

User friendly tool in taxonomic studies of invertebrates: a case study on firefly photography in Wellamadama premises, University of Ruhuna

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Taxonomic research especially on insects are very time consuming, poorly funded and have not given sufficient priority. Since it is one of the important basic aspects in understanding the diversity of any organism, it is crucial to utilize reliable techniques to overcome the above mentioned problems. Fine photography has been identified as one of the best alternatives to overcome most of the problems in taxonomic studies. The main aim of this study was to obtain fine photographs of fireflies in Wellamadama premises of the University of Ruhuna, one of the reference sites in present taxonomic research on fireflies in Sri Lanka.

Fireflies used in this study were collected from November 2009 to February 2010. Two firefly species, namely, *Luciola horni*, *Asymmetricata impressa* and another species belongs to *Luciola praeusta* complex were recorded. Photographs taken using Low focal length Dino- Light camera were used for the identification. Major taxonomic characters, such as, dorsal and ventral view of the body, coloration of head, body and legs, number and shape of the light organ, shape of the aedeagal sheaths and fine taxonomic characters such as, size of the punctures on the elytra were accurately measured by the computerized images of Dino- Light camera. These photographs are more detailed and clear than photographs taken by camera attached to the binocular microscope. As such, use of Dino- Light camera could be recommended as one of the best, reliable and user friendly tool in taxonomic studies of small to medium sized (above 2mm) insects.

Key words: *Dino- light photographs, Firefly Taxonomy, Wellamadama premises*