Green Tree Python and Emerald Tree Boa: Habitat, Diet, Reproduction and Common Diseases

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Adapted from Captive Management, Reproduction, and Disease of the Green Tree Python (Morelia viridis) and the Emerald Tree Boa (Corallus caninus) presented at the 2004 Annual Conference of the Association of Reptilian and Amphibian Veterinarians

The Green Tree Python, (*Morelia viridis*), and the Emerald Tree Boa (*Corallus caninus*) are both commonly kept species of the family Boidae. They are remarkably similar in their management and both are predominantly green.

The Green Tree Python ranges from the Cape York Peninsula of Australia north through New Guinea and the surrounding islands. Their length can reach 160-180 cm (63-71 inches) and the pythons may have spots of blue, white, or yellow depending on population, but the spotting is variable. Green Tree Pythons can also be mostly or all yellow and some females will become blue following gravidity (pregnancy). Despite the variances that can be seen in both of these species, no subspecies have yet been described.

Emerald Tree Boas from the northern part of their range in Guyana and Suriname may be 160-180 cm (63-71 inches) long and have a broken white line and irregular blotches of white down the back. Emerald Tree Boas from the Amazon Basin are larger at 180-220 cm (71-87 inches), have a solid white line, irregular white blotches, and yellow ventral scales. Emerald Tree Boas from the Amazon Basin tend to have smaller, more minute, and more numerous scales on their heads. Those from the Amazon Basin are also more rare in captive collections.

Both the Green Tree Python and Emerald Tree Boa go through an ontogenetic color change. The Emerald Tree Boa is usually born red and turns green; however, a few are born green. The Green Tree Python is born yellow or red. Often, the red neonates (newborn) will become yellow, and then finally become green.

Habitat

Enclosure: The arboreal (tree-dwelling) habits of these snakes make their management rather specialized. They need enclosures that are taller than they are wide or deep. Cages should be secure with tight-fitting lids. The enclosure should have at least two sides made of screen to help keep the air fresh; arboreal snakes are sensitive to stale or stagnant air. The enclosure should be simple in design to facilitate cleaning.

Substrate: Suitable substrates include newspaper, butcher paper, artificial turf, aspen, orchid bark, and cypress mulch. Newspaper and butcher paper are cheap, easy to clean, and there is no danger of the snake ingesting it. Orchid bark and cypress mulch hold moisture well and help keep humidity high, resist growth of mold and fungus, and look nice, however, if these substrates are used, the snakes should be fed in a different container so they can not ingest it.

Landscaping and 'Furniture': The cage should have several horizontal branches of varying width set at different heights. Cut pieces of PVC pipe makes good branches that can be easily cleaned.

Temperature

The environmental temperatures for these snakes should be a bit lower than those of other neotropical boids (other members of the Boidae family). Daytime temperature should range from 24-28°C (75-82°F) with a basking spot of 30°C (87°F) and a nighttime temperature drop to 22-24°C (72-75°F). Heat should be provided from above using lamps or heat emitters and not from underneath.

Water and humidity

Neotropical snakes require high humidity (80-90%) for proper shedding and respiratory function. A large water bowl, misting, and a humidifier can help to keep the humidity in the proper range.

Diet

These snakes have a very slow metabolism. They should be fed one appropriately-sized meal once per week unless medical conditions dictate otherwise. Some adults need to be fed only once per month. An appropriately-sized meal will leave a lump in the snake that lasts about 24 hours. Overfeeding causes obesity and often constipation. In the wild, the diet of the Green Tree Python consists of reptiles and mammals, with juveniles mainly eating reptiles and adults eating mammals. These snakes do not eat a lot of birds as is commonly believed. In captivity, these snakes are fed a diet of domestic mice and rats. Feeding frozen-thawed is preferred over live because live rodents can harm the snake. Frozen food should be used within 6 months of freezing.

Reproduction

The Green Tree Python has been reported to mate and lay eggs throughout the year. However, most mating for both species

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occurs from November through January in the northern hemisphere. A daytime temperature of 24°C (75°F) and a nighttime temperature drop to 17°C (62°F) are helpful in stimulating copulation (mating). Ovulation can be recognized by a lump in the middle part of the body that lasts for 8-24 hours. After ovulation, females go through a post-ovulation shed (POS) that is completed 20-30 days post-ovulation. Green Tree Pythons lay eggs about 20-24 days after the POS. Eggs hatch 40-50 days later when incubated at 31°C (88°F) and with a humidity of 100%, (however, the eggs themselves should be kept relatively dry). A small, elevated container with damp sphagnum moss makes an ideal place for a Green Tree Python to lay eggs.

A gravid (pregnant) Emerald Tree Boa will bask extensively at temperatures of 30-32°C (87-90°F), giving birth to live young approximately 100-110 days after ovulation, and may go through more than one shed cycle after ovulation.

Common Diseases

The Green Tree Python and the Emerald Tree Boa are easily stressed, which can make them susceptible to a number of opportunistic pathogens.

Respiratory: Extremely low temperatures and humidity make them susceptible to respiratory infections. Clinical signs include: wheezing, labored breathing, excessive mucus in the mouth, and nasal discharge. In addition to a bacterial and fungal culture and sensitivity (leading to treatment with the correct antimicrobial), appropriate husbandry changes should be made. Chlamydiosis has recently been reported in an outbreak of respiratory infections in Emerald Tree Boas.

Digestive: Gastrointestinal problems such an anorexia, diarrhea, constipation, and regurgitation are common in these snakes especially in imported specimens. Imported snakes can be stressed, carrying a heavy parasite load, and be anorexic due to the parasites. Emerald Tree Boas are quite susceptible to *Cryptosporidium* infections manifesting in chronic regurgitation. Constipation can be caused by dehydration since the snake has to absorb more water to keep hydrated and the feces dry out making them harder to pass. Constipation can also be caused by overfeeding as previously mentioned. Stress can also cause otherwise non-pathogenic protozoa to become pathogenic.

Neurologic: Inclusion body disease (IBD) is a viral disease caused by what is currently thought to be a retrovirus that affects boids. The virus causes neurologic (nervous system) disease, regurgitation, and can cause secondary pneumonia. At this time, there is no serologic assay. Current therapy recommends biopsy of the esophageal tonsils, liver, kidney, and pancreas as the best antemortem (before death) diagnosis. A complete blood count should also be performed. Infected snakes do not recover and euthanasia is recommended.

Skin: Dysecdysis is commonly seen in these snakes. It is primarily caused by low humidity, but can also be caused by a mite infestation, poor nutrition, and improper handling during the shedding cycle. Snakes with dysecdysis should be soaked in tepid (lukewarm) water for about 30 minutes, then rubbed gently with a towel to remove the pieces of skin. Retained eye caps should be carefully removed by someone properly trained in this procedure to prevent permanent damage to the cornea.

Cancer: Neoplasia is seen in all reptiles, and lymphomas and lymphosarcomas have been reported in Green Tree Pythons.

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