

A survey of Acarine ectoparasite of bats (Chirpptera) in Malaysia

Abstract

A comprehensive 8-yr survey of acarine ectoparasites (ticks and mites) of bats was carried out in 18 localities from 2002 to 2009. Most of the surveys were conducted during 14 national biodiversity scientific expeditions throughout Malaysia. The objective was to identify acarines of known public health importance from bats and thus determine whether there is any potential public health risk in Malaysia. Trapping of bats was conducted using Harp traps and Mist nets. In total, 1,579 individuals comprising of 6 families and 52 species of bats were examined alive. In general, 25.6% of the bats were infested with acarines. Infestation rates of ticks, mesostigmatid mites, and chiggers on bats examined were 0.4, 10.4, and 14.7%, respectively. Their prevalence and mean intensity were tabulated. Genera of ticks extracted were *Amblyomma*, *Dermacentor*, *Ixodes*, and *Ornithodoros*. Of these genera, only two species can be identified to species level and they are *Amblyomma cordiferum* and *Ixodes simplex*. In total, 8 genera and 15 species of mesostigmatid mites were found; the species were *Ancystropus eonycteris*, *Ancystropus zeledorii*, *Echinonyssus nasutus*, *Laelaps aingworthae*, *Laelaps nuttalli*, *Laelaps sanguisugus*, *Laelaps sculpturatus*, *Longolaelaps longulus*, *Longolaelaps whartonii*, *Meristaspis lateralis*, *Meristaspis macroglossi*, *Paraperiglischrus rhinolophinus*, *Spinturnix acuminatus*, *Spinturnix americanus*, and *Spinturnix bakeri*. Chiggers on bats were represented by 12 genera and 6 species; the species identified were *Gahrliopia fletcheri*, *Riedlinia lipoxena*, *Trombigastia cadei*, *Walchiella impar*, *Walchiella oudemansi*, and *Whartonia caobangensis*. The study produced an up-to-date list of acarine ectoparasites of bats in Malaysia where a total of 38 genera and 47 species of acarines were listed. Findings of the study demonstrated that 5 genera and 1 species of acarines that may pose potential health risks, can be found on bats.