

Gymnophthalmus speciosus (Chacachacare Shiny Lizard)

Family: Gymnophthalmidae (Spectacled Lizards)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



Fig. 1. Chacachacare shiny lizard, *Gymnophthalmus speciosus*.

[<http://www.trinidad-tobagoherps.org/Gymnophthalmusspeciosus.htm>, downloaded 28 October 2016]

TRAITS. A small, shiny lizard, the dorsum (back) is bronze-brown, with dense black markings, and a dark brown to black stripe along the sides (Fig. 1). *Gymnophthalmus speciosus* grows to 40mm snout-to-vent length (SVL). The body is slim and elongated, with the tail being significantly longer, at $1.7 \times$ the SVL (Fig. 2). The limbs are short and tetradactyl (with four fingers or toes), the longer posterior legs are $0.29 \times$ the SVL. The dorsal scales are moderately larger than the ventral scales. The eyes are small with round pupils; this species has transparent lower eyelids enabling them to see with their eyes closed. Juveniles' tails may be bright red and adults' tails are usually orange-red, unless regenerated (Savage, 2002).

DISTRIBUTION. *Gymnophthalmus speciosus* is distributed widely across South and Central America; south Mexico, Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, Venezuela, Guyana, Colombia, and the island of Margarita (Fig. 3). In Trinidad and Tobago this species is only found on the, now uninhabited, island of Chacachacare, off the coast of Trinidad, and nowhere else locally.

HABITAT AND ACTIVITY. This species is found in open areas usually near the edge of forests, shorelines and coasts, regularly near sites of human habitation. This species seems to prefer areas with abundant sunshine and less leaves (Savage, 2002). Individuals were found during sunny days, usually at in the afternoon period of the day, and seeking shelter in rocky environments or under logs and bricks. However, other *Gymnophthalmus* species

prefer the shelter of leafy environments or deep within the forests (Cole et al., 1993). Being such a small animal, this species feeds mainly on insects and other small arthropods (Savage, 2002).

REPRODUCTION. A bisexual species, with both males and females, *G. speciosus* is oviparous, laying eggs in clusters of 1-4 eggs with very little development of the embryo in the female parent. Egg laying and hatching takes place for four months of the year, starting in February and ending in May. Hatchlings are usually 16-19mm in length and mature in about seven months (Savage, 2002). Reproduction is aided by a bilobed hemipenis in males, which has a complex structure. It is hypothesised that the shape of the hemipenis aids in gripping and keeping position after insertion (Presch, 1978).

EVOLUTION. *Gymnophthalmus speciosus* is confirmed by genetic comparisons to be one of the parental species of the asexual species *G. underwoodii*, which only consists of females. The other parental species is genetically identified to be *G. cryptus*. This is interesting in the fact that both *G. speciosus* and *G. cryptus* reproduce sexually (Cole et al., 1993).

APPLIED ECOLOGY. *Gymnophthalmus speciosus* is unlisted in the IUCN database because of their extensive distribution throughout Central and South America. There is no significant population decline; hence, no measures are currently in place to conserve the species.

REFERENCES

- Cole, C. J., Dessauer, H. C. and Markezic, h A. L. (1993). Missing Link Found: The Second Ancestor of *Gymnophthalmus underwoodii* (Squamata: Teiidae), A South American Unisexual Lizard of Hybrid Origin.
- Presch, W. (1978). Descriptions of the Hemipenial Morphology in Eight Species of Microteiid Lizards (Family Teiidae, Subfamily Gymnophthalminae).
- Savage, J. M. (2002). The Amphibians and Reptiles of Costa Rica.

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Fig. 2. The long tail of *Gymnophthalmus speciosus*.

[http://www.reptarium.cz/content/photo_rd_08/Gymnophthalmus-speciosus-03000038380_01.jpg, downloaded 28 October 2016]



Fig. 3. *Gymnophthalmus speciosus* geographic distribution.

[<http://reptile-database.reptarium.cz/species?genus=Gymnophthalmus&species=speciosus>, downloaded 28 October 2016]