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Culicid ectoparasitism on Philippine Bronzeback (*Dendrelaphis philippinensis*)

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Subject identified by: Cyrus Job P. Dela Cruz, Rafe M. Brown.

Location: Mount Mayon Natural Park, Barangay Lidong, Municipality of Santo Domingo, Province of Albay, Bicol Peninsula, Philippines (N 13.241127 E 123.733252)
Elevation: 315 metres ASL.
Habitat: Lowland forest with abundant Agoho (*Casuarina equisetifolia*).
Date and time: 03 July October 2018, 19:00 hrs.

Identity of subjects:
(i) Philippine Bronzeback, *Dendrelaphis philippinensis* (Reptilia: Squamata: Colubridae).
(ii) Mosquito (Insecta: Diptera: Culicidae).

Description of record: An adult *Dendrelaphis philippinensis* was observed sleeping on a slender tree branch (Fig. 1). After the snake was documented, it was noticed that a mosquito was actively feeding on the ventral part of the snake. Furthermore, it was observed that the mosquito is adapted in detecting the soft skin part of the snake by feeding on the spaces between ventral scales (Fig 1, inset). Observation lasted for two minutes.

Fig. 1 (and inset). © Cyrus Job P. Dela Cruz

Remarks: *Dendrelaphis philippinensis* is a species belonging to the *Dendrelaphis caudolineatus* complex, characterized by the combination of (i) reduced pattern of black longitudinal stripes, with 2-6 black longitudinal stripes at the midbody, (ii) a pale ventrolateral line is absent or faintly present, (iii) a postocular stripe is present and extends onto the neck and (iv) based on geographical distribution (Southeastern landmasses of the Philippines) (Van Rooijen & Vogel 2012).

Mosquitoes (family Culicidae) are known pests of mammals, but fewer species are known that preferentially feed on ectothermic hosts such as frogs and snakes (Ferguson & Smith, 2012). Several studies document mosquitoes blood feeding preferences on ectothermic hosts e.g. Ferguson & Smith (2012), Burkett-Cadena et al. (2008) and Cupp et al. (2004). Female mosquitoes require blood to produce eggs (Hurd et al. 1995) and possibly transmit parasites and viruses (Burkett-Cadena et al. 2008, Gruia-Gray & Desser 1992, Barta & Desser 1984) that can affect the fitness of an ectothermic host. In the study of Madsen et al. (2005) on Water Python (*Liasis fuscus*), the infectivity of the mosquito-vectored haematozoan parasite *Hepatozoon* sp. affects growth rate, condition, reproductive output, and survival of snakes. But according to the study of Brown et al. (2006) the infection is largely benign in most cases. Thus, the effect of mosquito on *D. philippinensis* in the transmission of parasites and viruses remains ambiguous but possibly applicable.

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