

wildlife

# A "GOOD" SNAKE?

Words and photography by Ruchira Somaweera



*Pit-vipers like this moderately venomous Sri Lankan Green Pit Viper (Palaia Polonga) have a specialised heat-sensitive organ called the Loreal Pit between the eye and the nostril which is used to sense warm-blooded prey and predators, even when the snake cannot see them.*

Blood sucking creatures hanging from roofs, eye-plucking monsters, slithering revengeful demonic souls, deadly assassins ("Snakes on a plane" anyone?), these are few of the plethora of urban myths surrounding snakes that us folks in Sri Lanka, grow up with. Snakes have a major image problem due to which most people fear and loathe them. To many of us, they are worth more dead than alive and a knee-jerk reaction naturally props up either to run screaming (survival tip 1: don't panic and back away) or squash them with whatever at hand or to just pour kerosene on the poor soul. The fear of snakes or 'ophiophobia' (oph·io·pho·bia), runs deep in our ancestral roots and it is believed that during the evolution of man, detecting and indiscriminately avoiding all snakes was probably favoured by natural selection. So here we are...

Snakes are the 'youngest' reptile group on earth, the last big invention of nature. The first 'snake-like' creatures are considered to have appeared on earth about 135-180 million years ago in the Jurassic period (nope, despite the Hollywood flick, T'rex was not running around at that time), but the earliest known snake fossils belong only to the Cretaceous period, about 95 million years ago. Today, nearly 3430 species of snakes inhabit most parts of the Earth apart from a few countries like Ireland, New Zealand and Bermuda as well as the two poles. On the other end of the

spectrum, among the countries with a high diversity of snakes is, Sri Lanka.

Snake diversity in the island of Sri Lanka is extremely high, hosting at least 89 inland snake species, of which at least 49 are endemic and found nowhere else in the world. With such a rich diversity, despite its small size relative to other islands such as Papua New Guinea, Borneo, and Madagascar, Sri Lanka has one of the most evolutionary diverse island snake faunas in the world. Additionally, at least 15 species of sea snakes live in the estuaries and mostly shallow ocean belt around the island. However, when these snakes have to share a quite small space with over 20 million people, clashes do happen and both parties suffer.

Sri Lanka has been historically plagued with human suffering from venomous snakebite. In fact, the country not only has one of the highest incidence rates of venomous snakebite in the world (where about 200 out of 100,000 people get bitten each year) but also a high prevalence of 'envenomations', the process by which actual venom is injected into someone from the bite (of the snake). The larger area of encounter (as snakes frequently inhabit home gardens and agricultural fields), inability of most farmers to afford safety wear, the low level of awareness of first-aid after a snake bite and delayed access to proper medical treatment, all contributes to this high level of morbidity and mortality.





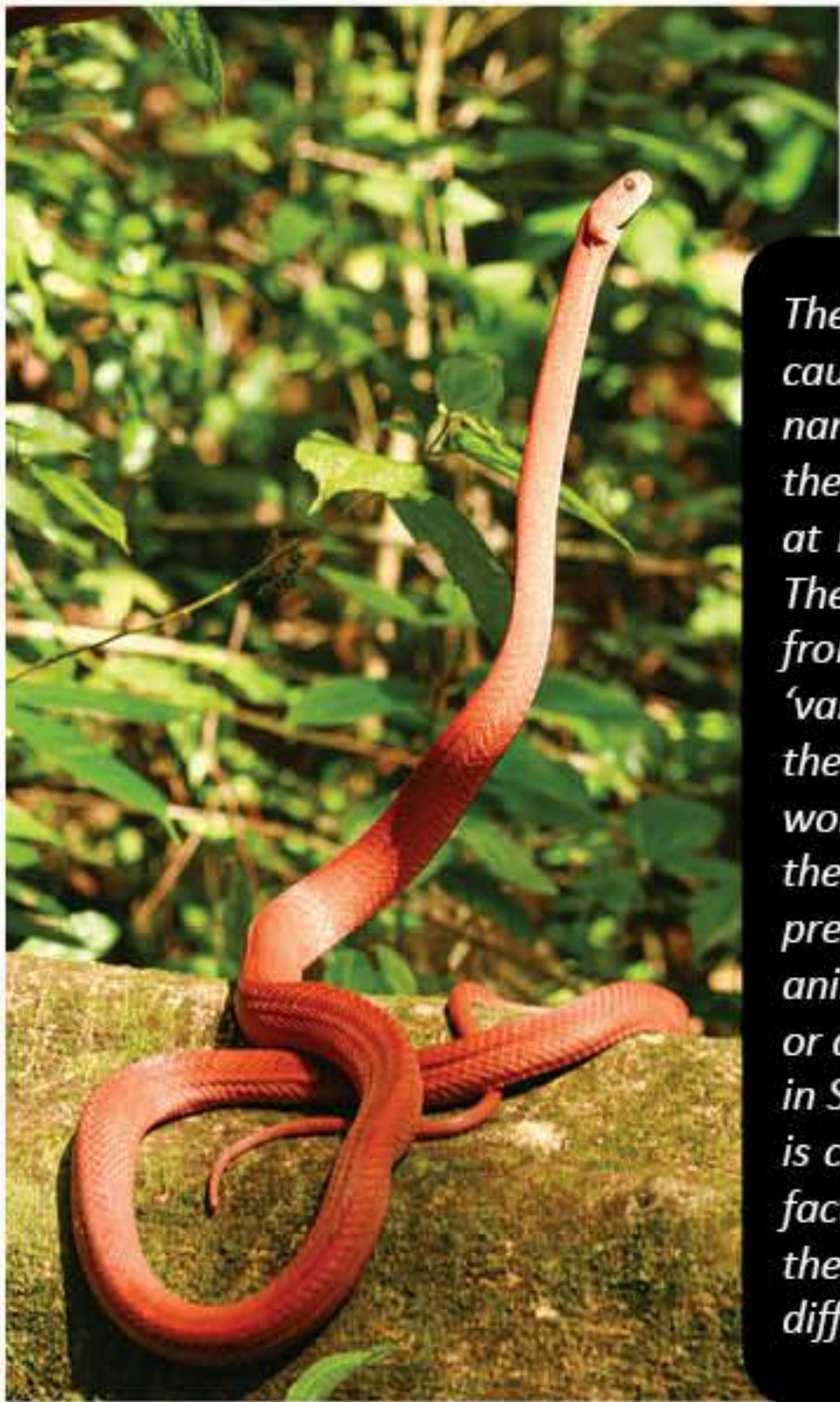
*As the name implies, the Depathnaya is believed to have two heads (the Sinhala name means 'two-headed cobra'). In fact the Pipe Snake has similar colour patterns on both its head and stout tail. It flattens and raises its tail (instead of the head) as a 'hood' when disturbed.*

Of the 89 species of inland snakes in the island, only the Cobra (Naya), Russell's Viper (Thith polonga), Common Krait (Thel karawala), Sri Lankan Krait (Mudu karawala), Saw-scaled Viper (Veli polonga) and the Hump-nosed Pit-viper (Kunukatuwa or Polonthelissa) are considered to have potent enough venom to cause death to a human. Furthermore, of these only the Russell's Viper, Cobra and Common Krait are responsible for a vast majority of deaths due to snakebite envenoming. A significant portion of Sri Lankan snakes are either non-venomous (have no fangs or venom glands) or mildly venomous (have at least one pair of short fangs attached near the rear of the upper jaw and the mild 'venom' is produced by a specialised gland named Duvernoy's gland). There are no confirmed records of human deaths caused by any of these snakes, but some of the snakes most feared by many for being dangerous, (e.g. Ahaetulla or the Vine Snakes, Mapila or the Cat Snakes, Katakaluwa or the Trinket Snake) belong in this category.

Ironically, due to this negative impression on snakes (predominantly based on myths and beliefs), hundreds and thousands of harmless snakes are deliberately killed by humans through fear due to the innate hyper-vigilance about snakes, misidentification, poor knowledge and also as a precautionary measure against probable future snakebites. Nevertheless, to someone who is grieving the loss of a friend or family from a snakebite, getting rid of the alleged culprit or an unfortunate bystander may in fact provide some sort of mental relief. Yet, malicious killing by humans coupled with deforestation (for urbanisation and agriculture), road kills and predation by domestic predators (e.g. cats, poultry) have resulted in many of the Sri Lankan snake species being threatened in the country. Given this situation, the management and conservation of snakes in Sri Lanka must



*A large number of Sea snakes are highly venomous and spend their entire life in the ocean. Highly adapted for a life in water, they have paddle-like tails and muscular flaps that cover their nostrils while diving. Most species give birth to live young in water.*



*The Nidi Mapila (Sri Lankan Cat Snake) won't cause a bite victim to die in their sleep- the name refers to its inactive behaviour during the daytime (they are predominantly active at night and spend the day time sleeping). The Le Mapila is commonly believed to hang from the ceiling in a chain-like form and like 'vampires' suck blood from sleeping humans, they are often referred to as 'Le mapila'. The word 'Le' (blood in Sinhala), is used due to the reddish body colour. Cat snakes do have prehensile tails which are used to anchor the animal's body as they dangle from a branch, or as an aid for climbing. However, no snake in Sri Lanka (or in the world for that matter) is capable of sucking and drinking blood. In fact, as Cat Snakes have their fangs close to the throat, envenomation is quite rare as it is difficult even to make an effective bite.*



*The famous Ahaetulla (Green Vine Snake) is a mildly venomous snake. Because of their arboreal habits, the most vulnerable area of a person to get a bite is the upper body including the face. No such incident of 'eye-plucking' has ever been recorded.*



be backed by strong educational programmes and public awareness focussing on their importance to maintain the balance of our ecosystem. It is important to understand that snakes only bite if they feel threatened.

Ecologically, snakes are an integral part of the environment and play a crucial role in food webs as both predators and prey. Economically,



*Albinism is commonly associated with the evil. Albinism, a disorder of complete or partial absence of pigment in the skin, is not uncommon among snakes but many albino babies do not survive till adulthood as they are more vulnerable to predators due to their conspicuous colour. This is an albino Wolf snake (Radanakaya).*

they are the best natural controllers of disease-carrying pests such as rats and mice that cause significant damages to farming activities and human health. Snake venom (an evolutionary adaptation primarily to immobilize prey and secondarily to be used in self-defence) is a cocktail of proteins, amines, glycoproteins and alike, and these components are important in biomedical research aimed at finding remedies to diseases affecting us humans. In fact, the antivenom used to treat snake bites itself is made of modified snake venom. Some snakes (e.g. Cobras) even play an important role in the folklore of Sri Lanka, being depicted in many rock carvings, traditional masks and also in literature.

Snakes also have an aesthetic value. The mysterious nature of these creatures, inspire fascination and feelings in a way that no other type of animal can. If encountered, I bet a snake would awe you way more than a poodle would do! Likewise, please don't be beguiled by snake charming or from wrapping a python around next time you are holidaying in the beach side. It's a way of life for some, based on cruelty. Do you seriously think snakes can be hypnotized through seductive music? Google will help.