

## *Riama shrevei* (Luminous Lizard)

Family: Gymnophthalmidae (Spectacled Lizards)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



**Fig. 1.** Luminous lizard, *Riama shrevei*.

[<http://www.markoshea.tv/series1/series01-10.html>, downloaded 10 October 2016]

**TRAITS.** The purported luminous lizard or Shreve's lightbulb lizard (*Riama shrevei*), previously known as *Proctoporus shrevei*, is a small lizard typically 42mm in length from the tip of the nose to the anus (the snout-vent length, SVL) but can grow to be bigger than 50mm SVL. The tail of the lizard is normally 1.7 times the SVL; 71mm for a typical 42mm lizard (TT Herps, 2016). Mature males have a line of five or six eye-like spots (ocelli) on the sides (Fig. 1) and these appear as giving off light, as claimed by Ivan Sanderson in 1939, hence the name luminous lizard (Lum Young et al., 2005). Since then it has been found that the ocelli merely reflect light. The mature males of the species are the ones with the reflective properties, while the immature lizards and the female *Riama shrevei* do not have the reddish underbelly and the whitish lateral spots (O'Shea, 2016).

**DISTRIBUTION.** The luminous lizard is known to be found only in Trinidad in the Republic of Trinidad and Tobago (IUCN, 2016). They are only known to be found in the Northern Range, and samples were collected mostly in the Aripo Forest (Fig. 2). Sanderson had originally caught his specimen in the Aripo Caves of the forest. They are normally found about 600m above sea level, although some have been seen at lower elevations (Lum Young et al., 2005).

**HABITAT AND ECOLOGY.** *Riama shrevei* is known to be found the forested, mountainous region in the north of Trinidad. There it prefers to be hidden under rocks and boulders, usually only a few feet from a river or a stream (TT herps, 2016). The luminous lizard prefers a temperature that typically ranges from 20-23°C (Lum Young et al., 2005). They are known to be predominantly nocturnal but may be found moving about during the day. While they live on land, they are also known to be able to move about in water, so they are partially aquatic. A carnivore, the luminous lizard has a diet of smaller arthropods (TT herps, 2016).

**REPRODUCTION.** *Riama shrevei* are dioecious and they have sexual reproduction. The females and the males copulate and then the female lays eggs among the trees of the forest. The female lizards are also known to share their nesting places (TT herps, 2016).

**BEHAVIOUR.** The luminous lizard is severely and adversely affected by any sustained temperatures over 24°C. As all other reptiles, the luminous lizard is cold blooded and maintains its body temperature by staying in the shade when it is hot and coming into the sun to warm up. However, what is significant is that a small increase could kill this lizard if it is maintained. Simply holding the luminous lizard in the palm of your hand for a couple of minutes exposes it to enough heat that it can slip into a coma and eventually be killed (Lum Young et al., 2005).

**APPLIED BIOLOGY.** As there has been rising global temperatures and destruction of the forests in the north of Trinidad for often unmonitored development, the habitat of the luminous lizard has been rapidly shrinking since Sanderson studied it in 1939. The males are said to be particularly difficult to find (O'Shea, 2016). *Riama shrevei* is categorized as Data Deficient on the IUCN Red List of Threatened Species, meaning that further study is needed (IUCN, 2016).

#### REFERENCES

- IUCN. (2016). *Riama shrevei*. IUCN Red List. <http://www.iucnredlist.org/details/full/178338/0>.
- Lum Young, J., Comeau, P., Hailey, A., Jaggernaut, D., Oumdash, B., and Quesnel, V. (2005). On the Heat Sensitivity of the "Luminous Lizard" *Proctoporus shrevei*. Living World, Journal of The Trinidad and Tobago Field Naturalists' Club, **2005**: 61-61.
- O'Shea, M. (2016). Mark O'Shea Exotic Island. <http://www.markoshea.tv/series1/series01-10.html>.
- TT Herps. (2016). <http://trinidad-tobagoherps.org/Riamashrevei.htm>.

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Posted online: 2016



**Fig. 2.** Distribution of the luminous lizard, *Riama shrevei*.

[<http://maps.iucnredlist.org/map.html?id=178338>, downloaded 10 October 2016]



**Fig. 3.** Luminous lizard, *Riama shrevei*, showing the reflective spots that appear luminous.

[<http://www.luminosaur.narod.ru/gallery1.htm>, downloaded 10 October 2016]

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