

Gonatodes humeralis (Spotted Gecko)

Family: Sphaerodactylidae (Dwarf Geckos)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



Fig. 1. Spotted gecko, *Gonatodes humeralis*.

[<http://reptile-database.reptarium.cz/species?genus=Gonatodes&species=humeralis>, downloaded 30 March 2015]

TRAITS. *Gonatodes humeralis* is one of the smallest members of its genus, an obscure coloured lizard (Fig. 1) with a maximum rostrum to anus (snout-vent) length of 41mm, with its tail accounting for more than half of its body size. This is more commonly known as the spotted gecko and displays strong sexual dimorphism where the males are more brightly coloured than their female counterparts in order to attract females. Male lizards are chiefly grey but have an array of yellow and crimson spots on their heads which vary in shapes and sizes (Fig. 2). Conversely, the females are light brown with dark brown spots on their heads, and a light stripe which extends down the middle of the back. There are common traits shared between the two sexes, including a black spot after which follows a white, vertical line just before the forelegs (Avila-Pires, 1995). Furthermore, both sexes also have a banded tail which can range from red-brown to black and also beige. The toes of the lizard are covered with claws which make them unable to climb on glass or other very smooth surfaces.

DISTRIBUTION. *Gonatodes humeralis* is commonly found throughout the northern region of South America. The distribution of the spotted gecko spreads from Trinidad and Tobago to the Amazon region located in Brazil. In the west as well, the prevalence of this lizard extends to the country of Peru.

HABITAT AND ACTIVITY. *Gonatodes humeralis* are chiefly located in riverine forests (Vanzolini, 1972) or occupy the interior of primary and secondary forests (Vitt et al., 1997). They can be found on the branches of trees that can reach up to 2m height. The species is also found in thick buttress root trees found inside forests, on the lower portions of tree trunks and vines, 20-40cm wide. In Trinidad, these lizards have been found to populate cocoa populations in large numbers (Murphy, 1997). These lizards are sporadically found on the sides of manmade structures. *G. humeralis* is a diurnal species, hunting in the day. They are as visual sit and wait hunters (Huey and Pianka, 1981), sitting with their heads down, waiting for their prey. The diet of *G. humeralis* is dominated by small arthropods such as grasshoppers, crickets, insect larvae, homopterans and spiders.

REPRODUCTION. The female deposits a clutch of a single egg and is capable of depositing more than one clutch per reproductive season. The egg of the spotted gecko is calcified and thus is resistant to water loss. As a result, it is deposited in open, dry areas. *Gonatodes humeralis* in particular deposits its eggs under bark, termite nests and loose pieces of wood on tree trunks. Furthermore, this particular species of lizard has been found to display communal nesting where the females share the nesting site with other lizards. This is a result of limited nesting sites which offer protection and thermoregulation of the eggs. As a result, it is more efficient to share a nesting site. *G. humeralis* has been observed to share a nest with reptiles such as *Gonatodes baseman* and *Thecadactylus rapicauda* (Vitt et al., 1997).

POPULATION ECOLOGY. The spotted gecko is primarily a solitary creature, unless it is the mating season. The species generally lives on the lower portions of tree trunks and vines with a 20-50cm circumference. This species occupies mostly secondary forests (Rand and Humphrey, 1968) where they are present mostly in clearings. A study in the city of Manaus was conducted using six primary and six secondary forests. In this study, 82 were found in the sample areas with 6 juveniles, 34 males and 29 females. Seventy of these individuals were found in secondary forests, occurring at the most disturbed areas. *Gonatodes humeralis* were primarily found located in tree trunks and rarely in microhabitats such as fallen trees, palm leaves or buttresses.

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Fig. 2. Male spotted gecko, *Gonatodes humeralis*.

[http://www.dwarfgeckos.com/gonatodes/g_h/images/gonatodes_humeralis_male.jpg, downloaded 29 March 2015]