

**DESCRIPTION OF INVASIVE EXOTIC REPTILE SPECIES  
FROM THE LESSER ANTILLES**



***Gymnophthalmus underwoodi***

(Grant, 1958)

Common name: Underwood's spectacled tegu,  
Smooth-scaled Tegulet

Order : Squamata,

Family : Gymnophthalmidae

### Description

**Morphology.** Small sized lizard with elongated body and tail. The dorsal side is brown, with a pale lateral line extending from the snout to the tail, passing over the eye. Below this line the scales take on a darker colour. The ventral side is whitish, with dark spots (Cole et al., 2013; Recoder et al., 2018; van den Burg et al., 2021).

**Standard body size (snout-vent length).** up to 43 mm (Turk et al., 2010; Recoder et al., 2018; van den Burg et al., 2021)

**Sexual dimorphism.** No sexual dimorphism (unisexual species) (Cole et al., 1993; Kizirian et Cole, 1999).

**Possible confusion with other species.** Confusion is possible with a close related species native to Guadeloupe, Dominica, Martinique and Saint Lucia, *Gymnophthalmus pleei*. *G. underwoodi* is distinguished by a relatively keeled tail, resulting in a lower number of scales below the tail (Recoder et al., 2018).

### Distribution

**Native.** Venezuela, Guyana (Cole et al., 2013), Surinam (Jairam, 2016), Guyane, Brazil (de Oliveira et al., 2014; Ribeiro-Junior et Amaral, 2016, 2017; Recoder et al., 2018; Farias and Vogt, 2020).

Caribbean: Grenada, Saint Vincent and the Grenadines (Daudin et Silva, 2007; Powell et Henderson, 2017; Recoder et al., 2018), Trinidad, Tobago (Auguste, 2019), Barbade (Ribeiro-Junior et Amaral, 2016, 2017).

**Introduced.** Florida (van den Burg et al., 2021).

In the Caribbean, the status of native or introduced species is not clearly established for all populations.

Caribbean: Cuba (Borroto-Páez et al., 2012), Dominican Republic (Szkudlarek, 2019; Reyes et al., 2020), US and British Virgin Islands, Antigua, Barbuda (Censky and Lindsay, 1997; Daltry, 2011), Saint Martin, Saint Kitts, Nevis, Saba, Montserrat, Saint Barthélemy (Questel and Boggio, 2012; van den Burg et al., 2021), Guadeloupe (Lorvelec et al., 2007; Breuil, 2010), Dominica (Turk et al., 2010), Martinique (Lorvelec et al., 2007; Breuil, 2010).

## **Biology and ecology**

**Habitat.** *Gymnophthalmus underwoodi* inhabit a wide diversity of natural and anthropized habitats. The species is observed in humid and dry forests, river beaches, rocky slopes with low vegetation or in gardens and peri-urban areas (Ribeiro-Junior and Amaral, 2017; Recoder et al., 2018; van den Burg et al., 2021).

**Diet.** Insectivore (Powell and Henderson, 2017).

**Reproduction.** *G. underwoodi* is a parthenogenetic species, meaning that females lay eggs that develop without the need to be fertilised (Cole et al., 1993; Kizirian and Cole, 1999).

Reproduction happens throughout the year, and females produce one to four eggs per clutch (Kalaisko 2015).

## **Behaviour.**

## **Impact and management of introduced populations**

**Impact.** Little is known about the impact of *Gymnophthalmus underwoodi* on native ecosystems in introduced regions.

**Management.** To date, no targeted control measures have been established in the different regions where the species has been introduced.

The status of native or introduced species is not clearly established for several populations in the Caribbean (Lorvelec et al., 2007).

## **Bibliographie**

- Auguste, R. J. (2019). Herpetofaunal checklist for six pilot protected areas in Trinidad and Tobago. *Herpetology Notes*, 12, 577–585.
- Breuil, M. (2010). *Gymnophthalmus underwoodi* (Smooth-scaled Worm Lizard). Distribution. *Caribbean Herpetology*, 30.
- Censky, E. J., & Lindsay, K. (1997). *Gymnophthalmus underwoodi*. *Herpetological Review*, 28, 210.
- Cole, C J, Dessauer, H. C., & Markezich, A. L. (1993). Missing link found: the second ancestor of *Gymnophthalmus underwoodi* (Squamata: Teiidae), a South American unisexual lizard of hybrid origin. *American Museum Novitates*, 1–13.

- Cole, Charles J., Townsend, C. R., Reynolds, R. P., MacCulloch, R. D., & Lathrop, A. (2013). Amphibians and reptiles of Guyana, South America: Illustrated keys, annotated species accounts, and a biogeographic synopsis. *Proceedings of the Biological Society of Washington*, 125, 317–578.
- Daltry, J. C. (2011). An Introduction to the herpetofauna of Antigua, Barbuda and Redonda, with some conservation recommendations. *Conservation of Caribbean Island Herpetofaunas*, 2, 17–51.
- Daudin, J., & De Silva, M. (2007). An annotated checklist of the amphibians and terrestrial reptiles of the Grenadines with notes on their local natural history and conservation. *Applied Herpetology*, 4, 163–175.
- de Oliveira, D. P., Souza, S. M., Frazão, L., de Almeida, A. P., & Hrbek, T. (2014). Lizards from central Jatapú River, Amazonas, Brazil. *Check List*, 10, 46–53.
- Farias, R. E. S., & Vogt, R. C. (2020). *Gymnophthalmus underwoodi* (Smooth-scaled Worm Lizard). Brazil: Roraima. *Herpetological Review*, 51, 9430.
- Jairam, R. (2016). Attempted predation on a Smooth-scaled Worm Lizard, *Gymnophthalmus underwoodi* (Grant 1958) by a Rainbow Whiptail, *Cnemidophorus lemniscatus* (Linnaeus 1758) in Suriname. *IRCF Reptiles and Amphibians*, 23, 93–94.
- Kalaisko, V. (2015). *Gymnophthalmus underwoodi* (Shiny Lizard). *The Online Guide to the Animals of Trinidad and Tobago*.
- Kizirian, D. A., & Cole, C. J. (1999). Origin of the unisexual lizard *Gymnophthalmus underwoodi* (Gymnophthalmidae) inferred from mitochondrial DNA nucleotide sequences. *Molecular Phylogenetics and Evolution*, 11, 394–400.
- Lorvelec, O., Pascal, M., Pavis, C., & Feldmann, P. (2007). Amphibians and reptiles of the French West Indies: Inventory, threats and conservation. *Applied Herpetology*, 4, 131–161.
- Páez, R. B., Bosch, R. A., Fabres, B. A., & Garcia, O. A. (2012). Introduced amphibians and reptiles in the Cuban Archipelago. *Herpetological Conservation and Biology*, 10, 985–1012.
- Powell, R., & Henderson, R. W. (2017). Notes on the diets of some amphibians and reptiles of the St. Vincent and Grenada banks (Lesser Antilles). *IRCF Reptiles and Amphibians*, 24, 135–138.
- Questel, K., & Boggio, J. (2012). *Gymnophthalmus underwoodi* (Smooth-scaled Worm Lizard). Distribution. *Caribbean Herpetology*, 36.
- Recoder, R. S., Dal Vechio, F., Marques-Souza, S., Teixeira, M., Silva-Da-Silva, M., Santos, A. P., ... Rodrigues, M. T. (2018). Geographic variation and taxonomy of red-tailed *Gymnophthalmus* (Squamata: Gymnophthalmidae) from Amazonian Savannas. *Zootaxa*, 4497, 61–81.
- Reyes, F. O., Landestoy, M. A., Jiménez, L., & Bobadilla, M. R. (2020). *Gymnophthalmus underwoodi* (Underwood's Spectacled Tegu). Dominican Republic: Santo Domingo. *Herpetological Review*, 51, 539–540.
- Ribeiro-Júnior, M. A., & Amaral, S. (2017). Catalogue of distribution of lizards (Reptilia: Squamata) from the Brazilian Amazonia. IV. *Alopoglossidae*, *Gymnophthalmidae*. *Zootaxa*, 4269, 151–196.
- Ribeiro-Júnior, M., & Amaral, S. (2016). Diversity, distribution, and conservation of lizards (Reptilia: Squamata) in the Brazilian Amazonia. *Neotropical Biodiversity*, 2, 195–421.
- Szkludlarek, M. (2019). *Gymnophthalmus underwoodi* (Underwood's Spectacled Tegu). Dominican Republic: La Alta Gracia Province. *Herpetological Review*, 50, 524–525.
- Turk, P. A., Wyszynski, N. N., Powell, R., & Henderson, R. W. (2010). Population densities and water-loss rates of *Gymnophthalmus pleii*, *Gymnophthalmus underwoodi* (Gymnophthalmidae), and *Sphaerodactylus fantasticus fuga* (Sphaerodactylidae) on Dominica, West Indies. *Salamandra*, 46, 125–130.
- van den Burg, M. P., Hylkema, A., & Debrot, A. O. (2021). Establishment of two nonnative parthenogenetic reptiles on Saba, Dutch Caribbean: *Gymnophthalmus underwoodi* and *Indotyphlops braminus*. *Caribbean Herpetology*, 79, 1–5.