

THE CARE AND BREEDING OF *SAUROMALUS OBESUS OBESUS* IN CAPTIVITY

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INTRODUCTION

The Chuckwalla is a large herbivorous lizard from the desert regions of Mexico and south-west U.S. where water is scarce and temperatures extreme. They are very territorial and a given territory would contain a dominant male, adult females, subordinate males and juveniles. Its breeding habits are largely unknown and there are few recorded cases of it having bred in captivity.

A pair of sub-adults were acquired in 1980 in order to attempt captive reproduction.

DESCRIPTION

Adult males are of larger build than females with broader heads and heavier jowls. The tail is thicker and shorter than in females of similar snout-vent length. Females tend to have lighter colouration and often show faint crossbands across the back. Males are normally darker, especially around the head and often have speckles of red on the flanks.

The colouration may vary from light grey to black giving it a drab appearance but this blends in well with the habitat in which they are found.

Maximum SV lengths are around 220mm in males and 205mm in females.

When acquired the male measured 155mm SV and the female 150mm and had probably just reached sexual maturity (Berry 1974).

HOUSING

The Chuckwallas were housed in a 75 x 37 x 37cm vivarium which was illuminated by 3 Trulite tubes situated 35cm above the surface. These were controlled to give a daylight period which ranged from 14.5 hrs in the summer to 10 hrs in the winter. In addition, a spotlight was situated in one corner above a basking rock and was switched on for 6 hrs each day.

The floor was covered with a layer of sand about 5cm deep and numerous rocks were provided for cover. Supplementary heating was provided by an underfloor heater if required. A nominal day-time temperature of 28C in winter and 36C summer was maintained but this was allowed to rise several degrees while the spotlight was on. At night heating was only used if the temperature dropped below 18C.

The Chuckwallas were fed mainly on a vegetarian diet. The main foods being peas, green beans, brussel sprouts and lettuce. This was supplemented from time to time with broken grapes, sweet corn, bananas, grated carrot, mealworms and rice. Vionate was added to the food 3 times a week.

Both animals were healthy when acquired except for Nematode infestation. This was cured in each case by a single dose of Fenbendazole (Panacur-Hoerst Pharmaceuticals) at a dose rate of 200mg/kg.

Chuckwallas derive their moisture from the food they eat and do not require a water bowl. Because of this they can rapidly deteriorate if they do not eat for sustained periods.

As with all animals deprived of natural sunlight a well-balanced diet supplemented with multivitamins, especially vitamin D3, and calcium is essential. Trulite is also beneficial due to its ultra-violet element promoting vitamin D synthesis in the skin, which helps the body absorb the calcium needed to sustain sturdy bone growth and for egg production during gestation.

BREEDING

During early April 1982 there was a marked increase in courtship activity culminating with mating on the 20th. Courtship display was typical of iguanids with much head-bobbing. Egg-laying was expected about midday and trays of damp sand and vermiculite were placed in the vivarium but ignored. By the beginning of June the female began to look very heavy with eggs but still showed no sign of looking for a suitable laying place. On June 9th food was offered, as normal, in a 19cm plastic bowl. This was commandeered by the female who emptied it of food and sat inside. She began head-bobbing which the male seemed to take as his cue to disappear and so retreated under cover. After about an hour she began to lay her eggs. The first five were laid in the bowl and the next five on a wooden platform next to the bowl. The period between each leg laid varied from 3-37 minutes. Three of the eggs were very soft and she tried to eat one of these but it was removed before the shell was broken.

At no time did the female make any attempt to cover or conceal the eggs and once laid she showed very little interest in them. After all the eggs had been laid the female attempted to gain access to the cover where the male was. Each attempt was met with an attack by the male which drove her off. She eventually spent the night out in the open, something she had never done before.

The eggs were removed and placed in an incubator at 32°C on damp vermiculite and covered to a depth of 2cm to allow moisture absorption. The following day the top covering of vermiculite was removed. The eggs measured approx. 35mm x 20mm and weighed 10g, there was no noticeable increase in size during development.

During incubation seven eggs were lost, these were probably infertile.

After 67 days the first egg hatched and movement could be seen inside the remaining two. The hatchling took 15 hours to completely emerge from the shell by which time movement had ceased in the others. The following morning the remaining eggs were opened to reveal two fully-formed dead embryos. There was no apparent reason why they had failed to break out of their shells.

SUMMARY OF BREEDING DATA

Mating — 20th April
Egg-laying — 9th June
Gestation — 50 days
Hatching — 15th August
Incubation Period — 67 days
Incubating Temperature — 32°C
Eggs Laid — 10
Fertile/Developed — 3
Hatched — 1

CARE OF YOUNG

At birth the hatchling measured 100mm total length (53mm SV) and was extremely active, managing to escape on the third day and remaining at large for 20 hours despite an extensive search. On recapture it was healthy but sluggish due to the low temperature.

All food was ignored for three weeks although the hatchling would lap at a broken grape for moisture. Eventually some cress was eaten and once feeding, lettuce, grated carrot and peas were also accepted, but as yet no interest has been shown in insects.

In mid-February, the young Chuckwalla was transferred to the adult vivarium and, apart from a little head-bobbing, was readily accepted.

In eight months the hatchling has grown 87mm, and now measures 187mm total length, 105mm SV.



Plate 1. Adult female and baby Chuckwalla.



Plate 2. Captive-bred baby Chuckwalla.

DISCUSSION

After mating the adult diet was supplemented with a vionate/crushed eggshell/Brewer's yeast/calcium & vitamin D mixture. Although 3 of the 10 eggs were soft the shell was not easily broken and the remaining eggs were very tough. It may well be that this was the reason why the other two embryos failed to break out of their shells.

REFERENCES

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