

A Morphometric Analysis of Malaysian Rhinolophus Species

Abstract

A preliminary investigation on the morphometric variations among four *Rhinolophus* species was carried out using voucher specimens from the Universiti Malaysia Sarawak (UNIMAS) Zoological Museum and the Department of Wildlife and National Park (DWNP), Kuala Lumpur. A total of 19 individuals from *R. acuminatus*, *R. affinis*, *R. creaghi* and *R. stheno* were morphologically analysed where 27 linear measurements of body, skull and dental were appropriately recorded. The data were subjected to Discriminant Function Analysis (DFA) and Canonical Variate Analysis (CVA) using SPSS Version 15.0 and Cluster Analysis of Euclidean distance using Minitab Version 14.4. The highest character loadings observed in Function 1, Function 2 and Function 3 were the fifth digit metacarpal length (D5MCL), the fourth digit metacarpal length (D4MCL) and the palatal length (PL) with the standardized canonical discriminant function coefficient value of 22.384, 14.235 and 8.122, respectively. These three characters are identified as the best morphological predictor in for differentiating the four species of *Rhinolophus* in this study. Thus, the morphometric approach which as being more cost-effective could be useful in addition to DNA sequencing for aiding in species identification.