



Interspecific Communal Oviposition by a Colombian Lightbulb Lizard (*Riama columbiana*) and Eyelash Lizards (*Lepidoblepharis duolepis*) in Colombia

Daniel Enrique Espitia-Sanabria, Iván Camilo Pineda-Infante, and Pamela Patiño Salazar

Grupo de Ecología y Diversidad de Anfibios y Reptiles, Facultad de Ciencias Exactas y Naturales, Universidad de Caldas, Calle 65 # 26-10, A.A. 275, Manizales, Colombia (daniel.espitia.1999@gmail.com)

Communal nesting in amphibians and reptiles is defined as the unintentional deposition of eggs under rocks or bark or in vegetation, holes in tree trunks, or cracks by two or more conspecifics (Espinoza and Lobo 1996; Doody et al. 2009). Few studies report interspecific communal oviposition (ICO) by lizards; in such instances, individuals of two or more species use the same oviposition site (Krysko et al. 2003; Alfonso et al. 2012; Estrada and Borroto-Paéz 2020).

At 1620 h on 21 November 2022, we identified an ICO site with six eggs in the Botanical Garden of the University of Caldas, Manizales, Colombia (5.05631, -75.49446; WGS 84; elev. 2,110 m asl). Four of the eggs were oval and placed in pairs; the other two eggs were noticeably larger and also

oval but more elongated (Fig. 1). These eggs had been deposited under leaf litter among the roots of a tree and covered with dirt. The two larger, more elongated eggs, with lengths of approximately 11 mm, correspond to a single laying event of a Colombian Lightbulb Lizard, *Riama columbiana* (Gymnophthalmidae) (Duarte-Marín et al. 2018), and a study of a congener has shown similarities in egg number and size (12.7 mm) (Méndez-Galeano and Pinto-Eraza 2018). The four smaller eggs laid in pairs probably were deposited by two Eyelash Lizards, *Lepidoblepharis duolepis* (Sphaerodactylidae). These eggs had diameters of ~0.9 mm, which corresponds to sizes of eggs in other species of *Lepidoblepharis* (Ayala and Serna 1986; Calderón-Espinoza and Medina-Rangel 2016). Lynch and Renjifo (2001) documented observations of *Riama* engaging in communal oviposition, but to the best of our knowledge, this is the first report of communal interspecific oviposition of a gymnophthalmid and a sphaerodactylid.

Acknowledgements

We thank Guillermo Alejandro Echeverry for informing us of the presence of this oviposition site and Paul Gutiérrez-Cárdenas for providing us with the literature cited herein.

Literature Cited

- Alfonso, Y.U., P. Charruau, G. Fajardo, and A.R. Estrada. 2012. Interspecific communal oviposition and reproduction of three lizard species in southeastern Cuba. *Herpetology Notes* 5: 73–77.
- Ayala, S.C. and M.A. Serna. 1986. Una nueva especie de *Lepidoblepharis* (Sauria, Gekkonidae) de la Cordillera Central de Colombia. *Caldasia* 15: 649–654.
- Calderón-Espinoza, M.L. and G.F. Medina-Rangel. 2016. A new *Lepidoblepharis* lizard (Squamata: Sphaerodactylidae) from the Colombian Guyana Shield. *Zootaxa* 4067: 215–232. <https://doi.org/10.11646/zootaxa.4067.2.6>.
- Doody, J.S., S. Freedberg, and J.S. Keogh. 2009. Communal egg-laying in reptiles and amphibians: Evolutionary patterns and hypotheses. *The Quarterly Review of Biology* 84: 229–252. <https://doi.org/10.1086/605078>.
- Duarte-Marín, S., M.A. Atehortua-Vallejo, and L.F. Arcila-Perez. 2018. *Riama columbiana* Andersson, 1914. *Catálogo de Anfibios y Reptiles de Colombia* 4: 56–60.



Figure 1. Interspecific communal oviposition site (6 eggs) of a Colombian Lightbulb Lizard (*Riama columbiana*) (eggs 5 & 6) and an Eyelash Lizard (*Lepidoblepharis duolepis*) (eggs 1–4) under leaf litter and covered with dirt. Photograph by Pamela Patiño Salazar.

- Espinoza, R.E. and F. Lobo. 1996. Possible communal nesting in two species of *Liolaemus* lizards (Iguania: Tropiduridae) from northern Argentina. *Herpetological Natural History* 4: 65–68.
- Estrada, A.R. and R. Borroto-Páez. 2020. Interspecific communal oviposition by the native Puerto Rican Eyespotted Geckolet (*Sphaerodactylus macrolepis*) and invasive house gecko (*Hemidactylus* sp.) in Puerto Rico. *Reptiles & Amphibians* 26: 232–234. <https://doi.org/10.17161/randa.v26i3.14416>.
- Krysko, K., C. Sheehy, and A.N. Hooper. 2003. Interspecific communal oviposition and reproduction of four species of lizards (Sauria: Gekkonidae) in the lower Florida Keys. *Amphibia-Reptilia* 24: 390–396. <https://doi.org/10.1163/156853803322440844>.
- Lynch, J.D. and J.M. Renjifo. 2001. *Guía de Los Anfibios y Reptiles de Bogotá y Sus Alrededores*. Impresos Ediciones Ltda., Bogotá, Colombia.
- Méndez-Galeano, M.Á. and M.A. Pinto-Eraza. 2018. *Riama striata* Peters, 1863. *Catálogo de Anfibios y Reptiles de Colombia* 4: 61–67.