

Numerical syntaxonomy of the bryophyte communities of the
coniferous forests in the Taebaek Range

송 종 석

안동대학교 생물학과

The bryophyte communities on the forest floor of the mixed coniferous and deciduous broad-leaf forest and the evergreen coniferous forest of cool temperate and subalpine zones in Mts. Taebaek, Odae and Sulak of Taebaek Range were investigated from the numerical and phytosociological viewpoints. As a result, four bryophyte communities were recognized there, considering the species composition of vascular vegetation; A. *Thuja koraiensis*-*Abies nephrolepis*/*Taxus caespitosa*-*Pinus pumila*/*Hylocomium splendens*-*Pleurozium schreberi* community, B: *Sasamorphia borealis*-*Abies nephrolepis*/*Plagiomnium cuspidatum*-*Aulacomnium heterostichum* community, C. *Abies holophylla*-*Abies nephrolepis*/*Thuidium recognitum*-*Trachycystis immarginata cristatus* community, D. *Meehania urticifolia*-*Abies nephrolepis*/*Hylocomiopsis ovicarpa*-*Taxiphyllum aomoriense* community. Among these, the community A was distributed in higher altitudes and characterized by the species group of the holarctic elements limited in subarctic; subalpine and arctic; alpine zones and was confirmed belonging the *Vaccinio-Piceetea* Br.-Bl. 1939. In contrast the communities B, C and D were distributed in the mixed coniferous and deciduous broad-leaf forest of lower altitudes and characterized by the elements of the cool temperate; montane zone. By the result of the numerical syntaxonomical analysis such as cluster analysis, interspecific association, PCA, the communities were largely divided into the two types. The two types coincided with the community units or the diagnostic species of the bryophyte communities of the subalpine zone and the montane zone, respectively. Also the analysis revealed that the division of the above two forest zones are justifiable. Up to date many investigator have described the coniferous forest distributed above 1000m in Taebaek mountains as the forest vegetation of subalpine zone. However, from the results of the present study, the boundary of the mixed forest and the true subalpine coniferous forest was elucidated to be ca. 1500 m phytosociologically. Species richness was highest in the community A, and the other four communities showed a similar species richness.