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THE REPRODUCTION IN CAPTIVITY OF THE NORTH AFRICAN SPINY-TAILED LIZARD, *UROMASTYX ACANTHINURUS*

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This impressive agamid has been kept for many years with very few, if any, successful breeding results in the U.K. During the winter of 1990 the author decided to try once more to "cycle" his animals, which were kept in two separate groups, one consisting of one male and two females, and the other of three males and one female.

From 25 September, 1990, the artificial day length in the lizards' cages was reduced in one hour units, from sixteen to eight hours. The cage (6' x 2' x 2') has a false floor to the front with an area of damp sand and peat immediately behind, into which is placed a drainage pipe at a 45^0 angle. The drier underfloor area to the front was used more by the lizards as the light periods decreased. At the same time the lizards were sprayed each morning with a hand held water spray. Day temperatures reached a high of 25^{0}C, but were normally about 20^{0}C. Night time lows of 12^{0}C were not unusual. By 3 November 1990, the basking area provided by a Mercury Vapour Lamp, 125w (manufactured by "Sunlight Systems") was turned off, as well as a heater pad. One "Trulite" fluorescent tube (24 inches) was used for 8 hours per day during this period. The ambient room temperature was 14^0-20^{0}C. The cage of Group One experienced slightly lower night temperatures due to the cage being in contact with concrete floor of the room.

At this stage the lizards weighed as follows:

GROUP 1	
Male	475g
Female	200g
Female	250g
GROUP 2	
Male	120g
Male	210g
Male	225g
Female	150g

On 28 December, 1990 all lights and the heat pad were turned back on. The maximum temperature, beneath the Mercury Vapour Lamp, was 52^{0}C. The ambient temperature was 28^{0}C, the night time minimum 16^{0}C.

Food was offered immediately: Spring greens, sprouted seeds, lentils, grated carrot, and apple skins. The food was dusted with "SA 37" vitamin/mineral powder plus calcium carbonate. The lizards were weighed again on 30 December, 1990:

GROUP I	
Male	375g
Female	160g
Female	160g
GROUP 2	
Male	70g
Male	130g
Male	220g
Female	85g

These figures show huge weight losses, an average of 76g per animal in Group One and 50g in Group Two.

Plate 1. – Adult male *Uromastyx acanthinurus*. Green colour phase. Compare with red colour phase on front cover, and Plate 4.

Plate 2. – Juvenile captive-bred *Uromastyx acanthinurus*, approximately 6 months of age.

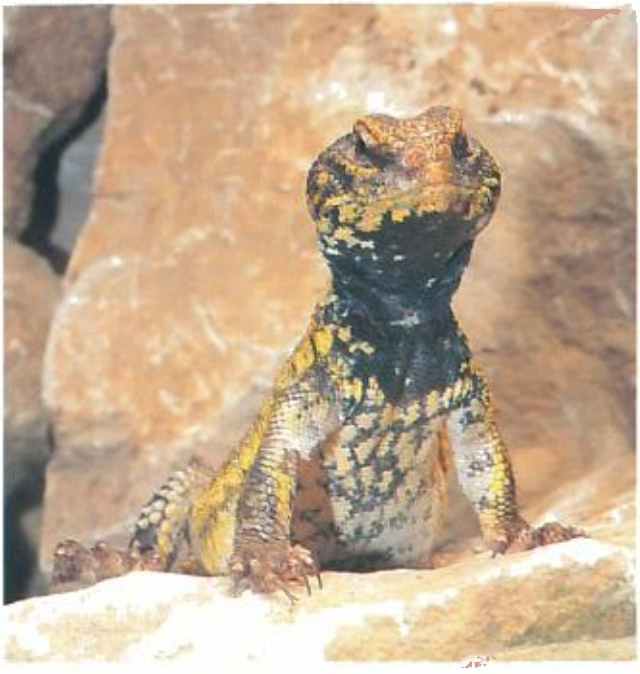

Plate 3. – Adult male *Uromastyx acanthinurus*, yellow colour phase.

Plate 4. – Adult male *Uromastyx acanthinurus*, red colour phase. Father of juvenile shown in Plate 2.

COURTSHIP

By mid-January the male in Group One was chasing the females and biting their flanks. The same male was introduced to Group Two in an attempt to stimulate sexual activity but this proved disastrous as the male attacked another male, biting it viciously on the head and causing a fair amount of bleeding around the ear drum. The Group One male was immediately removed. The victim's wound soon healed.

On return to its our vivarium the male began courting in earnest, performing "press ups" in front of the two females, chasing and biting them. but not aggressively. The females were obviously ready to accept a mate as they would greet the male head-on, tongue licking. The lizards did not touch at this point but it would appear that this was a passive gesture on the part of the females. Actual copulation was not witnessed, but by 21 February 1991, the male had very long waxy deposits exuding from his femoral pores, and the hemipenal bulges were obvious. This characteristic only shows up after a winter cooling period; the males' sexual organs are activated by a lowering of temperature. By mid-March the females were filling out slightly but it was difficult to be sure if they were gravid. During this time, and later in the year after egg laying, the male would dig into the burrow system, spraying sand everywhere.

At the beginning of May one female was obviously gravid, and on 7 May, 1991, 14 eggs were deposited in the sand and peat mixture at the end of the drainage pipe. The eggs were extremely large in relation to the size of the female, being 4.6 cm long x 2.5 cm wide. They were incubated at approximately 30-33^{0}C, 85% humidity. Seven eggs proved infertile after a month, but the remaining seven hatched on 1 August, 1991, following an incubation period of 87 days. The youngsters were perfect replicas of their parents.

Within a very short space of time the juveniles were eating all types of chopped greens, such as friese, spring greens and kale, as well as sprouted seeds, grated carrot, waxmoth larvae and crickets. The latter are a bit fast for the lizards to catch, but are accepted if offered on tweezers. Growth was good and the babies fed until they looked like footballs on legs. "Nutrobal" mineral/vitamin supplment and Calcium Carbonate were added to the food. A shallow dish of water was placed in the cage daily but not seen to be used. The cage was also sprayed with a water spray. The water was also sprayed directly on the lizards' bodies. Lighting consisted of a 40w spot light over a flat rock, plus a Black Light fluorescent tube, which was positioned in such a way that the lizards could actually touch it.

At the time of writing (10 January, 1992), the youngsters are doing well and there appear to be no problems in raising them. Unfortunately, female two did not produce any eggs and the female in the second group did not produce either. This could have been because of the ratio of three males to one female.

After this initial breakthrough it is hoped to reproduce these beautiful and interesting lizards annually.

UPDATE, SPRING 1992

Pre-hibernation weights 6 December, 1991:

GROUP 1	
Male	400g
Female (non-breeder)	240g
Female (breeder)	250g
GROUP 2	
Male (Green)	330g
Male (Large Yellow)	250g
Male (Small Yellow)	170g
Female (Red/Brown)	180g
Female (?)	175g

Female (Small Red)	85g

The last two animals were reared from wild hatchlings and introduced to the group.

Post hibernation weights, 30 January, 1992:

GROUP 1

Male	405g
Female	235g
Female	235g

GROUP 2

Male (Green)	310g
Male (Large Yellow)	245g
Male (Small Yellow)	165g
Female (Red/brown)	180g
Female (?)	175g
Female (Small Red)	85g

The weight loss in Group 1 was an average of 1.66g per animal, minimal in comparison to the previous year, and in Group 2, 7.5g per animal, average. One animal (Male, Group 1) actually gained 5g. These lower average weight losses were probably due to winter temperatures remaining generally lower in the current year. (Minimum recorded 10°C).

At the time of writing (16 April, 1992), both groups have been extremely active and courtship plus numerous copulations have been observed since 29 February, 1992. The larger red male of Group 1 was seen to chase a female and circle in front of her several times, as if chasing its tail. This was followed by "press ups", eventually resulting in the male gripping the female on the side of the neck, with his tail under hers, both tails and cloacas lined up. Mating followed. The Group 2 males were seen to mate with different females, even the very small 85g animal. Two females are looking very gravid, but are still mating with the males.

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PRODUCTS MENTIONED IN TEXT

Mercury Vapour Lamps, Sunlight Systems, 3 St. Marys Works, Burnmoor Street, Leicester LE27 JJ.

"SA 37" Vitamin powder for Dogs & Cats, Intervet, Cambridge.

"Nutrobal" Vitamin/mineral powder for Reptiles. Vetark Products Ltd., Winchester, Hampshire.