



Presumed Combat Behavior in Greater Black Kraits, *Bungarus niger* Wall 1908, in Trongsa, Bhutan

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The Greater Black Krait (*Bungarus niger*), one of five species of kraits that occur in Bhutan, is a slender, terrestrial, shy and inoffensive, venomous snake that is primarily nocturnal but can be encountered occasionally during the day. This species occurs in northeastern India, Nepal, Bangladesh, and Bhutan (Uetz et al. 2020).

At about 1625 h on 23 August 2020, Damanti Kumari Sunwar, an Agriculture Extension Officer of Langthel County, Trongsa District, Bhutan, observed and videotaped a pair of black snakes on a roadside in Langthel Village (27.34477°N; 90.58163°E, 1,088 m asl; Fig. 1). The video clip was passed on to Kado Rinchen, the local forest ranger, who referred it to the first author, who confirmed the species to be *Bungarus niger*. The snakes were intertwined and both were attempting to assume a superior position (Fig. 2). Male combat behavior has been described in multiple species of snakes (e.g., Fleay 1937; Lowe 1948; Gillingham et al. 1983; Senter et al. 2014; Pradhan 2020; and references therein) but, to the best of our knowledge, not in Greater Black Kraits.

Although the sex of the kraits was not determined, we

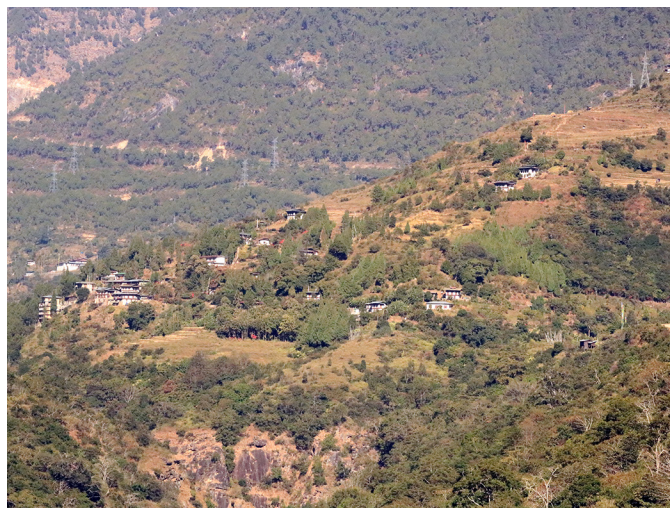


Fig. 1. Langthel Village, Bhutan, where two Greater Black Kraits (*Bungarus niger*) were engaged in presumed male-male combat behavior. Photograph by Kado Rinchen.



Fig. 2. Intertwined Greater Black Kraits (*Bungarus niger*) attempting to assume a superior position in Langthel Village, Bhutan. From a videotape by Damanti Kumari Sunwar.

believe that these snakes were engaged in male-male combat because the behavior of trying to gain an advantage by elevating their heads above that of the other individual was essentially like that described during male combat by Fleay (1937) and others.

Literature Cited

- Fleay, D. 1937. Black snakes in combat. *Proceedings of the Royal Zoological Society of New South Wales* 1936–37: 40–42.
- Gillingham, J.C., C.C. Carpenter, and J.B. Murphy. 1983. Courtship, male combat and dominance in the Western Diamondback Rattlesnake, *Crotalus atrox*. *Journal of Herpetology* 17: 265–270. DOI:10.2307/1563829.
- Lowe, C.H., Jr. 1948. Territorial behavior in snakes and the so-called courtship dance. *Herpetologica* 4: 129–135.
- Pradhan, A. 2020. A fight between two MacClelland's Coralsnakes, *Simomicrurus maclellandi* (Reinhardt 1844), in Darjeeling, India. *Reptiles & Amphibians* 27: 506–507.
- Senter, P., S.M. Harris, S. M., and D.L. Kent. 2014. Phylogeny of courtship and male-male combat behavior in snakes. *PLoS One* 9: e107528. DOI:10.1371/journal.pone.0107528.
- Uetz, P., P. Freed, and J. Hošek. 2020. *The Reptile Database*. <<http://www.reptile-database.org>>.