

DESCRIPTION OF THE GENUS ASPIDELAPS AND A SUCCESSFUL BREEDING WITH ASPIDELAPS LUBRICUS INFUSCATUS



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■ INTRODUCTION

The genus *Aspidelaps* belongs to the family Elapidae. It is divided into two species; *Aspidelaps scutatus* with probably three subspecies and *Aspidelaps lubricus* also with three subspecies. *Aspidelaps* is found in South Africa with *Aspidelaps scutatus* living mainly in the central parts and *Aspidelaps lubricus* mainly in the border regions of South Africa.

In Europe these species are not considered dangerous although laboratory tests on rats have shown that their venom is as potent as that of their larger relatives the genus *Naja*. The venom is neurotoxic, it effects the nervous system, and can even cause heart failure. According to P.J. Buys and P.J.C. Buys polyvalent antiserum is advised in cases of accidents with *Aspidelaps scutulatus*. In the case of *Aspidelaps lubricus* it is reported that a bite can cause death. Because they are apparently not harmless we keep these snakes, like all our venomous snakes, in so called two-part terraria (Mavromichalis 1994).

■ APPEARANCE, ORIGIN AND LIFESTYLE

Aspidelaps scutatus, the Shield-nosed Cobra

Aspidelaps scutatus has a very short head that immediately joins the body. Remarkable is the rostral shield (scale) which is formed like a plough and covers the complete front of the head and ends in a triangle on top of the head. The size of the eyes is average, with round pupils.

The body is stoutly built and the average length lies between 60 and 75 centimetres. The number of scales around the body is 21, in rare cases 23. The scales are smooth or slightly keeled. The anal scale is undivided. The dorsal colour varies from grey to red in several shades. On the back brown/black saddle markings can occur which sometimes grow together into rings. The ventral surface varies from white to light-yellow.

What in former times was known as the subspecies *Aspidelaps scutatus bachrani*, because of the complete black head and neck, is now only recognized as a colour form. It is no longer accepted as a subspecies because the colouring was the only difference in appearance. We couldn't find any literature on other subspecies. In the Netherlands the name 'schildcobra' is often used for this species; in Africa the name 'schildneusslang' or 'Shield-nosed Snake' is used by P.J. Buys and P.J.C. Buys

and they refer to *Aspidelaps lubricus* as the 'koraalslang' or 'Coral Snake'. We also think that this name is better suited for these animals.

During the day *Aspidelaps scutatus* lives underground in selfmade tunnels or in deserted rodent burrows in rocky, sandy areas. At night it appears to hunt for prey. It eats lizards, snakes, toads and small mammals. We believe that in the wild these snakes might eat insects as well, our own *Aspidelaps lubricus infuscatus* ate crickets when they were young.

When disturbed they erect themselves like a cobra and attack repeatedly with a closed mouth, whilst constantly making a loud hissing sound. If this is not effective they can pretend to be dead, just like *Hemachatus hemachatus*, the Ringhal's Cobra, does.

They are oviparous and have probably not yet been bred in captivity. Like *Python regius* they are difficult feeders, with sometimes very long periods of fasting.

Aspidelaps lubricus, the South African Coral Snake

Aspidelaps lubricus also has a short head immediately joining the body. The rostral scale is much shorter compared to *Aspidelaps scutatus*. The scales of this species are smooth and their number is 19 around the body. The anal scale is undivided. The basic colour of the body is yellow/orange surrounded with 20/47 black rings. Underneath the eye there is a black mark and the first black ring is often the widest and is triangular shaped. On the ventral surface the rings are more narrow. Of the nominate form beautiful red coloured animals are known with black rings, this form is very popular.

Aspidelaps lubricus infuscatus is recognized by its greater length and a larger amount of scales; 158 ventrals and 31 sub-caudals. Compared with the nominate form their colour is lighter and our animals also have black heads and necks. The tail is longer and more pointed.

We have the impression that this species occurs more on the surface than *Aspidelaps lubricus* which we also keep. Also they are more active during the day (own observation).

Aspidelaps lubricus cowlesi is almost without markings and is very light in colour. This subspecies is rarely kept in captivity and not much is known about it. This is probably due to the many problems in their natural habitat (war, starvation). *Aspidelaps lubricus* lives in the middle and western part of the Cape Province and in the south of Orange Free State.

Aspidelaps lubricus infuscatus occurs in Southwest Africa and *Aspidelaps lubricus cowlesi* is found in the south of Angola. The South African Coral Snake lives in dry sandy steppe areas. Not much is known about their lifestyle because these animals also live underground. They are sometimes found during ploughing. During heavy rainfall they come to the surface on these occasions they hunt very actively. Their defensive behaviour is the same as for *Aspidelaps scutatus*. They are also oviparous. Our young *Aspidelaps lubricus lubricus* and *Aspidelaps lubricus infuscatus* ate crickets, something that is not mentioned anywhere in the literature.

■ OUR ANIMALS IN THE TERRARIUM

In January 1994 we obtained very young *Aspidelaps lubricus infuscatus*, two males and one female. They were born in captivity and their former owner had bought them on the Snake Day in 1993 but he could not get them to eat. We housed the very young animals separately in small boxes and tried unsuccessfully to feed them naked mice. Damaged mice smeared with the smell of chicken were not successful either. After two weeks we decided to put the animals together in a large terrarium with kitchenpaper on the floor and toilet-paper-rolls as hiding places. Then when we offered them

seven naked mice they started to eat immediately. We had to keep an eye on them constantly because they were very competitive for their food. After they were fed together for a couple of times, they started to eat when separated. By coincidence we had some 'left over' crickets from our spiders and these were also immediately eaten by the young.

They grew into to adult animals without any problems. We separated them in 1995 hoping to breed with them. At the end of 1995 the animals went into hibernation. Literature mentions that the animals should be put into hibernation in the month of May in order to breed with them successfully. In our opinion however, our animals are well acclimatized and are adapted to the Dutch wintertime. We had similar experiences with species of the genus *Naja*.

Hibernation took place from November until February at a temperature of 16-20°C. In January we increased the temperature slightly to 24 °C. From February onwards the temperature varied from 28 to 32 °C. The animals started to eat well again and their length at this time was approximately 65 centimetres.

■ MATING AND THE LAYING OF THE EGGS

The female sloughed on March 15 1996. On the evening of March 19 we introduced a male which we will call male 1. Male 1 attacked the female immediately and was only interested in biting her. We removed this male instantly. When male 2 was introduced to the female he showed mating behaviour. This increased after spraying with lukewarm water. After we introduced male 1 again the two males started combat fights. Male 1 started to bite male 2 as well which made us decide to remove him again. After about five minutes male 2 mated with the female. The next day the animals were still coupled together. The mating lasted for a total of

18 hours. On the 20th of May, 61 days after mating, the female laid seven white eggs in a cluster. They were approximately 3 centimetres long and 2 centimetres wide.

■ INCUBATION TIME OF THE EGGS AND THE HATCHLINGS

We incubated the eggs in a plastic box with moist fine gravel in an incubator of the 'au bain marie' type. The temperature varied between 29 and 31 °C, and the humidity was between 80 and 100%. Under these conditions the eggs developed well and on July 18, 59 days after laying, all the eggs hatched on the same day.

The length of the hatchlings varied from 15 to 20 centimetres. The hatchlings were very robust with a large variety of markings. Some had a very light colour with just a few wide black rings, while others had a lot of narrower black rings.

The first young sloughed 7-9 days after their birth. They all showed the same defensive behaviour as described above. Six of them accepted a new born mouse two days after sloughing. One was successfully stimulated to eat by isolating her and offering her a new born mouse with a damaged nose. After their first meal the snakes were housed separately, because the hatchlings showed very strong competition for food amongst each other. They were sexed as 3 males and 4 females.

■ CONCLUDING REMARKS

Breeding *Aspidelaps lubricus* and *Aspidelaps lubricus infuscatus* has improved over the last few years. However, very little or nothing is written about the successful breeding of *Aspidelaps scutatus*. We ourselves concluded that several animals are needed to induce successful breeding.

For example male 1 is not suitable for mating. His behaviour towards the female is very aggressive and shows

Offspring of *Aspidelaps lubricus infuscatus*.

Photo by Marcel van der Voort.



To prove that they will never attack he handles them with his bare hands. Our friend has seen him do it and thus believed him.

All in all this is a spectaculair species with very interesting behaviour patterns which should be kept, and bred with, in captivity more often.

a more cannibalistic behaviour, rather than mating behaviour. A friend of ours, keeping two pairs of *Aspidelaps lubricus lubricus*, also had negative experiences. One of his females died because the male kept biting her constantly during his efforts to mate.

In our opinion the toxicity of the poison of *Aspidelaps* is underestimated. A good friend was bitten in the wrist by a *Aspidelaps lubricus* (nominat form). He always handled his animals with bare hands. He told us that he had been sick for two days, the symptoms were like having serious influenza. Possibly because of its small size, the nominat form of *Aspidelaps lubricus* has not enough poison to kill an adult human being. With another species or subspecies he could have had more serious problems. We feel that one should be careful with these animals. Due to their defensive behaviour they will probably not attack easily with the mouth opened. We observed that if they think that they are being fed they will attack, with an open mouth, anything that moves. The only dealer of these snakes in The Netherlands claims that they are completely harmless.

■ LITERATURE

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