



Back from the dead: The world's rarest toad *Adenomus kandianus* rediscovered in Sri Lanka

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Abstract

Adenomus kandianus Günther (1872) was previously known only from two specimens both deposited in the British Museum, the holotype BMNH1947.2.20.63, and the syntype of *A. kelaarti* BMNH1947.2.20.62. The only record of *A. kandianus* since the initial description in 1872 was by Ferguson in 1876, who mentions two specimens resembling *Bufo kandianus* in his collection, making *A. kandianus* the world's rarest toad. The species had not been reported since, and was considered extinct. Here we report on its rediscovery.

Key words: *Adenomus*, extinct amphibian, rediscover, Peak Wilderness, Sri Lanka

Introduction

Adenomus kandianus is one of the 21 amphibian species known to be extinct from Sri Lanka after extensive searches over a ten-year period failed to locate this species in the wild (Manamendra-Arachchi and Pethiyagoda, 1998, 2005; Manamendra-Arachchi and de Silva, 2004; Stuart, *et al.*, 2008; Meegaskumbura, *et al.*, 2007). A global amphibian hotspot (Meegaskumbura, *et al.*, 2002), the island of Sri Lanka consists of 111 species of amphibians described so far, and it also carries the dubious distinction of contributing the highest proportion (60%) to the global list of extinct amphibians (Manamendra-Arachchi and Pethiyagoda, 1998, 2005; Manamendra-Arachchi and de Silva, 2004; Stuart, *et al.*, 2008; Meegaskumbura, *et al.*, 2007). These extinctions belong to the following taxa: one to the family Bufonidae (*Adenomus kandianus*), one to the family Dicroglossidae (*Nannophrys guentheri*), and nineteen species to the family Racophoridae (*Pseudophyllautus* species) (Stuart, *et al.*, 2008).

The Sri Lankan endemic genus *Adenomus* is represented by the three species *A. dasi*, *A. kandianus*, and *A. kelaarti* (Manamendra-Arachchi and Pethiyagoda, 1998) all of which are stream dwelling toads. Gunther first described *A. kandianus* from a single specimen under the genus *Bufo* and provided a concise description with vital diagnostic characters important in identifying the species. Later publications synonymized *A. kandianus* as *A. kelaartii* Kirtisinghe, (1955), but according to the latest bufonid synopsis *A. kandianus* was once again considered a valid yet extinct species. Furthermore, in all publications there after the species was listed as extinct (Manamendra-Arachchi and Pethiyagoda, 1998; Manamendra-Arachchi and de Silva, 2004; Stuart, *et al.*, 2008; IUCN and MENR 2007).

The Peak Wilderness Sanctuary is one of the few remaining areas in Sri Lanka with a continuous natural forest cover of altitudinal graded forest types, ranging from lowland mixed *Dipterocarp* forests to montane cloud forests, having its own forest vegetation and is an area of great biological diversity (Singhakumara, 1995). It covers a large altitudinal range and different climate conditions which is well reflected by its forest type and biodiversity. Forests ranging from Tropical Lowland Forests (<1050 m) to Tropical Montane Forests (>1650) can be identified within the area (Fernando and Ranasinghe, 1997). The Peak Wilderness Sanctuary, in particular, harbors the majority of the endemic and threatened bird species of Sri Lanka (Ranawana and Bambaradeniya, 1998; Wickramasinghe, *et al.*, 2007). We here report on the rediscovery of *A. kandianus* during a survey of the Peak Wilderness Sanctuary in the Central Province, Sri Lanka.