A distinctive new species of chameleon of the genus Furcifer (Squamata: Chamaeleonidae) from the Montagne d’Ambre rainforest of northern Madagascar

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Abstract

We describe Furcifer timoni sp. nov., a new colourful and morphologically highly distinct chameleon from Montagne d’Ambre National Park in northern Madagascar. Males of this rainforest species are characterized by short paired bony rostral appendages which are completely absent in females. The new species differs from all other Furcifer species except F. bifidus (Brongniart, 1800) and F. balteatus (Duméril & Bibron, 1851) by a light ventrolateral band that is composed of scales which are arranged in a rosette-like manner. It differs from F. bifidus and from F. balteatus by smaller size, shorter rostral appendages of the males, and colouration. We suspect that F. timoni may be a cryptic species of the forest canopy. Furthermore, we designate a lectotype for Dicranosaura bifurca var. crassicornis Gray, 1864 and confirm its synonymy with Furcifer bifidus.

Key words: Squamata, Chamaeleonidae, Furcifer timoni sp. nov., Madagascar

Introduction

Madagascar is the hotspot of chameleon species diversity. Recent molecular studies suggest that chameleons evolved on this microcontinent and later colonized Africa and the islands in the Indian Ocean by oversea dispersal (Raxworthy et al. 2002; Rocha et al. 2005). The three Malagasy genera Brookesia, Calumma, and Furcifer include almost 50% of the world’s chameleon species, including the biggest and the smallest. The chameleon genus Furcifer is currently composed of 19 species which are distributed over Madagascar and the Comoro islands (Glaw & Vences 2007). In contrast to the genera Brookesia and Calumma, many Furcifer species inhabit relatively arid regions in western Madagascar and only a few are exclusively found in rainforest areas. Intensive herpetological fieldwork and taxonomic revisions during the past 15 years have led to a strong increase in the number of species in the genera Brookesia and Calumma (Raxworthy & Nussbaum 1995; Schimmenti & Jesu 1996; Böhme 1997; Glaw et al. 1999; Andreone et al. 2001; Raxworthy & Nussbaum 2006). Modelling of distribution areas based on remote sensing data has further predicted the discovery of new chameleon species (Raxworthy et al. 2003). In Furcifer, some species like F. pardalis (Cuvier, 1829), F. oustaleti (Mocquard, 1894) and F. lateralis (Gray, 1831), show a significant geographic variation in colour and/or molecular characters, indicating the possible presence of still unrecognized taxa (e.g. Boumans et al. 2007). Nevertheless, only a single new species of Furcifer has been described subsequent to 1972 (Jesu et al. 1999), indicating that the species inventory of this genus might have been largely completed.