



## New species amongst Sri Lanka's extinct shrub frogs (Amphibia: Rhacophoridae: *Philautus*)

MADHAVA MEEGASKUMBURA<sup>1,2\*</sup>, KELUM MANAMENDRA-ARACHCHI<sup>2</sup>,  
CHRISTOPHER J. SCHNEIDER<sup>1</sup> AND ROHAN PETHIYAGODA<sup>2</sup>

<sup>1</sup> Department of Biology, Boston University, 5 Cummington Street, Boston, MA 02215, USA

<sup>2</sup> Wildlife Heritage Trust of Sri Lanka, 95 Cotta Road, Colombo 8, Sri Lanka

\* Corresponding author (e-mail: madhava@bu.edu)

### Abstract

An extensive survey of amphibians in Sri Lanka, a 65,000 km<sup>2</sup> continental island, has recently served to uncover ~100 new species of amphibians, mostly Oriental shrub-frogs of the endotrophic genus *Philautus*. Comparison of specimens acquired in the course of this survey with type and other historical collections have previously shown that 19 species have disappeared from the island. The final two extinct species, *Philautus pardus* and *P. maia*, known only from collections made in the island prior to 1876, are described herein as new. A contemporaneous account of the latter species reported that the female carried its clutch of eggs adhered to its belly, a behaviour which, if true, is unique in Anura. The remarkable extinction of anurans in Sri Lanka appears to be largely a result of the loss of c. 95 % of the island's perhumid forests. Sri Lanka's amphibian extinctions have been detectable only because of the baseline offered by specimens collected in the period 1850–1940 and preserved in overseas natural-history museums. Historical biodiversity collections in the world's natural history museums thus offer outstanding value as baselines for contemporary biodiversity conservation assessments.

**Key words:** Amphibia, endotrophy, extinct species, habitat loss, museum collections, *Philautus*, new species, Red List, Sri Lanka

### Introduction

The ubiquitous tinkling calls of the shrub frogs of the genus *Philautus* help to characterize the forests of tropical Asia. About 140 species are presently recognised in the genus (AmphibiaWeb 2006), and several others await description (Biju 2001; Manamendra-Arachchi and Pethiyagoda 2005). All known *Philautus* are endotrophic (i.e., they undergo their 'tadpole' stage within the egg, emerging as metamorphosed imagos), with nesting taking place on the forest floor or on trees (Bossuyt and Dubois 2001; Meegaskumbura *et al.* 2002; Bahir *et al.* 2005). The genus shows a remarkable endemic radiation in Sri Lanka—a 65,000 km<sup>2</sup> continental island narrowly separated from southern India by the 20 km wide Palk Strait—from which 62 species of *Philautus* are recognized (Meegaskumbura *et al.* 2002; Bossuyt *et al.* 2004; Dubois 2005; Manamendra-Arachchi and Pethiyagoda 2005; Meegaskumbura and Manamendra-Arachchi 2005).

From 1993–2003, the Wildlife Heritage Trust of Sri Lanka (WHT) conducted an extensive survey of the island's amphibian fauna (Pethiyagoda and Manamendra-Arachchi 1998; Manamendra-Arachchi and Pethiyagoda 2005). While serving to uncover a large number of new species, this work also necessarily involved the examination of type and other specimens preserved in museums worldwide, principally the approximately 140 specimens in the collection of The Natural History Museum, London. Much of this material had been col-