

# Notes on distribution and colour pattern of the rare agamid lizard *Lophocalotes ludekingii* (BLEEKER, 1860) in Sumatra (Indonesia)

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## Abstract

During an expedition to Jambi Province in southern Sumatra new observations could be made on habitat and colouration of *Lophocalotes ludekingii*. For the first time descriptions of the colour patterns of male and female are provided. The new distribution record lies more eastern than previously known. In addition, a further observation of this species in Kerinci National Park by a French colleague, shows a different colour pattern compared to the above cited population. Measurements of all available museum material extends the knowledge of snout-vent length variation.

Key words: Squamata: Agamidae: *Lophocalotes ludekingii*; new distribution records; variation; Sumatra; Indonesia.

In contrast to all other arboreal agamids of South-East Asia *Lophocalotes ludekingii* is characterized by smooth subdigital lamellae on fingers and toes, a relatively large tympanum and a large head, expanded below the ears. Very little is known about habits and distribution of this monotypic genus. The knowledge about this species is based mainly on older literature (DE ROOS 1915). Currently, the species is only known from the type locality at "Agam" (surroundings of Bukittinggi) and a few other localities near the type locality in the Province West Sumatra (MANTHEY & GROSSMANN 1997, Fig. 5).

During an expedition to Sumatra in 1999, NIKOLAI ORLOV collected different agamids in a tropical rain forest, at 1400 m above sea level, near Kersik Tuo, Sungai Penuh, Jambi Province/Southern Sumatra, Indonesia. Voucher specimens were deposited in the Zoological Institute, St. Petersburg (ZISP). In Hamburg we were able to identify one of these species as male and female of the rare *Lophocalotes ludekingii*, others were *Dendragama boulegeri* DORIA, 1888 occurring in the same habitat.

Morphologically, the specimens from Jambi Province did not differ significantly from material of this species in the Leiden Museum (Museum of Natural History, Leiden) RMNH 4852 a-e from Mt. Kerinci, RMNH 3862 a-c from Alahan Pandjung in Sumatera Barat (West Sumatra Province) and in the Zoological Research Institute and Museum A. Koenig in Bonn. Four specimens (ZFMK 46706-710) were from Sijungjung and ZFMK 5170 from Gunong Singalung (= Mt. Singalang), Sumatera Barat. A further specimen from Western Sumatra had no specific locality data (ZFMK 46199). Documented locality records are shown in Figure 5.

The type specimen of *Calotes ludekingii* BLEEKER was redescribed by GÜNTHER (1872) as *Lophocalotes interruptus*, overlooking the publication of BLEEKER (1860). It is deposited in the Natural History Museum, London (BOULENGER 1885: 275). BOULENGER (1887) synonymized *Lophocalotes interruptus* with *L. ludekingii* and some other overlooked species described by BLEEKER in 1860. The length and pholidosis of the examined specimens are given in Table 1. These data extend the known size range for the species as given by MANTHEY & GROSSMANN (1997): 66-92 mm snout-vent length in adults. Males and females do not differ very much in colour patterns (Figs. 1, 3). Females did not have any light vertebral band as noted by MANTHEY & GROSSMANN (1997: 195). Males have a more robust head, a prominent dorsal crest and longer occipital and nuchal spines (figs. 1, 2).



Fig. 1. Male of *Lophocalotes ludekingii* (ZISP 22828) in its habitat. Photo: NIKOLAI ORLOV.  
Männchen von *Lophocalotes ludekingii* (ZISP 22828) im Lebensraum.



Fig. 2. Lateral head view of male *Lophocalotes ludekingii* (ZISP 22828). Photo: NIKOLAI ORLOV.  
Seitenansicht des Kopfes eines Männchens von *Lophocalotes ludekingii* (ZISP 22828).



Fig. 3. Female of *Lophocalotes ludekingii* (ZISP 22829) in its habitat. Photo: NIKOLAI ORLOV.  
Weibchen von *Lophocalotes ludekingii* (ZISP 22829) im Lebensraum.



Fig. 4. Male of *Lophocalotes ludekingii* in life at Lake Tuiju (Kerinci National Park, Sumatra). Photo: DIDIER BOUSSARIE.  
Lebendes Männchen von *Lophocalotes ludekingii* beim Tuiju See (Kerinci National Park, Sumatra).

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Fig. 5. Map of Sumatra showing locality records. Red dots: older records before 1930, blue dots: new records.

Karte mit Fundortdaten. Rote Punkte: ältere Fundorte vor 1930, blau: neue Fundorte.

specimen no	SVL	TL	sex	M
RMNH 3862a	78.8	147	f	34
RMNH 3862b	89.5	161	f	40
RMNH 3862c	87.1	152	M	39
RMNH 4852a	78.1	140.2	m	31
RMNH 4852b	33.6	53	juv	37
RMNH 4852c	48.2	—	juv	37
RMNH 4852d	68.9	131	f	35
RMNH 4852e	70.7	133.5	f	35
ZFMK 46710	62.5	107	m	37
ZFMK 51700	55.8	—	juv	
ZFMK 46706	87.7	142	m	37
ZFMK 46707	85.9	151	m	36
ZFMK 46708	80.1	151	m	38
ZFMK 46709	80.3	128	m	41
ZISP 22828	71.0	128.0	m	—
ZISP 22829	66.0	105	f	—

Tab. 1. Snout-vent length (SVL), tail length (TL), scales around midbody (M) of *Lophocalotes ludekingii*; m: male, f: female.

Kopf-Rumpf-Länge (SVL) und Schwanzlänge (TL), Schuppenreihen um die Körpermitte (M) von *Lophocalotes ludekingii*, m: Männchen, f: Weibchen

Interestingly, a further record of that species could be provided by Dr. DIDIER BOUSSARIE near Lac Tujju (Kerinci NL Park/Sumatera Barat (West Sumatra Province) at 1200 m above sea level, on 17 October 2002. This male specimen had not such a bright green colouration as the specimens observed in southern Jambi Province. Its ground colour was dark brown with a large white patch behind the nape and faded transversal olive bands on the body (Fig. 4). Total length was 220 mm.

It may be concluded that *Lophocalotes* is an inhabitant of mountain regions about 1000 and 2800 m a.s.l. For the RMNH specimens no elevation is recorded, but Mt. Kerinci is about 3800 m about sea level, so that the species may be found in even higher elevations. One of us (N.O.) observed the species in a rain forest with 1 m height bush vegetation. By the new observation its known distribution range could be extended more to the south-east along the mountain chain of Pegunnungan Barisan.

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#### Bemerkungen zur Verbreitung und Färbung der seltenen Lamellenagame (*Lophocalotes ludekingii* (BLEEKER, 1860)) in Sumatra (Indonesien)

Bisher kannte man *Lophocalotes ludekingii* nur von wenigen Lokalitäten in der Provinz Westsumatra. Während einer Expedition in die Provinz Jambi konnten mehrere Exemplare dieser Art beobachtet und fotografiert werden. Erstmals wurden Färbung und Morphometrie von beiden Geschlechtern dokumentiert. Außerdem konnten durch Beobachtungen und Fotos eines französischen Kollegens im Kerinci Nationalpark (Sumatera Barat) Färbungsunterschiede zur oben zitierten Population aufgezeigt werden. Vergleiche mit dem einzigen verfügbaren Museumsmaterial aus den Museen in Bonn und Leiden ergänzen bisherige Angaben zur Kopf-Rumpf-Länge.

Schlüsselwörter: Squamata: Agamidae: *Lophocalotes ludekingii*; neue Verbreitungsdaten; Variation; Sumatra; Indonesien.

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