

CHONDROS — AU NATUREL

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While the breeding biology of the Green Tree Python, *Chondrophython viridis*, is now amongst that most thoroughly documented, numerous perplexities yet remain. This is especially true in the area pertaining to the incubation of the eggs. For the edification of husbandrists I wish to here document the program in effect at the R.B.R.I., which is, because of the area of the country in which we are situated, considerably different from that practiced by most other institutions.

During the latter part of 1981 a pair of Green Tree Pythons were acquired to accompany a lone female which had been long in my collection. Additionally, in mid-1982 a second male was acquired. A perusal of the literature indicated that the species should be well able to withstand the vagaries of the weather in south western Florida with the exception of those few winter days during which the low temperatures associated with passing of cold fronts prevailed. Upon such rare days the temperature may occasionally plummet to the mid-twenties but more frequently it hovers near 40°F. The remaining 10 months of the year, February through November inclusive, should produce a weather pattern not seriously dissimilar to that within the natural range of the species. Considering the portions of the literature which correlated the changes in barometric pressure often associated with the formation of showers to the breeding activities of the snakes, it was decided to house the two pairs out-of-doors under existing conditions in a manner which would fully expose them to the stimuli offered by the changing weather conditions.

Although I seldom use cages of wire construction for the maintenance of any reptile, it was decided to do so in this case. The material chosen as the enclosure was a galvanized welded wire measuring $\frac{1}{2}$ x 1 inch and of this a cage of some 30 x 30 x 36 inches was constructed. It was affixed firmly between the horizontal limbs of a Powder-Puff (*Calliandra*) bush. Beneath, a tangle of foliage plants, and along the limbs the aroid Creeper *Syngonium podyphyllum*, added to the tropical aspect. Within the cage, limbs were firmly anchored at various levels which would allow the snakes to choose their desired height and positions. Above the front of the cage the foliage of the shrub was thinned, the intent being to allow access of the early morning sunlight, hence providing an area for thermoregulation should the serpents so desire. A large and deep water dish was provided.

Into this, initially, the trio of chondros were introduced. After a day or so of nearly incessant prowling they settled in well, each choosing a different limb as their own. From this day they seldom strayed, returning to what appeared to be the very same spot after each session of movement or basking.

The activity patterns of the trio were similar. Early evening and at dawn they would usually be actively prowling unless digesting a recent meal. They usually coiled upon their chosen perches throughout the hours of full darkness but occasionally remained active long into the night. The earliest rays of the sun drew all to the front of the cage where they would bask in its increasing warmth for varying durations, longer in cool weather, and for correspondingly lesser periods as the temperatures increased. Daylight activity was not uncommon during the summer rainy season. The advent of showers, either real or through the use of a sprinkler system, would bring about an increased degree of alertness. In keeping with the reports of others it was found that during storm activity defecation and breeding activity were stimulated. Also, drinking usually occurred at this time, the snakes drinking the beads of moisture as they formed upon their coils. Feeding seldom occurred during periods of rain, the snakes preferring to await the coming of darkness for this.

Although I initially worried about feeding or striking chondros engaging their teeth in the wire of the cage, I soon found that such concern was without basis. In the year that they have been so caged, upon but one occasion have I seen a specimen mis-strike when grasping a food animal and

these particular specimens are not at all inclined to strike in aggression. Another potential cause for striking, I thought, would be the presence of birds in the scrub. Neither did this problem materialise for as soon as the birds discovered the snakes, with the exception of an occasional scolding bluejay, all vacated the shrub.

While the high temperatures of summer were of no concern whatever, I wondered how low a temperature could be sustained safely by the snakes? By accident, during one unheralded cold front, I found that temperatures in the mid to low forties in no way debilitated them. In fact, one female caught, constricted, and consumed a rat soon after sundown on a day when the thermometer never read above the low fifties. It is possible that her body temperature was a few degrees warmer for she had basked in the sunlight until shortly before the food was offered. No longer do I concern myself that the snakes are out on winter evenings when a 30° drop from the days high in the 70° is possible.

Mating activity was sporadic throughout the spring and early summer prior to the introduction of the second male. After his introduction moderate aggression between him and the original male became apparent and mating activities became incessant. Although some rather deep lacerations resulted from the hostilities of the males towards each other it was decided to allow the colony to remain as it was and, luckily, no serious injuries occurred. Eventually their mutual antagonism waned somewhat but mating activity continued unabated throughout the summer.

One of the female snakes seemed more acceptable than the other, and usually both males were busily engaged in courtship of her simultaneously. At this time their aggressive attitudes peaked. This particular female, besides sporadic couplings during the daylight hours, was mated by one or other of the males for more than forty consecutive nights during the months of July and August. The second female, while of lesser interest, was also mated on several occasions.

For a period of several weeks at summer's end and as mating activities were waning, both females, which unlike the males had continued to feed regularly, began to fast. After approximately four weeks they, and the males, neither of which had fed for a full three months, began again to feed, easing some of my anxieties.

Although neither looked gravid, I decided in mid-November to place both females indoors so that I might better monitor their conditions. Both they and the males continued to feed ravenously. On 1 December the female that had been mated the most began to actively prowl the floor and perimeters of her cage. Little significance was attributed this as both had done so before and she certainly did not appear gravid. It was, however, decided to insert a sphagnum tray within a hiding box. On 4 December the prowling female entered the box upon numerous occasions only to emerge moments later. Upon the morning of 6 December I found her coiled in the hiding box, head buried in the centre of her coils. She there remained through the morning of 8 December when she produced 17 eggs, all but three of which were clustered. Around these she remained coiled in a tight conical position, exhibiting periodic muscle contractions (brooding behavior). As temperatures were fluctuating due to the passage of a cold front as it was decided to remove the eggs to an incubator. After removal of the eggs, although the female remained coiled tightly in the box for more than 2 weeks, the brooding contractions ceased.

It was decided that the incubation of the eggs should be attempted in the medium with which I am most familiar: dampened, unmilled sphagnum moss. Along with the benefit of my familiarity it was thought that this medium would offer the best support for the clustered eggs. The sphagnum was prepared in the usual manner, this being to soak it thoroughly and then to wring from it every drop of water. What remained was slightly dampened moss, evenly moist throughout, a medium which I have used over the decades to hatch innumerable reptile eggs. The moss was placed in a warmed (85°F) crockery bowl and upon this were placed both the cluster and the single eggs, all of which were then covered liberally with more moss. Finally a covering of clear plastic was placed over all and affixed securely, rendering the compartment capable of attaining and sustaining a relative humidity of 100%, seemingly a very important consideration in the successful incubation of chondro eggs. The egg compartment was then placed in an incubator which had been preset to maintain a temperature of 85°F (± 1°F).

Ten days later the eggs were checked. All appeared good, having chalky though pliant shells and having become turgid during the days since deposition. On December 22 the heat strip which controlled the temperature of the incubator burned out, allowing temperatures to drop far below the normal level. Repairs were immediate, and incubation continued. On 1 October 1983, a check of the eggs disclosed that one on the outer perimeter of the cluster had died and dehydrated. All others looked well, being chalk white and turgid with minimal windowing.

By 22 January 1983 dimpling was noticeable on several eggs. On the morning of 1 February, after 55 days of incubation, the first hatching slit the shell and protruded its head. It (as all others subsequently proved to be) was of the yellow color phase (Plate 1). It was not until the morning of the following day that any additional eggs were slit. At that time nine hatchlings were in evidence. By noontime of 2 February all remaining eggs had been slit and the first to do so had emerged completely from the shell, to be followed within several hours by its 15 siblings.

It should be noted that the female which deposited the eggs fasted a second time for a substantial period, refusing food the day prior to deposition and not again accepting a meal for an additional 52 days.

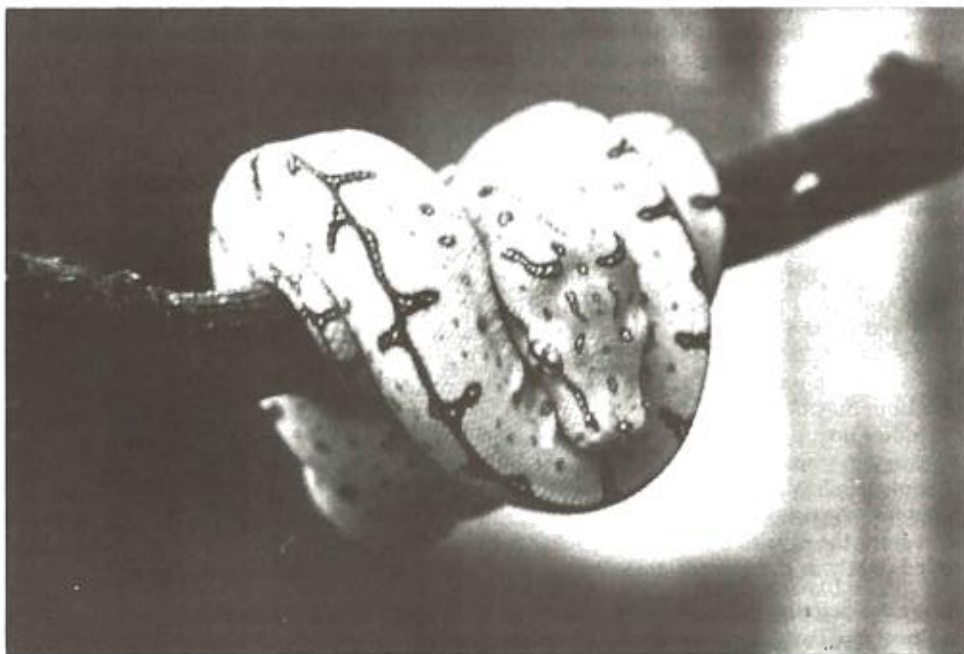


Plate 1. Newly hatched *Chondropython* at the R.B.R.I. Photo by S. Townson.