



Comparison of Two Male Morphs of *Asymmetricata humeralis* Walker (Coleoptera: Lampyridae) from a Mangrove Associated Habitat in Galle, Southern, Sri Lanka

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Abstract

Fireflies are fascinating nocturnal insects. *Asymmetricata humeralis* Walker is a widespread firefly species in all provinces of Sri Lanka. *Asymmetricata humeralis* was originally described as *Colophotia humeralis* by Walker in 1858 in Sri Lanka. During our recent study (2022), two morphs of male *A. humeralis* were identified from a mangrove-associated habitat at Akmeemana, Galle, Southern-wet zone of Sri Lanka. In this study, their morphological features were further compared. The recorded two morphs, (M1 and M2) of *A. humeralis* were observed during a visual encounter study of fireflies. In order to collect data, six field visits were conducted once a month from January to June 2022. Fireflies were observed from 18.00 to 20.00 during each visit and an insect hand net was captured for close examination. Photographs were taken from a digital camera (Sony. 14.1mpxl) and they were compared with the images of syntype-male *A. humeralis* in the Natural History Museum, London. Further, a total of 21 M1 and 16 M2 were examined. According to the findings, the morphology of M1 is identical to the original description of type *A. humeralis*, whereas the color pattern of the elytra and abdominal ventrites of M2 differs from the type specimen. In terms of similarities, the total length and width of fully grown adults are the same in both morphs and there are no shape or size differences in the aedeagus and the aedeagal-sheath between M1 and M2. In terms of differences, M1 is brownish orange elytra with a dark base and apex, abdominal ventrites III brown, IV, and V dark brown, whereas M2 elytra are entirely dark and abdominal ventrites III, IV, and V are black. According to the expert taxonomists' reviews, both M1 and M2 could be considered identical species (*A. humeralis*) because of having identical aedeagus and aedeagal sheaths, which are of species-specific taxonomic significance. Therefore, molecular characterization is recommended of further confirmation of their taxonomy.

Keywords: *Asymmetricata humeralis*, Mangroove Habitat, Male Morphs, Sri Lanka.

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