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Landscape ecological studies on green-belt zone in the metropolitan area of Seoul

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A study to clarify landscape structure of urban area was carried out in green belt around Seoul, metropolis of Korea. Through aerial photograph and field survey, vegetation map including land-use pattern was made. On the basis of vegetation map, phytosociological survey and vegetation structure were explored. Landscape elements identified were developed area, cultivated field, plantation and forest. 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 *P. rigida*. Patches near human settlement in the low part of mountain were fragmented into small size. However, patches became larger toward the upper part of mountain. Vegetation structure of the plantations showed that they will be changed to natural forest through successional process. *Q. mongolica* forest occupying the largest area will be possible through two types. The one is maintaining itself as a climax forest, and the other is changing to *Sorbus alnifolia* forest of simple stratification.

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Vegetation mapping for ecological management of urban forest

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A study to prepare ecological management plan of urban forest was carried out on Mt. Hwangnyung in Pusan. Vegetation units were determined by the phytosociological procedure and described in a vegetation map at the scale of 1:5,000. For the mapping of vegetation units, field surveys were accomplished and photographs taken in 1995 and 1996 were analysed to confirm the boundary of each vegetation unit. The vegetation was classified into 14 communities, 16 groups, and 13 subgroups. GIS was introduced to understand the relationship between vegetation units and topographic factors. The effects of artificial disturbances on urban forest were estimated through the analysis of vegetation patches. Management plan based on restoration ecological principle was prepared for each vegetation unit.