

Results don't happen overnight!

By Brian Bush

Following is an extract from my notes regarding an ongoing study I have undertaken of ontogenetic colour change in the spotted mulga snake (*Pseudechis butleri*). This is not necessarily an exceptional case. It illustrates however the long-term study required in some cases to get results. It also illustrates the hidden setbacks that can occur.

14 Oct 87 - ♀ from Yalgoo rubbish tip 29 Sept 1987 placed with X from Leonora 25 Sept 1985 until she was noticeably gravid. Copulation not observed.

4 Jan 88 - X x-rayed in an attempt to determine when oviposition would occur. Eggs discernible approx. 60 mm in length.

7 Feb - Deposited 5 developed & 2 partly developed eggs. Only 2 developed eggs appear fertile.

29 Feb - After 22 days incubation all healthy eggs failing. *Could too many rads be the cause?*

20 Dec - Placed with male.

21 Dec - Copulation observed.

21 Feb 89 Deposited 4 unhealthy eggs.

12 Jun - Noticeable swelling X's right side immediately posterior to cloaca. Tender. Made 4 mm incision between subcaudal scales - discharged whitish "curdled" fluid and thick "paste". Swabbed out with Betadine antiseptic liquid.

19 Jun - Repeated above treatment.

23 Jun - *ditto*

1 Jul - Wound dry and looks good.

No breeding attempted **89/90** and none occurred **90/91**.

20 Jan 92 - X placed with ♀. Copulation not observed.

25 Mar - Deposited 1 healthy egg.

26 Mar - Deposited 2 unhealthy eggs.

27 Mar - Deposited 1 healthy & 3 unhealthy eggs.

X's SVL 130 cm, weight 398.85 gm. Relative clutch mass (RCM) = 0.25

Eggs in 210 gm vermiculite to 105 gm cooled boiled water. Incubator temp. 26-32°C

Only the larger of the healthy eggs viable, the other failed almost immediately.

27 Apr - Remaining egg incubating for 30 days.

30 Apr - Egg collapsing (33 days).

2 May - Egg opened. Contains white "paste" no embryo - infertile again!!!

25 Feb 94 - X placed with ♀, copulation not observed.

Applied to CALM for approval to collect another female to use in ontogeny study. The Leonora X must be incapable of successful reproduction. Application refused.

31 Mar - Again! Eggs are palpable within X's body.

8 Apr - Deposited five yellow "slugs".

28 Jan 95 - X placed with ♀, copulation not observed.

27 Feb - Feels gravid, eggs palpable within body.

13 Mar - Deposited four yellow "slugs".

SUCCESS AT LAST!

15 Oct 96 - X placed with ♀, copulation observed.

12 Dec - X sloughed.

15 Dec - X ate three 20g mice. This was to be her last feed pre-parturition.

1 Jan 97 - 77 days post mating deposited eleven fertile eggs. Total mass 310.3g. Embryos obvious when candled (approximately 3 cm long) surrounded by a large area of dense blood-vessels encompassing at least 25% of inner surface of egg. X's weight immediately post-parturition 600g. RCM = 0.52.

9 Mar - X sloughed.

11 Mar - First neonate pipped after 71 days at 30°C.

13 Mar - Last pipped after 73 days at 30°C.

Almost 12 years, 6 months lapsed from the date the female was collected until I successfully bred this species. My results did not compare with those previously published so now I must enlarge my sample size with further breeding. I expect to complete this study towards the end of 1998, however ongoing work is required to determine if neonates vary significantly between clutches.

LETTER TO WASAH...