

Boa Constrictor/Red Tailed Boa

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Updated 2021

Natural History

Boas are a species of medium-large constrictors native to South and Central America. There are multiple subspecies of *Boa constrictor*, as well as the species *Boa imperator* and *Boa sigma*. The name “red tailed boa” may be used to describe multiple species in this genus, but *B. c. constrictor* are considered the “true” red tailed boas. *B. imperator* (Central American/Colombian/Common boa) is also common in the pet trade, and tends to be the most common boa species kept in the US. Along with *B. imperator* and *B. sigma*, there are 8 subspecies of *B. constrictor*, although the true red tailed boa and common boa are by far the most common in the pet trade. Boas are semi arboreal, nocturnal, and can be found in habitats ranging from dry lowlands to high elevation forests. Boa constrictors are viviparous, meaning they give birth to live young and receive nutrition via the placenta.

Characteristics and Behavior

To experienced reptile keepers, boa constrictors are desirable pets, but to many members of the general public, they are a source of fear. Boa constrictors tend to be quite docile, although their potential to reach large sizes make them inappropriate pets for new keepers. Common boas are known for being curious, and come in a wide variety of color morphs. For intermediate-advanced keepers, boa constrictors can make great pets. Before acquiring a boa constrictor, consider that these snakes require a large amount of space, can live very long lives, and certain areas may have restrictions on constrictors over a certain size. Also keep in mind that big snake = big poop! The general rule of thumb for handling large snakes is 1 person/5 feet of snake. While boa constrictors are not aggressive, they are large, powerful snakes that can do serious damage if handled incorrectly. Large constrictors should never be put around your neck, and if handling for someone else, the head should always be controlled.

Lifespan

30+ years

Adult Size

6-10 feet. There are reports of some boas reaching 12 feet.

Housing

At minimum, snakes should be able to fully stretch out. That means that a 10' snake needs at minimum, a 10' long enclosure. 6-8' individuals need at least 3' of height and width, whereas 8-10' individuals need at least 4' of height and width. To house a snake this large, a custom made enclosure will likely be needed. It is a myth that reptiles become stressed by too much space; there is no such thing as too much space, only too much exposure! Warwick et al. in "Spatial considerations for captive snakes" (2019) noted that, "Extensive natural home ranges...dismiss notions that snakes do not use space. Indeed, were snakes truly both sedentary and agoraphobic then keepers would require no vivaria frontage or lids and could open all enclosures confident that snakes would not leave the proposed security of their cages. However, snakes will freely leave their enclosures when permitted to do so and they are known for their abilities to escape captive environments." In the same paper, it was also noted that, "Established captivity-stress related behaviors are also commonly associated with snakes in small enclosures."

Furnishings, such as logs, branches, rocks, plants (live or fake), and ground clutter should also be provided for enrichment and cover. An elevated basking area should be available so the snake can move closer to or farther away from the basking source. Reptiles also need hides on both the warm and the cool side of the enclosure so they don't have to choose between security and thermoregulation. Since boa constrictors are semi arboreal, plenty of branches and climbing spots should be provided. For substrate, cypress mulch or coconut husk (such as ReptiChip) mixed with ReptiSoil, EcoEarth, or Zilla Jungle Mix can all be used to create a humidity holding environment. At least 3-4" should be provided to encourage burrowing and help hold humidity. The BioDude's TerraFirma can also be used, particularly for keepers choosing to go bioactive.

Lighting

Because snakes consume a whole-prey diet, they don't technically need UVB to synthesize vitamin D and metabolize calcium. However, UVB is beneficial for all species and should be considered a part of best care practices. UVB enhances immune function and promotes normal day/night cycles. Anecdotally, many keepers report more basking activity in their snakes when UVB is provided. The ReptiSun HO T5 5.0 is acceptable, as is the Arcadia T5 6% Forest or Arcadia T5 7% shadedweller, depending on where you put your boa constrictor's basking spot. Arcadia provides a guide as to where to place your UVB fixture in relation to your snake's basking spot. UVB fixtures should be roughly as long as half your reptile's enclosure length. UVB bulbs should be replaced every 6 months; even if they are emitting light, they may not be emitting

adequate UV. It is important to note that UVB cannot penetrate glass, so natural sunlight through a window will not be sufficient. Allowing safe outdoor time is also an excellent source of UVB and visible light. Snakes taken outdoors should be kept in an escape-proof and predator-proof, non-glass enclosure. Provide shade and basking spots so your snake can regulate their temperature.

It is tempting to say that boas don't need UVB because they're nocturnal, but even nocturnal and crepuscular snakes are exposed to sunlight in the wild. Nocturnal or crepuscular snakes may emerge during the day, and when they are hiding, they hide in sheltered areas where sunlight reaches them in small amounts. When keeping reptiles, our goal should be to replicate their natural environment as closely as possible, which includes replicating full spectrum lighting (the sun).

Sunlight is made of ultraviolet, near infrared (IR), mid IR, far IR, and visible light. It is our job as keepers to provide full spectrum lighting, which means as close to sunlight as possible. Unfortunately there is not one source for all of these components, so we must provide multiple types of lighting. For visible light, LED or halide bulbs should be provided. Light sources should be turned off at night to promote normal day/night cycles.

Arcadia UVB guide: <https://www.arcadiareptile.com/lighting/guide/>

Heat

Unlike mammals, reptiles cannot internally regulate their temperature and rely on their environment to heat and cool themselves. Therefore, it is important that we provide captive reptiles with a temperature gradient so they can warm up or cool down as needed. Reptiles have three temperatures to measure: basking spot, warm ambient, and cool ambient. The basking spot is the hottest area in the enclosure where they bask, the warm ambient is the air temperature on the warm side of the enclosure, and the cool ambient is the air temperature on the cool side of the enclosure. Ambient temperatures are best measured with digital thermometers (one on the warm end and one on the cool end), as analog thermometers are often inaccurate. Basking temperatures can be measured with a digital infrared thermometer.

Boa constrictors require a basking spot of 88-90F, a warm ambient of 80-85F, and a cool ambient of 75-80F. Any light emitting sources should be turned off at night, but a non light emitting source like a ceramic heat emitter, radiant heat panel, or deep heat projector may be needed to keep the temperature in the low-mid 70s. Sunlight is made

of UV, near IR, mid IR, far IR, and visible light. Flood tungsten-halogen bulbs are the most efficient at producing near IR, which is the most abundant IR in sunlight, and they also produce significant mid IR and some far IR. Far IR is the least abundant in sunlight, but is most often produced in large amounts by sources like ceramic heat emitters, heat pads, and radiant heat panels. Tungsten-halogen bulbs should be the flood type to ensure a wide enough basking site. A cluster of bulbs may be needed to create a large enough basking area for an adult boa. These heat producing bulbs can be found as reptile specific bulbs or at hardware stores. Avoid hot rocks as these can easily burn reptiles.

Humidity

Ambient humidity should be maintained at 60-70% and measured with a digital hygrometer. A few inches of substrate can help maintain humidity. Additionally, heavy misting can create humidity spikes. It's also beneficial to have moist moss or substrate in one hide to create a humid microclimate.

Feeding

Wild boas eat a variety of mammal, bird, and occasionally lizard prey. This can be replicated in captivity with rats, mice, rabbits, gerbils, guinea pigs, ducks, chicks, and quail. ReptiLinks, which are pre-processed blocks of bullfrog and mammal meat can also be provided to enhance variety. Dietary variety is important for enrichment and preventing nutritional deficiencies. Boa constrictors have very slow metabolism and are prone to obesity in captivity. Food should be no larger than the width of the largest part of your snake's body. Young boas may need fuzzies or other young prey, whereas large adults may need rabbits and larger food items.

Multiple small feeders can also be fed instead of one larger feeder to stimulate a "nest raid". Live prey should be avoided, as live animals can seriously injure your snake. It may take time to transition a snake from live to frozen/thawed, but the majority of snakes can make the change with time. Adjustments to your snake's feeding schedule should be made based on their body condition. Do not handle your snake for 24-48 hours after feeding as this can cause regurgitation.

Feeding schedule:

Up to 6 months: 1x/week

6-12 months: Every 10-12 days

1-2 years: Every 2 weeks

2-3 years: Every 3-4 weeks

3+ years: Every 4-8 weeks

Water

A water bowl large enough to soak in should always be available. Boas like to defecate in their water so it is important to keep their water dish clean and fresh.

Sexing

To definitively sex your snake, your veterinarian will need to probe them. You may also be able to feel "bumps" on the hemipenes of mature males as you run your finger from vent to tail.

Zoonosis

Like other reptiles, boas can carry *Salmonella*. Always wash your hands after handling reptiles or items from their enclosure.

Health

Boa constrictors tend to be hardy, but may be prone to dysecdysis (difficulty shedding), stomatitis (mouth rot), scale rot, and foreign body ingestion. Your boa constrictor should be examined by your veterinarian every 6-12 months.

Sources and Further Reading:

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