

## **A new species of *Leptodactylus* (Anura: Leptodactylidae) from the state of Espírito Santo, Brazil, with remarks on the systematics of associated populations**

ANTONIO DE PADUA ALMEIDA<sup>1</sup> & ARIADNE ANGULO<sup>2,3</sup>

<sup>1</sup>Projeto TAMAR–IBAMA, Reserva Biológica de Comboios, Cx Postal 105, Linhares, Espírito Santo, Brasil, 29900-970.

<sup>2</sup>Conservación Internacional, Carrera 13 No. 71-41, Bogotá, Colombia.

<sup>3</sup>Departamento de Herpetología, Museo de Historia Natural de San Marcos, Apartado 140434, Lima 14, Peru

### **Abstract**

Adults and tadpoles of a new species of the genus *Leptodactylus* are described from southeastern Brazil. *Leptodactylus thomei* **sp.nov.** can be found amidst the leaf litter within cocoa plantations along the northern coastal region of the state of Espírito Santo. It can be distinguished from other species of the *Leptodactylus marmoratus* group by its advertisement call, which is described, together with agonistic calls, and compared to advertisement calls of other species of the group that occur in southern and southeastern Brazil. The systematics of associated populations is discussed.

**Key words:** *Adenomera*, advertisement calls, agonistic calls, *Leptodactylus marmoratus* group, morphologically cryptic species, new species, reproductive mode

### **Introduction**

The genus *Adenomera* was revalidated by Heyer (1974) to accommodate members of the *Leptodactylus marmoratus* group. His conclusions were supported by an analysis of 50 characters, mostly of a morphological nature. More recent studies, which encompass data from a variety of sources (behaviour, genes, morphology, natural history), suggest a different taxonomic arrangement: evidence currently available seems to support the placement of *Adenomera* within *Leptodactylus*. Heyer (1988) found that *Leptodactylus* appeared as paraphyletic in some cladistic analyses that contained *Adenomera* and *Lithodytes* as part of the terminal taxa. Kokubum & Giaretta (2005) also found evidence from behavioural and natural history features that suggest a close relationship between *Adenomera* and *Leptodactylus*, reinforcing the notion that *Leptodactylus* could be paraphyletic. Results from Angulo's (2004) study also support the notion that *Adenomera*