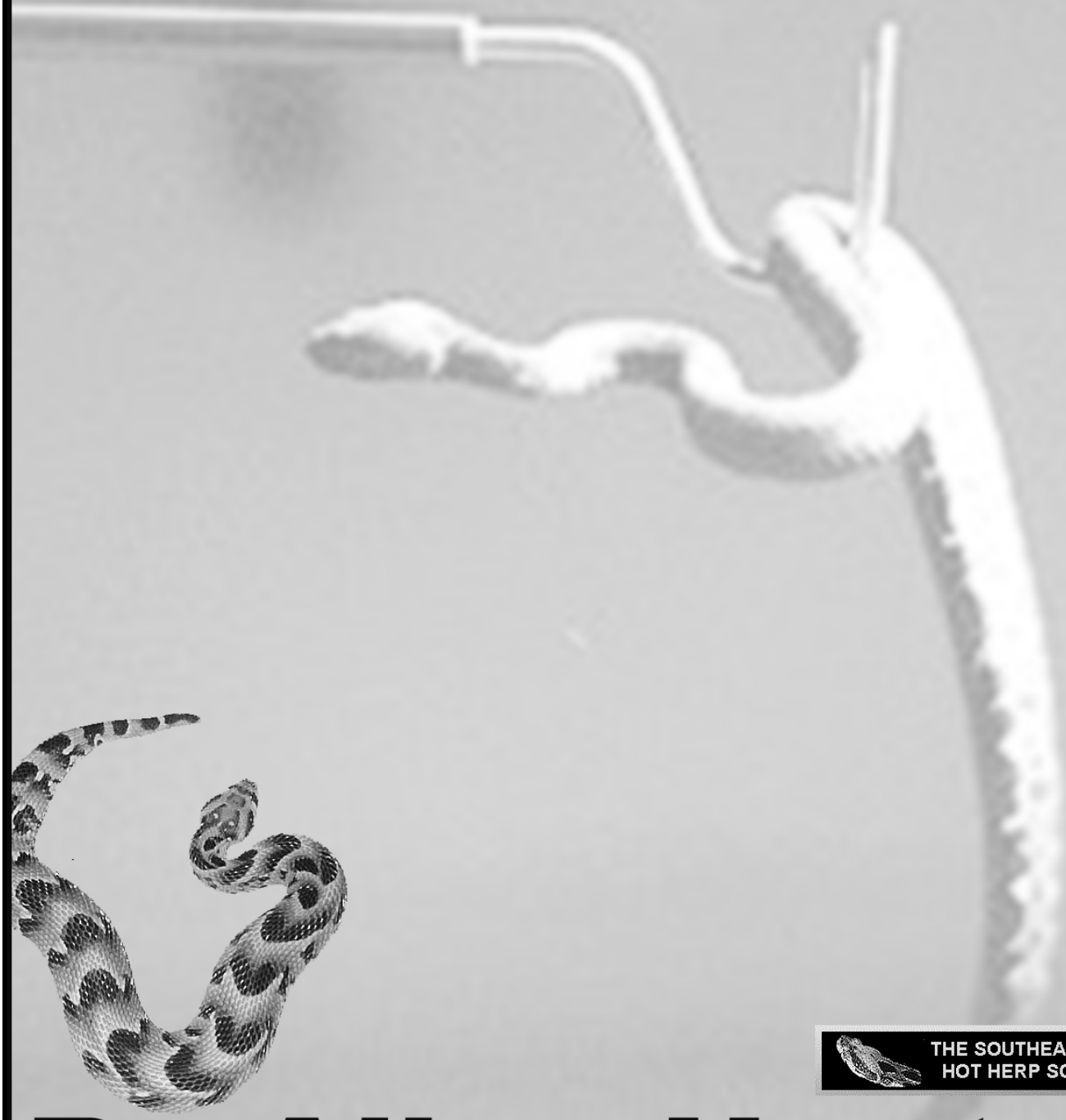
VENOM 101

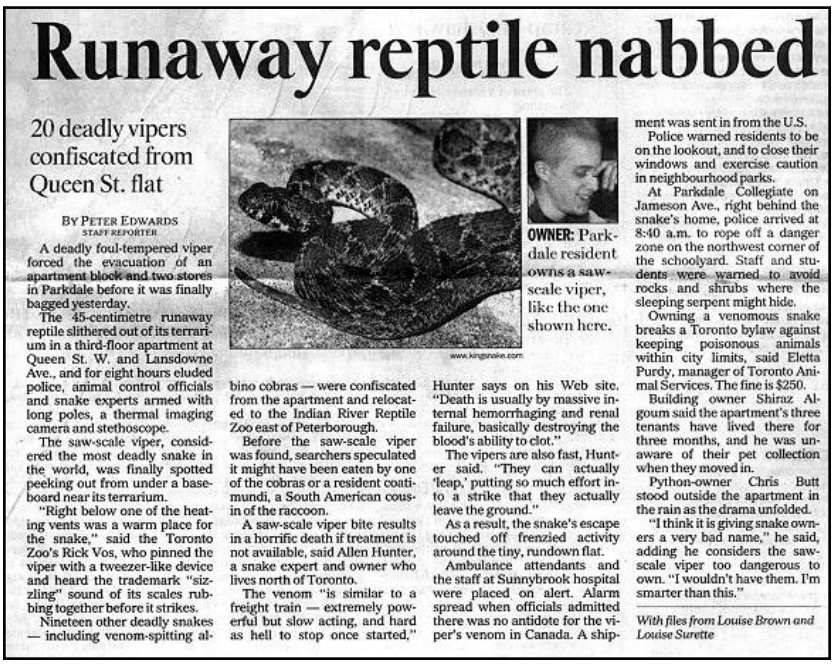


THE SOUTHEASTERN HOT HERP SOCIETY

By Allen Hunter

One aspect of keeping venomous snakes that deters most keepers is actually having to "handle", or physically deal with their charges. No matter what kind of setup you've devised (utilizing dividers and/or trapboxes), there will come a time when you have to manouver or restrain the animal for cleaning or treatment if it is sick. Aside from feeding accidents (which can be the most serious bites), this is where most slip-ups can occur. What has to be remembered at all times is that there is NO ROOM FOR ERROR! One mistake could be your last; or at least a very painful, expensive and possibly disfiguring lesson.

Venomous snakes are NOT pets and should not be viewed as such. There is way too much of a cavalier attitude amongst the new keepers - and not enough of you take these animals seriously enough.



Runaway reptile nabbed

20 deadly vipers confiscated from Queen St. flat

BY PETER EDWARDS
STAFF REPORTER

A deadly foul-tempered viper forced the evacuation of an apartment block and two stores in Parkdale before it was finally bagged yesterday.

The 45-centimetre runaway reptile slithered out of its terrarium in a third-floor apartment at Queen St. W. and Lansdowne Ave., and for eight hours eluded police, animal control officials and snake experts armed with long poles, a thermal imaging camera and stethoscope.

The saw-scale viper, considered the most deadly snake in the world, was finally spotted peeking out from under a baseboard near its terrarium.

"Right below one of the heating vents was a warm place for the snake," said the Toronto Zoo's Rick Vos, who pinned the viper with a tweezer-like device and heard the trademark "sizzling" sound of its scales rubbing together before it strikes.

Nineteen other deadly snakes — including venom-spitting albino cobras — were confiscated from the apartment and relocated to the Indian River Reptile Zoo east of Peterborough.

Before the saw-scale viper was found, searchers speculated it might have been eaten by one of the cobras or a resident coatimundi, a South American cousin of the raccoon.

A saw-scale viper bite results in a horrific death if treatment is not available, said Allen Hunter, a snake expert and owner who lives north of Toronto.

The venom "is similar to a freight train — extremely powerful but slow acting, and hard as hell to stop once started," Hunter says on his Web site. "Death is usually by massive internal hemorrhaging and renal failure, basically destroying the blood's ability to clot."

The vipers are also fast, Hunter said. "They can actually 'leap,' putting so much effort into a strike that they actually leave the ground."

As a result, the snake's escape touched off frenzied activity around the tiny, rundown flat.

Ambulance attendants and the staff at Sunnybrook hospital were placed on alert. Alarm spread when officials admitted there was no antidote for the viper's venom in Canada. A shipment was sent in from the U.S.

Police warned residents to be on the lookout, and to close their windows and exercise caution in neighbourhood parks.

At Parkdale Collegiate on Jameson Ave., right behind the snake's home, police arrived at 8:40 a.m. to rope off a danger zone on the northwest corner of the schoolyard. Staff and students were warned to avoid rocks and shrubs where the sleeping serpent might hide.

Owning a venomous snake breaks a Toronto bylaw against keeping poisonous animals within city limits, said Eletta Purdy, manager of Toronto Animal Services. The fine is $250.

Building owner Shiraz Algoum said the apartment's three tenants have lived there for three months, and he was unaware of their pet collection when they moved in.

Python-owner Chris Butt stood outside the apartment in the rain as the drama unfolded.

"I think it is giving snake owners a very bad name," he said, adding he considers the saw-scale viper too dangerous to own. "I wouldn't have them. I'm smarter than this."

With files from Louise Brown and Louise Surette

www.kingsnake.com

OWNER: Parkdale resident owns a saw-scale viper, like the one shown here.

Freehandling venomous snakes IS NOT WORTH IT!!!

Snakebite is an already assumed risk when you take on the responsibility of keeping venomous snakes, so if an accident occurs, remember this: it's the keepers fault! Not the snake, cage, tool, etc., your's - and your's alone.

It is imperative that all prospective keepers of venomous snakes try to obtain, or at least know where the nearest source of antivenom is located, as well as the specific, scientific latin names of your snakes. Based on this assumption, if an accident occurs:

THIS BOOK MAY SAVE YOUR LIFE!
A must-have for all venomous keepers!
The Antivenom Index - 1999 Revision
The American Zoo & Aquarium Association and
The American Association of Poison Control Centers

This book offers a goldmine of information including listings of all stocks of antivenom available in N.America, worldwide antivenom producers and addresses, snakebite treatment, and all relevant emergency contact numbers.

Private individuals who are not AZA members can
send a check for $50.00 plus $3.00 postage or $10 for domestic Federal Express to:
American Zoo & Aquarium Association
8403 Colesville Road - Suite 710
Silver Spring, Maryland 20910

(Foreign readers should probably obtain a U.S $ Bank check and add at least $10.00 foroverseas postage).

Of far more importance is PUBLIC SAFETY! Escapes are, in my opinion, the #1precaution we must take. Not only does this create public panic and horrible press along with hastening laws, but sets-up the possibility of an innocent person being bitten. While this hasn't happened yet, there always is a first time. The incident below (and virtually in my own 'backyard', as it were) clearly demonstrates a classic example of irresponsibility and stubborness. The owner had been totally aware of the necessary safety protocols (and stated that he'd read this website, as well), yet still did not follow the #1 rule: SECURE YOUR SNAKEROOM. After hearing the details of the 'escape scene', and how an Echis coloratus escaped from it's cracked aquarium with taped flyscreen lid, I figured that this whole embarrassing situation could have been prevented by one lousy piece of wood and 10 minutes work by sealing the bottom of the door!! (From The Toronto Star - May 2, 2000)

Who this publication is intended for:

This site illustrates tried & true methods, techniques, and tips on the captive maintenance of venomous snakes, and is intended for serious herpetoculturists who are contemplating venomous husbandry. Public and personal safety are of paramount importance.

Who this publication is not for:

Aspects of venomous keeping that are definitely NOT covered here: "care sheets", venomoid surgery, freehandling or any other reckless behavior, venom toxicology, sales of raw venom or snakes, using venoms as bio-weapons, or any other such claptrap that encourages such behavior, or portrays venomous snakes in a manner that perpetuates the public impression of irresponsibility and 'negative exploitation' involving venomous snakes.

Hots 101; Pt. 1: The Golden Rules

By Allen Hunter

The keeping of venomous snakes by private individuals is illegal in most urban areas, and is generally held in dim view by society as a whole. I will not delve into the moralities of this issue, but we must understand that there are serious people out there who keep and love these facinating and misunderstood reptiles. The captive maintainence of "hot" snakes and Heloderma lizards is certainly not without risk, and it cannot be stressed strongly enough that there is NO ROOM FOR ERROR! A bite or an escape by a captive venomous snake is a matter of grave concern and can create numerous problems like: embarassing press and legalities, "witch hunting" of fellow herp keepers by public authorities and hospitals that are without proper antivenin and inexperienced with the relativly uncommon occurance of venomous snakebite, especially by exotic species.

Still, there are individuals out there who are serious, experienced herpetoculturists who are highly skilled in the keeping and handling of venomous reptiles. Then there are the irresponsible and sensationalistic people who obtain a rattlesnake or cobra to be "cool" or show off with and, eventually, get "nailed"(bitten) or cause other problems, much to the dismay of serious herpers.

To some herpers already well-experienced with harmless species, the allure of keeping a hot reptile can be a strong one. Venomous reptiles are truly facinating and present habits, behavior and challenges not often found in their non-venomous brethren. Most species display an attitude and confidence which suggests that they are fully aware of their damaging capabilites and are fully prepared to use their "guns" if hard pressed. But even large or particularly aggressive species like Taipans, Mambas, cobras, saw-scaled or russell's vipers will seek escape if given the opportunity.

We must remember always that SAFETY COMES FIRST! Much the same as driving a car, it's only as safe as you make it.

For those of you who are considering adding a venomous snake to your existing collection, I would strongly recommend that you have AT LEAST 5 yrs. experience with various non-venomous snakes(especially agressive specimens) under your belt before even contemplating venomous snake husbandry. Also, you should read everything you can get your hands on about venomous snakes and their captive maintainance. In the bibliography I've included books which I feel are the "Bibles" on the care of venomous snakes and bite toxicology.

It may help to discreetly inquire as to who keeps hot stuff and see if they might "show you the ropes". This how I learned years ago, and most experienced hot keepers can tell if you're genuinely serious or not. Almost all hot keepers are understandably secretive, but love to "talk hot stuff" and share information about their care if you're serious and pose no threat to them or their animals.

For those with a hankerin' for something hot, I've compiled a list from various sources and personal experience, of management and safety measures for the responsible keeping of venomous reptiles:

HOUSING

* Venomous reptiles should be housed in solid, secure, locked cages within a locked room.

* Cages should be constructed of strong, quality materials(1/2" plywood min.) with no gaps or cracks large enough for newborn snakes to escape from. A good rule of thumb here is, any crack or hole large enough for the snake to put his snout in up to the eyes, is NOT secure. If it can do this, it's gone-GUARANTEED!

* No cracked glass, bricks or lid weights, screen front cages or duct tape. Ask me about the horrors of using duct tape in or on cages, including what was probably the worst misjudgment mistake I've ever made. Besides, it looks cheesy and doesn't impress anyone!

* The most Important rule! The room itself MUST be absolutely sealed. You can't scrimp here folks! This means using fine screening over air ducts and cracks along the baseboards, sealing the bottom of room doors(incl. closets) and making sure that windows fit snugly and are lockable. You may even want to consider putting bars on the window or an alarm system if the window is on the ground level. IT IS VITAL THAT THERE ARE NO HOLES INTO THE WALLS OR BUILDING STRUCTURE!! Despite whatever caging you may have, this is the one area of security that cannot be overlooked! I personally give public safety a much larger priority than my own - we automatically assume the risks when we take on the extreme responsibility of maintaining a potentially dangerous animal, but to have a venomous snake escape out of the building and possibly endangering the public I personally consider to be criminally negligent, and certainly can be, depending on where you live! If someone else gets bitten by your snake, YOU ARE RESPONSIBLE - bottom line!

* Venomous snake rooms should be free of clutter and large immovable cages should have the back end sealed against the wall so that fast and/or agile species cannot run and hide behind them. Have as much floor area as possible when working with hot snakes. Just try handling a cobra with junk around your feet or getting a boomslang out from behind a 400lb. cage. Fun? I think not!

* A good policy is to keep your handling tools and room light switch on the wall just inside the door. You don't want to cross the room in the dark to turn the lights on, and then step on something(alive) that wasn't supposed to be there!

OTHER SAFETY MEASURES

* Label all cages with species and # of specimens. Such labels should contain the scientific name, as common names can be misleading to a toxicologist treating an exotic snakebite; e.g. 1.1 Saw-scale viper-Echis carinatus pyramidium

* DO keep a posted list of emergency numbers in case of an accident. If possible, have a phone installed in your snake room.

* DO learn the proper snakebite first-aid protocols, and have them well practiced beforehand!

* NEVER pick up(freehandle) a venomous snake with your bare hands.

* NEVER work with hot reptiles while drunk, high on drugs or feeling unwell. 80% of captive bites occur when someone who's hammered goofs-up.

* ALWAYS keep cages and room door locked when not in immediate use. And never leave your keys out or loan them. Hide a spare set.

* DON'T involve inexperienced persons in handling hot snakes.

* BE DISCREET! Be selective who you speak to about them.

This list could go on, but most of it involves common sense. Keep your head about you, learn to "read" your snakes and hopefully all will be happy in Herpville! Part 2 will focus on tools for handling venomous snakes.

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* Russell, F.E.,Phd.- Snake Venom Poisoning(1980)Scholium Int. Inc.,New York
* Visser, J.& Chapman,D.S.-Snakes and Snakebite(1978)Purnell,Johannesburg,S.A.
(These last two books are sure to cure a case of complacency. Real eye openers with excellent text, complete with graphic bite photos to make you think!)

Hots 101; Pt. 2: Tools

By Allen Hunter

Hello friends of the fanged ones, welcome to Pt.2 of Hots 101. This time I'll explain some of the tools and handling equipment used in the captive maintainence of venomous snakes.

First off, I should state that the tools mentioned here should regarded as being absolutely necessary for handling venomous snakes, and any individual who insists on using their bare hands or even gloves has surely taken leave of their senses and must be regarded as irresponsible and a danger not only to himself, but those around him and his fellow keepers.

SNAKE HOOKS

The universal tool for handling and pinning venomous snakes. Hooks consist of a rod or pole of various thicknesses and lengths which terminate with a 90 degree angle 'foot' or hook. The end is rounded to prevent injury to the animal and the top should have a rubber or wooden handle for optimum control. A good cheap source for these are golf clubs with the heads cut off and a 1/4-3/8" bent aluminum or steel rod welded to the end of the golf club shaft. Commercially made snake hooks are available, and can be ordered to size from various reptile dealers.

The keeper should have an assortment of different sizes and lengths of hooks to accomodate any size of snake. Popular lengths include 12-16" hooks fashioned from strong coat hanger wire or part of a fishing pole for neonates and juveniles, 24-36" for most med. sized snakes(2-3.5 ft.) and 36-48" for larger species. Personally, I find that any hook over 48" is rather cumbersome to use, and does not aid in speed of movement if necessary.

THE GRAB STICK

The grab stick, or Pilstrom tongs as they are generically referred to, is a mechanical grasping device intended for use in restraining large, fast or extemely aggressive snakes. These tongs consist of a 3/4" aluminum tube, 24-60" long, a pistol-type grip and lever similar to a bicycle brake and two 6" fingers at the bottom end which are connected to a long thin steel rod that is under spring tension.

As opposed to lifting and guiding the snake with a hook, the jaws of the grab stick clamp onto snake(never in the neck region!) and prevent it from running. Great care must be exercised in using a grab stick, as most snakes react violently to something restraining them instead of simply being lifted, and can easily damage ribs, spine or internal organs. Fortunately, you can feel how much pressure is being applied to the snake and help to avoid injury.

Personally, I feel that grab sticks are a little brutal and are only used as a last resort when a particularly fast or aggressive snake is getting dangerously out of control using hooks. I find they are much more useful for offering dead prey to large snakes and moving or taking out objects in the cage.

THE TRAP BOX

This simple but very effective control device greatly eases the day-to-day cage maintainance and stress on both the snake and keeper. It is basically a sealed hide box with a sliding plexiglass or wooden door and a means to lock or secure the door shut when taken out of the cage.

Trap boxes are generally reserved for large elapids or other snakes with berserk temperments which cannot be easily controlled with hooks. Mind you, for the venomous snake keeper there is no safer method than the trapbox.

At this time there is no commercially made(yet!)trap box, so you'll have to construct it yourself. Be sure to use strong materials as you would when building a cage, and don't forget to drill a few small holes for ventilation while it's outside the cage.

MISCELLANEOUS TOOLS

Every keeper of venomous reptiles should include long (16-24") forceps or locking hemostats for feeding dead prey to small to medium-sized snakes. They are commercially available from medical supply depots and most large herp dealers, and should be considered an absolute necessity. I personally know one bonehead who thought rattlesnakes couldn't strike straight up from a coiled position and promptly offered an adult mouse to a 3.5ft. Northern pacific with his bare hand and was immediately bitten from a distance of 12" in the palm of his right hand with both fangs. Well, he almost died from his stupidity and to make us think him even more of a genious, three weeks later he was bitten again(!!!), this time by a W. Diamonback!

One other tool which gets a lot of use in my herp room are plexiglass shields. These are simply pieces of plexi in various sizes, screwed onto pieces of broom handle at various lengths. These are placed between the resting snake and you, so you can quickly grab a waterbowl, uneaten rodent or scoop feces without disturbing the snake or stressing it by constantly taking it out of the cage for maintainance.

Well, that's all for now. Part 3 will discuss the methods and potential horrors of transporting venomous snakes.

Hots 101; Pt. 3: Transporting

By Allen Hunter

After the first two articles on rules and tools, I felt that this article should address transporting venomous reptiles. For if done improperly, can potentially lead to many types of peril, as I will point out some of the hazardous methods I've encountered. Over the years, I've seen some truly horrendous methods of moving hot stuff and I must say that I'm surprised that nothing got loose or someone got bit or both. For a perfect example of what I'm talking about, let me tell you about an episode that could have been disastrous had we been in a car accident without a proper container:

In the mid-80's, a well known herper and myself were in a taxi, headed to a farmhouse just outside the city to pick up a huge, near-record size 8.5ft. Black-neck spitting cobra (Naja nigricollis).

The previous owner assured me that the snake would be properly bagged and boxed in a wooden shipping crate, ready to go when I got there. Upon arrival, we were rather dismayed to find out that he could not find a bag large enough to contain or get this big, active cobra into easily. What we were confronted with however, was a un-bagged huge spitter, simply placed inside a large green Rubbermaid gabage pail with the lid held on by four pieces of duct tape. And only 6" long pieces at that! He stated that it was also the last bit of duct tape he had, but it should hold till I got home with the snake.

After an angry and colourful verbal exchange, I cursed myself for not coming prepared with a grab stick, hooks and face shield should anything happen on the way home. So I took the pail holding my magnificent new beastie and jumped in the back seat of the waiting taxi for the 40 min. ride home.

In terms of driving skills, cabbies are an entity unto themselves. Most are fast, aggressive drivers with little regard for safety and ours was no exception, adding to my increasing anxiety. For the next 20 mins., every time we hit a bump or pothole in the road, the cobra would let out a loud, whooshing catlike hiss. And every time it did this, I would see the driver look back nervously at the pail and then at me while I was trying to keep my composure. A few more hisses later, he finally asked me what the hell was making all that noise in the pail. And playing on the layman's ignorance, I told him it was a big, ol' nasty snapping turtle and he seemed satisfied with that as almost no one is offended by the presence of a turtle, snapper or otherwise. At about 10mins. from my house, this big cobra, with a head about 3" across and a body as thick around as my forearm, had decided he'd had just about enough of this smelly pail and bumpy ride and suddenly pushed up on the lid- HARD. So hard in fact that one of the pieces of duct tape holding the lid promply gave way, but I just saw it out of the corner of my eye and threw both arms over the lid to keep it in place. And awkwardly there I stayed, draped over this garbage pail with a big deadly snake inside it for the remainder of the trip, which happily ended without incident.

But, you can see the possibilites for catastrophe here. Because the snake was un-bagged with a cheesy container, that big and strong, and if I hadn't been paying attention to that lid, we may have been faced with a large loose cobra inside a moving car with three people in it and no handling tools. NOT A PLEASANT SCENE!! Possibly even worse, we could have been in an accident and suddenly have a large cobra loose on the road with no handling tools to recapture it, if we weren't injured ourselves!

Some other equally horrendous transport methods I've heard of:

- Moving a sub-adult pair of Cascabels in a taped-up six pack box.
- Carrying a sub-adult E.Diamondback rattler home on the bus, bagged and wrapped in a towel, inside his parka in a snowstorm in Jan.!
- A guy bringing me an E.Massasauga inside a workboot.
- A drunken aquaintance of mine walking into a bank to cash a cheque, and placing a scotch-taped paper bag(!) containing 2 Saw-scale vipers on the counter in front of him(Yikes!)
- Transporting a large pair W.Diamondbacks in a styrofoam fish box on the notorious Jane St. bus at 2 a.m. And then being hassled by three gang punks who wanted to rob him of the box, only to flee in terror after a sharp rap on the box produced the unmistakable sound that only rattlesnakes are famous for!

As you can see, these are NOT the recommended methods of moving venomous snakes. The first error here is improper containers, the second are the modes of transportation. Lets examine them separately;

BOXING

Before consideration of the transport box, emphasis must be placed on making sure the snake is securely bagged. Strong cloth bags, usually pillow cases, are used and the keeper must make absolutely sure there are no holes, frays or rips in the material no matter how small. No one wants to have an unexpected surprise when they open the box at their destination. Before bagging the snake, I hold the bag at the top with one hand and forcefully run my finger of the other hand down the side seams and push hard on the bottom corners, much the same as a snake would do while in the bag. After getting the snake into the bag(which is easier said than done with some species,another article maybe), make sure the knot on the bag is TIGHT. Be sure while tying the knot to keep your hands, arms and feet away from the end of the bag containing the snake. Venomous snakes (especially viperids) can easily bite through bags. This accomplished by first quickly twisting the bag shut (making sure you don't twist the snake in with it!), and placing a snake stick across the bag just behind the twist and holding it flat to the floor with your foot while tying the knot. And (obviously) ALWAYS carry the bag by the top BEHIND the knot.

Styrofoam fish boxes are almost THE universal reptile transport container and come in many sizes, although 2x2x1' is pretty much the standard. They're light and retain warmth(or coolness in summer), but for the sake of these positive qualities they lack strength. They are fairly sturdy, but one could easily punch or kick a hole in it, thereby compromising safety.

A wooden box made from 1/2-3/4" plywood seems to

be the way to go, complete with a carrying handle, padlock latch, hinged lid, a couple of 1" or so ventilation holes covered inside and outside with fine steel screening and if you really want to be fancy, some metal impact caps on the corners. A box constructed as such would offer the strength needed, but would offer almost zero insulation for temperature control.

A logical solution to this problem would be to combine the two types of boxes together in a happy combo. The simplest way would be to take exact measurements of the styro box and build your wooden box around it. Or perhaps even simpler would be to modify a coleman-type cooler with screened holes and a locking device.

A couple of final points to remember when packing snakes into your box is to place cardboard dividers between bags if more than one snake is going into it. This is to prevent the often stressed and probably frightened snakes from biting each other. The long fangs of viperids can cause fatal mechanical trauma to vital organs of another snake if the bite is placed right. There is nothing more heartbreaking than to arrive at your destination only to find one of your snakes dead or dying from a bite from a fellow passenger because of one minute's negligence on the keepers part.

MODE OF TRANSPORTATION

How you move the snakes is just as important as how you pack them. In fact, it's probably more so. Because if there's any aspect of moving venomous snakes that can invite possible disaster, this is it. Blunder not, and all will be smooth sailing- er, driving!

Here's a list of things to remember:

* NEVER transport hot stuff on the public transit system. It doesn't take an idiot to imagine the potential mayhem!
* ALWAYS transport by car. Make sure to place your box so that it's not sliding around or can be tipped over during a sharp turn. On the car's floor is good, or on the back seat strapped-in with the seat belt is even better.
* DO bring along a couple of hooks or a grab- just in case.
* DON'T DAWDLE! Do not pass go, do not collect $200, go directly to home. This means not stopping for beer and leaving your car running out side to keep the snakes warm. A car thief would be in for a nasty surprise later on- and legally, so might you if the thief gets bitten.

I wish to close by saying that I hope these three articles shed some light on hot keeping to new/potential keepers. I most enjoy sharing my long-time experiences of venomous keeping with others and exchanging captive information.

Beginner/Novice Species

By Allen Hunter

Let me begin by saying here that generally speaking, I'm somewhat hesitant to recommend 'beginner' venomous species for several reasons - most of which I won't bore the reader to death with at this time. This is why I'm hesitant to respond to emails or forum questions such as the good old "I've kept snakes for a few years now, and I want to know what is a good starter hot snake?". There are so many varied opinions concerning this topic, but the one common train of thought is this : the main thing is that in the beginning stages, the prospective venomous keeper preferably chooses smaller species that won't necessarily cause death or grave disfigurement without antivenom available!

I've also seen heated debates on the age of the prospective keeper, with a so-called 'legal' age of 18 in most places. Now, 18 years of age is by no means a 'magic' number whereby suddenly all is well - there are irresponsible of all ages - I've seen this first hand, much to my dismay. There are numerous responsible and skilled keepers that began keeping / catching venomous species when they were kids, but the fact remains that generally speaking - kids and young teenagers are often more careless than most adults. The stats speak for themselves in all aspects where potentially hazardous objects or activities are placed in the hands of such. Maturity & experience (usually!) come with age, and that an adult is mentally better prepared to deal with a dangerous or compromising situation better than the teenager/kid. This also brings up the subject of legalities, and this is where the age of 18 is set as the age of consent in most countries (I mean, they have to set a certain age somewhere, but what I wonder is how do 'they' come about this number?). If you sell or trade a venomous snake to a minor without parental consent, the kid gets nailed and either permanently disfigured or dies, guess what the outcome may be? More than likely a huge lawsuit against the seller by the bite victim's parents for criminal negligence! Make no bones about it, this has happened. A number of years ago, a 16 yr old went to a notorious large herp dealer with fake ID and purchased a cobra. Takes the snake home, and tells his parents it's a harmless rat snake. Places it in a 30gal aquarium, and is bitten by the cobra within 3 days. Kid is placed on life-support, scrapes through it, and ends-up losing two fingers from his left hand (it was a 4ft.Monocled cobra). Enraged parents promptly sue (and easily win) the dealer for an undisclosed six-figure sum. From then on, the dealer is more demanding when checking out suspiciously young-looking clientele. Lesson learned.

What must be remembered at all times is that no matter how seemingly innocuous the venom is, there is ALWAYS a rare chance of anaphylaxis (allergic reaction) to the snake's venom itself !! Treat ALL venomous species with the respect they deserve !

Anyway, enough finger-wagging rhetoric.

++ Actually, it's far easier to mention what species are NOT recommended for novices (and this just my opinion!) ++

The following Rear-fanged colubridae snakes :

All of these species have been involved with fatal or serious envenomation:

Boomslang (Dispholidus typus), Bird/Twig snake (Theletornis ssp.), African Sand snakes (Psammophis ssp.), Red-necked Keelback (Rhabdophis subminiatus), and possibly the False water cobra (Hydrodynates gigas) - whose venom has been shown to be as potent as the W.Diamondback rattlesnake, although it is produced in minute quantities.

Atractaspidae (mole 'vipers') species:

Mole 'viper'/Burrowing asp/stilletto snakes (Atractaspis ssp.)

Viperidae (true vipers) species:

Gaboon vipers (Bitis gabonica ssp.), Rhinoceros vipers (Bitis nasicornis), Puff adders (Bitis arietans), Saw-scale / Carpet vipers (Echis ssp.), Levantine vipers (Macrovipera lebantina ssp.), Palestine vipers (Vipera Palaestinae), Russell's vipers (Daboia russelli ssp.).

Crotalidae (pit-vipers) species:
Cantils (Agkistrodon bilineatus ssp.), Cottonmouths (Agkistrodon piscivorous ssp.), E. Diamondback rattlesnakes (Crotalus adamanteus), W. Diamondback rattlesnakes (Crotalus atrox), Mojave rattlesnakes (Crotalus scutellatus), Neotropical / Cascabel rattlesnakes (Crotalus durissus ssp.), All larger C./S.American 'lance-heads' [i.e.: fer-de-lance] (Bothrops atrox, asper, alternatus, etc.), Bushmasters (Lachesis muta ssp.), Sharp-nose viper ['hundred-pacer'] (Deinagkistrodon acutus), Habus (Protobothrops flavoviridis), Purple-spot / Mangrove pit-viper (Trimeresurus purpeomaculatus).

Elapidae ('cobra family') species:
All true Cobras (Naja ssp.), King cobras (Ophiophagus hannah), all Mambas (Dendroaspis sp.), all Kraits (Bungarus sp.), Desert Blacksnakes (Walterinnesia aegyptia), Tree cobras (Pseudohaje goldii & nigra), Water cobras (Boulengerina ssp.), Taipans (Oxyuranus sp.), Death adders (Acanthophis sp.), Tiger snakes (Notechis sp.), Brown snakes (Pseudonaja ssp.), King browns (Pseudechis australis), Blacksnakes (Pseudechis sp.), and all sea snakes.

All of the above species I feel are just not at all suitable for the novice, and all mentioned are perfectly capable of causing death or disfigurement. There are still many great & facinating species besides these to choose from, and after a period of time you will hopefully gain the necessary experience needed to be able to safely - and with confidence - take on the bigger responsibility of dealing with a potentially lethal species like the ones listed above.

And that's my 2 cents on this matter.

Thanks for listening!

Common Novice Handling Mistakes

By Allen Hunter

Throughout the last few years, and especially since the introduction of my "Hots 101" articles and handling pages on my website, I've seen a great rise in the numbers of people keeping venomous species - and a correspondingly high increase in bites and mishaps among these newer keepers. Even here in my own neck of the woods (Ontario, Canada), there have been five 'accidents' in the past year alone - more than have occurred in the past five years combined. After hearing about the causes of these blunders, it left me totally without surprise, as each and every one of these could easily have been avoided. Fortunately, none of these bites resulted in serious symptoms, but it did give me pause for reflection about my own past mistakes and those made by others in what could be perceived as 'common' handling errors made through carelessness or inexperience.

Let's have a look at each problem individually - I'm willing to bet that many of you have experienced or seen mishaps such as these before.....

MISJUDGING STRIKE DISTANCE -

This is probably one of the most common errors made, and usually is a result of overall inexperience and / or unfamiliarity with a particular species. Although mostly occurring with novices, occasionally even veteran venomous keepers are caught 'off-guard' with a new species that they've never encountered before. This was recently brought to light for me personally, by being almost tagged by one of a newly acquired group of Desert Blacksnakes (Walterinnesia aegyptia) - a fairly rare elapid species that is known for having a bad temper coupled with potent venom - and an unusually long strike length! As I had found almost no captive info on this species, I was quite unfamiliar with these - particularly when I saw them regularly strike almost their entire body length in distance - almost 'leaping' off the ground - something not seen with most elapids.

Here are some general guidelines regarding strike lengths: (Just bear in mind there are always exceptions to every rule!)

For viperids - all viperids can easily strike 1/3 of their body length, some can strike 1/2 with little effort, and some notables like large Bothrops and certain arboreal species can launch themselves up to approx. 3/4 of their body length! (depending on the extent of it's hunger or agitation) It's really a self-judgment call, but give what you think is a safe distance - and then add another foot or so! ;-)

Elapid strike distances are really a mixed bag. Most cobras are relatively predictable enough, but again, there are exceptions - Forest cobras (Naja melanoleuca) and King cobras (Ophiophagus hannah) are two cobra species that immediately come to mind that have been known to sometimes actually rush and advance towards the keeper with the full intention of biting. The author has personally experienced this with N. melanoleuca, and has it on good authority that this also occurs with O. hannah. Coincidentally, both these species are among the highest-rearing (when they hood) of all cobras species, along with their large sizes makes for a much longer strike. Most cobras will generally rear about 1/3 of their length, and this is approx. what the strike length is. Other elapids are quite varied. Most species will strike like most colubrids, while other longer-striking species such as mambas, taipans, Walterinnesia, Pseudohaje etc., are more difficult to predict or describe accurately - but what can be said is this: give those species much respect and space to work with!

FINGER / HAND PLACEMENT-

I've heard of numerous bites that happened simply because of thoughtlessness - and were completely avoidable with a little common sense and focus. I personally know of at least half a dozen bites that were the result the keeper placing his hands on screen-mesh lids or vents - incidentally, all were with pit-vipers - which came as no surprise. The warm exposed skin at the mesh acts as a tempting target for a pit-viper, and the long fangs can make it a reality with ease. This is partly why I think aquariums with simple screen tops are totally inadequate for keeping venomous species in, they're simply unsafe.

I know of a bite case where the victim was bitten on the palm by

a Okinawa Habu (Protobotrops [Trimeresurus] flavoviridis) when he inadvertently leaned back behind him and rested his hand on the cage while he was attending a herp party. Another bite happened when the keeper was sliding back the screen top on a 30gal. tank containing a 3ft. Timber rattlesnake (Crotalus horridus), and actually got the top halfway off before he was promptly bitten with both fangs on the right forearm - and nearly died as a result. He could have easily avoided it by using good old common sense - and a hook to slide the lid back! One keeper kept a spitting cobra in a tank with a screen top, and then stupidly placed the tank on a shelf at waist-level, whereupon he was sprayed with venom the next time he passed by the tank.

Rubbermaid or 'shoe-box' plastic containers are often also the source of hand placement bites, their semi-opaque visibility and fumbly lids are begging for trouble! Although I still use these occasionally, I generally don't recommend them for venomous - although neonates, juveniles and small species may benefit from them as temporary housing. Just remember to look for where the animal is first, place the box on the floor, gently pop the lid tabs without lifting (or with a pair of hemostats - better), and use a hook to lift the lid - NOT your fingers!
Remember to LOOK & THINK!

UNDERESTIMATING AN ANIMAL'S POTENTIAL -

In a similar way to misjudging strike lengths, there seems to be a common misconception among novice keepers and layman that certain species exhibit certain behavioral characteristics which give an overall impression of docility or physical inability. This is a dangerous train of thought to maintain, and although in most cases the keeper can 'get away with' certain maintenance functions - sooner or later, you will misinterpret that animals intentions or behavior and suddenly have a serious surprise. Some apparently sluggish viperids who specialize in predatory ambush behavior are masters of immobility and then suddenly delivering a lightning-fast strike. A prime example of such a species are Gaboon vipers (Bitis gabonica ssp.), a large, beautiful, very popular viper - whose behavior is often grossly underestimated. 'Reading' the body-language of gaboons can sometimes be problematic, as almost everything is very subtle. Often the only indications you'll see before the strike are a shift in the eyeball towards your direction, some gently rapid sniffing (watch the sides of the body), a slight muscle tensioning, then...BAM! The strike of large Bitis is among the fastest I've seen, and I guarantee that no human can dodge it, if within range! And don't think that they can only strike forwards - I've seen them strike in almost every direction.

Another misconception about large heavy-bodied vipers like gaboons is that they can only crawl or move slowly. Bull! These vipers, when spooked, can seriously HAUL ASS! And can be very difficult to get under control when behaving as such, due to their large bulk, usually requiring two hooks to manipulate them back into the enclosure - along with some frantic dancing!

IMPROPER TOOL FOR THE JOB AT HAND -

This seems to be a real 'gray -area' concerning potential mistakes, relying on the individual keeper's common sense, but I felt that it should at least be mentioned here. Numerous bites have happened due to the (again) classic example of using too short a hook for the size or potential strike-length of the snake to be maneuvered. A 24" hook is simply not long enough for say, a 4 ft. rattlesnake. Even using this size hook on a 3ft. snake is pushing your luck, I feel. I generally try to use a hook that is approx. the same length as the snake itself, up to about 40-48". Beyond this, and I'll still remain with a 40-48" hook while 'tailing' the snake (as longer hooks are rather cumbersome). Make sure to hook the snake no farther down the body than the length of the stick - or else this may give the snake the anchor and leverage to still whip-around and nail you while on the hook. This goes in spades for large, agile elapids, arboreal species, and viperids like Bothrops atrox/asper.

LOSING FOCUS / CONCENTRATION -

It is vital that the keeper use every once of concentration and focus while working with venomous snakes, as one single lapse could be just that moment when the snake decides to take a strike at you. Keep your attention zeroed-in on the animal at all times, 'reading' it's body language, and try to avoid these common distractions:
- Cluttered floor / work area
- people talking to you while actually handling
- people/animals/things moving near you in your peripheral vision
- smoking while handling
- background music

Some people are more easily distracted than others, but I feel it's best to keep these things to a minimum, as all it takes is a second - and BAM! Having buddies yak at you, having a smoke hanging out of your mouth, or having cranked-up Led Zeppelin (or Bach or whatever turns your gears) blaring in the background is just not worth it. Never take your eyes off that snake until it's safely contained!!

INEXPERIENCE WITH PINNING / TUBE RESTRAINING -

This is also an area where a lot of bites happen, and it is prudent that the keeper be fully adept at pinning non-venomous snakes beforehand. Have full confidence in what you're doing, and be familiar with both types of 'holds' before ever attempting to pin a hot snake. These would be the two-finger 'elapid' hold, and the three-finger 'viper' hold. These are explained in more detail on my "Venom 101" site. An example of a potential mistake would be using a typical wrap-around two-finger hold on a large viperid. With this fingering, due to the long fangs, all it would take is for the viper to poke one (or both) fangs from the side of it's mouth, give a sudden jerk & twist backwards and then you have a fang in your finger (a la Atractaspis - the only genus of venomous snakes that are truly impossible to hold safely behind the head!).

Mistakes made with tubing would be misjudging the snake's potential strike length in relation to the length of tube you're using, letting the snake slide back out due to improper grip, and using too large a tube diameter that will allow the snake to turn it's head around inside the tube and come back around towards the restraining hand.

TAKING ON MORE THAN YOU CAN HANDLE OR GETTING 'COCKY' -

This really is more a question of experience than anything else, but after keeping say, some viperids for a couple of years, and then delving right into keeping a large elapid like large African cobras, mambas, taipans, or king cobras without starting off with some smaller elapids like Aspidelaps and then Asian cobras to familiarize yourself with their generally faster movements and behavior - is in my experience biting off more

than you can chew. And this is what I've seen and believe it to be due to a bad case of the 'Novice supermanus overconfidenti' complex. J I've seen animals returned to the dealers where they were puchased, simply because the keeper was overwhelmed by the apparent aggression and speed of, say, the Egyptian cobra he bought, and wasn't prepared / able to deal with it properly or safely due to inexperience with the species. Although some may disagree, I still maintain that if you are not able or skilled enough to safely control these species - you shouldn't be keeping them yet.

There is more that could be stated concerning handling mistakes made by novice keepers, but I feel these are the most common of them. Most bites by captive snakes seem to be traced down to one of these errors, and it is in the keepers best interest to be not just aware of these possible mistakes - but to avoid them in practice!

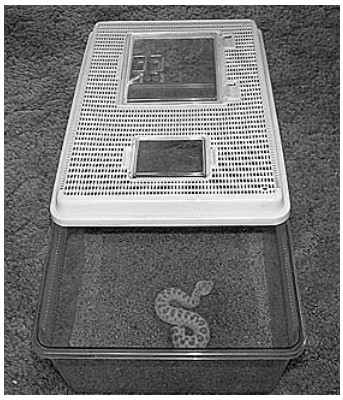
Caging

Please keep in mind these are only my opinions, some people may disagree - whatever works safely for you is your best choice. Despite whatever type of caging you employ, the #1 priority is that your room is absolutely sealed!!

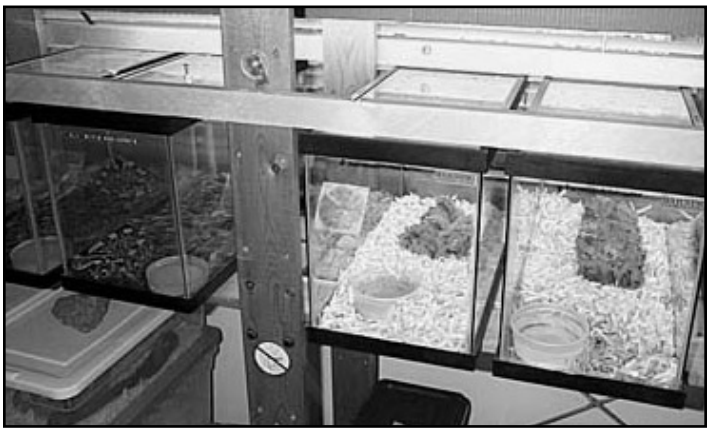
'Rubbermaid' or "shoe-box" type plastics	Ok for juveniles; semi-opaque = less stressful for animal; easily washable and stackable; good for keeping humid species. Despite the cons involved, these are still used by thousands of herpers, which does attest to their convenience. Just drill some air holes - and presto! - instant snake cage. Cheap too.	Some snakes may spook & run up and out when opened; sides of lids weak point - often needs weights on lids; can poss. expose fingers/arms when opening; poss. poor ventilation. Vipers often spook when lids are lowered back on - watch for snake's head.
Aquariums / Glass Tanks - Top opening	Good visibility; convenienent; good for aquatic species; small tanks are inexpensive.	Lousy heat / humidity retention without almost solid lid; screen lids leave hands prone to pit-viper bites; too 'open' visibilty for more nervous species; prone to breakage; difficult to secure lids; heavy & hard to stack without racks; pain in the ass to attach branches, mount lights etc. I personally hate tanks except for small sizes....
Front-opening *hinged-door*, plywood or melamine	Good heat / humidity retention; easily lockable; can be made to any size; stackable; cage decor is easily secured; can be made any color (sky blue often works nicely)	Plywood must be painted / waterproofed; seams should be caulked; doors should be down-swinging - not side mounted - as these can be an obstruction into the handling area; side mount door opening exposes entire bottom front - problematic with elapids; real glass is difficult to secure to a wooden door frame; must be well ventilated.
Front opening *sliding glass*, plywood or melamine	Same as above...with addition to having direct control over the amount of exposed cage opening - good for elapids. Good visibility; Design also allows for easy sectioning into multiple cages forming 'banks' with display case locks. My personal favorite.	Glass movement can become sticky - glass measurement must be cut precisely; glass track can get clogged with substrate - use a dam. Edges of glass must obviously be smoothed. Must be well ventilated. Can turn into a real puzzle and a headache to disassemble / reassemble for moving. Heavy too.
Top opening hinged door, plywood or melamine	Easily lockable; reduced visual exposure is good for nervous species; 4" min. 'lip' around top helps prevent hyper snakes from bolting out - good for terrestrial elapids.	Not stackable- floor sitting only; large cages can be awkward for handling - i.e. leaning in; reduced visibility; arboreal species like mambas are not recommended in this setup - i.e: green mambas will prob.sit high near the door, or having to work through branches to reach the floor. Don't care much for this type.

There are other commercially made types of caging which look very good, usually made from ABS type plastics. Names such as Neodesha and Vision offer cages in many sizes, and are light and easy to clean. I personally cannot vouch for any of these as I don't use them, but apart from the unstackability of the slanted-front standard Neodeshas, I hear good reports concerning their suitability for venomous species in general.

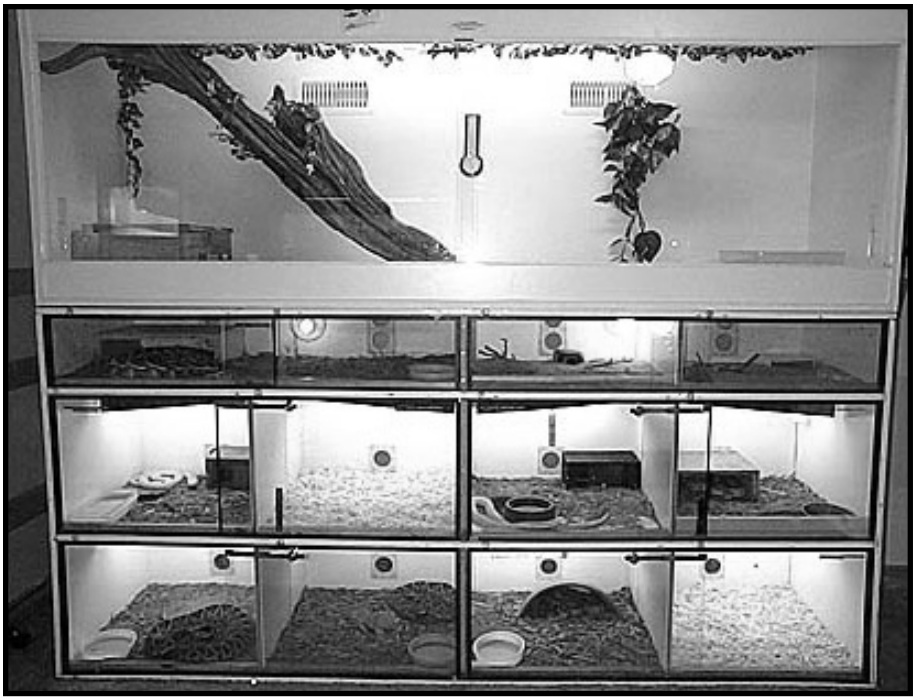
Here is a familiar container to all - a Rubbermaid 'sweaterbox' size, shown here containing a sub-adult Desert Blacksnake (Walterinnesia aegyptia). Great care must be taken to watch where you put your fingers when opening or closing the lid - use a hook! (pic- A.Hunter)



These type of 'shoebox' plastic cage are ok for small species such as this Avicenna sand viper (Cerastes vipera), but the sides of the lid are often a bit flimsy, and you have to watch your fingers on the lid's grill. The upside to these is that they're clear for good visibility, and includes a divider for separating the box into two small sections. (pic- A.Hunter)



Normally, I'm not a big fan of tanks, but I make an exception for small sizes with plexiglass lids. This setup is fairly safe as it is simple; 5 gal. tanks lined-up with two wooden lid retainers - the front bar rotates to release the tanks and keeps the lids from being pushed up from the inside by the snake. (pic- A.Hunter)

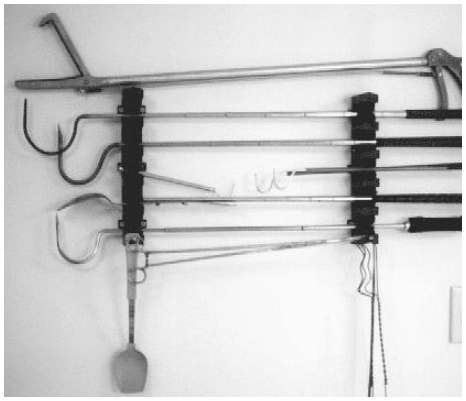


Sliding glass cage 'banks' are my personal favorites, and here's some examples: A large 8'x4'x2' melamine cage sitting atop a cage bank constructed from 3/4" marine plywood, containing eight 2'x2'x2' cages, a short 4'x2', and two short 2'x2' cages. These units are good for visibility / display. Easily secured as well. (pic- A.Hunter)

The configurations for 'bank' type caging are almost endless - here's another bank with four 4'x2'x1.5' sections, suitable for mid-sized species. (pic- A.Hunter)

TOOLS

Shown here are the necessary tools for handling venomous snakes, and should be utilized at *all* times!



Keeping your tools handy near the room entrance is a wise idea. (pic- A.Hunter) Shown from top to bottom: 40" grab stick (Pilstrom tongs), 44" & 40" hooks, 16" juvi hooks, 40" feces spoon, 36" hook, 18" locking forceps, 14" feces spoon and wire hooks for neonates. Also shown is the wall mountings, which are really fishing pole holders screwed to the wall, and I found perfect for the purpose. All tools should be hung on the wall out of the way, so as to avoid floor clutter for handling. Another good idea is to have your tools located just inside the room entrance for fast access, should a snake be loose in the room (let's hope not!). (pic- E.Wainberg)

A Pinky-pump for force-feeding. Rather distasteful, but works very well. (Pic- A.Hunter)

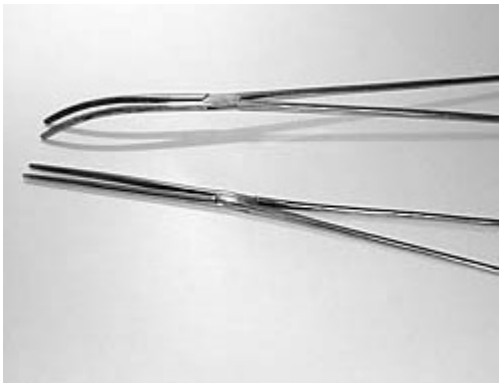
Another type of hook that is great for arboreal snakes is the L-hook. "Clingy" snakes are much easier to get off with this design. Just don't lift it higher that 90 degrees, or you may just wear that snake on your arm instead! (pic- A.Hunter)

Collapsable hooks have enjoyed some popularity for field & travel, and this heavy-duty model made by Midwest Customs is excellent for the purpose. It extends to 40". (pic- A.Hunter)

Some collapsable hooks can potentially have the annoying habit of rotating if a heavy-bodied snake starts to grip & struggle while being hooked. Midwest came up with the clever idea to place a groove on the shafts to prevent this. Works super! (pic- A.Hunter)

Tongs made by the good folks at Midwest Customs. These tongs differ from Pilstroms in that they feature an internal cable pull as opposed to a solid external rod. The jaws of Midwest tongs are also slightly curved upwards for ease of grabbing while standing. (pic- A.Hunter)

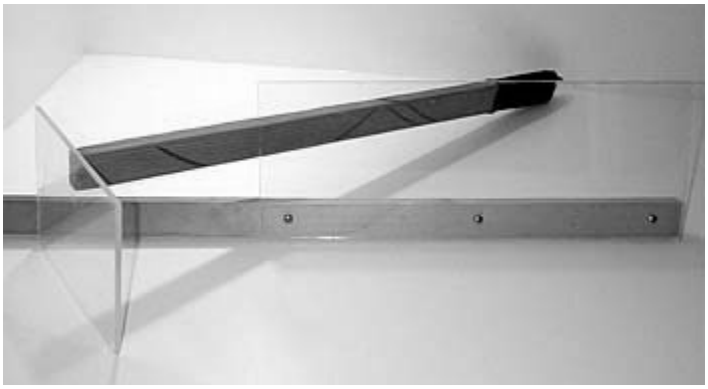
Putting firm foam, latex or neoprene on the jaws of your tongs is beneficial for both you and the snake (if you intend of using it for that) in that not only is it softer on the snake, but the rubber also 'grips' & helps prevent the snake from squeezing through. Shown is original design tongs made by Pilstrom. (pic- E. Wainberg)



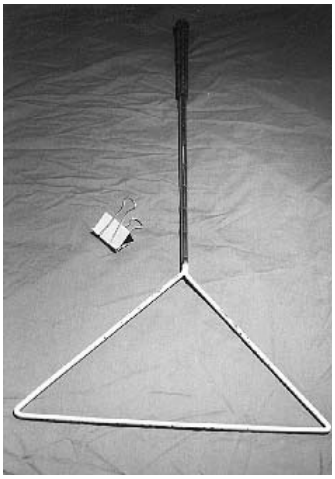
Locking hemostats are also necessary for feeding small to medium-sized snakes, and retreving items from the enclosure. The 18" curved & straight jaw hemos pictured are my favorite size for feeding a variety of viperids with. Elapids may tend to 'bypass' these and go for your hand! Caution & good judgement is still required! (pic- A.Hunter)

12" tweezers for feeding small snakes and so forth. A good set of probes is a must for serious keepers intent on breeding. (pic- A.Hunter)

Another tool I use often (as mentioned in pt.1 of Hots 101) are plexiglass shields. I have a few different sizes and two different styles of shield, the 'T'-shaped "frontal" and the straight "side-swipe" shield; demonstrated here removing feces from a Levantine viper (Macrovipera lebantina turanica) cage. As you can see, there is much less stress to the snake and you can see exactly what's going on. (pic- E.Wainberg)



Here are the two most commonly used sizes I make - (1/4" plexi) 16"x6" (also 18x12) straight, and 6"x8" front mount. The wood shafts of these are just the originals, I'll be making golf club-type shafts soon. (pic- A.Hunter)

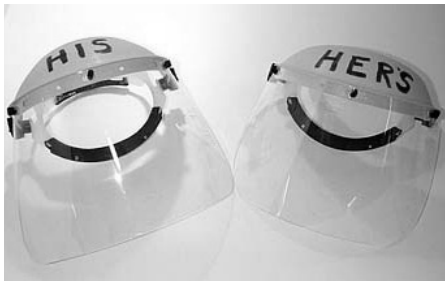


This odd-looking tool is the bagging hoop, or bagstick - an absolutely indespensible item in my snakeroom! I cannot rave enough about the merits of having one of these - refer to the "Bagging" page link on your left for more info. (pic- E.Wainberg)

A simple T-pinning stick I made that works pretty well, and it's 5ft length lets me tail and pin large/long snakes fairly easily. The bottom is lined with 1/8" dense, foam rubber. Thanks Wolfgang for the idea! (pic- A.Hunter)

Another newer design based on the Australian 'jigger' by Midewst, which features stiff latex tubing. Works well, but should only be used on smaller snakes. (pic - A.Hunter)

After you've finished laughing at the hokey picture below, you may also want to consider (a MUST, I think !) a face shield if you're going to go anywhere near spitting cobras. Silly name tagging is optional! ;-) (pic- A.Hunter)



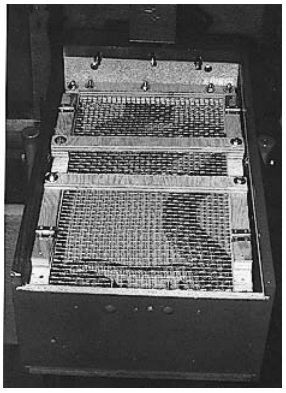
Other important tools for the snake room are large and small garbage pails for temporary holding bins while servicing the cage. My personal favorites are the large 20gal blue Rubbermaid (this Co. should be called "Herpmaid"!) plastic garbage bin with the turn-and-lock lid for larger snakes, and the small 5gal Rubbermaid 'Roughneck' plastic bin for small snakes. Both are easily washable and disinfected. Other miscellaneus things for the herp room include the simple but ingenious bagging stick (this will be shown in the "bagging" page), clear plastic tubes for tubing snakes (see the "Restraining" page), scoops for mulch, and one of my favorite toys - a rechargable "DustBuster" hand vacuum for getting wood dust from cage corners and annoying bits of mulch out of glass tracks.

If all tools are utilized properly, along with the ability to 'read' your snakes that only comes with years of experience, you can hopefully enjoy years of accident-free venomous herpetoculture.

Trapboxes

Trapboxes are a subject I get a lot of questions on, and is something that some keepers should consider for everyday ease and safety of maintainance. Large elapids or viperids, very aggressive specimens, or animals with healing wounds, are all candidates for the use of a trapbox. When left in the cage permanently, the snake recognizes and uses it as it's regular hidebox. By simply closing the door, it makes maintainace as stress-free as possible, for both you and the snake.

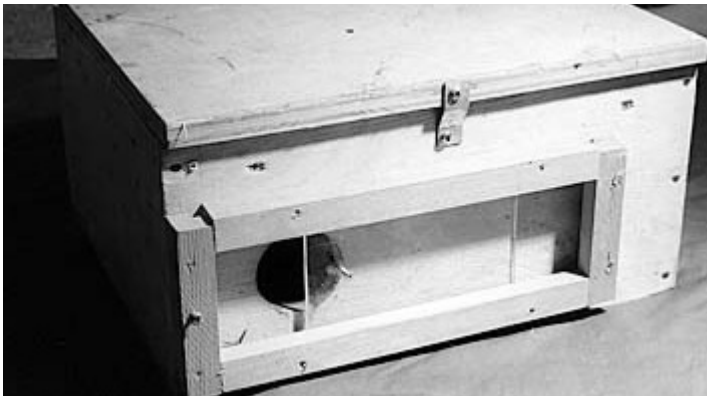
The whole concept of trapboxing dangerous species comes from zoos, and the system shown here from behind the scenes at the Sacramento Zoo is fairly typical. The external box is attached to the opening in the back, then the box & cage trap doors are opened. (pic - TFH)



Another view inside the detachable box, showing the mechanism known as a 'squeeze-box' for immobilizing the snake. The mamba inside is not too happy about this…(pic - TFH)

When working with large, agile, and unpredictable species - such as this 9ft. Black mamba (Dendroaspis polylepis) - an internal cage trapbox is the way to go. (pic- A.Hunter)

The same mamba having a snooze on one of my original boxes. (pic- S.Hunter)

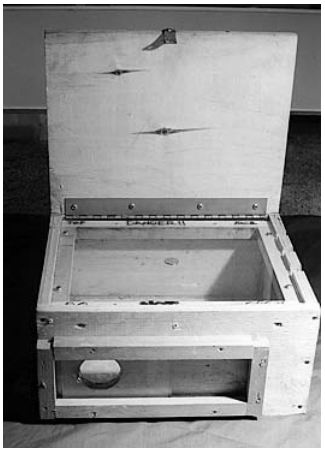


Here's a closer view of the prototype, and as you can see, it's a pretty plain affair. You could build one as fancy as you like, or just simple but effective as shown. Sizes can vary, from a small 8"x6"x3" (suitable for juvi's up to about 24") to the 24"x14"x8" (or larger) box pictured. Wood thickness will obviously vary according to box size as well. The box pictured is constructed from 3/4" marine plywood, fastened with 1 1/2" #10 flathead screws. The rather primitive door track is made with 1"x1" pine, cut out into a "L"-shaped cross-section for holding the door in. You could also use plastic glass tracking - which looks a lot nicer - by simply making a wooden supporting frame around it. The door itself is a piece of 1/4" plexiglass, with roundhead screws for wiring the door shut for transporting or removal. The clasp on the front is holding down the lid, which is hinged at the back for opening the box to view or remove the snake. The entrance hole is 2 1/2" in diameter. Primative-looking, but effective! (pic- E.Wainberg)

These are new style boxes I'm making currently. They're actually molded fiberglass electrical control boxes that we use at my work, and I immediately recognised the potential usefulness of them. They're light, easily cleaned & disinfected, strong, and have a great hinged lid with quick-release thumb screws. The original one on the right has wood door tracking, while the newer version on the left has 5/8" nylon tracking, and a pre-molded bottom lip for securing to the cage floor (cobras, for example, will physically move everything within the cage if it isn't secured!). These are the boxes that I take to film sets, and are quick for accessing the snake for handling. (pic- A.Hunter)

Simple trapboxes can be made to any size you want, this 10x6x4" smaller example is housing a albino Monocled cobra (Naja kaouthia). This cobra was used in an episode of the new TV series "Relic Hunter". (pic- A.Hunter)

For arboreal species such as this W. Green mamba (Dendroaspis viridis), the boxes should be mounted to the upper side of the cage, easily accessable to the snake. Arboreal snakes will take to these much more readily than ground-based boxes. (pic - A.Hunter)



Inside the box is a 'sub-roof', or window, made of 1/4" plexi. This is particularly handy if you have a need to see the snake at very close range, and is taken out easily by four screws if you have to remove the snake. Another added bonus of this design, if you choose, is it's use as a 'squeeze box' as well. By removing the retaining side screws which hold the window supports, you can immobilize the snake by pushing down the framed window and pressing the coiled snake to the floor of the box. And if you drill some small holes in various places on the plexiglass, you now have an alternative for removing, say ticks etc., to using the tubing method. A quarter was placed on the glass for scale. (pic- E.Wainberg)

Finally, A commercially made trapbox! Good show! This new prototype from Midwest Customs is made from high-density plastic, totally washable and light, and available in two sizes as well as in black finish. The only hurdle to overcome would be how to keep the door from sliding out. Hmmm....I'll have to experiment....I would also like to see a 'back door' or removable bottom for easier animal removal and cleaning. But very nice nonetheless! (pic- A. Hunter)

An inside view of the new box showing the smooth rivet-heads for the track (no snake damaging hardware inside), rubber seal on the inside of the lid, and a Canuck dollar bill for scale sizing. The entrance hole is cut with a 2" holesaw. These boxes are great! This size box will comfortably contain up to a 6-7ft. snake. (pic- A.Hunter)

Hooking & Tailing

By Allen Hunter

First, we should establish exactly what "hooking" and "Tailing" is. Most laymen assume when you speak of handling venomous snakes, they picture you boldly grasping and free-handling the snake as you would to a non-venomous species. Well, this is definitely *not* the case, and those who do pose a serious threat not only to themselves, but to anyone around them and the good name of responsible herpetoculture in general.

The "art" of venomous snake handling comes with experience, utilizing the proper tools, and through time you will come to expect certain handling behaviors from different species and specimens. But, as a general rule, *always* be aware of the unexpected! There's an old herper saying that has a ring of truth to it: "It's not the crazy ones that get you, it's the one you thought was your friend!". Naturally, one is automatically on guard when about to open the cage containing a known aggressive specimen, and one must refrain from complacency when dealing with "mellow" snakes. Because even that "dog-tame" cobra or viper is still a wild animal, and *will* occasionally have an "off" day and suddenly attack, probably when you least expect it and with dire consequences.

Hooking is the use of "snakehooks" (as shown in the "Tools" page) for manipulating venomous snakes (or aggressive harmless species), and will be herein referred to as a "hook(s)". Tailing is a reference to a way of controlling larger elapids and some 'runny' viperids, whereby the snake is first lifted using a hook and then quickly grasping it's tail before it slides off the hook onto the floor. This technique is best performed only by those who have complete confidence in their handling abilities and experience to know when to grab and when to let go.

There seems to be very little info on actual handling techniques, and pretty much all of it in print, which (as I'm discovering!) is quite difficult to accurately describe. Most of it is annoyingly vague, y'know, like : "Lift snake, place in container and yadda-yadda-yadda-snake secure". Well hopefully, with the use of pictures, these descriptions will shed a little more light on the subject.

Hooking

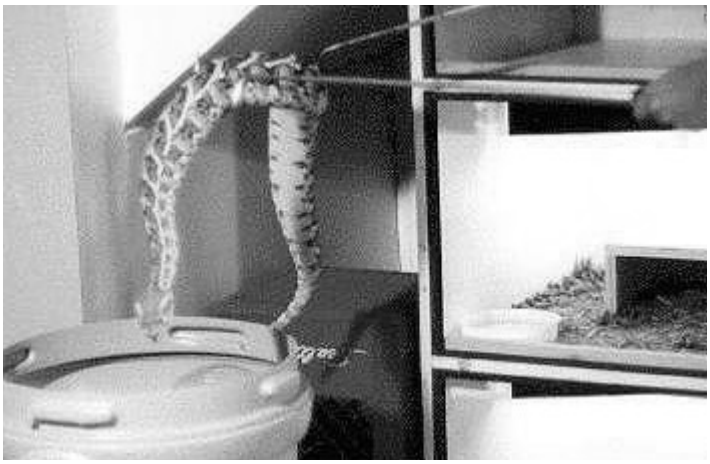
Ideally, the type and use of hook will depend on what species are being handled. Obviously, small hooks will be used on small or juvenile specimens, and larger hooks on adult snakes. Also, the choice of using one or two hooks has to be considered, usually using one hook for most calmer snakes and ones that will "sit well". Most arboreal, heavy-bodied or "runny" specimens are more comfortable and easier to control using two hooks. The reasoning for using two hooks on heavy-bodied species such as Bitis, large Crotalus, Lachesis, etc. is to spread-out and support the weight evenly, because the bulk of the snake resting on one thin area might hurt ribs or internal organs. For arboreal species, which have a very prehensile tail and tend to hang on to the branches you're trying to pull them off of, using the second hook by gently tapping or manipulating the grasping tail will free them. This also applies to freeing them from the supporting hook into the holding container, after all, the hook is merely another "branch" to the arboreal snake. In fact, arboreal species can be among the most difficult to handle, due to their agility.

Hooking snakes is much akin to a serpentine trapeeze artist performing a balancing act. Lifting a little too much or too little body will usually cause the snake to fall off the hook. Some snakes, once you lift it, will start to glide off the hook and then suddenly 'grasp' it and hang on with their tail. Some will sit perfectly (hanging nicely somewhere between the first and last third of the body), and some are awful on hooks; immediately racing or jerking off them as soon as you start to lift it. These are refered to as "runny" snakes, are often controlled and sit better using two hooks; quickly alternating the two hooks end-over-end underneath the rapidly undulating snake and then at the right moment quickly lifting it into the holding bin. And if it even refuses to sit on two sticks, then you must use 'tailing'. OK, here's some basic examples:

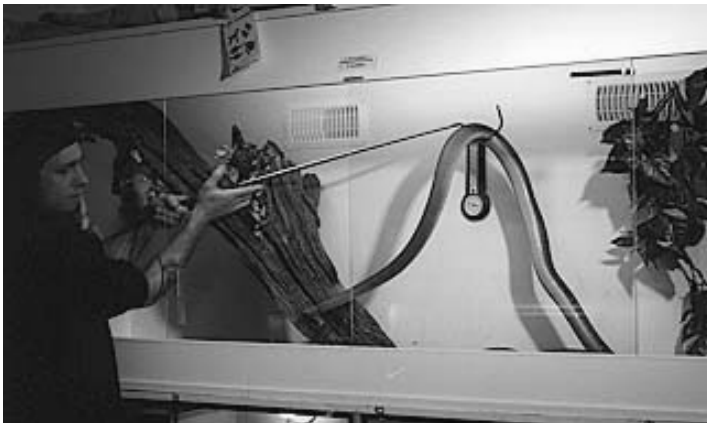
LEFT: Here's a good example of a snake sitting nicely on a hook. Pictured is a juvenile Purple-spot pit-viper (Trimeresurus purpeomaculatus), a cryptically-colored Asian arboreal species known for aggression. Indeed, this little nipper (as you can see in the pic) will always face the handler and will strike repeatedly with almost no provocation. Watch out for this species deceptively long strike-length!

Transfering the same P-spot from his cage to the holding bin using the second hook to release him from his branch, as descibed above.

LEFT: A typical example of a normally-hanging snake on a single hook, draping at about the half-way point of the body. Shown is a 4ft. Cascabel (Crotalus durissus cumanensis), a beautiful South American species which possesses a gorgeous pattern and bead-like scales, but also has extremely potent venom and must be given utmost caution.



RIGHT: Here's using two hooks on a heavy-bodied species, in this case; a 3 1/2ft. Puff adder (Bitis arietans). This puff's a fairly calm specimen, but some are famous for behaving well on the stick at first, and then suddenly "wigging-out" and violently twisting off. Also, do not be decieved by the often sluggish behavior of the Bitis vipers, they are capable of making sudden short bursts of speed trying to escape.



RIGHT: Large elapids need spacious enclosures, keeping them cramped can be stressful to both parties...here this 8x3x3' cage is housing a 9ft Black mamba (Dendroaspis polylepis). One must not attempt to simply hook a large elapid in such close quarters as shown unless you know that particular animal extremely well - and have much experience to be able to make such decisions.

Ah, spitters....(sigh).....When handling spitting cobras, no matter how docile, wearing eye protection is a must!! Here's a shot from a number of years ago hooking a juvenile Malayan Spitting cobra (Naja sputatrix), which is just about to spray at my faceshield. These full-face, welder style helmets are super for spitters. They don't fog-up, are light, and are easily washed off (take care to check your hands for nicks or cuts before washing venom from these..). Again, *never* work with spitters without eye protection! I can vouch first-hand, cobra venom in the eyes is a terribly painful experience!

LEFT: Another type of hook is the 'L' hook, which is particularly effective for arboreal species - although in this case I'm using it on a Levantine viper (Macrovipera lebantina obtusa). A prehensile-tailed arboreal species that would cling to the hook can be removed easier than with conventional hooks, and offer quick action in handling. However, care must be taken as to avoid raising the hook higher than 90 degrees - or you may wear that snake on your arm as it slides down the shaft!

Tailing is usually reserved for more active and agile elapid snakes and certain active viperids such as adults of some Crotalus or large Bothrops species such as the hyperactive and dangerous Fer-de-lance (Bothrops atrox, asper). Small or juvenile snakes are not easily tailed, as the distance between your hand and the snake's head is too short, so they should be dealt with as best as possible using two hooks. I've noticed that often squirrelly cobras that refuse to sit on a single hook and pour themselves off like water will often learn to sit on two hooks with a bit of patience and a bit of 'juggling'.

When tailing, the decision of what moment to grab the tail with your other hand is an important one. Often, since almost all snakes dislike their tails being touched and react by jerking away, they will either run or try to turn around and counter what's touching them. This usually happens only when you try to grab the tail while it's still on the ground. Once lifted, you should be able to gently and quickly grasp the tail before it glides off *and* while it's heading in the opposite direction away from you. The snakes first reaction is to pull it's tail away from you, and while trying to do so will naturally wrap around the "throat" of the hook for leverage and this is exactly what you want. While gently pulling the snake taunt, you can quickly transfer it to the holding bin. If the snake tries to counter-back towards you (and it might), you quickly lift the snake up by the tail while using the hook to keep it out away from your body. A way to keep the snake from coming up and trying to bite the holding hand, is to giggle the dangling snake in a back-and-forth or circular motion which disorientates the snake's sense of balance.

Tailing larger viperids such as this Rhino viper (Bitis nasicornis) or rattlesnakes can be difficult, because of their generally stronger coil-and -strike methods, one should be prepared for a possible hooking-rearward strike.

DON'T TRY THIS AT HOME KIDS!! I know it's not a very good photo, but here I was attempting to tail the Black mamba (Dendroaspis polylepis). I just about had her out, but we both decided it was not worth the risk of handling an 8ft mamba with Evan in the room. You need a lot of space to handle large agile elapids, and trying to do it in close quarters can be hairy buisiness!

So I thought a little more reasonable alternative to demonstrate elapid tailing was this spunky 4ft. Russian cobra (Naja oxiana), who was more than willing to come charging out and investigate! I really like these uncommon cobras, as they have a lot of personality. They are also the only cobra species that require winter hibernation in order to breed in captivity, being the northernmost representatives of the genus.

After quickly scooping the cobra off the floor, I snatched his tail and started to lift and stretch him out. And, as predicted, he tries to come around towards the hand while wrapping himself around the throat of the hook, as seen here. Although tailing sounds and looks relatively easy, with some snakes it can be a lot more difficult than it appears.

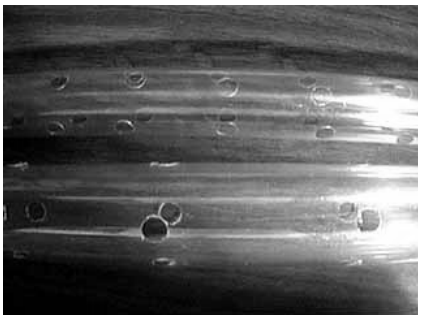
An example of 'dangling' as mentioned in the intro paragraph. Keep moving the tail and body, keeping the snake at bay with the hook. If you stay still, the snake will get the strength to swing up and bite the holding hand. This is especially true for long viperids.

Well, hopefully this little pictorial demonstration on handling will satisfy the curious person, herpers and layman alike. It is usually through ignorance that most captive snakebites occur, the victim often proclaiming "I didn't think it would do that!". It is only through knowledge, education, open communication and skill can we best avoid accidents. An ounce of prevention is better than litre of antivenin! ;-)

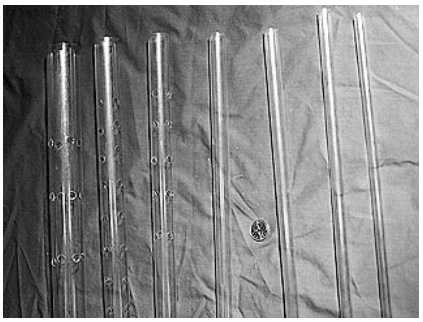
The next section explains the potentially precarious operation of restraining a venomous snake.

Tubing

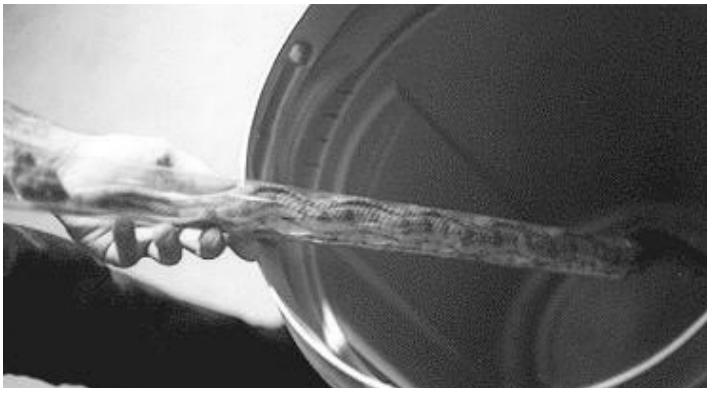
Tubing is the safest and least stressful restraint method to the animal. I use various sized clear plastic tubes ranging from 3/8" for tiny babies, to 2 1/2" for large snakes (and even this size is still too small for some snakes; i.e.- big Gaboon vipers and puff adders, big adult Diamondback rattlers, etc). An often-used size is 1 1/2" x 4' tube, which is actually a 48" florescent bulb shipping protection cover, and suited perfectly for the use. One end of the tube is sealed, and various small holes can be drilled and strategically placed for insertion of forceps, tweezers, swab-sticks, syringes etc. The tube can then be manipulated until one of the holes aligns with the problem area.



A shot showing the holes as described above. These holes should be drilled very carefully as to avoid cracking; I find 1/4", 5/16" and 3/8" hole sizes adequate for most tasks. (pic- A.Hunter)



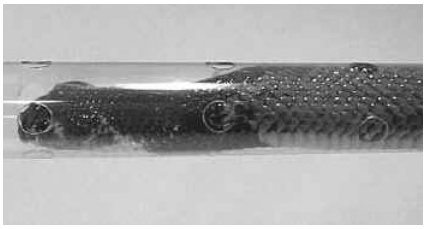
Another shot showing the varying sizes with a penny for scale. (pic- E.Wainberg)



Coaxing the Levantine into the tube. I find it's much easier to get the snake to go into the tube once it's placed inside a large holding bucket, as the snake's natural tendancy is to crawl up, and by placing the end of the tube in front of it's face and tapping it's tail with a hook, it goes up and into the tube. Presto! (pic-E. Wainberg)

After the snake is approx. 1/2 way in the tube, you quickly grasp the tube where it meets the end of the body to prevent the snake from backing out. From here you can lift the animal onto a table, or the floor in this case to do whatever needs to be done. Here I'm feeling her for the possible presence of eggs, which turned out to be nothing. :-(Remember that when restraining a really large snake, that you have some experienced assistant with you. One to hold the snake, and one to do whatever to it. A friend of mine lost a finger and nearly his life from pinning and trying remove an old eyecap from my old 8 1/2ft. monster Black-neck spitting cobra (Naja nigricollis ssp.), that proved to be be too big and strong to manipulate by himself. And I warned him of this,still, he was stubborn! Lesson learned! (pic- E. Wainberg)

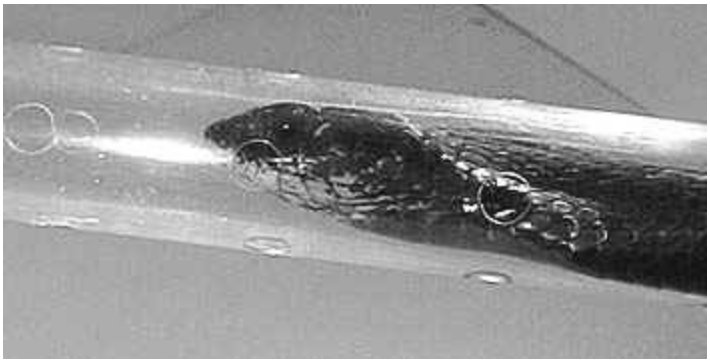
Tubes come in a variety of sizes, with diameters ranging from 3/8" up to 2 1/2". This way, even smaller species such as this Shield-nose cobra (Aspidelaps s. scutatus) can be safely restrained.(pic-E.Wainberg)



A close-up shot of the Aspidelaps showing hole positions (pic- S. Hunter)

Sometimes the above 'bucket method' isn't practical or awkward, necessitating placing the animal on the floor or a table. Here, an Iranian Saw-scale viper (Echis multisquamatus) - another small but deadly species - is gently pursuaded into a tube with a hook. Cooperation from the snake varies greatly! Small species and juveniles are great subjects for tubing, as restraining them by pinning is easily harmful to them and very precarious for the handler to retain a grip. (pic- E. Wainberg)

Here's another example of a species that can be difficult (at best!) to get into a tube - a 6ft. Forest cobra (Naja melanoleuca). I feel these are the most difficult to handle of all cobras, and an angry forest cobra can be a nightmare to deal with. This bad boy made me work! (pic- S. Hunter)



Another close-up shot, this time with a sub-adult Rinkals spitting cobra (Hemachatus haemachatus). (pic- S. Hunter)

Another reason for tubing is when the keeper is faced with the problem of having to restrain a snake for an extended period of time, a risky and tiring venture if you have to hold it's head after pinning. This freshy wild-caught W. Green mamba (Dendroaspis viridis) was badly riddled with ticks, and required three 30 minute sessions to debug it! Mambas also aren't the most willing subjects to get into a tube. (pic- S. Hunter)

A close-up....large elapids also tend to try to twist and 'twirl' out of your grip - hold on! (pic- S. Hunter)

Pinning

The physical restraint of a venomous snake can be a risky undertaking if done improperly. You have to be keenly aware of the snake's every body movement and muscle tensing. One slip, and you could have a fang in your finger, or at least having to do a hasty dance out of the way! Obviously the idea is to prevent the snake from biting while giving medication, disinfecting a wound, removing ticks or unshed eyecaps and only in the case of antivenin labs- milking the snake of it's venom. There should be no other reason to have to restrain a venomous snake (although I felt it was necessary to demonstrate this for educational purposes, but normally I do not pin snakes unless it's absolutlely necessary).

Pinning a snake is extremely stressful, and should only be done as a last resort, when other methods are unsuccessful. The only reasons I can determine for the need to pin is to give oral medication, assist or force feed, or to deal with any mouth/head injury. Most any other reasons can be accomplished by tubing. These may include giving injections, removing ticks or bits of shed, treating body wounds, and probing for sex determination or feeling for the presence of eggs/young.

There are basically two different 'holds' when pinning, the two-finger "elapid hold"; and the three-finger "viper hold". With the 2 finger elapid hold, the thumb is placed one side of the head behind the edge of the jawbone; and the index finger is around the other side of the jawbone and slightly wrapped under the throat. An alternative is with the thumb on the back of the head/neck, and the index finger completely wrapped around under the throat. This hold cannot be safely used on viperids because of the fang length and their propensity to poke a fang out the side of their mouth while being held, and may puncture your index finger. The 3 finger viperid hold differs in that the thumb and 2nd finger are placed behind the jawbones with the index finger holding down the top of the head. Personally, I have a lot more faith and comfort in the 3 finger hold with just about all snakes, some elapids included. With the 2 finger hold on a struggling elapid, it sometimes feels like the snake can twist up and out of the grip. There is a fine line you have to maintain when both pinning and then holding the snake, so that you apply enough pressure to safely restrain the snake, but gently enough as not to hurt it. There are other methods of restraining, including special "squeeze boxes" and bucket with cut-out & lid, but these are the two most common methods.

Here's some helpful pics: Here, as described in the intro, is a demonstration of pinning a venomous snake, utilizing the the 3 finger "viper hold". The mostly unwilling subject is again our old friend - Mrs. Levantine viper.

The initial pin. You'll notice the positioning of the hook, which is placed directly across the top of the head behind the eyes - *not* the neck! It may appear rather brutal, but it's important to note here that you should *always* pin on a soft, no-slip surface; such as a dense foam rubber pad, or the carpet shown here. This was just the right amount of pressure applied so that she couldn't pull out from under the hook. Sometimes utilizing the rubber handle of the hook is softer and better than using the actual hook.

After making sure the snake is not going to pull out (and you have to be ready to withdraw quickly if it does!), you swiftly move in and apply the 3 finger grip as described above. *Do not* remove the hook until you're *sure* you have a firm and proper hold on the snakes head.

The point of no return. A last check for grip "feel" after removing the hook. Don't slip! And make sure at this point to also restrain the snakes writhing body with your other hand, so it can't gain leverage to try and pull out. Most pinning accidents seem to happen right at this point, so be keenly aware of the snake's 'body language'!

A good photo depicting a typical viper hold, with the predescribed 3 fingers on the head, and the 3rd & 4th fingers around the neck for extra restraint should it try to twist or pull out of my grip. The snake's body should always be supported after lifting it. *Never* let it hang by the neck with only one hand unsupported!

A side view of the hold. This snake was quite co-operative, and didn't struggle much. Some species are renowned for being awful to pin. So far for me, the worst to pin have been Cascabels, Fer-de-lance, Gaboon and Rhino vipers, Saw-scale vipers and Forest cobras. I have not yet had a need to pin a mamba, but it's my understanding that they're horrible to try and pin.

Here's a two-finger pin on an albino Monocled cobra (Naja kaouthia), which can be quite difficult to get a decent grip on while the snake is trying to hood when you're trying to get a grip on it. (ph- S.Hunter)

Releasing a venomous snake after pinning it is another area where mistakes often occur, and is really just a matter of common sense and being swift with the release. This is rather difficult to describe accurately. The basic jist is that when about to release the snake, make sure to place the snake's body on the substrate of the cage, place a hook back across it's head pinning it down (while perhaps holding down it's body with the forearm of the holding hand), let go of the body (but make sure that the snake is not writhing or twisting too badly- wait until it relaxes slightly), pick the right moment to let go of the head (quickly but smoothly), and then lift the hook and back off quickly. The snake may make an immediate defensive strike - naturally - it's extremely annoyed at the indignity of being resrained in such a brutal manner! The more experienced keepers will often simply lay the body down, let go of it with the opposite hand with the snake facing away, and then 'toss' the head away from them. Another similar way is to use a deep bucket or garbage can, and utilizing gravity, quickly dropping the snake into the recepticle - but I don't recommend this. In fact, I highly discourage anyone from attempting to pin a venomous snake without seeing it being done first - another one of the great benefits of studying with an experienced keeper! As I already said, this is very difficult to describe clearly in text - so please - see it being done first!

Bagging

The bagging of venomous snakes for transport or shipping is one of the most overlooked aspects of hot herpetoculture, and is, like restraining, difficult at best to accurately describe in text alone.

There seem to be no 'set in stone' rules for how you get a snake into a bag, and I've heard of various methods for doing this. But the two most common methods are the 'bucket method', and the much better use of a special 'hoop stick' designed for just such a purpose.

REMEMBER: ALWAYS CHECK THE BAGS FOR HOLES OR OTHER WEAKNESSES FIRST!! PARTICULARLY DOWN IN THE BOTTOM CORNERS!

Here, we'll take a look at the two methods separately:

Bagging with a Bucket

First, we have to utilize and actual bag or sack to use, so for our demonstration purposes I'll use what I feel is the standard bag most people use - the average sized pillowcase.

A 10 gal. bucket is used, as this size fits pillow cases perfectly. A pair of long hemostats is also used, minimizing risk to the handler by not having to grab the edge of the bag with the bare hands.

Place the snake into the bag, in this case a Levantine viper (Macrovipera lebantina obtusa). This is sometimes easier said than done, especially if you're trying to bag an agile elapid - which naturally will immediately try to quickly fly out of the relatively short bucket. 4ft. + sized snakes have little or no diffuculty in doing this, so be aware and make sure you choose exactly the right moment to grab the tongs and pull the bag closed.

Now after pulling the bag shut, quickly place your hook on the bag where it meets the bucket edge, and then pull up or back with the tong until you have the bag taunt. Make sure that the snake's neck or head is not pinned.

Release the hemostats / tongs, and start twisting the neck of the bag closed while pulling upwards to gain more tying length.

To prevent the bulk of the snake from acting as a counterweight and unwravelling itself when you lift it up, use the 'throat' of the hook at the terminal end to help stop spinning.

Place the bag on the floor and pin down the bag at the base of the tie with one foot. Remember to keep your foot well away from the bag as most venomous snakes are perfectly capable of biting through easily. Although I'm in stocking feet, this is NOT recommended, and shoes / boots should be worn when working with venomous snakes.

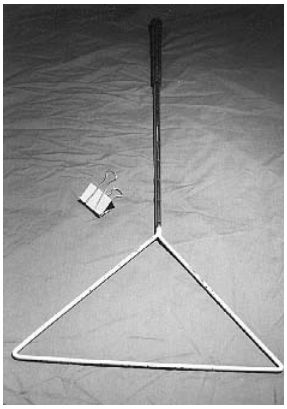
Tie a strong knot in the bag (do not tie using the 'dogear' method!), and if the snake is going to be in bag for an extended period of time (or being shipped), tie two knots if you have the length available. The hook pinning also helps to keep the snake from getting too close to the hands while tying.

Done! Snake bagged.

Bagging with a "Hoop Stick"

The hoop stick is, exactly as it sounds - basically a metal or heavy wire hoop attached to the end of a stick or shaft, and used specifically for the bagging of snakes or other small animals. Most are round, but the design I use is a triangular affair that was designed by herper extrodinare, Ludwig Trutnau. The added bonus of this design, is that the flat bottom section of the loop can be utilized as a bag 'stop', or blocker that frees-up your other hand for tying.

After getting one of these made, I have never went back to the bucket method! I cannot recommend these sicks enough! Perfect for bagging agile, aggressive or fast species, which can be difficult - at best - to get into the bag / bucket combo.



This stick is constucted from prebent 1/4" steel rod, welded to the end of a 36" golf club shaft, and then enamel painted to help prevent rusting. I suppose you could use aluminum, but I also assume that it may be too soft and possibly bend easily. Although different hoop / shaft sizes could be used, I found this size to be just right - long enough for safety and not too unwieldy, and the size of the hoop fits average pillowcases perfectly. The clip, which attaches to the handle for storage, is heavy-duty spring loaded and used for securing the bag to the hoop.

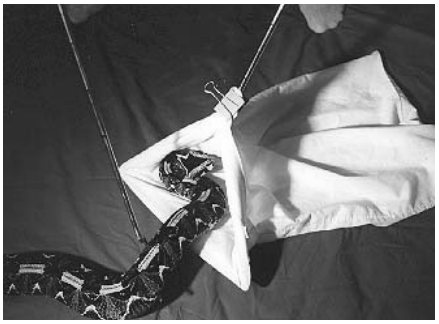
First, I bring the neck of the bag through the hoop from below and string the top seam around the upper corners of the hoop. Make sure to leave about 1"- 2" of 'lip' for holding strength and to prevent slippage.

Then take the bottom end of the bag and pull back towards you, starting to twist near the base of the shaft. For proper strength, make sure the upper corners are secure around the hoop.

While grasping twisted end of the bag, keep backward pressure, clamp the twist to the "Y" or shaft of the stick...

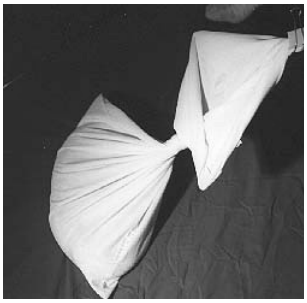
Lift it up, and give the bottom of the bag a good tug to ensure it's holding to the hoop.

Next, we'll choose a snake to bag - in this case a Rhinoceros viper (Bitis nasicornis). Caution must be exercised when tailing larger Bitis species, as they are strong and have a real propensity for suddenly whipping around and striking. A better plan for heavy-bodied vipers such as these is to use two hooks for support.
Now depending on how active, or how much resistance the snake is giving will determine the speed in which you execute these moves. For demonstration purposes, I purposely chose a fairly managable snake so we could show step-by-step without too much hassle.



This picture is pretty self-explanitory, isn't it? Place snake into bag - this can be done flat on the floor as shown, or up in the air as you're hooking the snake out and dropping it in....

Lift up and utilizing the snakes weight as an anchor, pull back and down pinning the mouth of the bag shut, make sure the snake's neck or head isn't there...



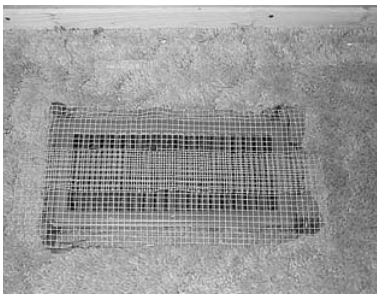
Do the 'ol "twist & twirl" (my preferred method, esp. with elapids), and pin down as above.

When the bag is pinned down securely, place one foot on the handle or shaft, release the clip, and grab the neck of the bag while pulling the bag tighter to gain more tying length...

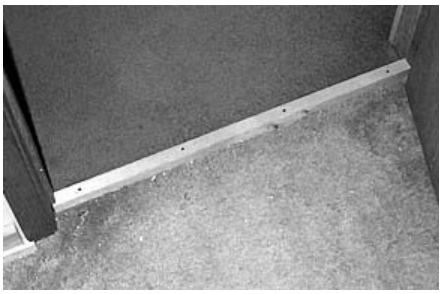
Finally tying the bag shut with the usual strong knot - and presto! Snake bagged!

Well, I hope this demonstration is helpful in giving the viewer an idea of what a couple of the most common methods are for bagging venomous snakes.

Safety and Security

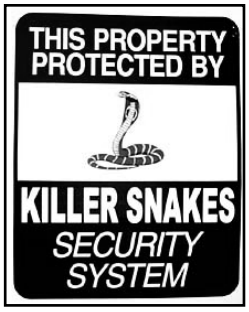


Probably the first obvious thing to do in sealing a room is making sure any air ducts or other holes are thoroughly blocked off. In this case, the floor duct was blocked off with two layers of mesh - 1/4" hardware cloth tacked-down on top, and if they somehow get through that - there's fine mosquito mesh underneath the metal vent plate. Not even a neonate Echis could squiggle through this! (pic- A.Hunter)



Sealing the doorway is also a must! Here a 1" slat of hardwood covers the floor crack. Naturally, you'll adjust the height of the wood accordingly the the gap. Make sure that it's screwed down tight and perfectly flush to the bottom face of the door. (pic- A.Hunter)

Caulking all cracks is also a good idea. Here, extra wood slats have been used to pin down the edges of the carpet, which prevents a snake from hiding under it. Ideally, a hardwood or tile floor is best for ease of cleaning and handling.



Warning signs are a good idea - no surprises for anyone. The one on the left is the one I use in my snakeroom, and is the first thing you see when entering the room. The sign on the right is humorous to a herper, but certainly will not win you any popularity contests with your neighbours! I would not go with this for serious use....

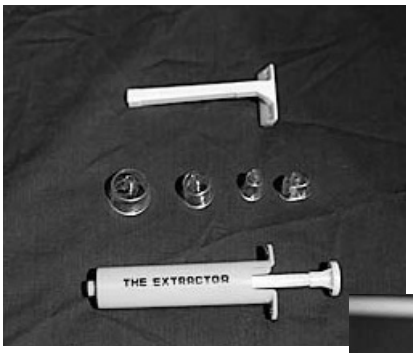
Keep your cage keys hidden away, and don't leave them lying around - you never know who'll suddenly get curious!

As mentioned in previous articles, realistically, all cages containing venomous snakes should be correctly labeled as to the occupant(s) inside, and preferably locked. As most of my cages are the front opening, sliding glass-type, I employ the "Jewlers" or 'display-case' locks which can be found at most good hardware stores. I feel with this kind of cage, these locks are an absolute necessity - keeping the snake in and snoopy layman out. Can't have the wrong people going in there, can we?.

Snakebite Protocols

The Juice of Life! Without question *the* most important item that you could possibly have while maintaining venomous snakes - antivenom! This may be the difference between life and death (or halting further necrosis) following a serious snakebite. It is imperative that every keeper of venomous snakes obtain suitable antivenoms for the species being kept, or *at least* know where the nearest source is and how to contact them FAST. A list of such pertinent names and numbers should be clearly posted in the snakeroom, and a phone with speed-dialer if possible. Unfortunately, antivenom is very expensive, is difficult for some to obtain and has a limited shelf life (approx. 5yrs if kept refrigerated, and longer if the serum remains clear and not 'cloudy'). Shown here is a 10ml vial of Pasteur "Ipser Afrique" polyvalent, covering the African species Bitis (puff, rhino, gaboon vipers), Echis (saw-scale vipers), Naja (African cobras) and Dendroaspis (mambas). (pic- E. Wainberg)

Here's an example of a basic snakebite first-aid kit that should be kept within the snakeroom. This should include a folder containing the relative snakebite protocols for the species being kept along with antivenom contact #'s, splints, sling bandage and Ace-type wraps for pressure/immobilization, and a Sawyer Extractor suction pump to assist in removal of venom directly from the fang punctures. There is currently some debate as to the efficiency of the Extractor, and P/I bandaging for cytotoxic (tissue-destroying) venoms. But it is shown that P/I is very effective for neurotoxic elapid venoms, and is currently the treatment of choice for these bites. It is of utmost importance that every venomous keeper practice and know how to apply P/I bandaging swiftly and properly before their first bite!



The Extractor with it's suction cups and a razor blade for removing hair to ensure good contact with the skin.

A close-up of the suction power of the unit.

It's vital to ensure you are up to date on the latest snakebite protocol, please check out what I think is the best info available on the net regarding the most recent techniques. Be sure to print these off, and make this available to the nearest hospital, if possible. Memorize and practice proper first-aid measures as well - life or limb may depend on it! Protocols for many species are listed, including most of the common species available in the trade.

SNAKEBITE PROTOCOLS
are available at:

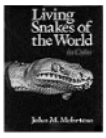
http://www-surgery.ucsd.edu/ENT/Davidson/Snake/index.htm

RECOMMENDED READING

Venomous Snakes: A Safety Guide for Reptile Keepers , William Altimari,1998, S.S.A.R. Publications ; A super little booklet, well written, and geared towards new keepers.

Snake Venom Poisoning, Dr. Findlay E. Russell, 1980, Scholium International Inc. A classic ! Although some fo the info is a bit dated, it is still sound and a very thorough piece of work. This book should be in the hands of every venomous keeper, but it may be difficult to find and often fairly expensive - but worth every penny!

The Dangerous Snakes of Africa, Stephen Spawls & Bill Branch, 1995, Ralph Curtis Books ; Our personal favorite quick reference book of African snakes, species ID' ing, snakebite protocols and more. A GREAT BOOK! A must-have if you love African species.



Living Snakes of the World, John M. Mehrtens, 1987, Sterling publishing co;

Maybe not completely up to date in every aspect of taxonomy, but nevertheless a good book for a quick reference- some really nice pics here too.

Poisonous Snakes of the World. U.S Department of the Navy. 1966, Dover Press; An old book for the U.S forces- thereby somewhat orientated towards the "layman"- Cool though, with fairly accurate info on distribution etc.

SNAKES. THE EVOLUTION OF MYSTERY IN NATURE, Harry W. Greene 1997, University of California Press Another favorite with great info, wonderful pictures and 'tons' of good info on biology, behavior, etc. One of the really good new books out on the market.

The Taipan (The Worlds Most Dangerous Snake) Paul Masci/Philip Kendall 1995, Kangaroo Press. A neat little book on everything you ever wanted to know about the Oxyuranus. Well written with plenty of bite cases, history and biology. Absolutely worth checking out.

Poisonous Snakes. Tony Phelps 1981, Blandford Press Ltd. Another definite "classic"- with a bit of handling info, husbandry and species descriptions. Good book!

Go ahead, grab away! Midwest Custom Products' new Gentle Giant tongs are the safest yet for animal use…

Review & photos by Allen Hunter

More than just a snazzy exterior - these tongs really deliver what they claim.

Call them what you will - 'tongs', 'grabs', 'spaz-stick', etc., the snake tong is one of those tools that although you may be hesitant or suspicious concerning it's use on the animal, you're often glad you had in cases of an out-of control animal that will NOT stay on hooks - or trying to dislodge an arboreal species from a branch. Starting with the advent of the first commercially-made snake tong, the Pilstrom Tong many years ago, these have been both a Godsend and terror in their actual use on live snakes. Careful pressure and restraint (no pun intended) had to be exercised by the handler to avoid rib and/or spinal injuries to the snake - which varied widely with each individual specimen - some snakes that would be relatively calm using just hooks would suddenly react violently to actually being grasped. And then the somewhat alarmed handler's natural tendency would be to tighten-up the grip to prevent the obviously enraged reptile from escaping or wrenching free of the grip - hence the injuries to the snake. After much experimentation, padding the jaws with foam rubber, and just plain old experience, one developes a 'feel' for using tongs. Admittedly, even with clunky old pilstroms, I can attest that I have never hurt a snake with tongs, but this may not be as easy for everyone to get a feel for them. Tongs were were found to be much more useful for grabbing things from inside the enclosure, or offering feed items.

Things just got a whole lot easier with the new Gentle Giant tongs from Midwest.

I eagerly awaited the arrival of these new tongs, along with the new bagging system, and after some rediculous incompetance by both Canada Post (missing parcel notices) & DHL courier (can't find address, then 'lost' in warehouse, then not lost, then lost again) the long overdue equipment arrived (through no fault what-so-ever of Midwest) - and what a pleasant surprise it was indeed!

The first thing that struck me about the tongs was their appearance - very slick and fancy looking. After hearing all the great ravings about these and their gentleness on the snake, Susan immediately offered her finger (always a good test to see how much pressure tongs exert) and told me to squeeze, so I obliged her and clamped on. Her face didn't even twitch (and Susan's pain-resistance level is almost nil), so she told me to squeeze harder. Same deal, although now she stated that she felt absolutely no pain, only wide applied pressure, and asked me to now squeeze as hard as I could. I'm sure the puzzled look on my face as I was doing this may have already answered her question, because with disbelief all I could manage to mumble was "I am!". I had that handle cranked all the way shut, and asked her to try and wriggle her finger free from the grip. No dice. Excellent! Before I get into the logistics of how this works, let's have an overall look at the construction.

Tong construction & details:

Working in a machine shop for 14yrs has taught me a lot about various manufacturing techniques & materials, and as far as I can see, the overall constuction and attention to detail of these tongs is top notch. Although these are more expensive (both to produce and retail) than the standard tongs, I'm actually surprised that Midwest can offer these at the retail price of $79.95US - I'm sure the initial expenditure with new dies for castings and new finishing techniques were hefty, and would initially push the price way up accordingly. The tongs recieved were the 'standard' 40", while different lengths are available. We'll break up the construction into three parts: the shaft, the handle, and the jaws themselves.

Shaft:

The shaft is made from high strength 3/4" aluminum tube, and measures 28 3/4" in length, and is finished in a rich, anodized deep blue, which will not chip, fade or peel like conventional paint - enameled or not. A white Midwest logo is stamped near the handle, and both the jaws and handle are attached to the shaft via 4 stainless steel, smoothed rivets each, which were seated fully and felt strong and secure. The blue finish is a pleasant, welcome change from the usual plain aluminum of most tools, or the screaming orange parts of some other tongs - but this a matter of personal taste - and it's up to the individual user to decide which. Unlike some of the older designs, there are no exposed cables or rods to possibly tangle-up in the snakes tail, they're all enclosed within. Nice! Whether this shaft will stand the test of time (i.e. twisted, dropped out of trees, etc.) remains to be seen, but I wouldn't be surprised to see these easily lasting 20+ years without problem, but, heck who cares anyways?- Midwest already has a life-time guarantee on all tongs ;-)

Handle:

The handle is cast from a aluminum/titanium alloy, and is now finished in a bright, almost chromed appearance, which according to Midwest owner Dana Savorelli, is achieved by a process involving an abrasive polishing compound similar to jem polishing. The effect is very pronounced over the older, straight casting, and also lends a smoother feel to the grip. The only time I could possibly see this as being a minor problem, is that if the user has very sweaty hands, it may cause slippage - but this is something subjective. I personally don't have a problem with this, but someone who does could always use some tape on there for extra grip. Perhaps some knurling on the rear of the grip would also prevent this.

On the subject of feel, obviously a lot of thought went into the tensioning of the cable and springs. Pulling the grip lever was silky smooth, with practically no play whatsoever. Of the two samples sent to me, there was a very slight difference in the tensioning - one felt slightly faster and 'tighter' than the other - but this difference is so slight as to not make any difference in actual practical usage, but this is my own particular preference, and says nothing about the quality of the workmanship - which

is flawless. The cable is strategically tensioned, so that even when maximum force is exerted during gripping, there is just enough flex in the cable to securely hold the animal, yet not enough to reach bone-snapping pressures that are possible with older, solid rod-loaded designs like Pilstroms.

The size of the handle and spread to the grip at 3 5/8" should be comfortable for almost all but the smallest of paws. I have very average sized hands, and found it to be very easy to work. Handlers with giant, baseball glove-sized hands might find the web-support protrusion on the back to be impeding, but these tongs are so good that I imagine those folks would be happy to adjust!

The Jaws:

The jaws are where the Gentle Giant shine, and where basically the whole concept of the 'animal-friendly' tong design focuses. Made from the same alloy as the handle, and measuring 4 3/8" from tip of bottom jaw to throat, 2 1/4" wide at midpoint, and having a generous 5" gape, these jaws should easily accomodate all but the largest of Bitis vipers or boids. The lower jaw is polished smooth, with the return/opening spring recessed into it and out of the way. Yea! No more exposed springs, cables or rods! On more than one occasion I've had arboreal species such as mambas & boomslangs often tie themselves up in a tangle only to find that the snake has looped it's tail through one of the springs and clung to it, making things slightly precarious to release the snake. Nice to see.

In the past, most handlers have had to place some foam or rubber on the inside of the jaws to help prevent injury, and to help create 'drag', inhibiting the snake from slipping/crawling through the jaws. Midwest has finally heard the call, and has coated the upper jaw with a red, thin rubber that achieves drag on the snakes dorsal surface - while the smooth flat bottom jaw inhibits the ventral scales from making a purchase - thus in combination makes for a perfect hold on the snake. Due to the rather flat design of the jaws, the upper jaw also features a 'finger' which helps to prevent the snake from wriggling out the front of the jaws while clamped.

The 2 1/4" with of the jaws themselves is the second part of the equation here, naturally contact pressure is reduced when spread over a wider area than with a narrow one, which makes perfect sense to me being applied here. This makes things much more comfortable on the snake, resulting in less 'freak-out' by the animal at being actually grasped as opposed to being lifted - which most snakes seem, by a predatory train of thought, to naturally react at.

When closed, which they don't completely (this is good), the resulting gap is 5/16" - enough to safely grab even smaller nasties like out-of-control Saw-scale vipers (which I don't use tongs on, but I could see this possibly happening out in the field), and smaller, squrrelly elapids and such.

In use:

I decided to try these out on a few different animals, of different sizes, and within reason, because of time and space restraints due to having Susan in the room with me (which as standard protocol in our house, I never handle any elapid over 6ft with anyone else in the room - hence it's hard to take pics of myself with just the camera's shutter timer) for photos.

My first real opportunity to test out these new tongs came when I just happened to be shipping out a quite spastic trio of 4ft. King Brown snakes (Pseudechis australis), that I had found to be rather annoying and were a real pain to deal with. These animals would always come immediately flying out of the cage biting at anything that moved in an overzealous feeding-response that sometimes proved to be quite dangerous to hook & tail on a regular basis, so I thought this would be a perfect occasion to 'test-drive' the new GG's for bagging them. I used the GG's on two of them, saving the last one for the usual hook & tailing to see if they wound up saving me time and effort.

Upon opening the first cage to the nastiest male, he predictably came rushing out at top speed, and here was where I first noticed how easily the lower jaw of the GG's quickly slid under the snake as he was whipping-out. Quickly clamping-down on the snake at mid-body (the first 1/4 to 1/2 of the snake is the best location) and grabbing the tail for support, the next thing I immediately noticed was how appearantly comfortable it seemed to the snake. On one previous occasion when this same snake ran away from me to go behind one of the big, immovable cages, I had to use a pair of padded standard tongs to get him out, which the snake took great offence to and immediately thrashed around and chewed furiously on the shaft. There was none of that this time around, which I attribute to the pressure-spreading width of the jaw design. As I lifted the snake to drop it into the bag (being held by a friend), I remembered the 'drag & slip' design of the upper & lower jaws, and paused briefly to check it out. Sure enough, try as he might, this normally weasely brown snake couldn't 'crawl' through the jaws (as what occasionally happens with normal tongs), and looked rather pathetic in it's fruitless attempts to so. Bonus!

The next King brown was also quickly & effortlessly dispached into a bag with identical results. It is interesing to note here that the bagging of these two snakes using the GG's was way faster and easier, and tailing the third snake for bagging (after chasing, cornering, hooking, tailing, dodging it's strikes as it's 'whirligigging' on the end of the hook), I realized using the GG's for flighty/nasty snakes was much faster and infinitely safer all-round.

I also used the GG's on another snake which are really nasty-tempered - one of my Desert Blacksnakes (Walterinnisia aegyptia). Normally, these snakes are not particularly flighty, but really stand their ground and strike repeatedly at the annoyance. These snakes also have a very long strike-length, and a bad tendancy to quickly whip around and 'hook-strike' backwards at anything touching their tails - making tailing occasionally precarious. I was pleasantly surprised to see identical results from these snakes as well using the GG's on one of them, as I really expected them to put up savage resistance to even these tongs. But no dice - after a couple of hisses & jerks, they actually went strangely placid…how nice indeed!

Testing these tongs on a heavier-bodied snake, in this case a 3ft. Puff adder, produced a similar result, and it seems that these tongs would have no trouble being used on all but the smallest of snakes or the largest of fat-bodied Bitis vipers or boids.

Conclusion:

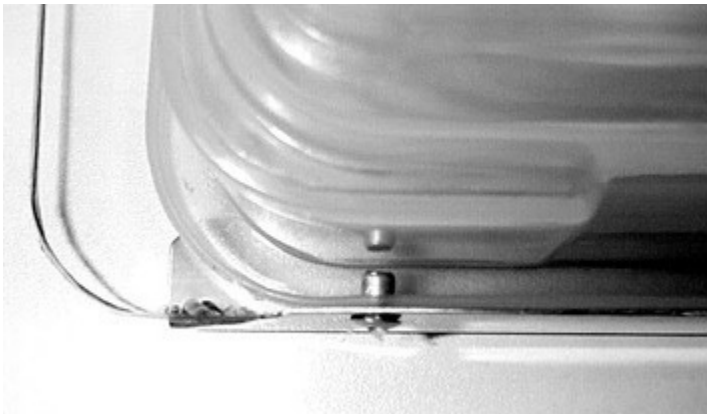
The Gentle Giant tongs from Midwest reflect what I feel to be the most advanced and 'animal-friendly' tongs available anywhere, at any price - and believe me, I've used them all. The quality of materials and construction is top-notch, and is backed by Midwest's lifetime guarantee - all of which adds up to be an incredibly effective and useful tool that I'm sure will last for many years of hard usage. No doubt about it - I believe this overall design will stand the test of time, and from now on set the new standard by which all other tongs will be judged. I recommend them highly! My old Pilstroms now look absolutely primative by comparison.....

Finally! A Rubbermaid ™ Safe for Venomous

Rubbermaid tubs have been a standard of many keepers for juvenile or small snakes for many years, but always suffered from a rather flimsy lid that often compromised snake security and keeper safety (for more info, see the "Caging" page). Here is a new design I came up with, which I feel is excellent in security and safety, and quite suitable for venomous species. Made from 1/4" plexiglass, three 26ga.- 5/8x5/8" stainless-steel angles, aluminum 1/8" rivets, and one 5/16" x 3/4" bolt.

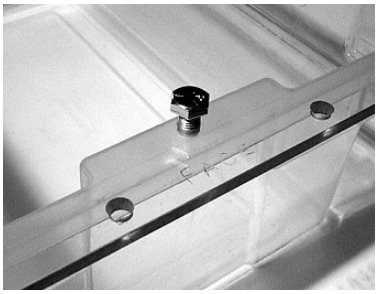
If constructed properly, this design could be used with confidence as enclosures for neonates, juveniles, and adults of small species. It could also be placed inside a larger cage as a temporary shift/trap box for larger snakes. There would be little problem using the same design on many different sizes of Rubbermaid tubs.

The plexiglass top is securely in place, with virtually zero gaps or bendability. This also has the added benefit of safe viewing and locating the animal before opening the lid. It also allows light to enter, for some species benefit from a regular photoperiod. Placed into a rack frame, this makes for quick visual inspection for multi-unit collections placed in rows.

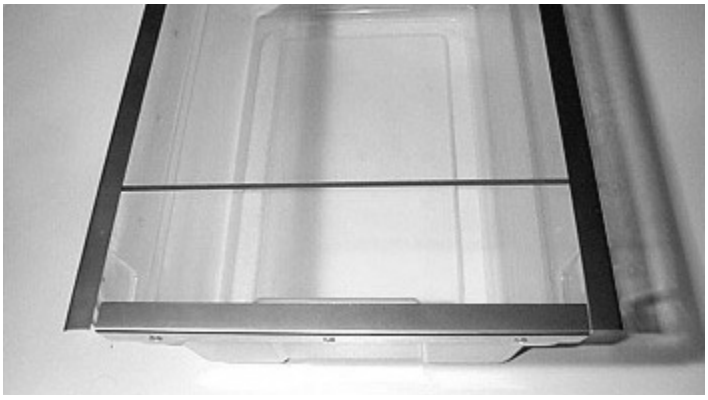


There is absolutly no exposed metal within the tub to injure the snake from rubbing. Shown from the underside, the rail rivets are secured to protruding lip- not the inside wall of the tub.

(photos: A. Hunter)



Here you see the threaded bolt that locks the lid in place, both from sliding, lifting, and the tub bending outwards. The plexi & the tub must be tapped with the same bolt threading for it to work properly. In this case, its 5/16 - 28. Fine thread works better in this case, because of the thinness of the material. The two extra holes are for grip with slippery fingers, or a small snakehook to open with.



Unlike the Rubbermaid lids, you can control the amount of opening - very handy when housing nervous or runny specimens that would otherwise jump out the far end of the tub.

The side rails are made from stainless steel, so they won't rust from humidity or washing. They're secured to the tub using 1/8"x5/16" aluminum flathead pop-rivets. All edges and corners must be filed smooth, for obvious reasons. Accurate height placement is critical, to minimize gap to almost nil, yet still allow free travel of the plexiglass lid.