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## The identity of *Rana margaritifera* Laurenti, 1768 (Anura, Bufonidae)

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### Abstract

*Rana margaritifera* was described by Laurenti in 1768 and currently is associated to the genus *Rhinella*, under the combination *Rhinella margaritifera*. Currently, the *R. margaritifera* species group consists of 16 recognized species. Furthermore, many additional species have been suggested to exist in this group which highlights the ambiguity surrounding the identity of *Rhinella margaritifera* and impend further description of the species in this group. After an exhaustive bibliographic review, we concluded that the recent designation of a lectotype for *R. margaritifera* is invalid according with Art. 73, ICZN, 1999. Herein, we designate and provide the description of a neotype for *Rana margaritifera* Laurenti, 1768.

**Key words:** Amphibia, *Rhinella margaritifera*, nomenclature, neotype, lectotype, type locality

### Introduction

Currently, the *Rhinella margaritifera* species group consists of 16 formally recognized species [*Rhinella acutirostris* (Spix, 1824), *R. alata* (Thomiot, 1884), *R. castaneotica* (Caldwell, 1991), *R. dapsilis* (Myers & Carvalho, 1945), *R. hoogmoedi* Caramaschi & Pombal, 2006, *R. lescurei* Fouquet, Gaucher, Blanc & Vélez-Rodriguez, 2007, *R. magnussoni* Lima, Menin & Araújo, 2007, *R. margaritifera* (Laurenti, 1768), *R. paraguayensis* Ávila, Pansonato & Strüssmann, 2010, *R. martyi* Fouquet, Gaucher, Blanc & Vélez-Rodriguez, 2007, *R. ocellata* (Günther, 1858), *R. proboscidea* (Spix, 1824), *R. roqueana* (Melin, 1941), *R. scitula* (Caramaschi & Niemeyer, 2003), *R. sclerocephala* (Mijares-Urrutia & Arends, 2001), and *R. stanlaidi* (Lötters & Köhler, 2000)]. In addition, there is an unknown, but presumably large, number of cryptic species awaiting description within some of the nominal described species (e.g., Fouquet *et al.* 2007, in a molecular analysis, suggested that *R. margaritifera* species group could consist to up to 11 additional species). Among the 16 nominal species of the group, nine were described in the last decade and, in spite of the renewed interest on documenting the diversity of this group, recent authors have avoided a key known problem while naming new species, i.e., the accurate identity of *Rana margaritifera* Laurenti, 1768, mostly because of the absence of precise type locality and type material.

The name *Rana margaritifera* was included in the synonymy of *Rana typhonia* Linnaeus, 1758, until the latter species was placed in the synonymy of *Rana tigerina* Daudin, An XI [1802] by Hoogmoed (1989), who resurrected a forgotten work by Andersson (1900) (nowadays, *Rana typhonia* is considered as a full species in the combination *Trachycephalus typhonus*; Lavilla *et al.* 2010). Since Hoogmoed (1989) action, the name *Rhinella margaritifera* (Laurenti, 1768) refers to a species complex widely distributed throughout Amazonia and vicinities (Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Surinam, and Venezuela) and extending into Panamá, an extensive distribution for a species which its *terra typica* was explicitly stated as “Brasilia” by Laurenti (1768), following Seba (1734). Aside from its extensive distribution in the Neotropics, this species complex has long