

## A Simple Restraining Device for Venomous Snakes

Rodrigo C. G. de Souza  
Caixa Postal 05  
Itacaré / Bahia  
45530-000  
BRAZIL  
lachesisbrasil@hotmail.com

### Abstract

We would like share with the community, the design of a simple restraining device we developed (or reinvented) based on an idea by my 7-year-old son. Since we only handle bushmasters, our main goal was to have built-in protection for the osteo-tendinous frame in the cervical area which, in *Lachesis*, requires extra care. The device has proven to be extremely effective in its main goal and also very simple to use, build and clean.

In the daily inspections in our “Serra Grande Center for Captive Reproduction of *Lachesis muta*,” we often have to immobilize rather large bushmasters (up to 9 ft), sometimes for long periods of time.

Up until a few months ago, we either used manual restraint or the transparent plastic tube technique. For simple actions such as tick removal, we used manual restraint. For longer procedures, such as the suture of wounds, we used the plastic tube, which often seemed “claustrophobic” and stressing to the animal.

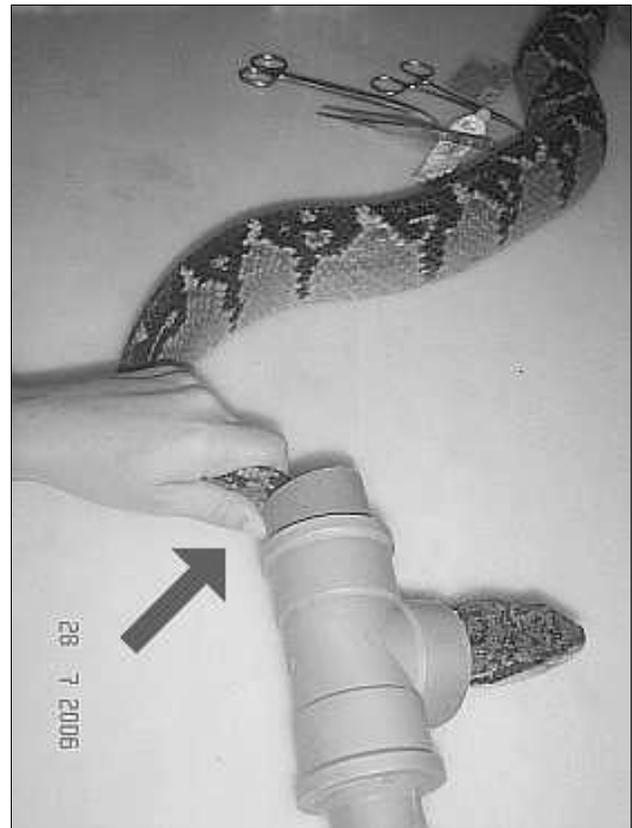


The attempt to minimize this stress led us to this simple device, which leaves the animal at ease, even during time-consuming procedures, which could lead *Lachesis* to a deadly “shock state.” We have never lost an animal even in 30-minute restrainings for suture of major cuts.

The device, which we call simply “T,” is made with common PVC pipe and fittings and, since we have never seen these cheap plumbing items being used for these purposes, we would like to share it with fellow herpetologists.

The images speak for themselves. Notice the smaller diameter of the pipe in the opposite end of the T, which forces the snake to make a left (or right) turn. Notice also how the cervical area is free of any pressure and only a gentle grip further down the body is needed to hold the snake in place.

The most important aspect of the use of this device is the choice of the appropriate diameter, which must be made according to the animal you are working with. The diameter of the pipe should be similar (slightly larger) to the cross section of the head, which should fit “just right” with the T: not too



Materials: (1) a 2" or 3" T-joint; (2) a 2" or 3" × 1" coupling; (3) about 3' of 1" pipe for the handle; (4) PVC glue/cement.

tight, for the animal must go forward on its own, not loose to avoid the possibility of a sudden U-turn. Needless to say, the choice of diameter must be made by experienced handlers who should also place the animal in the device as follows.

Once the animal is immobilized the traditional way using the hands, introduce the head into the device and let go very slowly, offering the snake the possibility to go forward, gently controlling the grip pressure (see arrow in picture #2). As soon as the snake feels that going backwards is not possible, things happen naturally: the normal behavior is to bump the snout into the dead end, retreat a little, and go for the light and ventilation. Once it makes the turn, block the back and forth movement by a gentle increase in the grip pressure.

In our experience with bushmasters, the snake always makes the turn naturally, avoiding the claustrophobic dead end and following what appears to be its only escape route. It is also important to keep in mind that in the case of large bushmasters the operation may take three or four people: one handling the opposite end of the T, another controlling the T itself restraining/letting go the animal, another in the snake's midsection, controlling twisting attempts and finally, the fourth person doing whatever procedure is necessary, in the picture above, suturing a machete wound.

Once the animal is locked into the device, less experienced persons can handle the grip on the animal, which does not require any strength at all, quite the contrary, specially with *Lachesis*, a gentle touch is a necessity. In pictures 2 and 4, my wife Ana is controlling the animal.

Finally, we would like to stress that our experience with the T is limited to *Lachesis muta* only. We believe, though, that the general principles and ideas described in this short communication should apply to other venomous snakes, with or without adaptations. We would like to hear your experiences with other species, relating eventual problems and/or improvements made to the device.

