

Snakebite Awareness Training

Part 2: Lesson 3 - Characteristics Used to Identify Snakes

NOTE TO TRAINER: the photographs in this lesson (or similar ones) are also available as slides that you can have printed and laminated if possible. These can be passed around for participants to look at while you are talking about them. Hold up the larger photo that matches the photo below so they can see it, then pass it around.

It is important to be able to identify various kinds of snakes in your community so that you can avoid a dangerous encounter with a venomous snake. Also, being able to identify the type of snake when you have been bitten, or at least to describe its characteristics, can give important information to medical workers so they know how to give you proper treatment.

So what characteristics are important to recognize? The important ones are:

- Body length and appearance
- Body markings and colors
- Scales
- Head shape
- Pupil shape
- Tail length

When you first encounter a snake, it may be moving quickly or be concealed in some way. So out of this list, what are the ones you should remember first? The three things you will most likely notice are:

1. **How long is the snake?** Compare it to something you know. Is it as long as your foot or longer? Is it as long as you are tall or longer?
2. **How thick is the snake?** As thick as your fingers? As thick as a broom or shovel handle? As thick as your wrist or forearm?
3. What **color** is the snake, and does it have any **stripes or patterns?**

If you can see it, Is the head shape oval and rounded, or similar to an egg, or somewhat triangular? Head shape and the other characteristics may be harder to see because you might need to be a lot closer to determine those.

Let's look at some examples.

Body Length and Appearance

One of the first things to look at is how long the body is, and its general appearance - is it slender, thick, or somewhere in between? How long is the snake in meters? The average person is about 2 meters tall and your foot is about 25 centimeters. Is the snake longer than you are tall? Is it the size of your foot or two feet? Do the best job you can to estimate the snake's size.

Here is a puff adder. You can see how thick its body is.



Photo used with permission of Stephen Spawls

Compare the puff adder to this Battersby's green snake, which is much more slender or thin.



Photo used with permission of Stephen Spawls

When considering thickness, compare it to something you know. Is it as thick as a pencil? A broom handle? Your fingers? Your wrist or forearm? Your leg?

Body Markings and Colors

Next, we want to look at the body markings and color.

This Battersby's green snake is basically all one color. We would say this snake has plain coloration.



Photo used with permission of Stephen Spawls

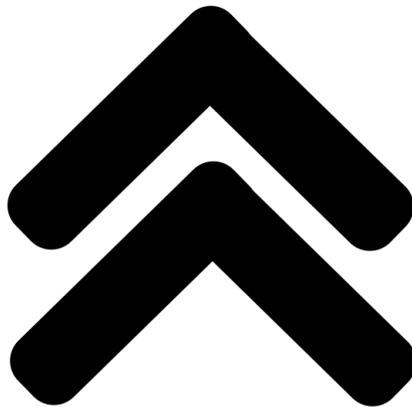
In terms of color, look at the overall body color, but also look for the colors of any spots, stripes, or patterns (see below).

One thing you can look for is whether the body has any stripes. This northern stripe-bellied sand snake has stripes:



Photo used with permission of Stephen Spawls

If there are no stripes, look for other patterns on the snake's body. This puff adder has repeating "V" shaped markings called chevrons.

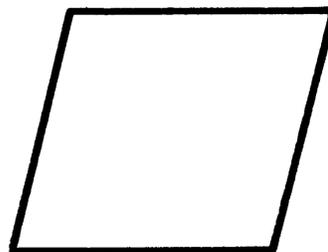
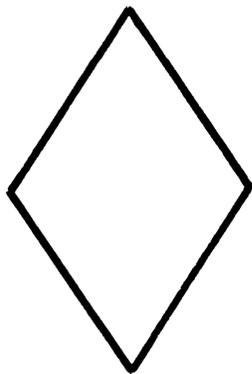


Repeating V pattern or chevron



Photo in the public domain

This rhombic night adder (and also the rhombic egg eater) has a distinctive pattern roughly similar to a rhombus. There is also a V shaped marking on the head.





Rhombic night adder photo used with permission of Stephen Spawls.

This white-lipped snake (below) has bands of white dots on a dark background as well as the white lip



Photo used with permission from Stephen Spawls

Patterns might not cover the entire body. For example, this forest cobra has black bands and spots on a yellow background in the throat area.



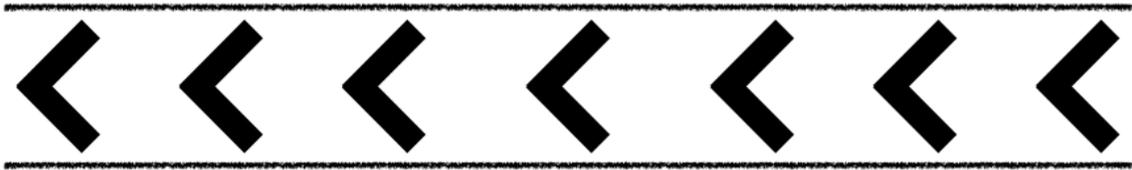
Photo used with permission from Stephen Spawls

Below are some of the common patterns found in snakes - some are seen on the back and others along the sides:

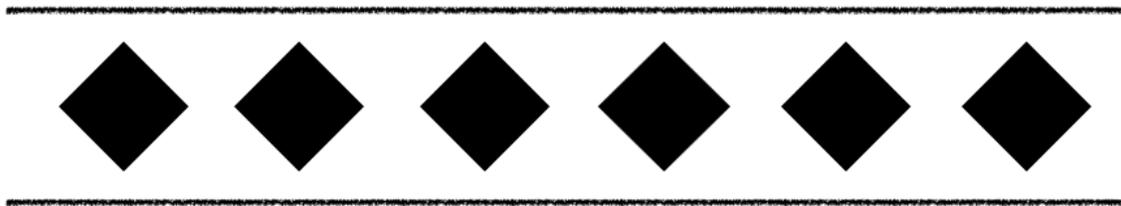
Stripes



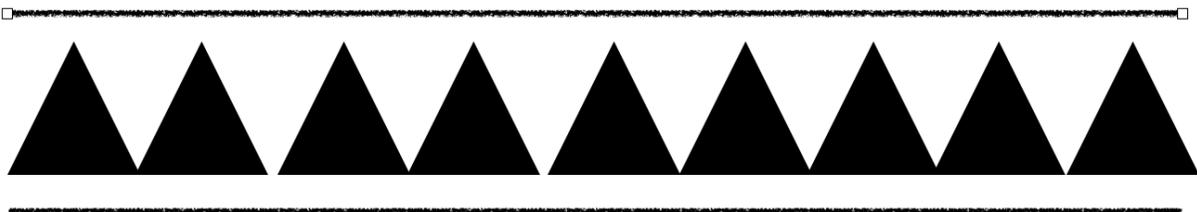
V-shapes or chevrons



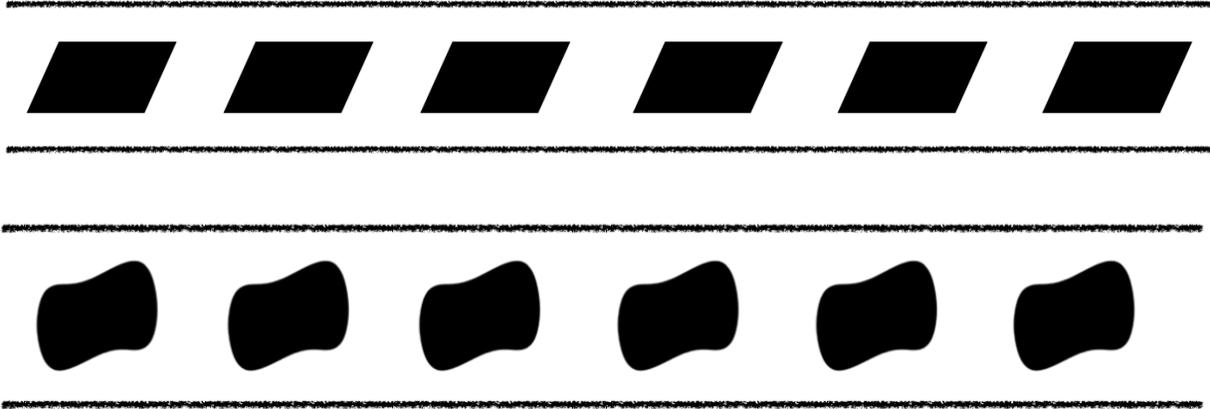
Diamonds



Triangles (usually along the sides)



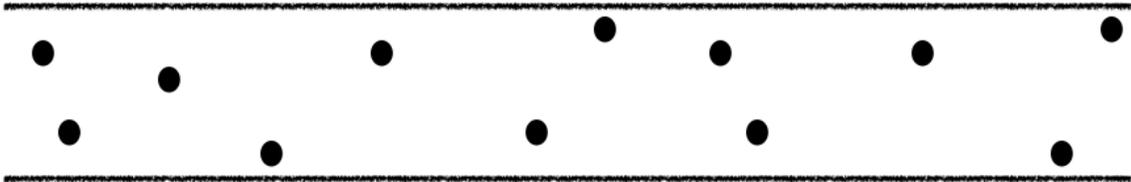
Rhombic patterns



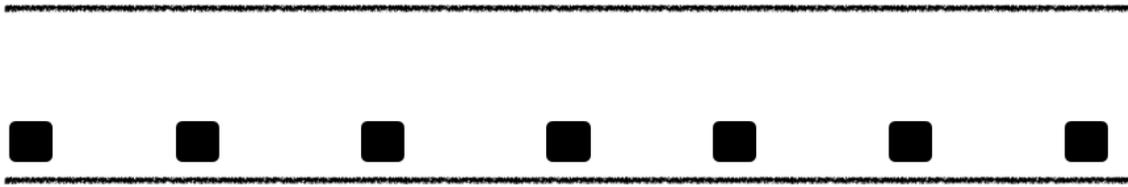
Blotches



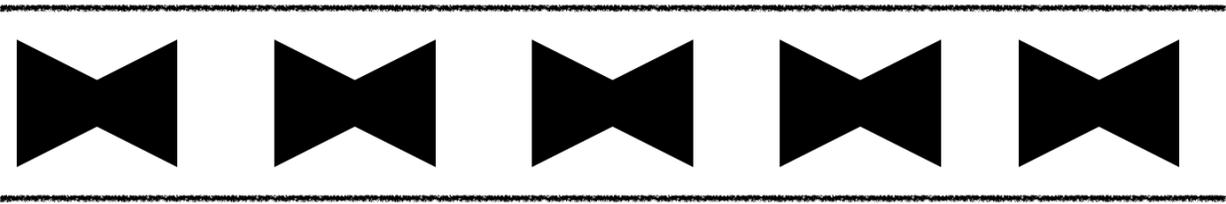
Random spots or flecks



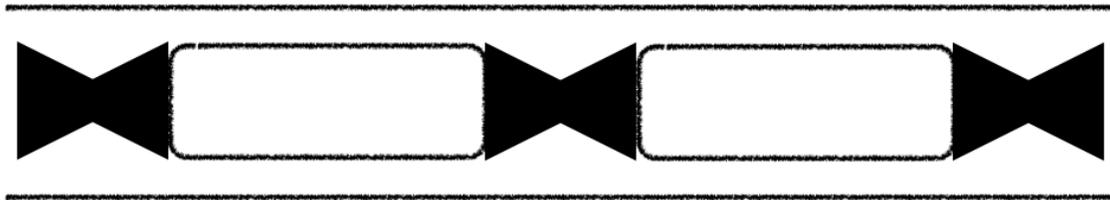
Row of dots (usually along the sides)



Butterfly or hourglass pattern



Combination of hourglass/butterfly with rectangular shapes



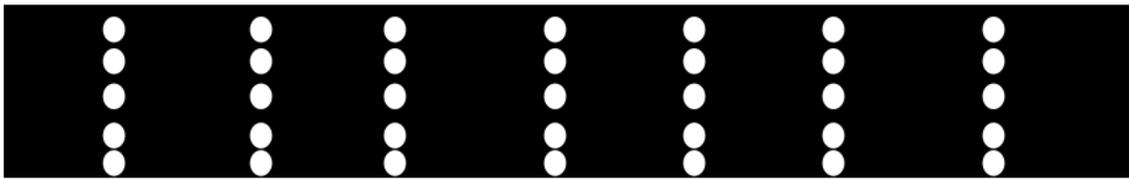
Single bands



Double bands



Single bands made of white dots



Colorful bands

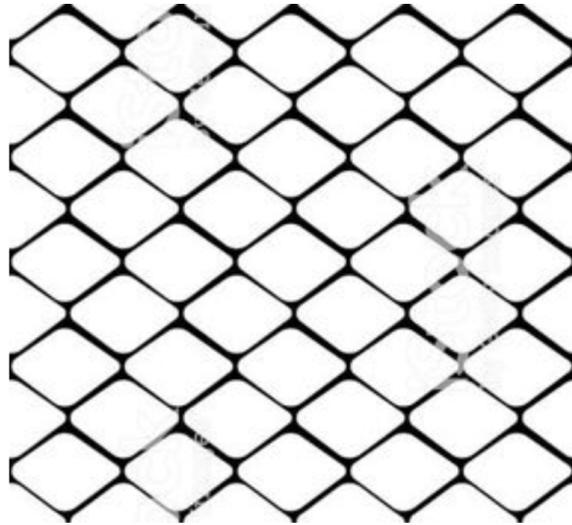


Scale Type

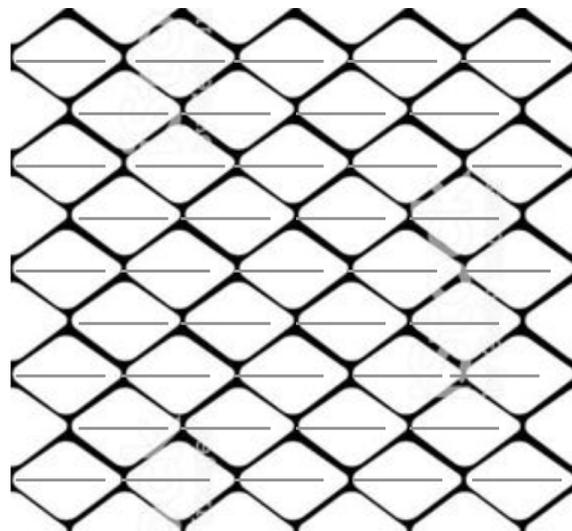
Look at the scales on the snake's body if you can do so safely.

Make note of whether the scales are dull or shiny.

Snakes have two types of scales: smooth (top) and keeled (bottom).



Smooth Scales



Keeled Scales

The puff adder and rough-scaled bush viper have scales with a ridge down the middle. These are called keeled scales. (Photo courtesy of Bernard Dupont. This file is licensed under the Creative Commons Attribution-Share Alike 2.0 Generic license with the following change: zoomed in on scales).



The scales of the Jameson's mamba do not have these ridges and are thus smooth scales.



Photo in the public domain

Head Shape

Look at the head of the snake from a safe distance. What is its general appearance? Some snakes have heads that are more rounded or oval shaped and elongated; in these snakes, there is not much of a size difference between the head and body. Here is an example of a rounded or oval-shaped head:

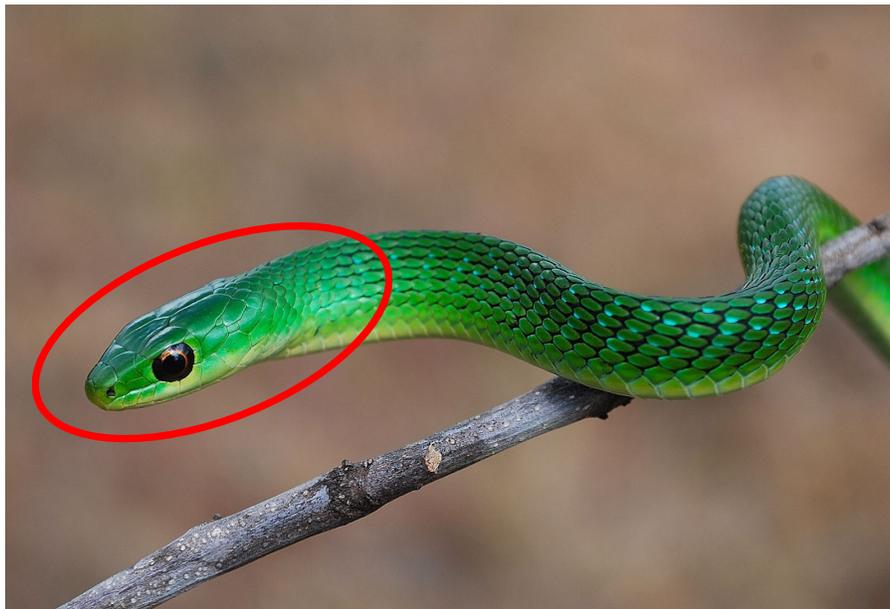
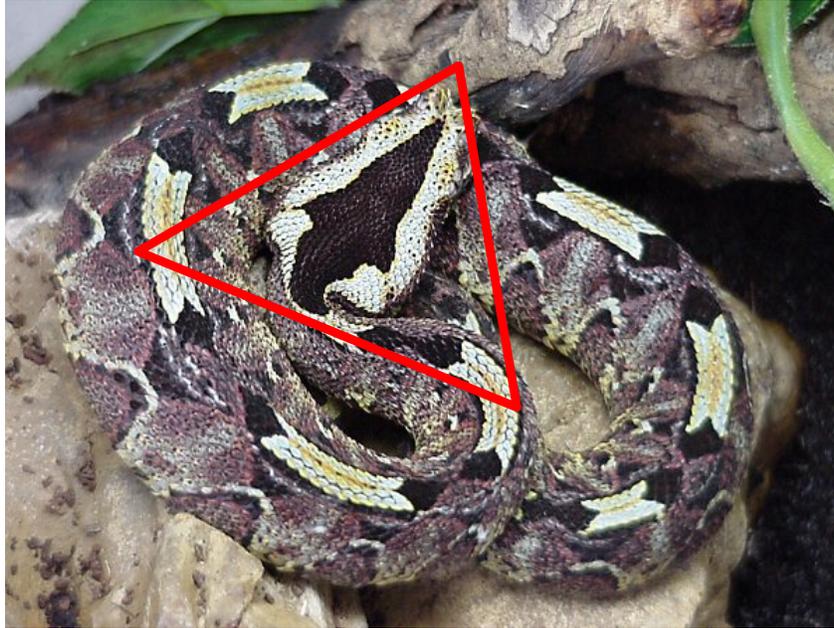


Photo used with permission of Stephen Spawls

Other snakes have a broader, more triangular head and a distinct neck. Look at the head of this rhinoceros viper. See the triangular shape? The venom glands on the back of the head help form this triangular shape. There is even a triangular pattern on the back of the head. (photo courtesy of Dawson licensed under the [Creative Commons Attribution-Share Alike 2.5 Generic](#) license without changes).

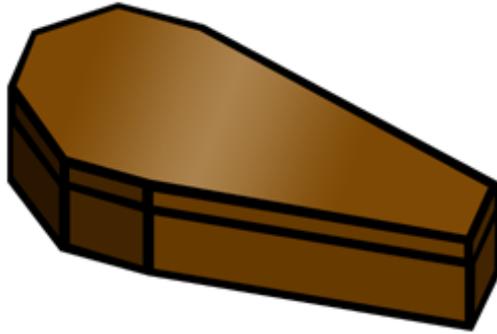


Some snakes that do not have a triangular shaped head can flatten the head out to make it look triangular when they feel threatened. An example is the white-lipped snake below.



Photo used with permission from Stephen Spawls.

Finally, the mambas have a coffin-shaped head.



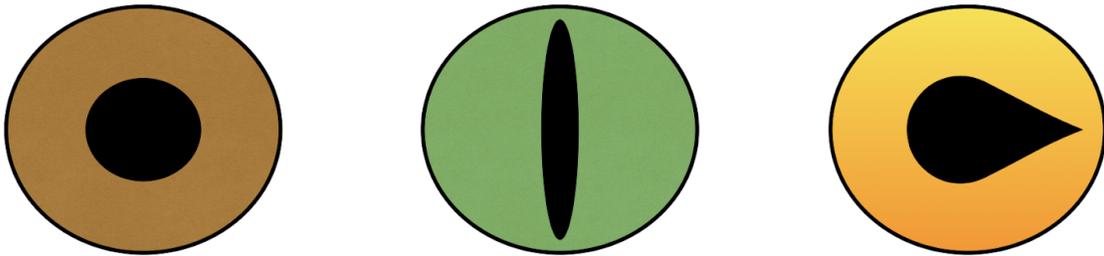
Coffin Shape



Photo by author

Eyes and Pupil Shape

Look at the shape of the dark part of the eye, known as the pupil. You can also look at the color of the area around the pupil, known as the iris. In snakes, there are basically three shapes of pupils (in order - round, vertical, and teardrop shapes):



On this boomslang, **the head is egg-shaped** (rounded), the **pupil is round**, and the **iris is green**. Snakes with round pupils have better vision during the daylight hours..



Photo used with permission from Stephen Spawls

On this puff adder, the pupil is not round, but is more like a vertical slit (oriented up and down, not side to side) similar to those on a cat. Snakes with these types of eyes have better night vision. (Photo courtesy of Julius Ruckert licensed under the [Creative Commons Attribution-Share Alike 3.0 Unported](#) license without changes.)



You should also make note of whether the eyes were large and obvious, or small and inconspicuous.

Tail Length

Look at the length of the tail. Usually, you will see a change in how thick the snake is in the last third of the body's length. This is where the tail begins.

This is the tail of a black mamba. You can see that the tail is long on this snake:



Photo used with permission from Stephen Spawls

This Gaboon viper has a short, stubby tail (photo is in public domain).



Some Other Thoughts

If you happen to own a cell phone with a camera, USE IT! If you can take a picture of the snake, you can always identify it later, or show it to someone else who might be able to identify it.

Also, you must be aware that there can be a ***great deal of variation in the colors and patterns of individual snakes***, so two snakes of the same type might look very different. Nevertheless, do your best to describe the snake you see and relay that information when necessary to health care workers.

In addition, ***make note of the behavior and position*** of the snake. Where did you see it? In a tree? On the ground? In water? Was it moving slowly or rapidly? Did it raise its head up, spread a hood, hiss, strike, open its mouth? Did you see it during the day or at night? Did it spit in your direction? Did it move away from you? Any of these kinds of details can be very important in identification of the snake.

Being able to identify a snake by its characteristics takes time and practice. The next time you see a snake, you might try to look at the characteristics you remember from this lesson, but always do so at a safe distance of at least 3-5 meters (most snakes can strike from a distance of up to $\frac{2}{3}$ of their body length)..

Having said this, you should also be aware that snakes can move very quickly, so ***getting a good look at a snake is not always easy***. And sometimes you are just too far away, or the snake is in a tree or bush, or it is blending into its surroundings. In these cases just keep a safe distance and leave the snake alone - but ***stay alert!***



These are both Blanding's tree snakes, but they have very different coloration (top is male, bottom is female).. Photos used with permission of Stephen Spawls.