

## **Species Composition of Bat at the Tenghilan Community Forest in Sabah, Malaysia**

### **ABSTRACT**

The interior forest ecosystem of Sabah is inhabited by a wide range of bat species, and yet their survivals are threatened by the loss and degradation of the interior forest habitat. The relevant past studies mainly focused onto the bat communities presented at the local permanent forest reserves, which subsequently resulted in the lacking in information on the bat communities at the local state land forests. Therefore, a preliminary bat survey was conducted to determine the bat species that inhabited the Tenghilan Community Forest, Sabah, Malaysia. Three existing forest trails were selected as the sampling areas, and then three sampling points were established along each trail. Mist-net trapping technique was used in sampling the bat individuals, and then ancillary data was recorded through visual observation, at each sampling point. A total of 36 bat individuals belonged to 6 different species and 4 different families were captured and recorded within 6 days of sampling period in this study. The trapped individuals were comprised mainly of the least-concerned ( $n = 34$ ) frugivorous and nectarivorous bat species ( $n = 32$ ). Among the three selected trails, the diversity richness and distribution evenness of bat species at Tongkat Ali Trail were determined to be significantly higher ( $H' = 1.351$ ;  $1-D = 0.6979$ ) than those of both the Liposu Trail and Bambang Trail ( $H' = 0$ ,  $t = -11.315$ ,  $p < 0.001$ ;  $1-D = 0$ ,  $t = 14.317$ ,  $p < 0.001$ ). In summary, this state land forest serves as an important habitat for the local bat community, even though the existing local bat composition is different from that of an undisturbed forest in Sabah. Further research should be conducted onto the entire area of this state land forest, by using a longer sampling period and more sampling points in future.