B521 Landscape structure and vegetation pattern on the urban forest

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Landscape ecological study on the urban forest was carried out in Mt. Cheongye. Through aerial photography and field survey, vegetation map including land-use pattern was made. On the basis of vegetation map, phytosociological survey and vegetation structure was explored. Landscape elements identified were developed area, cultivated field, plantation and forest. Main vegetation units recognized by phytosociological procedure were *Quercus mongolica*, *Q. variabilis*, *Q. acutissima*, *Pinus densiflora*, *Alnus japonica* communities and so on. Plantations were composed of *Robinia pseudoacacia*, *Populus tomentiglandulosa*, and *Pinus rigida*. Patch was more fragmented with small size near human settlement than that of mountain area. However, patches were larger toward the top of mountain range. Vegetation structures of the plantations showed that they will be changed to natural forest by self-thinning and invading of other plants. Vegetation succession of *Q. mongolica* forest occupying the largest area will be possible through two types. One is maintaining itself of *Q. mongolica*, and other is changing to *Sorbus alnifolia* forest.

B522 Legend level and grid size on vegetation mapping in Korea

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A vegetation naturalness map produced from the multicriterion matrix technique (MM-technique) has been recently proposed in terms of vegetation monitoring and assessment. This map was described with two indices such as vegetation class and naturalness value. Present study is focused on the organization of the map content of which is a matter of grid size (unit-area) and legend level for the various types of vegetation and their characteristics. Four grid sizes were tested by 0.0625 km^2 (250-grid), 0.25 km^2 (500-grid), 0.5625 km^2 (750-grid), and 1 km^2 (1000-grid), and legend level was determined by 14 major vegetation types of actual vegetation map in the Eiwang city (53.46 km^2). As a result, the frequencies of each 14 major vegetation types were slightly dependent on a grid size. Among a four grid sizes, the content of vegetation legend of the 250-grid showed the most similar status to that of actual vegetation map. Vegetation assessment of the considered region in which is highly fragmented by aggressive land-uses is necessary to accomplish with the smaller grid size. It was recognized that a grid size proper to show a full account of actual vegetation information is less 500-grid (500 x 500 m^2) in Eiwang city which is a medium size of city area in Korea.