William Pledger Reptile Handler

Living with reptiles

Areas covered:

- What you can do to make your home snake wise
- What to do when confronted with a snake
- Snake bite first aid
- Are snakes protected?
- Medical uses of snake venom

WHO IS WILLIAM PLEDGER.

I am a licensed reptile keeper who also holds a demonstrator and damage/mitigation licence. Over the last few years I have completed a variety of reptile handling courses as well as courses in animal studies, veterinary nursing, microchip implantation and work place training. I have been working and handling reptiles now for over 15 years, 7 of which I was a volunteer for WIRES NSW where I cared for and rehabilitated injured reptiles.

The object of this paper is to offer a guide for people to understand reptiles and their movements and put in place some basic preventative measures around the home, giving the owner more opportunity to see a reptile that has ventured near their home. The information offered has evolved from practical application and research from the author and is meant as a guide only, therefore should be viewed as such.

While every effort has been made to ensure that the first aid information contained in this text is correct, as methods change and develop, there can never be a guarantee that this will always be the case.

My aim is to help preserve the reptile species through education and understanding.

Regards

William Pledger

WHAT YOU CAN DO TO MAKE YOUR HOME SNAKE WISE.

Reptiles have been around for millions of years. It's important to remember that they have inhabited the area your house has been built on long before it was in place. In most cases snakes are just passing through because it's the path they have been using for years to get to a water source, or they were following a prey animal.

Reptiles are drawn to you house for a number of reasons:

1. Water
2. Food
3. Seeking high ground

The important thing to remember is that they are not there to hurt you. You are not a food source to them. So what can you do to reduce the chances of a snake coming and hanging around your house?

Eliminate the reasons they would want to. If you have pets, dogs, cats or birds, look at how you feed them and provide them water.

If they are outdoor pets, put the water as far from the house as possible in the shade but so it can be seen easily. Your pet doesn't care if it has to go to the back corner of the yard or to the farthest corner of the shed for a drink, he just wants a drink. By moving the water as far from the house as possible you are allowing for a passing snake to get a drink; without having to worry about it being at your back door step and if you see it and startle it, it is more likely to go back out to bush than towards your house.

When is comes to feeding your pets, feed them inside and clean the bowls after. Food scraps like dry biscuit crumbs attracts mice and other rodents, and eventually a snake will come looking. If you have birds, then bird seed on the veranda is always an issue, it falls through the floor and under the house. You may look at putting a large outdoor mat under the cage to catch the falling seed. You can give it a quick vacuum each day or shake it out if the cage is on rollers. This will help to reduce the nightly visitors who come up for the free feed.

A special note on bird cages, guinea pig hutches, rabbit hutches, mouse and rat cages, chicken pens (mainly homemade) and any other type of pet cage.

The cages you buy from a pet shop are commercially made and only consider the pet it is to house, not what may prey on it. A snake can get into the smallest of gaps so it is important to consider where the pet cage is going to be placed. If you are going to place it outside you will need to recover the wire opening with snake proof wire and fix it to the cage securely.

Another thing I like to suggest is to clean your verandas and stairs on a regular basis with bleach or chlorine based cleaners. This removes the odour of prey animals like rodents and birds, if the snake can not smell its prey it won't go looking for it. High ground is always a problem. The main reason they look for this is the weather. If it has been raining for a long period of time, they maybe flooded out of their hide spot and looking for a new place to rest until the weather is back to normal.

The number 1 rule is to store things at least ½ a meter off the ground. Put fire wood in a box with a lid and a latch to keep it closed.

The next thing that should be considered is the garden and plant types. All snakes can climb to some degree, some better than others. Keep trees and shrubs away from the house, this reduces what they have to climb on to reach your roof, don't use ground cover plants close to the house, this takes away hide areas for them. Trim away hanging branches so you can see clearly under your plants, even pot plants are a good place for them to hide. I have removed tiger snakes and red bellied black snakes from pots. Once you have a clear view around your garden and house you need to look at the yard and what you have lying around.

Almost everybody has something leaning against the back of the shed. This is another good hiding spot for snakes. If it is rubbish get rid of it, if it is usable get it up off the ground so you can see under it. Do you have a rubbish pile? Get rid of it, burn it off or take it to the tip. Rubbish piles break down over time and create a little humidity haven for snakes.

Compost bin? Look at how it is made. If it's just a pile of compost in a man made containment area it's an invite for snakes; as compost breaks down the vegetation becomes very humid and as it is food it attracts rats and mice which in return attracts the snakes. Because of humidity, the snake may not leave and will lay in ambush for the next rodent to come along. The ideal compost bin is one that is on a stand with a lockable lid.

Once you have eliminated potential hiding places you have done all you can to make your property snake wise. Remember you can never make it snake proof all you can do is make it so there is no reason for the snake to hang around.

<u>WHAT TO DO WHEN CONFRONTED WITH A SNAKE.</u>

This is what the Department of Environment and Heritage Protection QLD say you should do when you have a snake around your house.

"*Keeping snakes away from your home*

What attracts snakes into the yard or house?

Snakes are often attracted to yards and houses, when food and shelter are unknowingly provided by the human inhabitants. Brown snakes and taipans eat rodents and are attracted to garden or farm sheds to hunt rats and mice. Pythons regularly enter chicken pens and aviaries to prey on the occupants. They are also found in roof cavities hunting for rats and possums. Brown tree snakes are specialists at invading aviaries, often becoming trapped inside after they have eaten a bird. These snakes can also be found at night hunting for geckos around window sills in the home. Common tree snakes actively hunt frogs during the day and are often seen around the house and garden where frogs occur.

Houses and yards can also be used by snakes for shelter. Carpet pythons are regularly found curled up in ceilings, enjoying the security and warmth. A variety of snake species is often encountered in places such as timber piles and under sheets of corrugated iron.

How can I keep snakes out of my yard?

You can take measures to reduce the attractiveness of your yard or house to snakes. If you have a rock wall or other structure that has the potential to house frogs and rats, and in turn attract snakes, discourage these animals by blocking holes. Avoid creating habitat for snakes by keeping a tidy, well-maintained yard and shed. Actively discourage rats and mice, and snake-proof your aviaries and poultry pens.

How do I snake-proof my house?

Ensure that the yard is tidy with shrubs and gardens kept away from the house. Snakes will shelter in houses, under shrubs and in timber stacks to avoid the hottest parts of the day. It is also important to ensure that food scraps are disposed of properly to discourage rats and mice as snakes are attracted to places where they can obtain food. Bird owners should also discourage rodents by ensuring that aviaries are kept clean and hygienic and that the mesh is small enough to stop snakes entering.

Blocking off as many potential access points as possible can significantly reduce the chance of snakes entering your house. Install screens on doors and windows. Block any holes around the house including those between the roof and ceiling. Extra care should be taken during summer when the snakes are most active. In areas that experience flooding, snakes will move to higher ground during a flood. Take extra precautions at these times.

I have a snake in my house, what should I do?

It is important that you never try to kill the snake. Not only is it illegal to kill a native animal, but it places you at a higher risk of being bitten if you force the snake to defend itself.

Close the internal doors in the house and open the external doors and windows. Block the gaps underneath internal doors with rolled up towels. Place chairs and boxes under windows to make it easier for snakes to climb out. Keep everyone well clear of the snake.

If the snake is in a place away from electricity and valuable items, try directing a gentle jet of water from the garden hose or squirt bottle towards the snake to encourage it to move away. Remember that snakes on the move will try to shelter, so hosing the snake may not always work."

When you come across a snake, and I say when because it is inevitable that you will at some point see one-stay calm, try and get the best view of the snake you can. Stand still, don't run or jump up and down or turn away from the snake. Keep your eye on it and slowly back away, if the snake moves towards you stand still again, when it stops or seems to have lost interest slowly back away again until you are at a safe distance that you can turn and walk back inside and call a reptile handler.

Why try and get a good look at it?

Because the reptile handler will ask a series of questions to try and get an idea of the species and the habitat it is in.

The first 4 questions I ask are:

1. What is the current situation
2. Describe the snake as best you can
3. If the snake is in a confined space i.e. inside the house or shed etc
4. If it's in the open can it go back into bushland

Not all snakes need to be removed, in fact licensing states that a snake can not be removed just because it is an inconvenience to the property owner.

The more information you can give the better. The reptile handler is going to want to know if you have pets, children and elderly family members living on the premises. It is important to get a good look at the snake so that you can give the reptile handler as much information as possible. If it is in a confined space then the reptile handler is on his way, it's that simple.

A snake in the house is always a recipe for disaster, kids and pets always want to get a better look, inhibiting your actions. If the snake is in a room or a wardrobe, close the door and put a towel across the bottom to prevent it from getting out. If it is in the lounge or a large open area of the house keep an eye on where it went and wait for the reptile handler. **If it wants to move, let it.** As long as you can tell the reptile handler where it is he should be able to catch it. **Don't try to catch or keep the reptile contained yourself.**

If it is out in the open then the reptile handler has to assess the situation a little further.

Hosing the snake is a good way to move it on provided there is plenty of room between you and the snake. You can guide the snake by squirting its head to turn it around and its lower body to move it on. Use the longest squirt range when doing this so you have plenty of reaction time to guide the snake where you want it to go.

SNAKE BITE FIRST AID.

Almost everybody has a mobile phone today, but if you don't then you need to call and get someone's attention and have them call 000 for an ambulance.

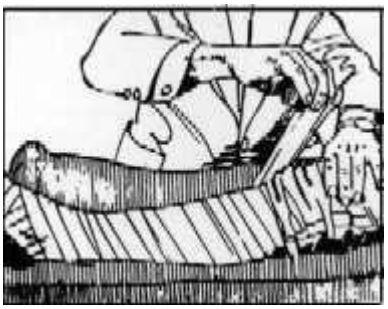
The illustrations in the following diagram show the steps involved in applying a pressure bandage. It is important to remember than any form of stretchable material can be used as a bandage and anything that is rigid can be used as a splint. Don't waste time looking for a bandage or timber for a splint. Every second counts so if you can not lie your hands on them immediately then use substitutes.

The method I use for treatment of snake bite (as taught by St. Johns Ambulance) is the first aid measure used to reduce the systemic toxic effect of snakebite. Place a pressure bandage over the snake bite then proceed up the limb, apply the same amount of pressure as you would when bandaging a sprain, then if a splint is available use a second bandage and bandage it to the limb to immobilise it.

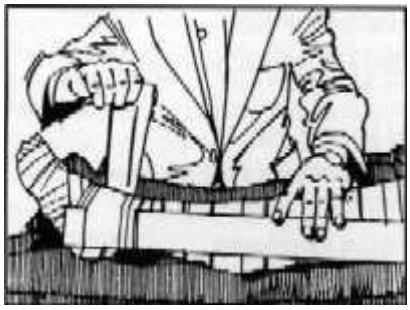
The pressure/immobilisation bandage can be applied to any part of the body. If you were treating a bite to the truck of the body (stomach), you would use a pad made by one of the bandages and place it over the bite site and hold it in place with the remaining bandage. The pressure should be as firm as you can achieve given the constant movement of the bite site. In areas such as the neck, where bandaging isn't an option due to the restriction to breathing, then direct pressure to the bite location using the heel of the hand may be the only option.

1. Apply pressure bandage.

2. Use the same pressure as you would a sprain.



3. Extend the bandage as high as possible along the limb.



4. Apply a splint to the limb.

5. Bind it as firmly to as much of the limb as possible.

ARE SNAKES PROTECTED?

Snakes are protected under the Nature Conservation Act 1992 and it is an offence to kill, injure or take snakes from the wild.

The Nature Conservation Act 1992 divides all wildlife in Queensland into three general classes:

1. protected wildlife
2. international wildlife
3. prohibited wildlife

For the purpose of this paper we are only concerned with protected wildlife. The class of protected wildlife includes every native Australian plant and animal species found in Queensland, and is further divided into the following sub-classes based on conservation status:

1. extinct in the wild
2. endangered
3. vulnerable
4. rare
5. near-threatened
6. least concern

Further information can be sourced by viewing the Nature Conservation Act 1992, Part 5 Wildlife and habitat conservation. The website address is listed in the acknowledgements at the end of this paper.

When left alone, snakes present little or no danger to people.

MEDICAL USES OF SNAKE VENOM.

Most people see snake venom as a lethal toxin with no other use than to kill. When you think about research in the uses of venom the first thing that comes to mind is anti-venom. There is a lot more research and uses for snake venom than just creating an antidote for a snake bite.

Venom from snakes and other creatures like spiders and scorpions have long been used for medicinal purposes, and much modern research has focused on the development of the poisonous substance into pharmaceuticals for a wider market.

Aspects of king cobra, copperhead, rattlesnake, and viper venom have been found to have an effect on a wide range of medical maladies, ranging from the dissolution of blood clots to possibly slowing the growth of cancer cells.

The venom from one of the world's most venomous snakes could be the key to a new breed of painkiller, a new study says. Pain-relieving compounds called mambalgins isolated from the venom of Africa's black mamba are as strong as some opiates-including morphine- without the risk of respiratory distress and other side effects common with pain-reducing drugs.

The first drug derived from snake venom, owes its origin to the Brazilian pit viper. Brazilian and British researchers discovered a protein in the venom that blocked the action of a compound called angiotensin-converting enzyme (ACE), which the body uses to keep blood pressure at the right level.

American researchers then concocted a protein similar to the venom protein to create one of the first of many ACE inhibitor drugs to treat people with high blood pressure. These drugs, which debuted in the 1970's, cause the fewest side effects of all blood pressure drugs, and have added benefits beyond lowering blood pressure—they also stem the risk of developing diabetes, stroke, heart failure, and kidney disease. High blood pressure is a common and serious problem that affects more than 50 million adults in this country. Half of all middle-aged and elderly adults need to take blood pressure medication to prevent heart and kidney disease.

Since 1998 there have been two drugs on the market that are based on snake venom proteins and are used to prevent heart attacks. One drug, called **eptifibatide**, is a modified rattlesnake venom protein. The other is called **tirofiban** and is based on a venom protein from the African saw-scaled viper. Both drugs have been used to treat people having minor heart attacks or those with chest pain indicating they are likely to suffer a heart attack.

There is constant research being conducted on snake venom to unlock all its possible uses. I could research this for weeks and constantly find new research being conducted. Listed is just an example of the areas currently being researched.

- Excessive bleeding: A blood-clotting protein in Taipan venom has been found to stop excessive bleeding during surgery or after major trauma.

- Stroke: Components of Malayan Pit Viper venom has shown potential for breaking blood clots and treating stroke victims.

- Neurological diseases: Enzymes from cobra venom may be instrumental to finding cures for Parkinson's disease and Alzheimer's disease.

- Cancer (various types): An enzyme derived from copperhead venom could be used to treatment for breast cancer.

- Aging: Yes, some are even used in a commercial wrinkle cream!

ACKNOWLEDGEMENTS.

I would like to pay special thanks to the following organizations for the published information that helped make this paper possible.

Websites:

http://www.health.qld.gov.au/poisonsinformationcentre/bites_stings/bs_pressure.asp

http://www.ehp.qld.gov.au/wildlife/livingwith/snakes/index.html

http://www.ehp.qld.gov.au/wildlife/livingwith/snakes/frequently_asked_questions.html

http://www.edo.org.au/edonq/images/stories/factsheets/an_overview_of_the_nature_conservation_act_1992_qld_-_14-10-09.pdf

http://www.legislation.qld.gov.au/legisltn/current/n/naturecona92.pdf

http://science.education.nih.gov/animalresearch.nsf/Story1/Making+Medicines+from+Poisonous+Snakes

http://news.nationalgeographic.com.au/news/2012/10/121003-morphine-painkillers-black-mamba-snakes-health-science/

http://www.reptilegardens.com/reptiles/snakes/venomous/snake-venom.php

Books:

Reptiles & Amphibians of Australia: Harold G. Cogger 6th edition 2000

The Snakes of Australia: J.R. Kinghorn second edition 1956