



USING LICHEN DIVERSITY VALUE (LDV) TO ASSESS ENVIRONMENTAL QUALITY IN BANGKOK AND REMOTE AREA IN THAILAND

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Abstract: Lichen diversity is an efficient mean to assess environmental quality. The aim of this study was to use lichen communities to represent environmental quality between the urban environment of Bangkok and the remote area of Khao Yai National Park (KYNP). Exploration of Lichen Diversity Value (LDV) from the urban site (Rama 9 Public Park) and remote site (KYNP) were performed by placing quadrates size 50 x 10 cm on tree trunk at 1.3 m above ground at four aspect orientations of 9 trees at each site. Environmental factors at each plot were measured including elevation, bark pH and DBH. Lichens in sampling plot were then collected for taxonomic identification at Ramkhamhaeng University laboratory. The study found a total of 100 taxa 22 families of lichens. KYNP had of 87 taxa 22 families, LDV was 46.89, whereas the only 13 taxa 7 families were found in urban site with 33.11 LDV. The richness of lichen species was significantly different ($p = 0.001$) between both sites. Canonical Correlation Analysis (CCA) ordinations separated the lichens into two groups which clearly influenced by the altitude, DBH and lastly bark pH. This study demonstrated that LDV provide fundamental information be used for monitoring environmental quality. Further studies are essential to strengthening the information.

Keywords: lichen diversity value, lichen, bark pH, environment