A MORPHOMETRIC ANALYSIS OF *ARANDA*, *ARACHNIS* AND *VANDA* AT SABAH AGRICULTURE PARK

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ABSTRACT

A MORPHOMETRIC ANALYSIS OF *ARANDA*, *ARACHNIS* AND *VANDA* AT SABAH AGRICULTURE PARK

Morphometric analyses of vegetative and floral characters were conducted within *Aranda, Arachnis* and *Vanda* at Sabah Agriculture Park. About 20 morphological characters were measured from 12 *Aranda* species, 3 *Arachnis* species and 9 *Vanda* species. The purpose of the study was to determine the pattern of genetic variation between *Aranda, Arachnis* and *Vanda*. This study attempts to add on to the body of knowledge on the morphological data of orchid hybrids besides improving the orchid hybrids floriculture industry. Data was analysed with multivariate methods (Analysis of Variance, ANOVA and post-hoc test). The result of the ANOVA showed that the characteristic of wild type *Arachnis*, *Vanda* with *Aranda* were statistically significant ($P<0.05$) in vegetative traits. Only leaf width shows no statistically differences ($P>0.05$). Meanwhile, the characteristics of floral traits of wild type *Arachnis*, *Vanda* and *Aranda* were statistically significant ($P<0.05$) except petal width, petal length (left) and lateral petal length (right). The results of ANOVA in hybrid type *Arachnis*, *Vanda* and *Aranda* showed statistically significance ($P<0.05$) except plant height. Meanwhile, the characteristics of floral traits of hybrid type *Arachnis*, *Vanda* and *Aranda* were statistically significant ($P<0.05$) except dorsal petal length. Four dendrograms were constructed using the Between-groups linkage method of Cluster analysis on Squared Euclidian distance. All of the dendrograms showed two major clusters based on vegetative and floral characters.