

Sibon nebulatus (Slug-eating Snake, Cloudy Snake)

Family: Dipsadidae (Rear-fanged Snakes)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



Fig. 1. Slug-eating snake, *Sibon nebulatus*.

[<http://www.serpientesdecolombia.com/old/project/fotos-sibon-nebulata/>, downloaded 4 March 2016]

TRAITS. *Sibon nebulatus* is a species of snake, previously known as *Leptognathus nebulatus*, with an elongated, laterally-compressed (side-to-side) body with a 13-13-13 or 15-15-15 arrangement of dorsal scales. The head is distinctly wider than the body with large eyes, with jawbones including an inwardly turned maxilla, no teeth on the pterygoid which is free at the posterior end, and a hinge joint on the mandible (Kofron, 1985). The body is coloured heavily with bands and spots of black or chocolate (Dixon et al., 1962) (Fig. 1). Males can grow up to 650 mm while females can grow up to 714 mm (Lewis et al., 2013). This species is often known as *S. nebulata*, although *nebulatus* is the currently recognised specific name (Reptile-database, 2016). Alternative common names include cloud snake, snail-eating snake, and combinations of these names.

DISTRIBUTION. Native to Central America from Southern Mexico to Ecuador and through northern South America. It is native to Trinidad and Tobago (Encyclopedia of Life, 2016) (Fig. 2).

HABITAT AND ACTIVITY. *S. nebulatus* is found in a range of forests such as wet, moist and dry forest as well as subtropical forest. It can be found on low vegetation or under leaf litter. This snake is nocturnal and primarily hunts slugs and land snails and shares most of its habitat with other species such as *Sibon annulatus* and *Sibon longifrenis* (Campbell, 1999; Boos, 2001; Lewis et al, 2013). It has been known to also eat annelids, soft bodied invertebrates and amphibian eggs (Ray et al, 2011). During the day, cloudy snakes can be found hiding in the leaf litter or in rotten logs where they remain inactive for most of the day.

FOOD AND FEEDING. *Sibon nebulatus* feeds primarily on snails and slugs and are active nocturnal feeders. Initial attraction to prey is from prey movement in the line of sight followed by scent. The snake proceeds to follow the prey in a straight line with its head elevated and will stop moving when the prey stops moving. Once the anterior end of the slug or snail is located by its movement, the snake strikes for the head from a distance of 0.5-2.0 cm away. For slugs, once it is grasped by the head, it is lifted into the air and swallowed. Following this, the snake will rub the side of its mouth on the ground in an effort to rid itself of the large amount of thick mucus left behind. Snails are more difficult to swallow as this involves snagging it by its head and while the mandible is pulled into the shell, the snake chews on the head to secure it and enters a holding period where no movement occurs. This length of time is variable and is larger for round snails than for conical snails. Following this, the snake begins to pull the shell back, tapping occasionally on the tree or ground in order to snag the shell onto any irregularity. Once snagged, they secure themselves to substrate with the tail and use muscular body contractions to pull the snail out of the shell, along with twisting movements of the head. As the snail becomes exposed, the snake advances its mouth over it and chews to secure the snail before repeating the pulling process. This continues until the snail is extracted and swallowed (Sheehy, 2013).

POPULATION ECOLOGY. Individuals are solitary. Usually one or two seen in areas investigated. *Sibon nebulatus* is usually located near food sources and are usually arboreal (live in trees). They have also been found to lie under leaf litter of the forest or in rotten logs when inactive. Due to coloration, these snakes are not easily seen among the trees or the leaf litter. It is not uncommon to find more than one species of *Sibon* at the same feeding site as there is competition for resources. In one instance, several cloudy slug-eaters were observed on the same tree where food was plentiful and can be assumed to be a rare occurrence (Campbell, 1999; Boos, 2001). Generally, *S. nebulatus* has been found in larger numbers at mid to high elevations and this was confirmed by observations made at Altos del Maria in Panama which is 800 m above sea level (Lewis et al., 2013).

REPRODUCTION. Little information about reproduction in the *Sibon* genus has been published. Eggs are laid in clutches of 3-9 from May to August but have been observed to be laid in September. They are usually 20-29 mm in length and were observed to hatch three months later. Most births occur in the wet season with hatchlings being 22.2-23.4 cm in length and 2.77-3.02 g in weight (Campbell, 1999; Boos, 2001).

BEHAVIOUR. Despite the fact that young are born in clutches of 3-9, little is known about hatchlings. Hatchlings raised in captivity are seen to be independent from time of hatching. Adults are nocturnal, docile, and secretive and will eject prey if disturbed during feeding. When threatened, they have been seen to coil tightly and make mock strikes and flare both quadrate and squamosal bones to create a triangular head shape much like *Bothrops atrox* (mapepire balsain), although the head of *S. nebulatus* is usually more rounded and with a larger eye (Fig. 3). It is noted that these mouth strikes are made with a closed mouth (Campbell, 1999; Boos, 2001; Guyer et al., 2004).

APPLIED ECOLOGY. *S. nebulatus* is often confused for *Bothrops atrox* (Fig. 4), due to its coloration and defensive mock strike, and this misidentification has caused humans to kill this species. There is no information published about the conservation and harvesting of *S. nebulatus* and the IUCN does not mention it.

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Fig. 2. Distribution map of *S. nebulatus*.

[http://eol.org/data_objects/21442106, downloaded 5 March 2016]



Fig. 3. Head of *Sibon nebulatus*.

[<https://www.flickr.com/photos/50873760@N02/4704631960>, downloaded 9 April 2016]



Fig. 4. *Bothros atrox* (mapepire balsain), sometimes confused with *S. nebulatus*.

[<http://reptile-database.reptarium.cz/species?genus=Bothrops&species=atrox>, downloaded 9 March 2016]

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