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**BIOLOGY OF
LICHENS AND BRYOPHYTES**

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**Analysis of morphological and chemical data of lichens in the family
Parmeliaceae in Thailand**

Phylogenetic relationships within the family Parmeliaceae were reconstructed based on analysis of a combined morphological and chemical data. Data matrix included 56 species of 13 genera. In the analysis 50 characters were employed. The analysis was carried out using neighbor-joining method. Results obtained revealed 5 clades with clear relationships of the lichens based on vegetative propagules. The character responsible for the grouping of 3 genera in Clade I is dichotomous rhizine. Clade II includes 4 genera which possess cilia and soredia. Clade III consists of 4 genera having important characters of cilia and isidia. Clade IV also contains 4 genera which produce a distinct substance known as usnic acid. Clade V includes only 1 genus which is grouped based on narrow rhizine. Although both morphological and chemical characters proved useful in resolving phylogeny the results were not strongly supported by a bootstrap test and hence should be interpreted with caution. (Poster: Taxonomy and Systematics, Wednesday in Nautilus)