SUCCESSFUL BREEDING OF *EPICRATES CENCHRIA* (LINNAEUS, 1758).

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DISTRIBUTION

The natural distribution of the Rainbow boa is Costa Rica south to northeastern Argentina, and Paraguay. Ten subspecies have been described.

SOME DATA ABOUT THE ADULTS

According to the distinguishing marks given by Peters and Orejas-Miranda (1970), it is not possible to determine the subspecies of my specimens without knowing the exact area where they originate. Another difficulty is that the females A and C are captive bred, with no information available about the parents. Counting of their scales and comparing of their colour patterns produced no positive conclusions.
As I agree with the assumption already made in literature (e.g. Stemmler, 1971) that in terrariums subspecies are interbred I say with reservation that my animals are *Epicrates cenchria crassus* with some clear, characteristics of *Epicrates cenchria maurus*.
The male was probably caught in the wild, and in 1972 was imported by VEH Zoologica, when it measured 122 cm long, and weighed 1670 g. It was

about 13 years old. It has been in my possession since 1973.
Female A is a (1967) captive bred specimen from West Germany, now 155 cm long, weighing 2480 g, and has been in my possession since 1971.
Female B was probably caught in 1972 and imported by VEH Zoologica, now 121 cm long, 1860 g, about 12 years old, and in my possession since 1974.
Female C is captive bred by myself in 1978 (male x female A), now 161 cm long, and weighing 3320 g.

CAPTIVITY CONDITIONS

The four boas are kept together in a wooden cage throughout the year. The cage is 190x60x40 cm (lxwxh). They are kept relatively dry (40-50% air humidity) on peat moss with a large water basin (about 8 l). Light and heat are provided by an electric bulb, during 14 hours a day (from 6.00 AM to 20.00 PM). During the summer months I use a 40 Watt lamp producing a daily temperature of up to 32^{0}C, night temperatures being about 20^{0}C. During the winter I use a 100 Watt bulb producing a daily temperature of up to 28^{0}C, and at night about 15^{0}C with a minimum of about 10^{0}C.
The animals are fed with laboratory mice, day-old chicks and rats weighing up to 250 g. Food consumption of the male and female A in 1983 was:
Male: 8 rats up to 250 g, 16 one day-old chicks, 28 mice up to 70 g.
Female: 12 rats up to 250 g, 24 one day-old chicks, 35 mice up to 70 g.

BEHAVIOUR

None of the four boas are aggressive. There are essential differences in day- and night-colouration. By day they possess a reddish-brown colour with a vague round cell-formed pattern, at night

they are fully grey with a clear pattern.
Mating season starts mid-September and continues until the latter half of Novenber. The male becomes very restless, hardly eating and copulates irregularly and repeatedly with all females. After successful fertilization the females stop eating at the end of December or the beginning of January, with few exceptions. Their movements become slow and they become much heavier (shortly before delivery 800 to 1000 g). From 30 to 40 cm before the cloaca up to the cloaca itself, the interscalar skin becomes visible.
During the last quarter of the gestation the female often gasps with opened mouth, as a result of the pressure of the developing young on the lungs. The pregnant females exhibit a greater need for warmth and often lie turned on their backs (of comparable observations of *Python regius*, Lehmann, 1985).
Birth always took place in the early morning. The eggs were expelled with one to three series of contractions (total duration: about 20 minutes). During the birth and for some hours afterwards the females were very aggressive when disturbed. The next day this behaviour would disappear. No cannibalism by the parents nor of the other adults was noticed. Some young immediately broke the thin but elastic membrane, others left their eggs only after about one hour.

SOME STATISTICAL DATA ABOUT THE BIRTHS

Year	Date	Female	Number of young
1974	28 March	A	19
1975	4 April	B	8
1976	28 February	A	16
1977	20 April	B	11

1978	4 April	A	18
1979	16 March	B	15
1980	16 April	A	13
1981	22 April	B	12
1982	23 April	A	21 + 2 unfertilized eggs
	6 June	C	18
1983	28 April	B	14
1984	27 February	A	19 + 1 dead

The number of young correlate with the length and the weight of the mothers. Though the length and weight of the young was independant. All young snakes of all births appeared to be quite equal in length and weight (average length 35 cm; average weight 30 g).
They first shed skins after 6 to 10 days (cf. the data as given by Trutnau, 1979).

REARING OF THE YOUNG

After the birth I removed the young and any egg residues from the cage. I washed the young in water of approximately 35^{0}C and put them in a small cage. Normally they start eating before the first shedding. I feed them pinky mice (2 to 8 per young) twice a week. All the young ate independantly. When they are 60 cm long, I give them 14 day old mice once a week. Their growth is very equable: differentiation of length and weight (males smaller and lighter than females) becoming apparent in the second year of their life. The very contrastingly coloured young snakes (which in colour and pattern look like the nominative subspecies *Epicrates cenchria cenchria*) are very

aggressive, for the first two to three months. They have the colour pattern of their parents when they are 50 to 60 cm long. The ground colour of all snakes from the above clutches has become darker (dorsal as well as ventral) than that of the parents, presumably because of the mixing of subspecies.
The young snakes have a strong tendency to seek dark hiding places. If this is available, they only appear by day to eat, and otherwise are active only during the evening and night.
Growth rate depends on the quantity of food. Average growth for our young (feed to satiation) is as follows:

	Females	Males
1st year	about 80 cm	about 80 cm
2nd year	about 110 cm	about 100 cm
3rd year	about 140 cm	about 115 cm
4th year	about 160 cm	about 120 cm

After the first pregnancy the growth of the females slows drastically, while there remained hardly any increase of weight (except during pregnancy). One should notice the difference between the females A and C and female B!
Males are mature at three years old, the females at four. According to my experience an active male is needed for successful mating: the male I use is the fourth one I have tried.

CONCLUSIONS

In 11 years with four *Epicrates cenchria* (one male and two females, from 1981 three females), of which two were wild caught and two captive bred) 12 litters totalling 165 young (plus one dead born and two unfertilized eggs) occurred. It is remark-

able that under the mentioned circumstances and in spite of yearly copulations the females gave birth only once every two years.
It was not possible to classify the animals to subspecific rank, but we think that the initial animals are hybrid subspecies. The young of all births showed only slight differences in average length, with colour and pattern differing strongly. No young had pathological malformations and there was only one born dead and two unfertilized eggs.
All young raised by the author became darker in colour than the adults, dorsally as well as ventrally. The raising of the young was free of problems, and they were mature at 2½ years. However, taking into account the clear reduction of growth rate after their first pregnancy we first used the females for reproduction when they were four years old.

REFERENCES

Lehmann, Christine & Klaus Lehmann, 1985. Husbandry and breeding of the ball python *Python regius* in the terrarium. Litt. Serp., Vol. 5 (2): 64-68 / Dutch Ed.: 66-70.

Peters, J.A. & B. Orejas Miranda, 1970. Catalogue of the Neotropical Squamata. Part 1: Snakes. Smithsonian Institution, Washington.

Stemmler, O., 1971. Gefangenschaftsnachzucht von *Epicrates cenchria maurus* x *Epicrates cenchria cenchria* (Reptilia, Boidae). Aquar. Terrar. 18, Seite 415-420.

Trutnau, L., 1979. Schlangen im Terrarium. Band 1, Stuttgart.