
CARE AND BREEDING OF *SISTRURUS MILIARIS*
BARBOURI, THE BARBOURS PYGMY RATTLESNAKE.

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INTRODUCTION

For two and a half years I have success-
fully kept Pygmy rattlesnakes; this year I
have bred them for the first time. In the
following article I give some details about
this species and about my way of caring for
and breeding them.

Although I do not want to advocate the
keeping of venomous snakes, *Sistrurus mili-*
arus barbouri is in my opinion an ideal
snake for someone who has not had much
experience with venomous snakes.

Reasons include the beautiful colour pat-
tern, the small size and the relatively low
price you have to pay for specimens nowa-
days.

THE SPECIES

Pygmy rattlesnakes belong to the family
Crotalidae (Pit vipers). This group is de-
fined by the possession of a warmth sensi-
tive organ, of which both openings are lo-
cated just beneath the eyes. They are
closely related to the real rattlesnakes of
the genus *Crotalus*. Besides *Sistrurus mi-*
liarus barbouri there are another two sub-

species distinguished: *Sistrurus miliarus miliarus* and *Sistrurus miliarus streckeri*, which both have roughly the same pattern as *Sistrurus miliarus barbouri*, but are a completely different colour and also have different areas of distribution.

Sistrurus miliarus barbouri has a light to dark-grey background with black, saddle-shaped spots on the back. Irregularly distributed on the sides are black spots. Between the saddle-shaped spots on the top of the head appear orange-red spots.

The underside is white with black spots. The eyes are gold coloured. The length of fullgrown animals lies between 60 and 70 cm. These venomous snakes have movable venom fangs in the front of the upper jaws and thus are, so called, solenoglyph.

Bites are generally not really dangerous, because the amount of venom injected (although quite potent), is limited.

The rattle of *Sistrurus miliarus barbouri* is fairly insignificant. It is rather small and produces a sound that can be compared with that of a bumblebee. My copperheads (*Agkistrodon contortrix contortrix*) make more sound when they lay between dry leaves with a vibrating tail-end.

DISTRIBUTION AND HABITAT

Barbours pygmy rattlesnake is found in the southeast of the U.S.A. The area spreads over the states Florida, Georgia and Alabama, and small parts of Mississippi and South-Carolina.

They occur in pine- and firwoods and in scrubby areas on the plains; always in the neighbourhood of water. The soil there is preferably sandy and dry, although areas with rocky soil are also inhabited.

These snakes hide themselves preferably under fallen leaves, a layer of fir-needles or under tree-stumps.

BEHAVIOUR AND FOOD

Sistrurus miliarus barbouri is day-, dusk- or night-active, depending on the temperature. If during the day it is too hot (warmer than 30°C), then they hide themselves and come out of their hiding places only later in the day.

They move only a little and over small distances, so that they stay their whole lives in one small suitable area.

Depending upon their distribution they may take a short winter rest. In the south of the distribution area, Florida, the snakes are active the whole year. In the more northern parts they hide themselves for two or three months to hibernate.

The diet is very varied and consists of small rodents, small snakes, lizards and frogs. Some specimens even eat large insects, like locusts, crickets and beetles.

THE PARENT ANIMALS AND THEIR TERRARIUM

In November 1987 I came into possession of two young *Sistrurus miliarus barbouri* with a length of about twenty cm. They were imported from the U.S.A.

Unfortunately the female died within a short time. The male fed well on small mice and grew fast. By exchange I was able to get a young female at the end of 1988, captive-bred by Serpo, in 1988. Because the male had grown considerably in the meantime, the animals were housed seperately. Especially the female was then fed often,

with the intention to let her, as fast as possible, reach such a length that they could be housed together in one terrarium, because, like many people, I am always short of terrariums.

The two snakes do not differ much from each other in their markings, except that the male has much redder spots on his back. His complete colour pattern is much more sharply defined than that of the female. Peculiar to this male is the fact that he has no rattle and never has had one, whilst the female has a rattle of about 1.5 cm. As food they both accept dead or living mice out of a pair of forceps.

In mid-August 1989 I urgently needed the terrarium of the female and from her length at that time (about 45 cm) I knew she could be put with the male in his terrarium. This terrarium measures 40x50x40 cm (lxwxh) and is made of melanine coated chipboard. The frontside consists of sash-windows with a little lock.

The heating is produced by a 15 or 25 Watt bulb, while in the winter during the night a heatcable ensures that the temperature does not sink below 22°C. During the day the temperature is about 28°C, falling at night to 22°C.

Because I have my snakes first of all for their beauty, I have furnished this terrarium very unnaturally, but in my eyes attractively. The bottom comprises of small and a bit larger, white pebbles, like those used in cactus-growing. It goes without saying that the black *Sistrurus* show up beautifully on this. Exactly in the middle, straight under the bulb, lies a large, red lava rock of about 20x15 cm. In the left hand corner at the back stands a tall cactus, while on the right side stands a spherical cactus. These flourish well.

Recently a cat-skull has also been placed in the terrarium. A little water bowl completes the set-up. This all results in a very decorative terrarium, and although it is furnished unnaturally for Pygmy rattlesnakes, satisfies their needs excellently. Both snakes move through the whole terrarium and can bask in the warmth on top of the lava rock, something they do often in the morning. They also can hide themselves behind this rock, something they seldom do. During the night they mostly lay at the back of the terrarium, on top of the heat-cable that lies under the pebbles. Regularly there is water sprayed into the terrarium; the female always reacts to this by rattling.

THE COPULATION

As I already mentioned the female was placed with the male on 16 August 1989. She was then just one year old, the male just two years. Within two hours they were copulating, which lasted for six hours. I thought this was a good sign, but considering the age of the female I did not expect anything from it.

On 3 september 1989 they copulated again. The female kept eating normally, till the signs of a sloughing showed at the end of October. On 9 November she sloughed and immediately followed another copulation. From that moment she refused all food. In that period she also started to grow fatter. The weight increase was as follows:

1 October	-	180 g
1 December	-	200 g
1 January	-	220 g

By late December she was very fat and always seeked the warmest spots. During the

day she thus lay continuously on the lava-rock under the bulb; during the night on the heat-cable.

THE YOUNG

On 1 January 1990 the female discharged herself of a dark-brown coloured fluid, which I thought would indicate the start of confinement, but she did not give birth until 7 January. In a period of six hours ten young were born, as well as four infertile eggs. This took much exertion; especially the infertile eggs caused considerable work. The last two young and one infertile egg could only be born after the female had rested for one and a half hours. In this period I increased the air humidity by spraying water and at the same time turned up the temperature. This seemed to help, because after this she quickly completed her labours.

During the confinement the otherwise very calm male became very restless and constantly "guarded" the space between the female and the windows. With considerable difficulty I was able to catch him out of the terrarium, because otherwise I could not even get into the terrarium with a hook to eventually free the little snakes out of their membranes.

The young were the perfect image of their parents. Some had inherited the bright colours of their father, while the others looked more like their mother. Even the little rattle, not more than one knob (prebutton), was used immediately when they were frightened.

The young were about 17 cm long and weighed on average 5 g. Four days after they were born four of them took a pink

mouse, even before their first slough, the next day. The other six still refused to eat, two weeks after their birth. I have offered them all kinds of food, like nestmice (dead, alive, cut), crickets and mealworms. Now I have started to force-feed them with nestmice of one day old. The female had lost 60 g weight after the confinement. The day after the confinement she ate a mouse and in the following week another three.

CONCLUSION

Much earlier than I expected my pair of *Sistrurus miliarius barbouri* reached sexual maturity. The birth of the young took place nearly 5 months after the first copulation, which is a normal pregnancy. It may be supposed that the first copulation proved fertile. It was strange that the female at a later stage, after three months of pregnancy, still accepted copulations. The separate keeping of the parent animals is possibly enough to stimulate them to copulate. Possibly it will succeed again this year. If this does not work, then I have the intention to give them a winter rest in the way I do with my *Elaphe guttata guttata* year after year, which makes them reproduce successfully. They appear in the same distribution area.

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Foto 1: *Sistrurus milliaris barbouri*, breeding couple. Foto J. Raaijmakers.



Foto 2: *Sistrurus milliaris barbouri*, juvenile. Foto J. Raaijmakers.