1987

antarcticus

HERPTILE 12 (2)

Notes on the breeding of Death Adders *(Acanthophis antarticus)*

Raymond T. Hoser,
170 Lawson Street,
Redfern,
N.S.W. 2016,
Australia.

Introduction

In the period leading up July 1984, the author maintained a breeding group of Death Adders *Acanthophis antarticus.*

In early 1984 there were four gravid Death Adders and three produced live young. From the data arising from these births and data already held numerous facts about Death Adders and their biology emerged. The key facts are as follows:

1. Death Adders produce young in late Summer to Autumn
2. The gestation period appears to be from six to nine months,
3. most, but not all females, produce young every second year - whilst some produce annually,
4. they copulate at any time of the year - not all pairings being successful in fertilising the females,
5. the sex ratio of offspring is approximately 1:1,
6. the colour red is the dominant gene (grey is the only other possible colour and it is recessive)
7. they are oviviparous - but most females fail to have all of their ova fertilised.

Most of the above was deduced from notes held by the Author, relating to the previous ten year period and not detailed here.

Many facts, however, can be derived from the data provided in table 2. The mating habits and other aspects of this species' biology have been dealt with previously (see, Hoser 1981, 1982, 1983 and 1985).

Breeding details

In 1984 the author's four gravid females gave birth to live young in the period 26th January till the 26th February (late Summer). Unfertilised "eggs" continued to produce however until the 7th March. In previous years these ova have been produced during the Winter months.

Typically, the females appear to give birth, during seasonally cold and humid weather, usually when the air pressure is rising. This is true for specimens both in the wild and in captivity (Hoser, unpublished observation). An account of the birth of one snake's young (File no. AAA-29) is given in table 1.

Prior to giving birth female Death Adders become unusually restless and, in the case of the author's specimens, tried to excavate the soil in their cages, presumably in an attempt to find a damper location in which to give birth. Interestingly, this pattern of behaviour started up to 60 days prior to parturition.

The live young varied in length although litter mates tended to be of similar size. The babies ranged in size downwards from 17.9cm total body length - the average length was 16.5cm.

In this species, at least, the usual theory that larger litters contain smaller babies did not apply; however larger females did tend to produce larger young.

Within a single brood the smaller specimens usually, but not always, had reduced change of survival in the period shortly after birth.

Miscellaneous notes

Data on the young and the mothers, were kept after the births had occurred, and although most of the young snakes were released shortly after their birth, four females were kept for future study.

Death Adders have been bred by others besides myself including Peter Mirtschin (1976, 1982, 1985), Joe Bredl, Peter Hudson (1979) of South Australia and Merv Hay (1972) from New South Wales. Their breeding data is similar to my own. All noted that Death Adders mate at all times of the year and only produce young in late Summer and Autumn - and usually only every second year. They also observed the production of unfertilised ova and that they usually give birth in seasonally cold and wet weather. Shine (1980) investigated wild specimens held in museums and his findings concur with mine. My study is the first to investigate the colour genetics of the Death Adder.

In view of the results of the 1984 breeding my aim is now to gather further evidence to support my conclusions and gather information relating to tail colour genetics of Death Adders (which is influenced by multiple alleles/genes).

Death Adders are threatened in the wild wherever they occur. They obviously can be bred in captivity (and all four females and the males concerned were long term captives); it is hoped that more captive breeding programmes will take place although in the current climate in Australia this seems rather unlikely.

Postscript

On 10th July 1984 the Author's house was broken into illegally by corrupt wildlife officials. This break-in was filmed and shown on National television. All reptiles, files, computer disks, photographic equipment, slides etc. were also taken. What wasn't taken was smashed. This was, apparently, a reprisal

for the Author's exposition, in previous years, of smuggling rackets and the break-in was the climax of a vendetta maintained against the author. Later court action revealed that the officials had no right to enter and steal the possesions (including snakes) - and the corruption and vendetta were also revealed in much detail. However, despite continuing legal actions by the author to recover stolen goods, to date only a few files and illegally intercepted mail have been recovered.

The actions by the Author against these officials continues at the time of writing (March 1987).

In the meantime the captive breeding programmes and associated research has been terminated.

Table One. Birth of young - (AAA-29) Times given
Eastern Summer Time.

1.00	(1)	first born,
1.01-1.05	(10)	
1.15	(1)	
1.16	(1)	
1.18	(1)	
1.24	(1)	
1.50	(1)	
2.35	(1)	
2.40	(3)	
2.41	(1*)	
3.00	(4)	
4.04	(2)	
4.05	(1*)	
4.06	(2+ 1*)	
4.50	(1)	
5.10	(2)	.....time for all young to be b

* = unfertilised ova.

Table Two. Young born in 1984 (Westhead) Terry Hills (Cothuga Point) Dead Death Adder Row

Snake file no.	AAA/25	AAA/29	AAA/5	AAA/3
Colour adult	red	grey	red	grey
Date	26/1	24/2	26/2	twinn
Last meal	24/1	27/11	12/1	N/A
first after	3/4	24/2	2/3	N/A
No. of young	7	27	7	0
unfert. ova	9	6	14	1(twi
dead young	3	12	2	N/A
sex ratio	3:1:3	12:15	4:3	N/A
colour ratio	4:1:2	0:27	5:2	N/A
mean length	150	164	166	N/A

References

1. Hay, M. (1972) Notes on the growth and breeding of *Acanthophis antarticus*
The Australian Herpetological Journal, 4, 4, 14-15.

2. Hoser, R.T. (1981) Unsuitable food item taken by a Death Adder *Acanthophis antarticus*
Herpetofauna, 13, 1, 30-31.

3. Hoser, R.T. (1982) Frequency of sloughing in captive *Morelia, Liasis* and *Acanthophis* (Serpentes).
Herptile; Journal of the International Herpetological Society, 7, 3, 20-26.

4. Hoser, R.T. (1983) Mating behaviour of Australian Death Adders, Genus: *Acanthophis* (Serpentes: Elapidae).
Herptile; Journal of the International Herpetological Society, 8, 1, 25-34.

5. Hoser, R.T. (1985) Genetic composition of Death Adders *Acanthophis antarticus* in the West Head area.
Herptile; Journal of the International Herpetological Society, 10, 3, 96.

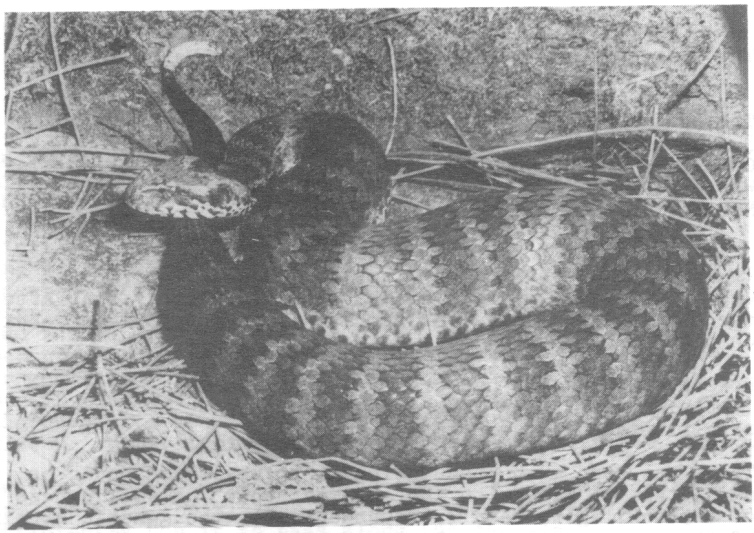
6. Hudson, P. (1979) On the breeding and birth of adders in captivity.
Herpetofauna, 11, 1, 11-13.

7. Mirtschin, P.J. (1976) Notes on breeding Death Adders in captivity.
Herpetofauna, 8, 2, 16-17.

8. Mirtschin, P.J. (1982) Further notes on breeding Death Adders *Acanthophis antarticus* in captivity.
Herpetofauna 13, 2, 14-17.

9. Mirtschin, P.J. (1985) An overview of captive breeding of Common Death Adders *Acanthophis antarticus* (SHAW) and its role in conservation. in Grigg, G., Shine, R. & Ehman, H. (eds) "Biology of Australasian Frogs and Reptiles.
Royal Zoological Society of NSW. p. 505-509.

10. Shine, R. (1980) Ecology of the Australian Death Adder *Acanthophis antarticus* (Elapidae): Evidence for convergence with the viperidae.
Herpetologica, 36, 4, 281-289.



Male Death Adder *Acanthophis antarcticus*

AAA-11

Glenbrook, NSW.

Grey phase.