

REPRODUCTION IN THE DUSTY HOGNOSE SNAKE, *HETERODON NASICUS GLOYDI*

By: Chris Mattison, 138 Dalewood Road, Beauchief, Sheffield S8 0EF, Great Britain.

Contents: Introduction - reproduction - Rearing the young - conclusions - Acknowledgement.

* * *

INTRODUCTION

The Western hognose snake, *Heterodon nasicus*, occurs in three distinct subspecies:

- *Heterodon nasicus nasicus* Plains hognose
- *Heterodon nasicus gloydi* Dusty hognose
- *Heterodon nasicus kennerlyi* Mexican hognose

Of these, the plains hognose is the form most often kept and bred in captivity, whereas the Mexican subspecies is the least commonly seen.

In 1987 a pair of dusty hognose snakes was purchased from a private collector in Texas. The snakes had been in his collection for over a year when purchased and were thought to have originated in the San Antonio region. Each animal was housed in a translucent plastic box measuring about 32x32x15 cm (Stewart Plastics) fitted with ventilation grills in the sides and the lid. The substrate used was dust-free wood shavings and a plastic water bowl was the only furnishing. The boxes were placed on a shelf in such a way that about one-third of their base was in contact with an Ultra-Therm heat pad in order to provide a thermal gradient. The animals fed well from the start although the appetite of the male was less than that of the female. Dead and live mice were taken with equal enthusiasm.

REPRODUCTION

Both snakes were cooled off during the winter of 1987/88 by removing all heating from mid October until the end of February. Temperature readings were not taken at this time but probably fell to the region of 10-12°C during the coldest nights. After the cooling off period, heating was replaced as before and the snakes began to feed almost immediately. They were placed together in mid-March of 1988 and mating was observed on March 31. The pre-laying shed occurred on April 22 and nine eggs were laid on May 1. On May 11, 1988 the snakes were introduced for the second time and mating took place immediately. The pre-laying shed occurred on May 26 and the second clutch, of eleven eggs, was laid on June 2. The incubation temperature was a constant 28°C and all the eggs began to hatch after periods of 55 days (first clutch) and 54 days (second clutch).

A similar regime was followed for the years 1989, 1990 and 1991, although the dates varied slightly. A summary of all breeding data is given in Table 1.

REPRODUCTIVE DATA

Female 1

	Mated	P.L.S.	Laid	Number	Hatched	Number	Sexes
1988	31/3	22/4	1/5	9	25/6	9	-
	11/5	26/5	2/6	11	25/7	11	-
1989	-	19/3	27/3	9	24/5	9	3♂, 6♀
	10/4	30/4	7/5	11	1/7	11	8♂, 3♀
1990	2/3	22/4	29/4	14	24/6	13	-
	17/5	1/6	5/6	16	14/7	14	-
1991	-	20/4	26/4	15	25/6	11	-
	-	24/5	31/5	13	26/6	13	-

Totals of 8 clutches

98 (mean 12.25)

91 (mean 11.37)

Female 2 (born 25/07/88)

	Mated	P.L.S.	Laid	Number	Hatched	Number	Sexes
1990	12/3	24/4	2/5	9	28/6	6	4♂, 2♀
	28/5	4/6	15/6	6*	-	-	-
1991	-	5/5	12/5	10	11/7	10	-
	-	7/6	13/6	7	11/8	5	-

Totals (4 clutches)

35 (mean 8.75)

21 (mean 7.0**)

* eggs laid in water basin

** excluding one spoiled clutch

Hatching success:

- female 1, 92.86%

- female 2, 80.77%

- females 1 + 2, 90.32%



Foto 1: *Heterodon nasicus gloydi*, Texas. Foto C. Mattison.



Foto 2: *Heterodon nasicus gloydi*, hatchling.
Foto C. Mattison.

REARING THE YOUNG

Hatchling hognose snakes are unusual amongst colubrids in shedding the skins almost immediately upon hatching, usually while still in the incubator. Food can be offered as soon as they are separated but feeding behaviour is highly variable. Some individuals accept newborn mice straight away and feed more-or-less regularly thereafter. Others feed at the first attempt and then refuse food for anything up to three months before feeding again, while others refuse food right from the start and may not feed voluntarily until the following spring. Again, while some will accept only living mice, most prefer dead. Some seem to relish mice which are beginning to decompose! Hatchlings which stubbornly refuse food can often be induced to start feeding by scenting a dead newborn mouse with a frog, either rubbing the mouse directly over the frog's skin or merely dipping it in a small volume of water in which the frog has been living for a few days.

Animals which feed well grow rapidly. A female from the second clutch was retained and reared. It matured in its second year and was mated to its father in 1990 and again in 1991. This snake had outgrown her mother (in length) within twelve months of hatching. Males often feed well to start with but become finicky as they approach maturity. Both sexes will breed at a surprisingly small size, certainly less than 30 cm in length in the case of males and little more in the case of females.

CONCLUSIONS

The dusty hognose snake makes a good captive and is a pleasure to keep. It requires very little space and no special arrangements. It breeds readily in captivity and any problems with feeding the hatchlings are usually resolved with a little patience. The colony described above has now been sold, along with a young unrelated male, to another breeder.

ACKNOWLEDGEMENT

Thanks to Bill Montgomery, who supplied the original pair of snakes.