the flying dragon (*Draco spilopterus* Wiegmann, 1834). *The Vivarium* 4: 13–15.

- MANTHEY, U. & W. GROSSMANN. 1997. Amphibien & Reptilien Südostasiens. Natur und Tier – Verlag, Münster. 512 pp.
- MUSTERS, G. J. M. 1983. Taxonomy of the genus Draco L. (Agamidae, Lacertilia, Reptilia). Zoologische Verhandelingen 199: 1–120.
- **PRESNELL, J. K. & M. P. SCHREIBMAN. 1997.** Humason's Animal Tissue Techniques. The Johns Hopkins University Press, Baltimore. xix + 572 pp.
- **TAYLOR, E. H. 1963.** The Lizards of Thailand. *The University of Kansas Science Bulletin* 14: 687–1077.
- UETZ, P. & J. HOŠEK (EDS.). 2014. The Reptile Database, http://www.reptile-database, accessed March 18, 2014.

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Appendix

The following specimens of D. abbreviatus (n = 6), D. blanfordii (n = 40), D. formosus (n = 60), D. maximus (n = 6), D. sumatranus (n = 23) from West Malaysia and D. maculatus (n = 13) from Cambodia (by province) and D. taeniopterus (n = 21) from Cambodia (by province) and West Malaysia (by state) were utilized in this study: Draco abbreviatus (West Malaysia) Johor: LSUHC 7613, 7717; Pahang: LSU-HC 3823, 4601, 5102; Perlis 8799; Draco blanfordii (West Malaysia) Kedah: LSUHC 6792, 6812, 6818, 7085-7091, 7100, 7116, 7127-7129, 7159-7165, 7183, 7489, 7537, 7538, 7539, 7562, 7563, 9427; Pahang: LSUHC 5090, 8045, 9081; Perak: LSUHC 9034, 9044, 9134; Perlis: LSUHC 8794, 8844, 8982, 8983; Draco formosus (West Malaysia) Johor: LSUHC 4712, 4713, 4786, 4787, 4802-4804, 6322, 6325, 7604, 7657, 8148, 8176, 8177, 8233, 8908, 8909, 9937; Pahang: LSUHC 4850, 4851, 4878-4880, 4952, 4953, 4977, 4978, 4983, 4986, 4987, 4989, 4999, 8047, 8048; Penang: LSUHC 6669, 6696-6698, 6721, 6740, 6741; Perak: LSUHC 5082, 5615, 5616, 5621, 5626-5628, 5632, 5649; Selangor: LSUHC 4017, 4832, 4833, 6538, 6538, 6553; Terengganu LSUHC 9360, 9361, 9365, 9366; Draco maculatus (Cambodia) Kampong Speu: LSUHC 7321, 7322, 7343, 7344, 7389, 7390, 7411, 7851; Pursat 7849-7852, 7919, 8411; Draco maximus (West Malaysia) Johor:

Notes

LSUHC 8206; Perak: LSUHC 5629, 5636, 5651, 5659, 7043; *Draco sumatranus* (West Malaysia) Johor: LSUHC 4715, 4785, 4788, 5565, 7658, 8140, 9935; Pahang: LSUHC 3838, 3899, 4555, 4556, 5404, 5405, 5480, 6204, 6228, 8037; Selangor LSUHC 4026, 5019, 6624; Terengganu: LSUHC 9393; *Draco taeniopterus* Cambodia: Kampong Cham: LSUHC 7332, 7336, 7340, 7366–7368, 7372, 7373, 7414–7416, 7418, 7419, 7456; Pursat: LSUHC 9305, 9309, 9331; Peninsular Malaysia: Perlis: LSUHC 8779, 8781, 8782, 8797.

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Observations on a live Pseudoxenodon baramensis (Smith, 1921)

The genus Pseudoxenodon Boulenger, 1890 includes six nominal species (Uetz 2014; Wallach et al. 2014), with a distribution across eastern China and south-east Asia, including the islands of the Greater Sundas (de Rooij 1917; Manthey & Grossmann 1997; Zhao 2006a; Das 2010). A recent phylogeny shows that the lineage is nested within the Neotropical xenodontines, suggesting a trans-Beringian migration between the early Tertiary and the mid-Miocene (Zhang & Huang 2013). Nonetheless, monophyly of the group remains undemonstrated, and several members of the genus are poorly known. Further, unnamed populations remain even from the relatively better-sampled northern regions (such as Xizang/Tibet) and none of the southeast Asian, especially Sundaic, species have been included in molecular studies, for scarcity of specimens (see Rahadian & Das 2013; Zhang & Huang 2013).

One of the least known of the snake species of Borneo is *Pseudoxenodon baramensis* (Smith, 1921). The species was originally described (as a *Tropidonotus*) by Smith (1921), from "Mount Dulit, Sarawak, North Borneo, at 1,000 metres" (equivalent to Gunung Dulit, Third Division, Baram District, north-western Sarawak, East Malaysia [Borneo], at ca. 1000 m; 03°15'N, 114°15'E); BMNH 1946.1.13.11 (ex-MAS 4579), holotype. The species was reallocated to *Pseudoxenodon* by Malnate (1960) for showing obliquely arranged dorsal scales and a long hemipenis, extending to the 20th subcaudal and forked at the eighth subcaudal. Few records of the species exist, all from the northern areas of Hamadryad

Sarawak and Sabah, to the north-west of the island (including Gunung Dulit, Gunung Murud, Gunung Mulu, Nanga Tekalit at the headwaters of the Sungei Rajang, Nanga Segerak along Sungei Engkari and Tambuyukon in Gunung Kinabalu; Manthey & Grossmann 1997; Stuebing 1991, 1994; Stuebing *et al.* 2014).

On 16 May 2014 at 08h30, a *Pseudoxenodon baramensis* was encountered in the Kelabit highlands (Fig. 1), Baram Division of Sarawak, East Malaysia (northern Borneo), on a trail between Pa' Lungan (Sarawak) and Long Midang (West Kalimantan), a short distance from the Pulong Tau National Park (coordinates ca. 03°50'N, 115°31'E estimated from base maps). The site is over 1200 m asl, and ca. 500 m from the Indonesian border landmark. The vegetation at the locality is submontane forest, dominated by oaks, *Quercus* spp. and other species (Fig. 2). The snake was initially encountered while exposed and crossing a moderately uphill forest path (Fig. 3), ca. six hours walk from Pa'



Figure 1. Landscape of the Kelabit Highlands, which includes the Pulong Tau National Park. Much of the vegetation of the lowlands has been affected by log-ging activities.



Figure 2. Submontane vegetation along trail between Pa' Lungan and Long Midang, the locality of observation of *Pseudoxenodon baramensis*.

Lungan. Vegetation around the area is sparse, with no grass cover, and strewn with leaf litter including oak fruits; the verge was knee- and waist-high with emergents, including wild gingers. At the time of encounter, dense mist and wet ground was encountered, the latter from heavy rainfall over the previous days.

Morphological features in the specimen agreeing with the description of the species include reduced anterior middorsal scales relative to those at midbody, which are narrow, imbricate and arranged in oblique rows; head short and distinct from neck; eyes large; pupil rounded; a single preocular; three postoculars; weak dorsal keels; body subcylindrical and tail moderately long. In addition, neck-flaring (see below) was observed, a behaviour reported in members of the genus (see Zhao 2006b; Rahadian & Das 2013). The individual was short and rather thickset, and 400–450 mm in total length.

We used the colour nomenclature of Smithe (1975; 1981) in this note, based on comparison on colour swatches in this manual to digital images captured with a daylight fill-flash. The dorsum of the specimen was olive, with black open-ended Y-shaped mark on the nuchal region and forehead; the venter yellowish. The



Figure 3. Unstressed individual of *Pseudoxenodon* baramensis from trail between Pa' Lungan and Long Midang.



Figure 4. Individual of *Pseudoxenodon baramensis* from trail between Pa' Lungan and Long Midang, raising a hood after being restrained for observations and photography.

Y-shaped mark on forebody comprises two arms that run posteriorly at an angle, the middle stem of the pattern extends anteriorly, where it narrows to become a thin line, to cross the interparietal scutes and reach the posterior edge of the frontal scute. The entire dorsum of body is Bunting Green (#150: an olive-green colour), with large black smudges that are sometimes fused to each other, starting 7-8 scale rows after the nuchal mark, forming a chain-like pattern, best marked posteriorly, enclosing paler circular, Opaline Green (#162D: pale green) areas. The forehead is similar to the body dorsum, but lacking darker markings and the supralabials are Pale Horn (#92: a pale yellow colour). The nuchal region of the stressed individual (Fig. 4) showed distinct black mottlings that contrast well with the pale interscale areas. The pupil is black and rounded, with a golden ring; the iris is Buff (#24: a dull yellow colour). The bright green dorsum in this species has not been previously recorded; the original description of Smith (1921) was based on a two-year-old alcohol-preserved specimen, described as being "Greyish olive ... with an indistinct blackish network".

When restrained for observation and photography, it raised a small hood (Fig. 4) but did not otherwise show any signs of aggression. After a few photographs were taken, the snake was released at the point of capture.

Given that no images of the species in life existed, including in the original description and in more recent literature, and the scarcity of literature records itself, it was thought important to record the occurrence of this specimen, along with images showing live colouration as well as the characteristic "hooding" behaviour, previously reported in its congeners, as well as that of its habitat.

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Literature Cited

- **DAS**, I. 2010. A Field Guide to the Reptiles of South-east Asia. New Holland Publishers (UK), Ltd., London. 376 pp.
- MALNATE, E. V. 1960. The identity of the natricine snake *Tropidonotus baramensis* Smith. *Notulae Naturae* (339): 1–2.
- MANTHEY, U. & W. GROSSMANN. 1997. Amphibien & Reptilien Südostasiens. Natur und Tier, Münster. 512 pp.
- RAHADIAN, R. & I. DAS. 2013. A new record of *Pseudoxenodon inornatus* (Boie in: Boie, 1827) from Gunung Gedeh National Park, west Java, Indonesia. *Hamadryad* 36: 174–177.
- **DE ROOIJ, N. 1917.** The Reptiles of the Indo-Australian Archipelago. II. Ophidia. E. J. Brill, Leiden. xiv + 334 pp.
- SMITH, M. A. 1921. Two new batrachians and a new snake from Borneo and the Malay Peninsula. Journal of the Federated Malay States Museum, Singapore 10: 197–199, pl. II.
- SMITHE, F. B. 1975. Naturalist's Color Guide. Parts I and II. American Museum of Natural History, New York, Part I: 8 pp. + 18 colour swatches, Part II: xiii + 229 pp.
- SMITHE, F. B. 1981. Naturalist's color guide. Part III. American Museum of Natural History, New York, iv + 37 pp.
- **STUEBING, R. 1991.** A checklist of the snakes of Borneo. *Raffles Bulletin of Zoology* 39: 323–362.
- **STUEBING, R. 1994.** A checklist of the snakes of Borneo: addenda and corrigenda. *Raffles Bulletin of Zoology* 42: 931–936.
- STUEBING, R., R. F. INGER & B. LARDNER. 2014. A Field Guide to the Snakes of Borneo. Second edition. Natural History Publications (Borneo) Sdn Bhd., Kota Kinabalu. viii + 310 pp.
- **UETZ**, **P. 2014**. The Reptile Database. Internet resource accessible at: http://reptiles-bat-abase-reptarium.cz. Accessed: 26 July 2014.
- WALLACH, V., K. L. WILLIAMS & J. BOUNDY. 2014. Snakes of the World. A Catalogue of Living and Extinct Species. CRC Press, Boca Raton. xxvii + 1209 pp.
- ZHANG, B. & S. HUANG. 2013. Relationship of Old World Pseudoxenodon and New World Dipsadinae, with comments on underestimation of species diversity of Chinese Pseudoxenodon. Asian Herpetological Research 4: 155–165.

- ZHAO, E.-M. 2006a. Snakes in China. Vol. 1. Anhui Science and Technology Publishing House, Hefei. 372 pp. [in Chinese.]
- ZHAO, E.-M. 2006b. Snakes in China. Vol. 2. Anhui Science and Technology Publishing House, Hefei. 279 pp. [in Chinese.]

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Addition of *Hemidactylus aquilonius* (McMahan & Zug, 2007) to the state fauna for four states of Northeast India

Hemidactylus Oken, 1817, is the second most species rich genus in the family Gekkonidae, and is represented by 141 species worldwide (Uetz 2015). Ahmed *et al.* (2009) reported the occurrence of seven species of *Hemidactylus* from northeastern India, namely: *H. frenatus* Schlegel, 1836, *H. brookii* Gray, 1845, *H. garnotii* (Duméril & Bibron, 1836), *H. platyurus* (Schneider, 1792), *H. flaviviridis* (Rüppell, 1835) and *H. karenorum* (Theobald, 1868). The presence of *H. karenorum* is questionable (Mahony & Zug 2008).

Smith (1935) reported the distribution of *H. bowringii* as including India (then including Bangladesh), Burma (now Myanmar), and China. Additional records from Southeast Asia, including Laos (Bourret 1939) and Vietnam (Bobrov 1992), have since been reported. The *H. bowringii* species complex is now known to occur across tropical and subtropical Asia (Zug *et al.* 2007; McMahan & Zug 2007). The oldest records of the species from the Indian subcontinent were given by Stoliczka (1871),