# **Burmese Python (Python bivittatus)**

### **Difficulty: Advanced**

Burmese pythons are giant, thick-bodied, constrictor-type snakes with smooth scales, a rectangular head, vertical pupils, and heat pits on the snout and lips. Although a variety of different colors and patterns have been produced in captivity (a.k.a. "morphs"), wild-type burmese pythons generally have striking pattern of brown blotches with dark outlines against a beige to golden background. There is a typically a triangular marking on top of the head, with another marking that passes through each eye. Lifespan in captivity is generally 20-25+ years.

Burmese pythons are famous for their impressive length, averaging around 16' (5m) long, but as short as 10' (3m) and as long as 22' (6.7m) are possibilities. There are also some dwarf localities/subspecies (Java, Bali, Sumbawa, Sulawesi) which max out around 8'. Female burmese pythons are generally substantially heavier than males, though not much longer.

Burmese pythons are native to tropical southern Asia west of southeastern China and Vietnam and have a well-established invasive population in Florida, USA. They generally prefer tropical forest, but can also be found in grasslands, warm temperate forests, and mangrove swamps, and are often associated with fresh water.

Before getting a burmese python as a pet, it is critical to consider that these are intelligent, extremely large animals (think of them like keeping a horse — or perhaps a gorilla — in your house). Furthermore, although this reality is often downplayed by enthusiasts, the fact remains that their size makes burmese pythons potentially dangerous animals to keep as a pet. If you wish to care for this animal, you must be aware of the risks and willing to take appropriate precautions.

It is the author's opinion that generally speaking, burmese pythons do not make good pets and are better suited to the capabilities of professional zoological institutions. (An exception may be made for dwarf burmese pythons where available.) If you know what you're getting into and provide appropriate burmese python care, however, they can make rewarding pets.

Burmese pythons are illegal to keep in some US states. Make sure to check with your local laws before planning to get one!

# **Shopping List**

Burmese pythons are giant snakes, and this makes them very difficult to properly house for most people. **The following list applies to burmese pythons <8' long.** Information on what you would need to accommodate a larger burm can be found in the rest of this care sheet.

- 8'L x 4'W x 4'H reptile enclosure (frontopening)
- Dual dome lamp fixtures, x2
- 75w halogen flood bulbs, x2
- Rheostats, x2
- 46" Arcadia/Zoo Med T5 HO Forest UVB bulb
- 48" Arcadia/Vivarium Electronics T5 HO fixture
- 34" ~6500K LED plant light, x2
- Power strip with digital timer
- 2 gallon pressure sprayer
- 80 gallons coconut husk substrate

- Large climbing branches, at least 2
- Sturdy artificial foliage
- Digital probe thermometer and humidity gauge, x2
- Infrared thermometer
- 30 gallon utility tub (for water)
- Aquarium siphon
- Low-D3 all-in-one reptile supplement powder
- 24" soft-tipped feeding tongs
- Veterinary disinfectant
- Spray bottle (for disinfectant)

## Housing

A snake's enclosure should be at least large enough to allow the animal to stretch out to its full length as desired. Since burmese pythons are semi-arboreal (meaning that they spend part of their lives in trees), you must also allow enough height for climbing/perching. This leads to a fitter and overall healthier snake both physically and psychologically.

Since burmese pythons can vary widely in adult length based on their genetics, rather than recommend a one-size-fits-all approach, here is a formula for calculating the appropriate minimum enclosure size according to the snake's projected adult length: Length = snake length; Width = half snake length; Height = as tall as possible

If you have a juvenile burmese python, the best way to estimate its adult size is to talk to the breeder. Ask about the length of the mother and the length of the father. If you have a male, it will likely end up similar in size to the father. If you have a female, it will likely end up similar to its mother.

Of course, if you have a burmese python estimated to grow 16' long, providing an enclosure exactly 18' long and 9' wide or may be unrealistic, as at that point it's generally better practice to convert a room or small outbuilding for the purpose. In this case, **you can also estimate minimum enclosure size by calculating the floor space of such an enclosure** (in this case 128 sq ft) and using that number as your minimum/target for the enclosure.

To build your own enclosure, I recommend checking out <u>DIY Reptile and Amphibian Setups</u> and <u>Giant Leaps in Giant Husbandry</u> on Facebook for resources and advice on building reptile enclosures.

Using an enclosure larger than the minimum is strongly recommended. *Bigger is always better as long as the space is useable to your pet!* Burmese pythons have a reputation for being sedentary and sitting curled up all day, but this is also a behavior observed when they are kept in undersized enclosures. When given the opportunity, they will happily cruise every inch of the space given them.

### Can multiple burmese pythons be housed together?

Burmese pythons are solitary animals which naturally live alone for most of their lives. Forcing a roommate upon them is likely to result in unnecessary stress (not to mention the immense enclosure that would be required!). In other words: No, it's best to house burmese pythons individually.

## **Lighting & UVB**

Although generations of burmese pythons bred in captivity have proven that UVB lighting (or lighting of any kind beyond that in the room) is not necessary to survival, they are inevitably exposed to sunlight and UVB radiation during their daytime activities in the wild, and therefore likely to benefit from what these resources have to offer. For these reasons, *ReptiFiles strongly recommends providing daylight and UVB lighting to burmese pythons in order to promote optimum welfare*.

Lights should be on for 12 hours/day and completely turned off at night. If you wish to practice seasonal cycling, they should have 13 hours of daylight during summer and 11 hours during winter. Alternatively, you can sync your snake's lights with your local sunrise/sunset times.

### **UVB Lighting**

UVB lighting can be tricky, because in order to get the right strength of UVB (UV Index, or UVI), distance and potential mesh obstruction must be considered. The basking branch should be placed as follows. Given distance is from the snake's back to the UVB lamp.

- Zoo Med T5 HO Reptisun 5.0 or Arcadia Forest 6%
  - o mounted over mesh 12-15" / 30-38cm
  - o mounted inside enclosure 14-17" / 35-37cm
- Zoo Med T5 HO Reptisun 10.0 or Arcadia Desert 10.0
  - o mounted over mesh 18-22" / 45-55cm
  - o mounted inside enclosure 21-26" / 52-65cm

(These recommendations are approximations based on available data. For best results, use a Solarmeter 6.5 to determine the best placement to achieve a UVI of 2.0-3.0 in the basking area.)

Your UVB bulb must be long enough to span half of the enclosure and placed on the warm side of the setup. This bulb should be housed in an <u>Arcadia ProT5</u> or <u>Vivarium Electronics</u> reflective fixture (yes, brand matters).

### **Additional Illumination**

Halogen and UVB lamps aren't enough to create the kind of bright light that simulates daytime, particularly not in a big burm enclosure. You will also need a strong ~6500K LED grow lamp like the <u>Arcadia Jungle Dawn LED Bar</u> or <u>Bio Dude Glow & Grow LED</u> to meet this need. Your LED(s) should span most of the enclosure's length.

## Heating

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. Burmese pythons, however, are *cold-blooded*, which means that they have to move between areas of different temperatures in order to regulate their body temperature. This is the range that works best for keeping burmese pythons healthy:

Basking: 90-92°F (32-34°C)
 Cool end: 80-88°F (27-31°C)
 Nighttime: 78-82°F (26-27°C)

In captivity, using incandescent heat bulbs is the best way to replicate the way the earth is warmed by the sun. Because burmese pythons are large and require a warm tropical environment, ReptiFiles recommends using a cluster of at least 4 75w halogen flood bulbs such as 75w PAR30 generic halogen flood heat bulbs, 75w Arcadia Halogen Flood Heat Lamp, 75w Zoo Med Repti Tuff Halogen Lamp. This combination is likely to deliver the best results by heating the snake's body evenly with high-quality short wave infrared radiation.

If your heat lamps are mounted inside of the enclosure, make sure to cover them with <u>bulb cages</u> to prevent your snake from accidentally getting a nasty burn!

### How to measure temperature in a burmese python enclosure:

To measure basking temperature, you will need a digital probe thermometer placed on the basking surface. Zip ties often work well for holding probes in place on branches, while silicone or grout can be used to secure them on other surfaces. For monitoring the cool end, you will need an additional digital probe thermometer placed in the shade in the middle of the setup. Most reptile-brand digital probe thermometers function well for this purpose.

If you notice that your basking area is getting too hot, dial it down with a <u>rheostat</u> or <u>proportional (dimming)</u> <u>thermostat</u>. If your basking area is too cool, you will need higher wattage bulbs.

## **Humidity**

Burmese pythons are a tropical species, and they are often found near bodies of water (remember, this species spends a significant amount of time in water in the wild). This means that they need high levels of humidity in

their enclosure. According to measurements taken from their native range, this should **average around 60%**. Occasional brief fluctuations higher and lower are fine.

Just because burmese pythons need higher humidity and like water doesn't mean that they should be kept sopping wet. In fact, keeping them too wet can be just as bad as keeping them too dry! The key is to keep their enclosure humid but well-ventilated enough that it is capable of drying out a bit between mistings.

Ambient humidity should be tracked via a digital hygrometer placed in the middle of the setup.

### How to humidify your burmese python enclosure:

Given the size of even a "small" burmese python enclosure, it takes a lot to spray one down. You will need at least a gardening-grade pressure sprayer, or better yet, install a <u>Mistking automatic misting system</u> with nozzles approximately every 24" / 60cm along the enclosure walls.

At minimum, the enclosure will need to be misted 2-3x/day, depending on your local humidity levels and how well the enclosure ventilates.

### Creating a "pond" for your burmese python

Burmese pythons naturally live near bodies of water in the wild, and they are excellent swimmers. Furthermore, spending time in water helps provide support for their heavy bodies, helps them feel safe from predators, and the water helps keep the enclosure humid. For these reasons it's best practice to provide a sufficiently large, deep basin of water on the floor of the enclosure. At minimum, this should be big enough for the snake to soak in with some room to spare. Optimally, it should be big enough for the snake to swim in a bit.

Large plastic utility tubs, stock tubs, and pond liners make great "ponds," but they do take a while to clean.

Alternatively you can build a bathtub-like basin and connect it to your home's plumbing to make cleaning easier.

Change out the water once weekly or whenever it gets soiled. Give the basin a good scrub with veterinary disinfectant such as <u>Rescue</u> or <u>F10SC</u> before refilling. Using a <u>Python siphon</u> makes emptying the basin easier.

## **Substrate**

Burmese pythons are likely to be healthiest and happiest when they are housed on a substrate (a.k.a. "bedding") that resembles the conditions of their natural habitat and facilitates high humidity. An additional consideration you need to make is cost-effectiveness and how easy it is to replace, as big snakes can be very messy!

Good options for substrate: DIY tropical soil mix (40% plain topsoil + 40% coconut fiber + 20% play sand), coconut fiber, Reptichip, cypress mulch

Provide a substrate layer that is at least **4" / 10cm deep** to cushion your snake's heavy body and help maintain healthy humidity levels. In an 8' x 4' enclosure, this will take at least 80 US gallons of substrate to achieve. A generous layer of clean <u>leaf litter</u> on top can also help with humidity and provides a source of sensory enrichment for your snake!

Feces and urates should be removed immediately, and contaminated substrate should be scooped out and replaced as often as needed. In other words, it will be best to keep plenty of extra substrate on hand!

### Décor

Decorations play an important role in your python's enclosure as environmental enrichment. These items are not optional — they are essential to promoting positive welfare for your pet! Enrichment items encourage exercise, stimulate your snake's natural instincts, and help stave off boredom. Pertaining to burmese pythons specifically, it's important to support their natural proficiencies in both climbing and swimming!

**Décor ideas:** hollow logs, sturdy branches, thick and/or braided vines, large, sturdy live plants (ex: ficus, dracaena, schefflera), large, sturdy artificial plants, plastic dog kennels (for hiding)

At minimum, you will need a couple of sturdy branches and foliage for cover. However, I encourage you to go well *beyond* the minimum to optimize the amount of usable space in your pet's home.

Finding décor items large enough for even a dwarf burm is going to be almost impossible if you stick to pet stores. Try reptile expos or wholesalers for large branches and logs, or go foraging in chemical-free areas. Landscaping stores can also be helpful. You may also want to try making homemade vines.

All climbing objects should be firmly secured to the walls or floor of the enclosure to prevent them from falling and potentially injuring your pet!

## **Food**

Burmese pythons are *carnivores*, which means that they need a diet of whole animal prey in order to get the nutrition that their bodies need. Here is one potential schedule, based on the use of prey 1-1.5x the snake's girth:

- Hatchlings (<1 year) every 1-2 weeks</li>
- Juveniles (1-2 years) every 2-3 weeks
- Young adults (3-4 years) every 3-4 weeks
- Adults (>4 years) every 4-6 weeks

Use a longer interval between feeds if the previous meal was large, and a shorter interval if the previous meal was small. A good rule of thumb is to provide a prey item at each feeding which is roughly the same to just a bit bigger in girth than the snake at its widest point (between 10-30% of the snake's weight). Multiple small prey items can be offered in one feeding to add up to the equivalent of a larger animal. Although burmese pythons can have relatively fast metabolisms, beware of feeding too often ("power feeding"), as this may result in a larger adult, but it also strains their body and may cause organ dysfunction, obesity, and a shortened lifespan.

Although rats and mice are the most common feeders, burms need more than just rats and mice to truly thrive. The key to providing a healthy, balanced diet for your python is VARIETY, the way they eat in the wild.

**Prey ideas for burmese pythons:** African soft-furred rats, domestic rats, guinea pigs, rabbits, quail, pheasants, pigeons, chickens, ducks, piglets, lambs, goat kids, Reptilinks

These can generally be purchased from high-quality breeders such as <u>Layne Labs</u>, <u>RodentPro</u>, and <u>Reptilinks</u>. Talk to your local butcher or connect with a livestock farmer for access to larger whole prey.

It's best to offer frozen-thawed prey rather than live to pet snakes. This is safer for the snake and generally considered to be more humane as well. Prey should be thawed in a plastic bag in warm water to around 100°F/38°C before offering.

Make sure to offer prey with a long pair of feeding tweezers to reduce the risk of getting accidentally bitten when the snake strikes! Alternatively, you can simply toss the prey into the enclosure. Because dwarf and standard-sized burmese pythons are large snakes, ReptiFiles strongly recommends having at least one other person in the room during feeding to help you out in the event of an accidental bite and/or wrap!!

As an additional safety precaution, it's wise to do some simple training with your burm to help it distinguish between feeding time and non-feeding time. Something as simple as just tapping with your fingernails on the

door of the enclosure every time before feeding (and not tapping for handling/maintenance) goes a long way toward preventing accidents.

### **Supplements**

Burmese pythons can survive without vitamin or mineral supplements, but using them every few feedings or so can be a good way to help with any nutritional deficiencies the prey items may have. Lightly dust the prey with an all-in-one reptile supplement like Arcadia RevitaliseD3 or Repashy CalciumPlus LoD.

## **Drinking Water**

Your snake should be able to use its "pond" as a water bowl, but if for whatever reason you can't provide a pond for your burmese python, make sure that it has a large bowl of clean water at all times. These snakes drink a lot!

## **Handling Your Burmese Python**

Considering that a full-grown standard burmese python on will be effectively larger and stronger than you are, making the effort of taming and even training is extremely important for your own safety in caring for this animal. This is even the case for dwarfs, although they are certainly more manageable.

After bringing your new burmese python home, place it in quarantine for at least 3 months to monitor its health and easily administer treatment if necessary. Once quarantine is finished, you can move the snake to/set up its permanent enclosure.

During quarantine, wait for the snake to be eating regularly before attempting handling. Before this point, you can start 'tap training' at feeding time and get your pet accustomed to you through daily enclosure maintenance. This is also a good time to learn about target training and "choice-based handling" techniques, which is one of the best ways to develop a relationship of trust with a pet reptile — I recommend learning about this from professional snake trainer Lori Torrini on Youtube!

Your pet may require a readjustment period after being moved to its permanent enclosure.

### Some additional handling tips:

- If your burmese python is >10' long, have at least one other person with you during handling!
- Before you get your snake out of its enclosure, wash your hands with soap and water or alcohol-based hand sanitizer. If you have been spending time around other animals, it's best to also change clothes.
- Use both hands to pick up the snake. One hand should be behind the head, and another should support as much of the rest of the body as possible. Have another person help you as needed. Then drape the snake around your body, supported by your shoulder on one side and under your arm on the other side.
- Never let the snake wrap around your neck.
- Never let children handle snakes unsupervised and/or unassisted.