can lid and look down on them to check on them down there. I thought it would be dry in the can, but I cut a hole in the bottom just in case some rain water got in the entrance hole I made.

I also buried two ten foot drain pipes so that one end was up and the other was buried down about 3 feet deep. I figured this was a lot like a gopher burrow. I couldn't get my hands on a snake down in the bottom, but I could look down on them with a flash light and see if they were in there.

Then I took apart two bales of straw and I fluffed it all up in a big pile in the middle of the environmental chamber. I took two sheets of plywood and covered over a bunch of the straw so the straw under them would keep dry. The snakes could get back up under the plywood and down in the straw and be pretty comfortable.

Releasing the Snakes

By the beginning of October I had the environmental chamber ready for the snakes. I planned to let the snakes go on October 10. That was a Saturday, so I could spend that day watching the snakes and also on Sunday. My mom called the TV station in Augusta during the week and on Saturday they had a television reporter out to cover the release. That night I was on the news. It showed me for about 30 seconds holding my biggest python. He really was pretty nice, but I was holding him by the head and that made him open his mouth so he looked a lot meaner. I was pointing out what I did in the environmental chamber, but mostly the TV reporter did all the talking. I put the snake down and he went right in that trash can. The TV reporter made me promise to call him in the spring when the snakes were done hibernating, so he could do a follow up story about how pythons were going to invade Georgia and South Carolina and all over the place.

Results

It didn't work. I mean all those pythons died, every single one of them. It started out great. The weather was warm and those pythons were crawling around and looking good. A couple of times my cousin got me some mice and I let them go in the environmental chamber and they all disappeared in a day. A couple of times I actually saw a python catch a mouse and eat it, but mainly I think the pythons were mostly moving around and eating at night. Some of the snakes just got in the water and stayed there most of the time. Mostly though I think they were moving around because three times each week after school got out my mom took me over to the pool and I checked on them and almost every time they were in different places. There were only a couple I couldn't tell apart, and I made notes on where each one was when I checked.

When December came around the temperature at night got down close to freezing and the days weren't all that warm, either. But it was warmer down in the environmental chamber and protected from the wind and the pythons were all moving slow, but they seemed to be ok. When I got there in the afternoons I could see the ones in the pool but I had to look around to find the others. Once in a while they seemed to be out sitting in the sun, but mostly they stayed under cover.

The funny thing was that they were moving at night when it was cold. At least they did one weekend when I checked them on Saturday afternoon and then we stopped in on Sunday morning before church. The snakes were all tucked away, but seven were in different places and it had been cold that night. I was wearing my parka that morning.

Right after that they all started dying. I found two laying out dead that next week. One was coiled on top of the straw and looked just like he was basking in the sun. The other was all twisted up over on the gravel. Then on the night of December 11 it got cold enough that we had skim ice form and Saturday morning I found two pythons with their heads frozen in the ice on the pool. I thought they'd crawl out and get in the warm straw but they didn't. Also I found one that morning stretched out along the edge of the cement side, laid out nearly straight and as stiff as a frozen dog's leg. It wasn't anywhere near all the shelters I had built for them.

After that I had my mom take me to Radio Shack and I bought a battery powered remote thermometer. I could put one part down in the trash can or under the plywood and then read the temperature with the other part if I was standing about 10 feet away. It also gave the coldest and hottest temperatures that had happened in the day before. It was 45 degrees down in the bottom of the trash can and down at the bottom of one of the drain pipes. Then right before Christmas the python down in the drain pipe started to smell dead. My cousin took me back the next day and he got that python out with a catfish hook on the end of a piece of bamboo, and sure enough he was real dead and smelled especially bad when we got him out. That next day I found the eighth dead python and this one was laying right on top of the skim ice. He apparently crawled out from under the plywood and tried to get in the pool, but it was frozen.

I was left with two pythons and both were sitting down in the trash can, under the straw, and they hadn't moved since the first of December. My thermometer said the temperature down there was about 45 at night and maybe a little warmer in the day if it was sunny. Then the weather turned bad and we got a cold snap right after the start of the year. There was snow on the ground. That second day I checked the temperature when I got there and it was 38 degrees down in the trash can. I checked the snakes and they both were all twisted up and dead.

Discussion and Conclusions

My project had a couple of problems. First was the weather. If it hadn't have been for the weather, everything would have worked fine. My cousin showed me a map on the internet of where government biologists say the climate is good for pythons and here in Sreland we're way inside the area of good climate. Well maybe pythons can live in our climate, but I can tell you they can't live in our weather. Maybe if this had been a warm winter my pythons would have done just fine and everyone would have said my experiment was a big success. I wasn't that lucky. Eight of the pythons died even before the cold snap hit.

Another big problem was that all my pythons seemed to be stupid. For example, how smart does an animal have to be to know to stay out the water when it's freezing? I think that if I kept trying then maybe I could get pythons to evolve and I think evolution

makes animals smarter. But every time I found those snakes out in the cold, I would carefully move them back into a warmer shelter, and they would be right back out into the cold as soon as I turned around. It was like they didn't even know that the cold was dangerous.

I've been thinking about where pythons would sit in the winter if they were loose here in Sreland. These pythons I had here were just little ones. I can't think of anywhere where a big python could hibernate in the winter, even if he could learn to hibernate.

I learned to never make a promise to a television reporter. When it got to be spring he called my house and wanted to know when to come out and film my snakes. I told him it would be pretty hard since they all were buried in my back yard. That night on the television news he said that people could relax because pythons weren't going to be invading us soon. He said that the school boy that was trying to teach pythons to hibernate had them all die. He didn't even say my name. I thought that wasn't so bad, but then a lot of people wrote in to our local newspaper and to the *Augusta Chronicle* saying that any boy who put tropical snakes outside and let them freeze to death while he watched must need some therapy. I'm not even sure what therapy is, but they didn't sound nice. A lot of people said it was pure animal cruelty and one day the animal control people even came over to the school and questioned me about my project.

But the worst part was that my teacher, Mr. Robal, said he thought it was cruel and wrong to just watch the animals die. He said I did do a lot of work, and at least he wouldn't flunk me, but I couldn't enter the Science Fair. Mr. Robal said that there wasn't anything scientific about my project and no reputable scientific journal in the world would publish a paper about a scientist freezing animals to death just to make a point.

Well I never wanted to be a scientist. I just wanted to be on television.

[A parody of: Dorcas, Wilson and Gibbons. 2010. Can invasive Burmese pythons inhabit temperate regions of the southeastern United States. *Biological Invasions*. online at: DOI 10.1007/s10530-010-9869-6.]