

Studies on congregating fireflies (Coleoptera; Lampyridae; Pteroptyx sp.) in Sabah, Malaysia: a review

Abstract

Five species of congregating firefly (Lampyridae; Pteroptyx sp.) in mainly mangrove forests of Sabah, Malaysia have been recorded. The recorded species are *P. tener*, *P. bearni* (formerly known as *P. similis* in Sabah), *P. gelasina*, *P. valida*, and *P. malacca*. In certain parts of Sabah, these congregating fireflies are used in firefly-watching activities. This activity has no negative impact on the mangrove ecosystem, and it helps generate a profitable 13for local tourism operators. In light of this, congregating fireflies could be designated as umbrella species for the conservation of the mangrove ecosystem. However, in spite of the number of studies on congregating firefly in Sabah, only a few scientific findings have been reported and published locally. In this paper, the authors compiled and reviewed Sabah's congregating firefly studies. The compilation reveals that firefly studies were concentrated at the Klias peninsula, and were mainly focused on species diversity, population density, description of their habitats and display trees; while bionomics and life-cycle of these congregating fireflies are scantily known. Apart from Klias peninsula, the other areas studied and findings published are for the Kinabatangan floodplain, Paitan, Tuaran, Sepilok, Pulau Sakar off the coast of Lahad Datu and Kawang River, while another four unpublished studies were also included. More scientific studies are needed since the only habitat for congregating fireflies, the mangrove area, is fast depleting due to infrastructural development and mangrove deforestation pressures.