

The Diversity of Black Flies in Peninsular Malaysia

Authors : C. D. Chen, H. Takaoka, Z. Ya'cob, V. L. Low, K. W. Lau, M. Sofian-Azirun

Abstract : Adult black flies (Diptera: Simuliidae) are small (1.5-6.0 mm long), two-winged insects, and are well known as one of the biting flies of medical and veterinary importance. Female of certain species, when they bite and take blood, not only cause severe skin diseases to human and cattle but also play a role as vectors of viral, protozoan and filarial diseases in humans and animals. Black flies also attract environmental biologist and ecologist because their immature states breed only in clean running fresh waters, and larvae are one of the principal processors of plant debris in streams. All these researches on medical and ecological aspects of black flies could not be reliably proceeded without sufficient basic knowledge of the fauna of black flies established by traditional but still important morphotaxonomy. Previously, only 39 species of black flies were recorded from Peninsular Malaysia, all of which are classified into four subgenus (Daviesellum, Gomphostilbia, Nevermannia and Simulium) of the genus Simulium. We carried out faunal surveys and taxonomic works of black flies in Peninsular Malaysia since November 2010. A total of 17 new species and 4 newly recorded species were collected. This increased the number of the described species of black flies in Peninsular Malaysia from 39 to 60. Our results suggest that a much higher diverse nature of black flies in Peninsular Malaysia will be clarified by further extensive surveys.

Keywords : black flies, Simulium, Nevermannia, feuerborni species-group

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