

THE HUSBANDRY AND BREEDING OF CHONDROPYTHON  
VIRIDIS.

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Contents: Introduction - Accomodation and care -  
Breeding techniques - Aggression between  
males - Pregnancy of first female -  
Pregnancy of second female - References.

### INTRODUCTION

*Chondropython* is a monotypic genus found in New Guinea and north-east Australia. It is a nocturnal arboreal reptile, of the rainforests where its beautiful green colour camouflages it perfectly among the trees. Its green dorsal colour may be broken by occasional blue or white scales. Sometimes specimens are speckled with white scales or are entirely blue. The belly is usually white or yellowish. Quite often, the transition between the (white) ventral and the (green) dorsal scales is marked by a row of yellow scales. Young specimens have a red dorsum with a white pattern, or a yellow dorsum with a red pattern. *Chondropython viridis* seldom exceeds two metres in length. Its main diet consists of small mammals and birds.

### ACCOMODATION AND CARE

The females are kept together in a cage measuring 120x60x100 cm (lxwxh) which is kept in a room with a constant temperature of about 25°C. In one part of the cage the temperature rises as high as 32°C during the day due to a 40 Watt light bulb. The humidity in the cage is kept around 40 to 50%. The cage is not sprayed with water very often even

when the snakes are in slough. This has never caused any ill-effects. The cage also includes a tangle of branches offering the snakes a large number of places to sit.

The males are placed in separate cages, each measuring 50x50x60 cm (lwxh), made of glass and containing only a drinking bowl and a branch. The floor of the cage is covered with newspapers and by day the temperature in the cage is raised somewhat by a 25 Watt bulb. These cages are also not sprayed too often.

Generally speaking, *Chondropython* are relatively good and regular eaters with females eating more than males. Once every three months a multi-vitamin preparation is injected into the food animals.

#### BREEDING TECHNIQUES

To stimulate breeding, the room temperature was lowered to about 23 or 24°C around the end of August. Also, the light bulbs were not turned on during the day, thus reducing the daily amount of light in the cages.

Soon after these changes had been made it became evident that the males had no further interest in food and that they had become more alert.

On 15 September the first two males were placed in with the females and the first copulations took place that same evening. The first female to become clearly pregnant had copulated only once, after which the males showed no further interest in her. The other females mated until December. This resulted in one more pregnant female. One of the females drew no attention from the males whatsoever and was not mated with.

Usually, it seemed that the males would mate once or twice and would then become inactive. If I brought a new male onto the scene and isolated the inactive male, mating would once again continue.

This method was kept up until December. By this time the males had lost all interest in the females and had begun accepting food again almost immediately.

#### AGGRESSION BETWEEN MALES

In my experience I have only known *Chondropython* males to be aggressive amongst each other during the breeding period. I have never observed aggression between males and females or between females. However, I have observed that these snakes can be frightened by each others behaviour and that this can lead to fatal accidents. This kind of "accident" can be prevented by either housing each specimen separately, or, if this is not possible, by feeding the animals generously so that they are not so alert and nervous.

Following are two instances involving aggression between males:

- two males, which had shared the same cage during the cooling period, were placed in the cage with the females. During the first week all went well as nature took its course. Activity took place mostly during the evening and night (which is normal since *Chondropythons* are nocturnal animals) and in the mornings they were often found in copula. Copulation was usually broken off later in the morning.

In the second week however, during a routine check in the afternoon, I found two males engaged in mortal combat. They had twisted their tails and lower bodies around each other and were pointing their spurs at each other like daggers. As far as I could tell these were being used in the fight, for I found in the area of the spurs a wound on one of the combatants. One of the males had succeeded in arranging its

coils around the other male in such a way that it had started to pull its opponent apart. Such strength was being applied that the skin had started to tear. The snakes were face to face and struck at each other with their mouths open. Their long curved teeth served as barbes inflicting deep flesh wounds with every bite. One of the two got off with only a few scratches, but the other suffered a number of deep wounds.

- The second instance occurred because I believed that males only fought when there were females present. I was wrong. Because of this belief, I would put the males back in their own cage if I had to leave and was not able to keep an eye on them. To my combined horror and surprise I learned that this was not enough. After my return on one such occasion, I found that the little blighters were at it again. Luckily this time, I acted quickly and coolly and was able to save the snakes from doing any fatal harm to themselves. Both had been at it in the same way as described above and both had deep wounds. Since then I have always kept my males separate, or, (if this is temporarily not possible) with a female, but never again will I keep more than one male at a time in a cage.

Up to now I have never observed any forms of aggression between females. Also, I have never seen scars on any wild female specimens, only on males (which they never seem to lack). From this last observation I conclude that these rivalries also take place in the wild and that it really does not matter how large the terrarium is; if males meet during the mating season, they will inevitably fight.

## PREGNANCY OF FIRST FEMALE

This female mated only once: on 19. September (for two hours). Three days afterwards she ate a half-grown rat and then stopped eating. She then chose a suitable branch on which to sit and stayed there, leaving only occasionally to visit the water bowl. Once, when I took her out for an inspection and placed her back, she immediately returned to her preferred spot.

Mr. J. Schouten (1985) had remarked that during the pregnancy of his female *Chondropython viridis* it had rested on the branches of its cage in an uncharacteristic fashion, namely in a series of much larger loops than usual. During my own experience I have only observed this once, for the duration of only one week, six weeks before the eggs were laid. I also made another interesting observation concerning behaviour: usually, when disturbed, this female would raise its head in the direction of the disturbance and prepare to strike, but now it reacted by burying its head under its coils and hissing.

Because I knew exactly when the female had mated, I could calculate with reasonable accuracy the date on which the eggs would be laid, assuming pregnancy to last sixty days.

About a week before the snake was to lay its eggs, I arranged a terrarium especially suited to accommodate the snake's needs during the coming period. In it, I had put a branch on which it could sit, a hide-box and I covered the bottom of the cage with peat-dust. I had hoped that the snake would settle down quickly in this new cage, but instead she remained restless. Every night she searched for a means of escape until finally, on the morning of 15 December, she laid her eggs on the floor of the cage and then retreated to the branch. The following night she suffered a series of strong spasms while incubating her eggs. During

that period, the temperature at night was about 27<sup>0</sup>C. The night after that however, she seemed to have recovered completely, for on the third day after laying her eggs, she ate a mouse and until this day has always been as gluttonous as ever and has never been finicky.

Of the fifteen eggs laid two were infertile (yellowed and hardened) while thirteen eggs had beautiful white shells. These were divided between two trays. The trays were filled with shallow water in which stood a raised platform. This platform consisted of a plastic-coated screen covered with a layer of filter-wadding on which the eggs were placed. The sides of the tray were perforated for air circulation and the top was covered with a lid. These contraptions were then placed in an incubator with a constant temperature of 29.5<sup>0</sup>C.

Soon afterwards it became apparent that a number of eggs had been attacked by mould and had died. After removal it became clear that they had indeed died and that each had contained an embryo. After exactly forty-nine days, on 26 January, the first egg hatched followed within a week by five others; three yellow and three red juveniles. One of these died soon after birth.

#### PREGNANCY OF SECOND FEMALE

Because this female had participated in a number of copulations, it was not possible to estimate the date on which the eggs were to be laid. The female had become gravid though, for the eggs could be felt in the snake's belly. Also she behaved in the same fashion as the first female upon being disturbed, In contrast to the first female though, she accepted food until four weeks before she laid her eggs. Nevertheless, like the first female, her ribs had become clearly visible. Most

likely this was due to the pressure of the eggs pushing them outwards. She remained in this condition until she laid her eggs.

Unlike the first female, I let this one stay in her own cage during her pregnancy, where I created three possible places for her to lay her eggs: two up above and one down below. The two above were constructed in the following manner:

- A round flower pot filled with a layer of vermiculite covered by another flower pot with a round entrance-hole cut in it.
- A tray filled with peat-dust covered with filter-wadding and a flower pot with a hole cut in it on top.

Four days before she laid her eggs she began to inspect her cage for the first time. After having inspected the cage extensively for about four hours, she finally decided to settle in the flower pot with the filter-wadding. However, when the lights went on again in the morning it appeared that she had gone back to her favourite branch. During the next three days she showed absolutely no sign of any activity until the moment the light went out at the end of the third day. She then became active almost immediately and began another inspection of her cage; after which she returned once again to the flower pot with the filter-wadding.

During an inspection on 23 February, at five o'clock in the morning, the snake appeared to have gone into labour although no eggs had been produced yet. At seven o'clock she had produced three eggs and by nine o'clock at least five.

At five o'clock in the afternoon, that same day, the snake was wrapped around her eggs like a turban, her head resting on the top coil. I then removed the other females which, up until now, had shared the same cage with her. During the incubation period, I once moistened the peat-dust. Also,

I sprayed the cage with water extensively every day.

The temperature in the cage was 26°C at night and 28-29°C during the day. This gave the snake the opportunity to adjust the incubation temperature if needed. At this temperature I have not seen the snake suffer any spasms; either during the day or night.

Near the flower pot in which the female incubated her eggs, I had placed a drinking bowl yet I only saw the snake drink from it once during the incubation period. As far as I could tell, she never left her eggs and only clearly changed her position once. This change of position resulted in the pile of eggs being reduced in height. The snake remained extremely alert and aggressive during the entire incubation period and struck at anything moving in the vicinity of its flower pot.

On the morning of the 48th day of incubation, the first snake hatched. The female, apparently aware, lifted one of its coils to enable its offspring to hatch, closing up the gap after its head had become visible.

After four days twelve snakes had hatched, one of which was later found dead. One egg contained a completely developed juvenile which had died prematurely although it had not spoiled. This egg had been in the middle at the bottom of the pile and had had no direct contact during incubation with the body of the female; in contrast to the rest of the eggs. The fourteenth egg was obviously infertile as it had dried and shrivelled.

After fourteen days all the young snakes had shed their skins for the first time. Characteristic of these juveniles contrary to the offspring of the first female was their temperament; these were much more aggressive and snapped at anything within reach.



## REFERENCES

- Schouten, J.R., 1985. Experiences in keeping and breeding of the Green tree python, *Chondropython viridis* (Schlegel, 1872), negative and positive results. Litt. Serp., Vol. 5 (4): 122-156 / Dutch ed.: 126-161.