

**CAPTIVE REPRODUCTION
IN THE SCARLET KINGSNAKE,
LAMPROPELTIS TRIANGULUM ELAPSOIDES
(HOLBROOK, 1838)**

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INTRODUCTION

On April 25, 1982, I acquired a female Scarlet Kingsnake, *Lampropeltis triangulum elapsoides* (Holbrook), measuring 51 cm in total length. She was purchased as a mate for a male Scarlet Kingsnake that had been in my collection since December 16, 1981. The male measured 41 cm in total length, and had a normal coloration and pattern. The female, however, was unusual in that her ventral surface coloration was almost entirely black.

These snakes were maintained separately in plastic shoeboxes (33x25x10 cm) using newspaper as a substrate. Shredded newspaper was spread liberally inside the shoeboxes to provide a burrowing medium. A small water dish, and a plastic retreat box were also provided.

The male Scarlet Kingsnake fed regularly on Five-Lined Skinks (*Eumeces fasciatus*) and Green Anoles (*Anolis carolinensis carolinensis*). The female fed readily on pinkie and fuzzie mice.

COPULATIONS

The first attempt to breed this pair of Scarlet Kingsnakes was on May 1, 1982, when the female was introduced into the male's cage. The male began rapid tongue-flicking over the back of the female. Actual copulation did not occur until the evening of May 2, following rather heavy courting by the male. The pair had separated by the following morning, at which time the female was returned to her cage.

On May 5, the female was again introduced to the male's cage. The male began courting the female almost immediately, but copulation was not observed until the morning of May 6. The pair was left together until May 9, when the female was returned to her cage.

By June 1, the posterior half of the female was noticeably distended, and she was believed to be gravid. At this time, a plastic dish filled with damp paper towels was placed in the female's shoebox. In the days that followed the female was observed to spend much of her time coiled on top of or underneath the damp paper towels.

On the evening of June 13, the female was found underneath the paper towels, coiled around a cluster of four rather large eggs. The eggs were soft and adherent, but were easily separated. A vernier caliper was not available so the eggs were measured with a ruler. The lengths ranged between 2.2-3.2 cm, while the diameters consistently measured 1.1 cm (see Table 1 for individual measurements).

Once measured, the eggs were placed in a plastic shoebox between layers of damp paper towels. The shoebox was then placed inside an incubator. The incubator had been previously adjusted to maintain a temperature of between 28-29°C. The eggs were checked daily, and were misted with water that was kept inside the incubator to eliminate the possibility of thermal shock to the eggs.

On the evening of August 5, two of the eggs were found to have slits in them. By the following morning the hatchlings had emerged and were found underneath the paper towels in the shoebox. The remaining two eggs did not hatch until the evening of August 7. The total length of each hatchling was measured and recorded. The hatchlings ranged in length from 18-20 cm (see Table 1 for individual measurements).

Egg nr	Size of the eggs	Hatching date	Incubation period	Length of hatchling
1	2.2 x 0.6 cm	5 Aug. 1982	53 days	19.1 cm
2	2.5 x 1.1 cm	5 Aug. 1982	53 days	17.8 cm
3	3.1 x 1.1 cm	7 Aug. 1982	55 days	20.3 cm
4	2.5 x 1.1 cm	7 Aug. 1982	55 days	20.0 cm

Table 1. Measurements of the eggs and hatchlings of the Scarlet Kingsnake, *Lampropeltis triangulum elapsoides*.

Each hatchling was placed in its own plastic shoebox (30x15x9 cm) in order to keep accurate shedding and feeding records. Newspaper was used as a substrate in all four shoeboxes. As with the adults, shredded newspaper was put into each shoebox along with small pieces of cork bark. Small, untipplable water dishes were also placed inside.

By August 16, all of the hatchlings had shed their first skins and hopefully were ready to eat. During the week that followed, newborn Eastern garter Snakes (*Thamnophis sirtalis sirtalis*) and newly hatched Northern Ringneck Snakes (*Diadophis punctatus edwardsi*) were offered to the hatchling Scarlet Kingsnakes, but all refused to eat. Next, I tried the amputated legs and tails of Green Anoles (*Anolis carolinensis carolinensis*), but these too were rejected by the hatchlings.

PROBLEMS

On the evening of August 24, I found two of the hatchlings (#3 and #4) in their shoeboxes dead. They were not emaciated, and it seems unlikely that starvation would have been the cause of their deaths. These hatchlings were only 2½ weeks old, and should have been able to go at least another week or more without food. Besides, all four hatchlings were maintained under almost identical conditions yet only these two hatchlings died.

On August 30, the two remaining Scarlet Kingsnakes were offered food. This time, however, they were offered the amputated hind legs of freshly killed fuzzy mice. Two of these legs were left in each shoebox overnight. By the following morning, both snakes had eaten one leg apiece. This food was offered again the next at the next two feedings (see Table 2 for individual sloughing and feeding records).

The two remaining hatchlings will be raised up on legs of fuzzy mice until they are big enough to eat pinkie mice, and eventually whole fuzzy mice will be offered to them.

Hatchling nr	First sloughing	Died	Feedings (mf = mouse fuzzy)
1	15-8-1982	-	30 Aug (1 mf leg) 2 Sept (2 mf legs) 8 Sept (2 mf legs)
2	16-8-1982	-	30 Aug (1 mf leg) 2 Sept (1 mf leg) 8 Sept (2 mf legs)
3	15-8-1982	24-8-1982	-
4	14-8-1982	24-8-1982	-

Table 2: Sloughing and feeding records for the hatchling Scarlet Kingsnakes, *Lampropeltis triangulum elapsoides*.

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