

**Q: Can you give an overview of how you breed ball pythons?**

Ball python breeding is about finding a balance between cool enough temperatures to stimulate breeding but moderate enough temperatures to prevent premature ovulations and respiratory infections. I use a moderate temperature swing to stimulate follicular development and spermatogenesis, and then to switch to a maintenance temperature to prevent premature ovulation. This method has given me good breeding success, extremely few slugs, and (knock on wood), no respiratory infections to date. Everything I do is governed by “listening” to my ball pythons and letting them guide my actions. Even though they don’t speak and have no limbs, they still communicate. You just have to spend enough time with your animals to know what they are saying.

**Q: Describe your temperatures for breeding ball pythons.**

Roughly my temp cycling can be divided into two phases: a “stimulation” phase and then a “maintenance” phase. The stimulation phase starts around mid November, where I begin dropping heat tape temps from their regular 89 down to 82 in 12 hour cycles. This goes on until roughly February 1<sup>st</sup>, where I put the heat tape a constant 85ish. The heat tape will remain at this temperature until a female lays her eggs, at which time I use my multiple racks and multi-zone thermostats to get her back onto 89 degree heat tape so she can eat and on weight for next year. Throughout this time, the room is roughly hi/mid 70’s, rarely if ever dropping below 75 degrees. Particularly during the maintenance phase with 85 degree heat tape, the room will never be cooler than 78 degrees anywhere in the room. I use no form of light cycling what so ever. When I’m in the room the lights are on, when I’m not in there the lights are off. I offer food weekly, when the heat tape is down to 85 the meals are smaller in size than they were when the heat tape was 89 degrees. Males should be “athletic” females should be “plump.” Other than that, I don’t pay much attention to strict weight requirements.

**Q: Why do you use the temp cycling method that you do?**

The stimulation phase imitates a change in seasons, signaling the females to begin follicular development and to stimulate spermatogenesis in the males. During the stimulation phase, I will also take a mature male’s shed, put it in a water sprayer, and spray all the females down with it. I do this 2-3 times. This lets the girls know males are present and (I hope) also stimulates follicular development. The \*key\* to not slugging out is temperatures, in my opinion. The 85 degree point is somewhere around the temperature that can accidentally trigger a female to ovulate prematurely and give slugs. Staying right around this temp prevents that from happening. Another issue is the retention of sperm, which I talk about next.

**Q: How many locks do you need? Doesn't few locks cause slugs?**

My goal is one lock per month, starting in January. Rarely do I actually achieve this, especially with high dollar males. The 85 degree maintenance phase allows sperm to be retained for quite some time in the females, so I don't get slugs even if I've only had 1-2 locks with a female. If females are constrained to higher temperature, say 90+, this would more quickly denature the sperm inside her. Thus the 85 degree point represents a delicate balance of 1) allowing the females heat to stay healthy and eat 2) allowing sperm to survive within the female for extended periods of time until ovulation and 3) preventing premature ovulation. In my years of breeding, I average 6-7 eggs per female with only a handful of slugs every year. During the hottest two months of the summer, I allow the room to rise to mid 80's and provide the 89 degree hot spot in an effort to "burn off" the previous year's sperm.

**Q: How many females to one male?**

As you start out, 1:4 or 1:5 Male:Female is a good ratio. Depending on the male, I extend this to 1:7. If I had an ultrasound, I could probably do 1:10. Once again, it's all about knowing your animals, knowing if they need rest, and avoiding pushing them too hard. I don't shoot for a billion locks, so I stretch my males to more females. Most of all, I really listen to my males and make sure I am not over exerting them. Breeding is hard work for them, so if they are looking thin they get more rest. If they are still feeding, they get less rest and do more breeding. So the range of breeding days per week is about 5 breeding days/week for a male in tip-top shape and only 1 breeding day per week (or less) for a male that is nearing his total effort for the season.

**Q: What about respiratory infections?**

I'm happy to say I'm not an expert on RI's because I have yet to have one. I think there are several key factors which help to prevent RI's. The first thing is husbandry. I keep all my breeders on newspaper, and I change it often (checking each animal 3x per week, minimum). I use Chlorhexadine to sterilize the tubs and disposable water dishes, changed often. A clean environment is key. Another potential factor is air quality. I have 2 HEPA filters and 10 pounds of activated carbon going in the room at all times. If you were to walk into my snake room, you'd barely know there were animals present. My animals are not in a basement, and so I think the fresh, clean air also helps to prevent RI's. Third, and I think most importantly, is temperatures. Some breeders shoot for a drastic temperature gradient: very cool on the cool side (75 and below) and very hot on the hot side (90 and above). If that's the case, how much of the tub is actually in the 80-85 degree temperature range? Is it enough of an area for a female to fit completely? If so, is she actually smart enough to know she needs to find that temperature? Or is will she choose the hot side to avoid getting sick, but as a result slug out? Or will she choose

the cool side to produce viable eggs, but then be stricken with RI? I shoot for a narrower temperature range during the critical months of breeding in order to achieve a balance between viable clutches while keeping my animals happy and healthy. When I say a low of 75 in the room, I really mean it. I use a temp gun to take many, many different readings on the coolest parts of the room ensuring none are very far from this target minimum temperature. Some might *\*think\** their room is a low of 75, only to find during the coolest part of the night or in certain corners it is actually much, much cooler. If you do find a ball python coming down with an RI, get it to a warmer enclosure and seek veterinary assistance immediately.

### **Q: This sounds like a lot of work?**

On the one hand, it is an amount of work (and we haven't even started talking about taking care of babies). On the other hand, start small and have fun, then work your way up to more animals as the process become more natural for you. Through it all, never lose touch with your animals and the fact that they are living, breathing, and sometimes temperamental creatures that don't follow rules laid down on paper! ☺ Most of all, have fun and enjoy the surprises along the way!