

## *Leptophis ahaetulla* (Parrot Snake or Lora)

Family: Colubridae (Typical Snakes)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



**Fig. 1.** Parrot snake, *Leptophis ahaetulla*.

[<http://flickrhivemind.net/Tags/leptophis/Interesting>, downloaded 02<sup>nd</sup> November 2011]

**TRAITS.** *Leptophis ahaetulla* is a slim, elongated snake (Wikipedia, 2011) and is slightly compressed laterally. It is an emerald green coloured snake on the dorsal side and light yellow colour on the underside, also known as the green horsewhip from its colour and shape. It is considered being medium to large in size, to be more specific it can grow to be more than two meters in length. The parrot snake has a large, triangular shaped, elongated head in comparison to its body with large, yellow eyes with round, dark pupils. This snake is considered non-venomous and has eighteen to thirty six maxillary (upper) teeth which increase in size from front to back in the mouth where the mandibular (lower) teeth decrease toward back of the mouth. The cephalic scaling comprises of a nostril, two internasal, two prefrontal, one frontal and two parietal scales. There is normally no loreal present and two postoculars.

**ECOLOGY.** This species of snake can be found in South America, the northern most countries and Trinidad and Tobago, the southernmost island in the Caribbean closest to South America (Wikipedia, 2011). In Trinidad to date *Leptophis ahaetulla* is only found in the Northern Range. The parrot snake can be found in moist or wet forests, rainforests and even in dry forests. It has a fairly wide range of habitats it can live in successfully. To be more specific they are arboreal which are tree dwelling snakes and mostly spend their time within the low to middle elevations of the trees. They can also be found in shrubbery near sources of water. This reptile is diurnal which means they are active during the day and would normally sleep in vegetation or within the trees at night. *Leptophis ahaetulla* mainly hunts and feeds on frogs, frog's eggs, arboreal lizards, insects (such as grasshoppers), birds and their eggs and they are also known to show cannibalism and feed on other snakes which is a rare behaviour.

**SOCIAL ORGANIZATION.** They are solitary animals just like all other snakes. Similar to the behavior of other species of snakes they would only be seen around each other during their mating season. They tend to avoid each other in the wild and would not fight over territory.

**ACTIVITY.** The parrot snake is a diurnal animal, this means they are active during the day and at night they are hidden in the vegetation. This is a tropical species of snake and so their activity is dependent on seasons. Their hunting activity is more prevalent during the rainy seasons when the number of amphibians such as frogs are denser due to breeding. Despite the fact that *Leptophis ahaetulla* is an aggressive snake it does not actively defend territory as seen in many species of snakes. Activity is shown in snakes when feeding, mating, for thermoregulation and oviposition, which is the laying of eggs.

**FORAGING BEHAVIOUR.** *Leptophis ahaetulla* feeds on frogs, frog eggs, lizards, insects, birds and their eggs. This snake is considered non-venomous but they do produce very weak venom in the Duvernoy's Gland which is effective on their small prey but cause little danger to humans. Further to this they harbor bacteria in their mouth and cause infection when bitten. Within the canopy the parrot snake will search bromeliads in search of tree frogs as shown in Fig. 3. This snake is arboreal but it will also venture onto the ground and even caves in search of prey.

**COMMUNICATION.** *Leptophis ahaetulla* has a forked tongue which they use to gain information in their surroundings. Having a forked tongue is advantageous because there is more surface area than a tongue that is not split in two and the snakes can sense the direction the chemical cue is coming from. The ability to follow a chemical cue is called tropotaxis. The snake sticks its tongue out and the chemical data from the surrounding environment is collected. When the tongue retracts into its mouth the collected chemicals passes on to the Jacobson's organ where it is analysed and identified. The male parrot snake uses its tongue not only as a sensory organ but also as a sensual organ during courtship. In addition the forked tongue allows the snake to capture prey, choose mates, find shelter and avoid predators.

**SEXUAL BEHAVIOUR.** The sexual behavior in the parrot snake is similar to that of other snakes. There are three phases observed in courtship of snakes. First, the male when he finds a female would go after her and attempt to mount her. When the male successfully mounts the female he would make wave-like motions from head to tail or vice versa while flicking his tongue or biting her. After this first phase occurs the male snake attempts to put his cloaca next to the female's. If the female is receptive, the third phase occurs where she would allow the male

to insert his hemipenis. *Leptophis ahaetulla* is an oviparous species which means they reproduce by laying eggs. They would normally lay a clutch consisting of three to five eggs at a time. It has been shown that female parrot snakes use old eggshells as a sign of a successful nesting area which means safe from predators and great incubation conditions. In a study it was observed two parrot snakes laid eggs in the same bamboo stem which was 12 meters above ground level. This shows that there may be limited nesting areas with appropriate incubation conditions and result in mixed or communal clutches of eggs (Greene, 1997).

**JUVENILE BEHAVIOUR.** There is very little information about the juveniles of *Leptophis ahaetulla* but they are green with dark bands. There is no parental care in the parrot snake so when the offspring are hatched they must survive on their own.

**ANTIPREDATOR BEHAVIOUR.** This species of snake is known to be very aggressive and when threatened would display such a behavior. It would raise its anterior part of its body, open its mouth widely and hiss (Fig. 2). They also would inflate their neck area, expanding the yellow colour. *Leptophis ahaetulla* would recoil and perform dummy strikes if the threat continues. These are not actual strikes but fake strikes to scare off the threat but if they are handled they would bite without hesitation. This type of behavior displayed by *Leptophis ahaetulla* is the same shown by pit vipers. The parrot snake mimics the pit viper's behavior since they are known for being dangerous so in turn the parrot snake appears dangerous and would ward off any predators and threats.

#### REFERENCES

Greene, H. W (1997). Snake: The evolution of mystery in nature. University of California Press, 1997.

<http://www.amazon.com/Snakes-Evolution-Mystery-Nature-Directors/dp/0520200144>

Wikipedia. "Forked Tongue". Last modified 27<sup>th</sup> October 2011. [http://en.wikipedia.org/wiki/Forked\\_tongue](http://en.wikipedia.org/wiki/Forked_tongue)

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**Fig. 2.** *Leptophis ahaetulla* showing behaviour when threatened.

[<http://www.bio.davidson.edu/people/midorcas/research/Field%20trips/Tortuguero%202004%20website/leptophis.htm>, downloaded 08<sup>th</sup> November 2011]



**Fig. 3.** *Leptophis ahaetulla* catches a frog in the rainforest canopy.

[[http://www.marietta.edu/~biol/costa\\_rica/rincon/rincontl.htm](http://www.marietta.edu/~biol/costa_rica/rincon/rincontl.htm), downloaded 13<sup>th</sup> November 2011]