

Rare cases of 'climbing' in Copperheads and Eastern Brown Snakes

Introduction

In the Melbourne area, there are three large elapid snakes (venomous land snakes) that are locally abundant; all of them are about a metre in length as adults. These species are the Tiger Snake *Notechis scutatus*, Brown Snake *Pseudonaja textilis* and Copperhead *Austrelaps superbus*. The following material is based on observations from 2003-2009 as a government licenced snake controller working all suburbs of Melbourne.

The genus *Austrelaps*, as first identified by Worrell (1963), is regarded as a generalised elapid species. The snakes average less than a metre in length (rarely more than this), are dangerously venomous and, where they occur in largest numbers, do not appear to be particularly habitat-specific (Hoser 2009). They inhabit timbered country, open areas, rocky areas, swamps, and uplands. Their diet consists of other vertebrates, including other snakes.

They are most abundant, and have a competitive advantage against other snakes, in particularly cold places, due to their apparent ability to be active at lower temperatures. Because of their propensity to eat smaller reptiles (including other snakes), they can and do eat out all other competing species in cold regions, enabling them to dominate all habitats and niches, if they choose. The reverse applies in warmer areas, where a hierarchy between taxa results in Copperheads being lowly ranked and literally 'pushed about' by other taxa, including those they may eat when the specimens are smaller (Hoser 2005).

In spite of the apparent availability of trees and shrubs as potential habitat, Copperheads have chosen not to use those habitats accessible by climbing, even when there are no competing species.

In bush habitats, it seems that the warmest places are at ground level as there is less wind, and hard cover, such as rock, seem to retain heat better.

Hence, in cooler regions heat-seeking animals such as Copperhead snakes will tend to prefer to stay at ground level.

Even taxa known to climb, such as Diamond Pythons *Morelia spilota*, Broad-headed Snakes *Hoplocephalus bungaroides*, Common Tree Snake *Dendrelaphis punctulata* and Brown Tree Snakes *Boiga irregularis* will tend to stay at ground level in cooler conditions. When tem-

peratures rise snakes of most taxa will have an increased propensity to climb. This is observed in both captive snakes and those in the wild. Captive snakes will tend to climb structures and rest at elevated places (such as on, as opposed to in 'hides'). Wild snakes are more likely to be found in trees as opposed to under rocks or otherwise at ground level.

Brown Snakes

In the same period (2003-2009), no instances of climbing of any sort had been seen in any of the captures for Brown Snakes or Copperheads, with the exception of the unusual examples given below. While climbing into the bonnets of cars is apparently common for Red-bellied Black Snakes *Pseudechis porphyriacus*, it is effectively unknown for Copperheads and Browns, except for the two instances given here. This is significant in that both taxa are of similar abundance to Tiger Snakes in and around Melbourne, although Brown Snakes are only native to what is best defined as the northern half of the city, and its far-western fringe.

No examples of climbing trees or other structures for this taxon are known. Only one case of a Brown Snake climbing into a car is known and it is documented here as an extreme case resulting from exceptional circumstances.

On a hot day near the end of 2007, I received a call from Sunbury College on Racecourse Road, Sunbury to remove a Brown Snake seen moving across the car park. Pursuant to my instructions, staff surrounded the snake and watched it from a safe distance, while waiting for me to arrive. The snake fled and ended up underneath a car that had driven into the car park as the snake was crawling across the hot ground. The driver alighted from the car and ran.

The snake remained under the car for a short time, estimated at 'a few minutes', but then crawled up into the car. The apparent reasons for this behaviour were that the snake was being surrounded by people on all sides, and the radiant heat from the ground was such as to elevate the snake's temperature to a fatal or near fatal level.

Following my arrival, the snake was retrieved from inside the car's engine space. At that stage it was apparently partly injured from the heat, as

evidenced by an abnormal 'tilt' in the head and fore body not noticed by me on a previous occasion. I had observed the snake a week earlier in an inaccessible place under a portable classroom. It had not been caught on that occasion, but had acted and moved in the usual manner.

The snake was retained for about 48 hours before release. However the 'tilt' had not resolved itself by the time it was released.

Copperheads

In a similar situation to the above, I had a call to catch a 'Brown Snake' at Upwey on a hot day at the end of 2006. This snake turned out to be a Copperhead (a common misidentification in Melbourne), which was cornered underneath a car parked under a shaded carport. In more than 40 minutes under the car, at no stage did it attempt to climb up inside the car's engine space.

On a separate occasion, I had a call to catch a 'Brown Snake' at Abbotsford, where I found and caught a yellowish brown Copperhead, sited in a doorway at the back of a restaurant. Noting that the taxon is apparently unknown from this part of Melbourne, I guessed that the snake was a vagrant and made enquiries about it. The snake had been seen to move from

under a recently-parked car and into the doorway where I had caught it. It transpired that the car had just been driven from next to a golf course at Cheltenham. The driver had seen similar snakes in that area and I deduced that it had likely travelled either in the wheels or engine area of the car, before alighting.

Conclusion

Climbing structures such as trees by Copperheads and Brown Snakes in the wild situation is rare. Tiger Snakes can and do climb regularly. In Victoria, however, elevated parts of trees and similar structures do not constitute significant habitat or activity areas for these snakes.

References

- Hoser RT (2005) Pecking orders in large venomous snakes from South-east Australia ... ecological and distributional implications. *Boydii* Spring, 33-38.
- Hoser RT (2009a) One or two mutations doesn't make a new species ... The taxonomy of Copperheads (Austrelaps) (Serpentes:Elapidae). *Australasian Journal of Herpetology* 1, 1-28.
- Worrell E (1963) A new elapine generic name. *Australian Reptile Park Records* 1, 1-7.

Raymond Hoser

488 Park Road
Park Orchards, Victoria 3134



Baby Copperheads. Photo by R Hoser

