

## *Gonatodes ceciliae* (Variegated Gecko)

Family: Sphaerodactylidae (Dwarf Geckos)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



**Fig. 1.** Variegated gecko, *Gonatodes ceciliae*.

[<http://www.inaturalist.org/taxa/34572-Gonatodes-ceciliae>, downloaded 20 October 2016]

**TRAITS.** The variegated gecko, *Gonatodes ceciliae*, is also known as the brilliant South American gecko. Males and females differ in size, males being slightly larger, about 51mm and females around 39mm body length. In both male and female, the tail is approximately 1.8 times the body length, that is, if it is not damaged. The snout of *Gonatodes ceciliae* is rounded, the eyes are relatively close together and large. The area above the eyes contain a few, usually around four, protruding horn-like scales and the ear opening is small and elliptical. Covering the upper body surface or dorsum of the variegated gecko are tiny granular scales. The scales on the upper surface of the limbs are larger, and the limbs are properly developed containing five digits each. The dorsum of the male variegated gecko is reddish-brown, the underside is cinnamon brown, and yellow spots or mottling outlined in black cover the sides of the body and head (Fig 1). Also present is a yellow bar outlined in black in the gular (throat) area (Murphy, 1997). The female's dorsum and underside are lighter than that of the male, they are more brownish-grey in colour and they have dark mottling (Fig. 2) (IUCN, 2016).

**DISTRIBUTION.** *G. ceciliae* has so far only been observed in Trinidad and Tobago, specifically the North and Central ranges, in the Venezuelan Paria Peninsula (Charles, 2015) and on the Bocas islands (Fig. 3) (TT Herps, 2016). They have been spotted in elevated areas up to 900m in those regions (IUCN 2016). There may be a difference between *G. ceciliae* in Trinidad and in Venezuela, as the splitting of the two regions as a result of rising sea levels during the Pleistocene, restricted the gene flow, thus causing them to adapt differently (Charles, 2015).

**HABITAT AND ECOLOGY.** The variegated gecko is a terrestrial reptile that thrives in humid forests and forest edges. However, it is mostly found in elevated areas rather than lowlands. *G. ceciliae* may be tolerant of mild habitat disturbances but not of major disturbances. It is diurnal and found mainly on the rough lower bark of trees (IUCN, 2016). It has a low heat tolerance, thus it avoids direct sunlight, preferring instead to stay in shady moist areas. The diet of the variegated gecko comprises of small snails and arthropods (Murphy, 1997). It is an ambush predator and thus sneaks up on its prey to capture it (TT Herps, 2016).

**REPRODUCTION.** Not much information is known about the reproduction of the variegated gecko besides that its eggs are laid under the bark of trees (TT Herps, 2016) and the young juvenile after hatching is approximately 15mm in length (Murphy, 1997). The young juvenile then matures into the sub-adult and then finally into an adult.

**BEHAVIOUR.** There is limited information on the behaviour of *G. ceciliae*, however, from observations, male and females were often seen together (Murphy, 1997). In a study by Charles (2015), it was determined that the perch height on the bark of tree varied between adults and juveniles, with juveniles having a lower perch height than adults.

**APPLIED BIOLOGY.** In Venezuela *G. ceciliae* faces some threats in terms of habitat destruction as a result of expansion for agriculture and logging. However, in Trinidad because they are found on slopes too steep to be accessed, and in forest reserves, habitat destruction is not a threat. In Trinidad the variegated gecko may be captured to be used in the pet industry, this is not yet a major threat as capture is infrequent (IUCN, 2016).

## REFERENCES

- Charles, P.C. (2015). The Distribution, Habitat and Microhabitat Patterns Among Four Species of *Gonatodes* (Squamata: Sphaerodactylidae) in Trinidad and Tobago, A Dissertation Submitted to the Faculty of the Graduate School of Howard University, Washington, D.C.: Proquest.
- IUCN. (2016). *Gonatodes ceciliae*. <http://www.iucnredlist.org/details/full/66083097/0>.
- Murphy, J.C. (1997). Amphibians and Reptiles of Trinidad and Tobago. Malabar, Florida: Krieger Publishing Company.
- TT Herps. (2016). Variegated Gecko, *Gonatodes ceciliae* (Family Sphaerodactylidae). <http://www.trinidad-tobagoherps.org/Gonatodesceciliae.htm>.

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**Fig. 2.** A Female *Gonatodes ceciliae*.

[<https://www.flickr.com/photos/nclarkii/3115238451/in/photostream/>, downloaded 23 October 2016]



**Fig. 3.** Geographical distribution of *Gonatodes ceciliae*.

[<http://maps.iucnredlist.org/map.html?id=66083097>, downloaded 23 October 2016]

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