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Taxonomic re-evaluation of the enigmatic *Polypedates chlorophthalmus* Das, 2005 (Anura: Rhacophoridae) from Gunung Murud, Sarawak, Malaysia (Borneo), a junior synonym of *Philautus hosii* (Boulenger, 1895)

J. Maximilian Dehling^{1*} & Indraneil Das²

Abstract. We re-examined the holotype of *Polypedates chlorophthalmus*, the only specimen of the species that has ever been collected. Detailed comparison to recently collected specimens of *Philautus hosii* revealed that the two taxa are identical in general habitus, shape of snout, hands and feet, extent of toe webbing, presence and shape of hand and foot tubercles, size and shape of vomerine teeth, dorsal and ventral colouration and pattern, iris colouration, as well as body size and proportions. We refer *Polypedates chlorophthalmus* to the synonymy of *Philautus hosii*.

Key words. taxonomy, synonymisation, tree frog, Gunung Murud, Sarawak, Borneo

INTRODUCTION

The genus *Polypedates* Tschudi, 1838, is represented on Borneo by five nominal species (Inger et al., 2017). The most enigmatic among them is *P. chlorophthalmus* Das, 2005. The species was described from a single female, collected at 1,351 m a.s.l. at a mid-elevation forest of Gunung [=Mount] Murud, northern Sarawak, East Malaysia, in 2003 and has never been collected or observed again. The primary diagnostic characters of the species are the large size (for a tree frog), the elongate, rounded snout, a distinct canthus rostralis, the absence of dermal flaps along limbs and above cloaca, and a distinctive green iris. Since the publication of the original description of *P. chlorophthalmus*, we collected numerous series of tree frogs of the genera *Polypedates*, *Rhacophorus* Kuhl & van Hasselt, 1822, and *Philautus* Gistel, 1848, from several locations on Borneo and documented the live colouration in these species. Among the new material were several specimens of *Philautus hosii* (Boulenger, 1895) that exhibited a greenish-coloured iris, instead of the more typical golden iris. *Philautus hosii* is of similar size and shares the aforementioned characters considered diagnostic for *Polypedates chlorophthalmus*. Therefore, we re-examined the holotype of *P. chlorophthalmus* and compared the species in detail to *Philautus hosii*. We herein present the results

of our morphological examination and refer *Polypedates chlorophthalmus* to the synonymy of *Philautus hosii*.

MATERIAL AND METHODS

The holotype of *Polypedates chlorophthalmus* was deposited in the Zoological Reference Collection (ZRC) of the Lee Kong Chian Natural History Museum, Singapore. Comparative material was deposited in the Naturhistorisches Museum der Burgergemeinde Bern, Switzerland (NMBE) and the Staatliches Museum für Naturkunde Stuttgart, Germany (SMNS).

We took the following measurements to the nearest 0.1 mm using digital callipers: Snout-vent length (SVL); tibiofibula length (TFL, measured with both knee and tibiotarsal articulation flexed); thigh length (THL, from vent to knee with thigh being held vertically to median body plane and knee flexed); total hindlimb length (LEG, from vent to tip of fourth toe with leg fully extended and being held perpendicularly to median body plane); tarsus + foot length (TarL, from tibio-tarsal articulation to tip of fourth toe); foot length (FOT, from proximal end of inner metatarsal tubercle to tip of fourth toe); hand length (HND, distance from proximal end of palmar tubercle to tip of third finger); head width (HW, measured at the level of the jaw joint); head length (HL, distance from rear end of jaw to tip of snout); interorbital distance (IO, shortest distance between upper eyelids); upper-eyelid width (EW); horizontal eye diameter (ED); vertical tympanum diameter (TD); eye-to-tympanum distance (ET, shortest distance between orbit and tympanic rim); eye-to-nostril distance (EN, distance between anterior margin of eye and centre of nostril); nostril-to-snout distance (NS, distance between centre of nostril and tip of snout);

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