

Hunting Pattern of few venomous Snakes which are four feet or Longer

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Abstract

This review deals with certain terrestrial snakes like King Cobra, Vipers like Russell's viper, Bushmasters (like Lachesis), Lance head vipers, Rattle snakes, Brown snakes and pseudo brown snakes like the King Brown snakes, Inland taipan and of course black mamba. One can generalize the observations even for some of the deadly venomous coral snakes of Australia (though these are short snakes). All these snakes are very to moderately very venomous snakes. The very venomous marine snakes will not be dealt with here. Usually these reptiles are shy of human beings unless provoked. The venom of these snakes is used mostly for hunting and pre-digestion of the prey. The least use of these venom is for self-protection. The uniqueness of king cobra is it is very active, and it chases its prey (including swimming rapidly).

Introduction

There are certain venomous snakes which are more than six feet in length. Some of these snakes are: King Cobra (*Ophiophagus hannah*)(10 feet to 19 feet) [1], Russell's viper (*Daboia russelii*) (4 feet to 5 feet) [2], Bushmasters (*Lachesis muta*, *Lachesis melanocephala*, etc.)(13 feet) [3], Lancehead vipers (*Bothrops jararaca* and *Bothrops insularis*)(4 feet long) [4], Diamond back rattle snakes (*Crotalus spp* and *Sistrurus spp*)(6 feet long) [5], Black mamba (*Dendroaspis polylepis*) (4 feet to 5 feet) [6], King brown snake (*Pseudechis australis*) (11 feet)[7], Eastern brown snake (*Pseudonaja textilis*)(7 feet) [8] and the deadliest Inland taipan (*Oxyuranus microlepidotus*)(6 feet) . In general, all these snakes are found in tropical climate regions of the world. Of all these venomous snakes, king cobra (having a length of about 19 feet) is the most active snake It is continuously moving from one place to another. It is also a great swimmer, both upstream and downstream. The different snakes discussed here are as shown in (Figure 1). It can be seen from the above figure that king cobra is not lying coiled up like other snakes. It is ready to run or swim, either in search of a prey or mate. It can be seen in the open fields like in tea gardens. It is never afraid of predators as it is very athletic, whereas other snake being sluggish, usually hides during day in crevices or in burrows made by other animals. They usually come out at dusk or at night when there are less chances of being detected by predators.

Feeding habits of these snakes

Most of these snakes feed on small rodents and amphibians, except for king cobra which feeds on other small snakes. In case of non-availability of these types of food, the snake will feed on small birds, lizards etc. The last item on its prey list is the rodents and any small amphibians. It can detect its prey upto 100 m distance using its sensors on the forked tongue. Since it is fastidious in the type of food (mostly snakes) it has to move from one region to another quite often [9]. This is very unlike many other snakes. It hunts virtually throughout the day. Other snakes are usually nocturnal as they know that their prey will also be searching their food at night (like many rodents viz. rats, mice, etc.) [2]. The pit vipers have a thermal sensor by which it generates an infra-red image of its prey and the distance it is from the predator. These snakes usually do not run after its prey unless it is very hungry and hence it waits until it is within a distance of 0.5 to 1m from it. This is possible only by using its infra-red sensors which are in the pit [10,11]. (Figure 2) shows infra-red image created by the pit of the snakes. It can also measure the distance the prey is located. This imaging system is also used by certain non-venomous snakes like pythons and boas.

All other snakes will use the sense of smell (Jacobson's organ) and the ground vibration to detect any threat or their prey. The

Eastern Brown snake is mostly found in agriculture lands as their major food is house mouse. They mostly use their sight to detect their prey [12]. The king brown too uses its eyesight to detect and catch its prey. It is mostly a dusk hunter when it gets its prey (a wide range) in any ecosystem. However, it mostly likes to feed on

frogs. In spring and in early summer it also forages on a wide range of small snakes including the eastern browns and the tree brown snake. It does not chase its prey over a long distance (unlike the King cobra) as most of the time something or the other is always within its reach.



Figure 1: King Cobra (A); Russell's viper (B); Diamond back Rattle snake (C); Bushmaster (Lachesis) (D); Lance head Golden viper (E); King Brown or Mulga (F); Eastern Brown (G); Inland Taipan (H) and Black mamba (I).

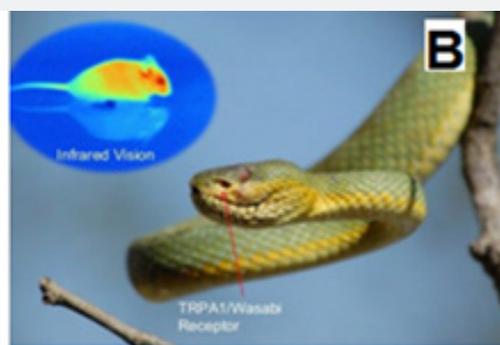


Figure 2: Infrared imaging by the pits of the pit vipers. The prey (A) and the infrared image (in the inset) by the viper (B) [14].

Australian coral snake (*Simoselaps spp*) are no doubt venomous snakes of the country. These are nocturnal creatures. They hunt at night for small lizards and eggs of birds which have been laid on soil or sand. Since these snakes have a snout like a shovel, they burrow in sand and stay there during the day [13,14].

Conclusion

It is therefore, very evident that among all the venomous snakes which are more than 4 feet long, the king cobra (nearly 20 feet long) is the one which is very active – both over land and in

water chasing either its prey or its mate This is followed by the eastern brown snake which is very small as compared to King cobra. The least active snake are the vipers which waits for the prey to come within a range of 1 meter from its head.

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