

# SUCCESSFUL BREEDING OF NAJA SPUTATRIX, THE SPITTING COBRA (WHITE PHASE)



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## ■ INTRODUCTION

By luck I had the rare opportunity to obtain a pair of *Naja sputatrix* a few years ago. This in itself is not so special, were it not for the fact that they were of the white phase. The following is a breeding report of these animals.

## ■ GENERAL REMARKS

Of all venomous snakes, the cobra together with the rattlesnake is the best known and also appeals most to the imagination. Belonging to the *Elapidae* family, most cobras fall into the genus *Naja* with representatives in Africa and Asia. Until recently, the Asian representatives were all under a single species name *Naja naja*. Some ten subspecies were recognised, most have now been "upgraded" to species.

The Asian cobras are what everyone imagines them to be: fast and elegant snakes that can raise the upper part of their body, whilst at the same time spreading the ribs of their neck, so forming a hood. They are found over much of Southeast Asia.

## ■ NAJA SPUTATRIX

The subject of this article *Naja sputatrix*, the spitting cobra has a large distribution area with populations on the Malay peninsula, the Riau Archipelago and on several of the Sunda islands (Indonesia). They prefer the vicinity of water and can be found on small dikes over-

grown with bamboo and dams surrounding rice paddies, on plantations and near the edge of the jungle. Here they utilise rodent burrows and can be found underneath tree trunks and in termite mounds. Quite often they can be found near, or even in the middle of villages. Here, they live underneath the rubbish which is always lying about the huts, such as piles of bricks and planks. They regularly enter homes. This cobra is generally active at dusk, although it sometimes can be found basking during the day.

The colour is quite variable in this species which seldom grows over 1 m in length. There are brown, grey-brown and olive coloured specimens, a population of white animals exists in a very small area in Indonesia. The spitting cobra is not too particular about its food. This mainly consists of rats and mice. Furthermore, birds, frogs, toads, lizards and even snakes are considered prey items.

## ■ SPITTING COBRA

*Naja sputatrix* in general is not aggressive; if possible it will attempt to flee. If that does not work, it tries to intimidate its attacker by raising itself, spreading its hood and striking, often with a closed mouth. The species name *sputatrix* indicates these snakes are able to spit venom. They share this feature with among others, two African species *Naja nigricollis* and *Hemachatus haemachatus*. With spitting cobras the venom canal does not have its outlet at the base of the fang, but on the front of the fang. Depending on the species a jet of venom can be ejected at the attacker

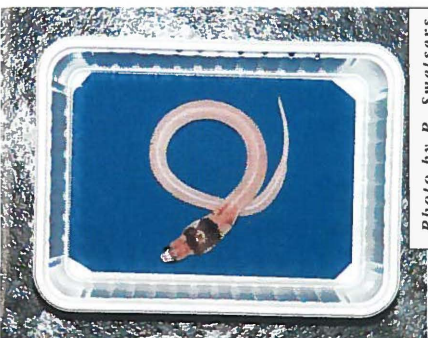


Photo by P. Smetsers

Young white *Naja sputatrix* with dark markings in the neck

the non-spitting ones as well, have a proteroglyph venom apparatus: they possess short fangs which cannot move, in the front of their mouth. The venom is mainly neurotoxic and affects the nervous system. The subject of the composition of venom is of great complexity and will not be discussed here.

### ■ MY ANIMALS

More than four years ago I obtained two exceptionally beautiful *Naja sputatrix*. They were wild-caught animals from Indonesia. What made them so special was their colour: pure white with just a few, very light brown scales. These occurred mainly on the head and decreased in number posteriorly. The underside of these cobras was completely white. The cause of this rare white trait is unknown. A small population of white cobras has evolved in a small area of Indonesia. The white phase should not be confused with albino specimens. These animals are pure white and have black eyes, whereas albinos which are now bred like e.g. *Naja kaouthia*, are yellowish white and have red eyes.

The male was already full grown upon arrival and was about 1 m in length. The female was half-grown and measured about 80 cm. I put both animals together in a plastified chipboard terrarium of 105x80x75 cm (lxwxh). The front has glass that could be removed, while part of the top had sliding glass. To work safely it was possible to divide the terrarium in two by means

within a range of 3 m with reasonable accuracy. If the eyes are hit, temporary blindness will result. Lasting damage can occur if not treated professionally. All cobras,

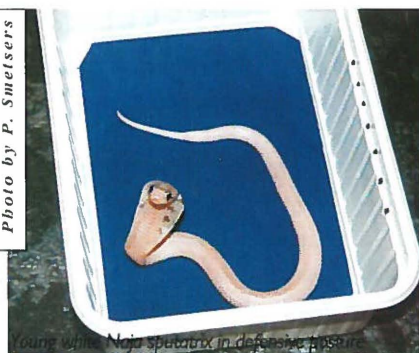
of a plexiglass plate. The bottom substrate was turf mixed with beech shavings. Two wooden boxes served as a hiding place. Both had a slide-door with a lock that could be shut using a long snake hook. Because both animals used these hiding places for most of the time, this worked well. The other furnishings of the cage were some small birch trunks and of course a water bowl. Heating and lighting were via a heating cable and a 40 Watt spotlight respectively. The daytime temperature was about 27 to 29°C. At night the temperature averaged at about 24°C.

The cobras got live mice for food. Other venomous snakes of mine always get freshly killed prey animals, but the cobras refused these. A mouse that is bitten dies within seconds. Both animals were rather shy and only left their hiding place to hunt for prey. When they were startled, they raised themselves and spread their hoods. An imposing sight. The male spits rather quickly, I therefore always wear eye protection. Their accuracy was really astounding, as an acquaintance once experienced. Squatting in front of the (closed) terrarium, he was suddenly spat at by the startled male. After he had recovered his composure, two spots of venom could be seen on the window, exactly at eye level.

### ■ THE BREEDING ATTEMPT

At the end of January 1997 the female *Naja sputatrix* showed signs of an approaching slough. As usual, I sprayed the terrarium to increase relative humidity. Immediately after she had shed the male displayed mating behaviour. A copulation lasting five hours

Photo by P. Smetsers

Young white *Naja sputatrix* in different position



Adult and young of white *Naja sputatrix*

followed. After that I did not observe any more matings. There was nothing that indicated the mating had been successful. But to be sure, I placed a box designed for egg-laying in the terrarium. On 13 April 1997 I noticed she looked very thin and when I checked found thirteen slightly dehydrated eggs in the hiding box, one of which was small and soft. I put the other twelve eggs in an "au-bain-Marie" type incubator. As usual coarse sand used for brick-laying served as a substrate. After three days the eggs looked rehydrated again. The relative humidity in the incubator was 100%, while the temperature (measured between the eggs) was between 28 and 33°C. On average the temperature measured 30°C. After exactly one month one egg went bad; it appeared to be unfertilized when checked. It was rather strange that it should have remained white for such a long time. At the beginning of June the eggs started to dent slightly, and the first young was born on 6 June. On 8 June the last egg which had been dented for over a week was opened. It contained a live young with a malformation of its spine. The other ten young were perfect.

### ■ THE YOUNG

The young spitting cobras were exact replicas of their parents: they were fiery and incredibly beautiful. They were even whiter and only on the back of their neck did they have some colour, but since that is absent in the parents it may disappear in time, and is already

fading in the young that grow the fastest. Just after hatching their length was 27 cm and they weighed 10 g. I put them separately in small containers. As expected they were very alert: regularly all ten of them were seen raised and with spread hood in their containers. Very beautiful. They did not really spit at first, although they tried very hard! After some weeks they had mastered this too and they spat at everything that moved. After about ten days the young cobras sloughed and I offered them naked mice. At first only one or two wanted to eat: I had to force-feed the others.

### ■ CONCLUSION

With the purchase of these specimens of white *Naja sputatrix* I have two very beautiful and also two (especially in the terrarium world) rare cobras in my possession. Although these are wild-caught animals which could cause problems, especially coming from Southeast Asia, through internal parasites, both my *Naja sputatrix* grew into problem-free terrarium animals. The fact that they also reproduced was an extra bonus, more so since the young turned out to be so beautiful.

*Translation from Dutch by Astrid Gomes*

*English corrections by Lawrence Smith*