



## A new species of the genus *Theلودerma* Tschudi, 1838 (Anura: Rhacophoridae) from Northwestern Vietnam

RAOUL H. BAIN<sup>1,3</sup>, TRUONG Q. NGUYEN<sup>2,4</sup> & KIEN V. DOAN<sup>2,5</sup>

<sup>1</sup>Center for Biodiversity and Conservation, and Division of Vertebrate Zoology (Herpetology), American Museum of Natural History, Central Park West at 79<sup>th</sup> Street, New York, NY, 10024 USA. E-mail: bain@amnh.org

<sup>2</sup>Institute of Ecology and Biological Resources, Vietnamese Academy of Science and Technology, 18 Hoang Quoc Viet, Hanoi, Vietnam. E-mail: <sup>4</sup>nqt2@yahoo.com; <sup>5</sup>doanvankien@yahoo.fr

<sup>3</sup>Corresponding author

### Abstract

A new species of *Theلودerma* is described from the Hoang Lien Mountains of northwestern Vietnam from between 1300–1400 m elevation. *Theلودerma lateriticum* sp. nov. was found at night inside a water-filled chamber of bamboo, which was within disturbed, submontane, semi-evergreen forest. The new species of *Theلودerma* can be immediately differentiated from all other congeners by its solid, brick-red dorsal wash and minimal foot webbing (proximal to proximal subarticular tubercle on Toe I; to level of proximal subarticular tubercle on postaxial side of II; proximal to proximal subarticular tubercle on preaxial side of III; just beyond proximal subarticular tubercle on postaxial side of III; to level of proximal subarticular tubercle on preaxial side of IV; just beyond proximal subarticular tubercle on postaxial side of IV; and just beyond proximal subarticular tubercle on preaxial side of V). The female and tadpole remain unknown.

**Key words:** Southeast Asia, Indochina, Amphibia, *Theلودerma lateriticum* sp. nov., taxonomy, systematics

### Introduction

The genus *Theلودerma* Tschudi, 1838 (Family: Rhacophoridae) is recognizable by its tuberculate (often keratinized), and often rugose dorsum, distinct tympanum, and reproductive behavior (Boulenger 1903a; Taylor 1962; Liem 1970). Large eggs are deposited as small clutches (approximately 6–8) above cavities or holes in trees that are filled with water. They are deposited as a group, within gel capsules, and the larvae drop into the small water pools below. Liem (1970) diagnosed *Theلودerma* based on the presence of numerous calcified warts on the dorsum, two slips of the *m. extensor digitorum communis longus* in the foot, and reproductive behavior. Although analyses since Liem (1970) have helped to determine the composition of *Theلودerma* and its phylogenetic position with respect to other rhacophorid genera, no morphological synapomorphy is known for the genus and its monophyly has not been thoroughly tested (Channing 1989; Richards & Moore 1998; Wilkinson & Drewes 2000; Wilkinson *et al.* 2002; Frost *et al.* 2006; Yu *et al.* 2007; Li *et al.* 2008; Yu *et al.* 2008; Fei *et al.* 2009; Yu *et al.* in press).

Currently, 14 species of *Theلودerma* are known from Southeast Asia, South China, and Northeast India: *T. asperum* (Boulenger, 1886); *T. bicolor* (Bourret, 1937); *T. corticale* (Boulenger, 1903b); *T. gordonii* Taylor, 1962; *T. horridum* (Boulenger, 1903a); *T. kwangsiense* Liu & Hu, 1962; *T. leporosum* Tschudi, 1838; *T. licin* McLeod & Ahmad, 2007; *T. moloch* (Annandale, 1912); *T. nagalandense* Orlov, Dutta, Ghate & Kent, 2006; *T. phrynoderma* (Ahl, 1927); *T. rhododiscus* (Liu & Hu, 1962); *T. ryabovi* Orlov, Dutta, Ghate & Kent, 2006; and *T. stellatum* Taylor, 1962. A summary of the known species and their current distributions is provided by