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## *Gonatodes vittatus* as Prey of *Hemidactylus* *palaichthus* and Potential Prey of *Scolopendra gigantea*

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## ***Gonatodes vittatus* as Prey of *Hemidactylus palaichthus* and Potential Prey of *Scolopendra gigantea***

*Gonatodes vittatus* (Lichtenstein 1856) (Reptilia: Sauria: Gekkonidae) or the Streak Lizard (Quesnel 1957) ranges across northern regions of Colombia and Venezuela and into Trinidad and Tobago (Rivero-Blanco 1979; Murphy 1997). It is a very familiar lizard, seen even in urban areas in Trinidad and Tobago. Unlike the majority of its congeners, it is particularly associated with dry forest edge and savannah environments and is very common on Chacachacare Island off Trinidad's northwestern peninsula. Little is known regarding the animals that commonly prey upon the members of the genus *Gonatodes*. Rivero-Blanco (1979) suggested that birds and snakes are probably the main predators of *Gonatodes*. Others have discovered *Gonatodes* in the stomach contents of a number of leaf litter foraging snake species (Dixon and Soini 1975; Martins 1991; Ávila-Pires 1995; de Albuquerque *et al.* 2007). Quesnel (2008) reported the large gecko, *Thecadactylus rapicauda* (Houttuyn 1782) preying upon male *Gonatodes vittatus* in Trinidad. Here, we report on two other possible predators of the lizards of the genus *Gonatodes*.

On 3 August, 2008, the authors visited Chacachacare Island and conducted a search for reptiles in the area around the abandoned Nuns' Quarters (of the old Leprosarium) (location N 10°40.787', W 061° 45.112' at 10 m to 15 m above sea level). At 1135 h we discovered an adult *Hemidactylus palaichthus* (Kluge 1969) (Reptilia: Sauria: Gekkonidae) or Spiny Gecko (Boos 1981) behind a wooden door about 0.5 m up a concrete wall. We captured the lizard unharmed and observed a small grey fleshy mass lining its lips and protruding from its mouth. By gently prying the animal's jaws apart we saw the scaly tail of some small reptile, which when gently extracted, proved to be an adult male *Gonatodes vittatus* (snout to vent length 32 mm). We photographed both predator and prey, preserved the *G. vittatus* in ethanol and one of us (S. S.) kept and successfully maintained the *H. palaichthus* in captivity for further observation and photography.

At 1250 h on the same day, we observed a Giant

Centipede, *Scolopendra gigantea* (L. 1758) (Chilopoda: Scolopendromorpha: Scolopendridae) approximately 20 cm long, foraging about 3 m up on the trunk of a tree. In close proximity to the centipede (at times less than 0.3 m) were at least three adult Streak Lizards (*Gonatodes vittatus*). We observed these animals for about ten minutes. The centipede appeared to be actively foraging; repeatedly moving around the tree trunk and the bases of the nearby branches. Each time the centipede came near to a lizard, the lizard reacted by scurrying around to the other side of the tree trunk. Although we observed no capture of the lizard by the centipede, we surmise that our observation represented active foraging by the centipede with the Streak Lizards as potential prey items.

In preparation of this report, we reviewed the literature for records of the diet of the lizards of the genus *Hemidactylus*. Rocha and Anjos (2007) conducted a study of the diet of *Hemidactylus mabouia* (Moreau de Jonnès 1818) in a rocky outcrop in southeastern Brazil and found that they ate arthropods (mainly insects and spiders) as well as gastropods (snails and slugs). In another study of this species in an urban area in southern Brazil, Bonfiglio *et al.* (2006) reported that arthropods (again, mainly insects and spiders) were the mainstay of the diet, but also noted two cases of cannibalism on juveniles by adult male *H. mabouia*. Avery (1980) found only arthropods (mainly insects) in the stomachs of *Hemidactylus brookii* in Ghana. Our report may represent the first record of the generally nocturnal *Hemidactylus palaichthus* preying upon the diurnal *Gonatodes vittatus*. Bonfiglio *et al.* (2006) suggest that *H. mabouia* is a generalist and an opportunist in its feeding behaviour, its diet varying based on what is available at a particular site. Perhaps the same is true for its congener, *H. palaichthus*. Our single observation does not allow us to suggest the level of importance of vertebrates such as smaller lizards in the diet of *H. palaichthus*.

Our observation of a Giant Centipede, engaged in what appeared to be foraging for Streak Lizards, is supported by

other records of centipedes of the family Scolopendridae preying on a wide array of live vertebrate prey, including frogs, snakes, lizards and even bats (Easterla 1975; Clark 1979; McCormick and Polis 1982; Carpenter and Gillinham 1984; Mollinari *et al.* 2005). One of us (S. S.) maintained a live specimen of *Scolopendra gigantea* from Chacachacare Island in captivity. This specimen was similar in size to the individual observed at the Nun's Quarters. While in captivity, it readily fed on live adult *Gonatodes vittatus* placed in its enclosure.

The two observations here recorded, as well as those previously reported by other investigators, suggest that the lizard *Gonatodes vittatus* and its congeners are prey species for a wide array of predators including vertebrates and invertebrates.

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#### REFERENCES

- Ávila-Pires, T. C. S. 1995. Lizards of Brazilian Amazonia (Reptilia: Squamata). *Zoologische Verhandlungen*, 299: 1-706.
- Avery, R. A. 1980. Feeding ecology of the nocturnal gecko *Hemidactylus brookii* in Ghana. *Amphibia-Reptilia*, 1: 269-276.
- Bonfiglio, F., Balestrin, R. L. and Cappellari, L. H. 2006. Diet of *Hemidactylus mabouia* (Sauria: Gekkonidae) in urban area of southern Brazil. *Biociências (Porto Alegre)*, 14: 107-111.
- Boos, H. E. A. 1981. Spiny gecko. *Trinidad Naturalist*, 3: 48.
- Carpenter, C. C. and Gillinham, J. C. 1984. Giant centipede (*Scolopendra alternans*) attacks marine toad (*Bufo marinus*). *Caribbean Journal of Science*, 20: 71-72.
- Clark, D. B. 1979. A centipede preying on a nesting rice rat (*Oryzomys bauri*). *J. Mammalogy*, 60: 654.

de Albuquerque, N. R., Galatti, U. and Di-Bernardo, M. 2007. Diet and feeding behaviour of the Neotropical parrot snake (*Leptophis ahaetulla*) in northern Brazil. *Journal of Natural History*, 41: 1237-1243.

Dixon, J. R. and Soini, P. 1975. The reptiles of the upper Amazon Basin, Iquitos region, Peru. *Milwaukee Public Museum, Contributions to Biology and Geology*, 4: 1-58.

Easterla, D. A. 1975. Giant desert centipede preys upon snake. *Southwestern Naturalist*, 20: 411.

Martins, M. 1991. The lizards of Balbina, Central Amazonia, Brazil: a qualitative analysis of resource utilization. *Studies on Neotropical Fauna and Environment*, 26: 179-190.

McCormick, S. and Polis, G. A. 1982. Arthropods that prey on vertebrates. *Biological Review*, 57: 29-58.

Molinari, J., Gutiérrez, E. E., de Ascensão, A. A., Nassar, J. M., Arends, A. and Márquez, R. J. 2005. Predation by giant centipedes, *Scolopendra gigantea*, on three species of bats in a Venezuelan cave. *Caribbean Journal of Science*, 41: 340-346.

Murphy, J. C. 1997. Amphibians and Reptiles of Trinidad and Tobago. Florida: Krieger. 245 p.

Quesnel, V. C. 1957. The life history of the streak lizard, *Gonatodes vittatus* (Licht). *Journal of The Trinidad Field Naturalists' Club*, 1957: 5-14.

Quesnel, V. C. 2008. Food and feeding behaviour of the nocturnal Neotropical gecko *Thecadactylus rapicauda* (Houttuyn) in a dwelling house in Trinidad, West Indies. *Living World, Journal of The Trinidad and Tobago Field Naturalists' Club*, 2008: 19-27.

Rocha, C. F. D. and Anjos, L. A. 2007. Feeding ecology of a nocturnal invasive alien lizard species, *Hemidactylus mabouia* Moreau de Jonnès, 1818 (Gekkonidae), living in an outcrop rocky area in southeastern Brazil. *Brazilian Journal of Biology*, 67: 485-491.

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