



## Systematic and taxonomic reevaluation of four little known Asian agamid species, *Calotes kingdonwardi* Smith, 1935, *Japalura kaulbacki* Smith, 1937, *Salea kakhienensis* Anderson, 1879 and the monotypic genus *Mictopholis* Smith, 1935 (Reptilia: Agamidae)

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### Abstract

The systematic status of many Asian Draconine agamids has long been in dispute. Herein, four such species, *Mictopholis austeniana*, *Japalura kaulbacki*, *Calotes kingdonwardi* and *Salea kakhienensis* are examined on the basis of external morphological characters. The monotypic genus *Mictopholis* was compared to other Asian Draconine genera and found to be indistinguishable from *Pseudocalotes*, with which it is here considered a synonym. *Japalura kaulbacki* is compared to other members of the genus *Japalura* as well as other similar species. Based on external morphology it is found to be separable from *Japalura* and conspecific with *Calotes kingdonwardi*, under which it is considered a junior subjective synonym. *Salea kakhienensis* is redefined morphologically based on nontype material and shown to represent a close member of this group. *C. kingdonwardi* is most similar to *Salea kakhienensis* both of which share a complement of characters with *M. austeniana*. The generic placement of *S. kakhienensis* relative to *Salea*, both with strongly overlapping synapomorphic characters is briefly discussed with respect to biogeographical implications that strongly support the exclusion of this species from the genus. *Mictopholis austeniana*, *Calotes kingdonwardi* and *Salea kakhienensis* are redescribed in detail and transferred to *Pseudocalotes*. The inclusion of these three species provides a generic range extension of approximately 800 km north-west of the previously considered range. The nomen *Oriocalotes discolor* is considered a primary objective synonym of *Pseudocalotes kakhienensis* new comb. and the systematic status of *Calotes kingdonwardi bapoensis* is briefly discussed.

**Key words:** reptile, lizard, Sauria, Draconinae, redescription, taxonomy, biogeography, Arunachal Pradesh, India, Kachin, Myanmar, Yunnan, China

### Introduction

Nelson Annandale (1908) described an unusual, large Agamid from near Harmatti in the Dafla Hills of what was then Assam, in northeastern India. Annandale considered his species a member of the genus *Salea* Gray, naming it *Salea austeniana*. Later Smith (1935a) created the monotypic genus *Mictopholis* defining the genus as follows “Body compressed; dorsal scales very unequal, irregular; ventral scales unequal; a nuchal crest and ? a dorsal crest; a strong fold in front of the shoulder; a gular sac; tympanum exposed. No preanal or femoral pores.” Although a common practice at that time, the definition for his genus was insufficient at diagnosing *Mictopholis* from members of some other agamid genera. The validity of the genus has remained unquestioned taxonomically despite the lack of diagnostic characters provided. Since its description, *M. austeniana* has only recently been collected again, providing new information on morphology, geographical range and ecology (Athreya 2006; Das & Das 2007).

Perhaps first noted by Schmidt (1927), the genus *Japalura* Gray has been recognised for some time to be paraphyletic. Recent evidence further supports paraphyly of the genus in relation to the Chinese species *J. splendida*, *J. flaviceps* and *J. polygonata*, based on numerous phylogenetic studies (Honda *et al.* 2000; Macey *et al.* 2000a & 2000b; Schulte *et al.* 2004; Zug *et al.* 2006). Without a comprehensive molecular phylogeny on this genus it is difficult to hypothesize the eastern range limits of *Japalura sensu stricto* (s.s.) due to overall