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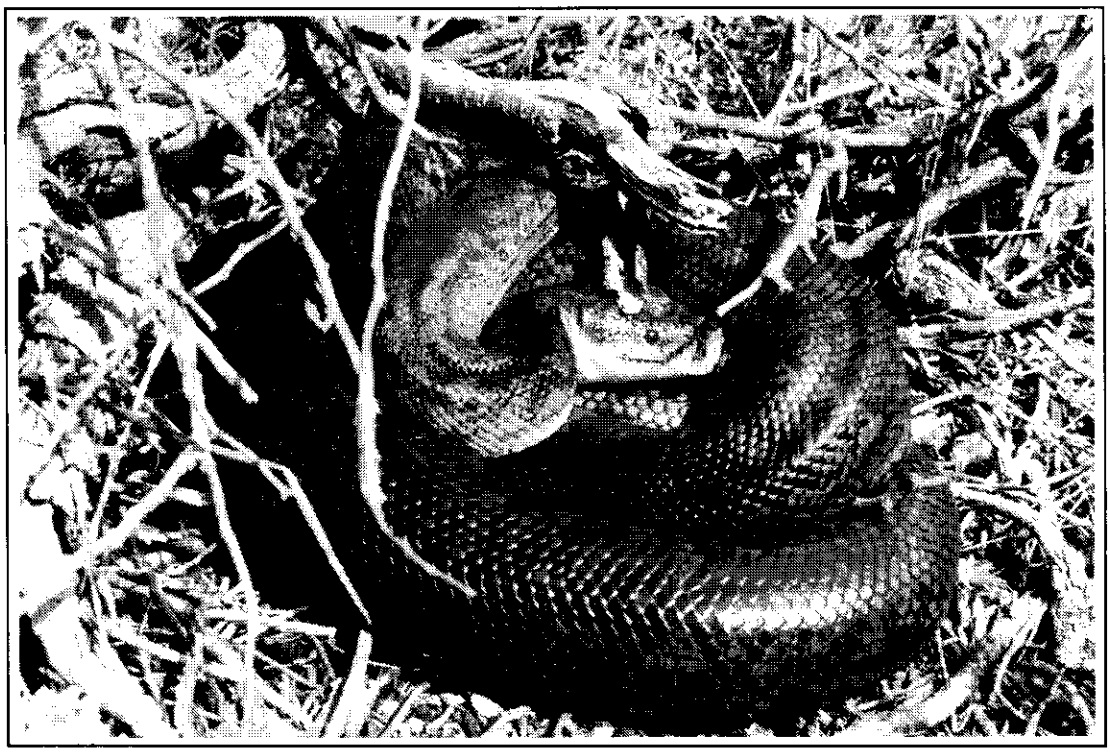
SCALY FRIENDS - CARPET PYTHONS

by David Pearson



(Photo: D. Pearson)

SNAKES tend to have a poor public image. This may be due to the ability of some species to inflict venomous bites, or perhaps the evil role cast for serpents in biblical tales. Certainly to be described as 'a snake in the grass' is not a compliment!

Pythons, however, are one group of snakes the public views with some empathy. They are non-venomous and are typically large and slow-moving. Pythons often reside close to people; sheltering in haysheds, outhouses and occasionally in house ceilings. Some farmers have encouraged their presence in sheds to keep mice and rats in check.

The Carpet Python (*Morelia spilota imbricata*) is found throughout southwestern WA, extending from Northampton, south to Albany and eastwards to Kalgoorlie. It is the best known of the pythons and the one most often encountered by people. It may grow up to 3 m in length and weigh over 5 kg. A pronounced triangular head and a pattern of irregular blotches and bars along the body (resembling an old carpet pattern, hence its common name) make it readily identifiable from other species of snakes.

Carpet Pythons are usually observed when crossing roads or sheltering in buildings. Unfortunately, their love of lying on warm roads in the late afternoon and evening results in many being killed by cars each year. Despite being one of the best known Australian snakes, little is known about their life history or ecology. Secretive habits and superb camouflage make them difficult to observe and study.

A downward trend in Carpet Python populations in WA has prompted a study by CALM into their ecology at two sites; Garden Island near Rockingham, and at Dryandra State Forest near Narrogin. Radio transmitters are implanted inside pythons while they are under a general anaesthetic. They are then released and located regularly to collect data on their preferred habitats, activity patterns, diet and social interactions.

The study has been running for two years and already some astounding findings have emerged. Female Carpet Pythons in SW WA grow to much larger sizes than males, up to four times larger at maturity. This occurs because females need to store vast amounts of fat to reproduce. In a reproductive year, females may not eat for up to eight months. During that time they will also lay a clutch of eggs (up to 35) weighing around 25% of their body weight and then coil around the eggs to incubate them for about 60 days. Should the temperature of the clutch drop too low, the female python will begin shivering to generate heat to elevate its temperature.

Young pythons are independent as soon as they hatch and wander away from the nest in search of food and a home range of their own. This is probably a dangerous period for them, as they are only 40 cm long and weigh around 25 g. Birds of prey, foxes and feral cats are some of the potential predators of these small pythons.

Radio tracking has shown that Carpet Pythons have a preferred home range. At Dryandra, they return to the same logs on a regular basis, often at the same time each year. Since the winters are cold at

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Dryandra, they retreat up trees and shelter in hollows as much as 10 m above the ground. Here they may spend up to 5 months, only emerging to bask on a branch on warm days.

With the arrival of spring, the males begin travelling widely in search of females. In populations of Carpet Pythons in eastern Australia, males may fight to determine who mates with a particular female. As a consequence, evolutionary forces have influenced males to grow to a large size. In contrast, the small males of the SW Carpet Pythons do not fight so there has been no reason to attain a large size. They tolerate the presence of other males and either wait their turn to mate, or move on to locate other females.

Pythons are renowned for their ability to consume large prey items. Since they do not have dentition suitable for cutting up their food, it is swallowed whole. This has led to some remarkable adaptations in the structure of the head, with the ability to temporally dislocate parts of the jaw to increase the size of the gape. Juvenile pythons eat mice, other small mammals, lizards and occasional birds; while adult pythons are able to eat larger birds, reptiles and mammals including Numbats, possums and small wallabies. Prey is captured by lying in ambush inside a log or on an animal trail.

Carpet Pythons at Dryandra show a strong preference for sheltering in hollow logs during the warmer months. Favoured logs are usually greater than 150 mm in diameter with a hollow section that extends at least a metre. In the absence of suitable logs they appear to require thick vegetation for cover. Females often lay their eggs inside logs, usually large ones with concealed entrances and occupying a sunny position.

In addition to radio tracking, a CALM survey collecting python sightings from the public has been running for three years. This has led to a much improved understanding of the current distribution and abundance of pythons throughout WA. This survey relies on the eyes and interest of many people and data collected will establish a benchmark against which any future changes in python populations can be assessed. If you have seen pythons in the past, or are likely to in the future, your observations would be of great assistance to the survey. Python sighting kits are available to interested people. Please contact me on (08) 9405 5100.

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