

Review on *Abies koreana* Community in Mt. Halla National Park, Korea

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漢拏山 國立公園 구상나무群集의 再檢討

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ABSTRACT

The character species of *Abies koreana* community in Mt. Halla national park, Korea, and its nomenclature was reviewed. According to the code of phytosociological nomenclature (Barkman *et al.*, 1986), the association name was corrected from Saso—Abietetum koreanae Yim *et al.* 1990 nov. in the Korean J. Ecol. 13(2): 101-130 (1990) to Saso quelpaertensi—Abietetum koreanae (Song et Nakanishi) corr. Yim et Kim 1990.

INTRODUCTION

The phytosociological studies on *Abies koreana* forest in Mt. Halla, national park in Korea, were carried out by Song and Nakanishi (1985), Kim and Nam (1985) and Yim *et al.* (1990). They were surveyed on the same forest in the mountain and analyzed with the same method, Z-M one, but their results were not compared and investigated with one another. Therefore, there are some arguments in the nomenclatures of the community by them.

To make clear the problem, we reviewed on the character species and the code of phytosociological nomenclature (Barkman *et al.*, 1986).

ON THE CHARACTER SPECIES OF *Abies koreana* COMMUNITY

Song and Nakanishi (1985) reported the character species of *Abies koreana* community, namely Saso—Abietetum koreanae Song et Nakanishi 1985, as follows: *Abies koreana*, *Sasa palmata*, *Vaccinium japonicum* var. *ciliare*, *Calamagrostis arundinaceae* var. *inaequata*, *Lonicera tartarinowi* var. *leptantha*, *Berberis amurensis* var. *quelpaertensis*, *Cacalia auriculata* var. *kantschatica*, *Pter-*

nopetalum tanakae, *Anemone stolonifera*, *Bistorta suffulta* and *Lastrea japonica* var. *musashiensis*.

Kim and Nam (1985) classified the *Abies koreana* forest into three associations of *Abies koreana*, *Sasa quelpaertensis*—*Abies koreana* and *Quercus mongolica*—*Abies koreana*. According to them, the character species of the three associations are as follows.

Abies koreana association: *Prunus maximowiczii*, *Berberis amurensis* var. *quelpaertensis*, *Betula ermani*, *Elaeagnus umbellata*, *Lonicera sachalinensis*, *Cacalia adenosyoides*, *Fragaria nipponica*, *Circaea alphina*, *Clintonia udensis*, *Majanthemum bifolium*, *Clematis chiisanensis* and *Primula jesoana*.

Sasa quelpaertensis—*Abies koreana* association: *Euonymus alatus*, *Pourthiaea villosa*, *Ilex crenata*, *Acer palmatum*, *Magnolia sieboldii* and *Viburnum furcatum*.

Quercus mongolica—*Abies koreana* association: *Acer palmatum*, *Magnolia sieboldii*, *Elaeagnus umbellata*, *Viburnum furcatum*, *Acer mono*, *Disporum smilacinum*, *Mitchella undulata*, *Hepatica asiatica*, *Senecio nemorensis* and *Hydrangea serrata* for. *acuminata*.

Yim *et al.* (1990) reported that the character species of the *Abies koreana* community, namely Saso—*Abietetum koreanae* Yim *et al.* 1990, are *Abies koreana*, *Sasa quelpaertensis*, *Lonicera maackii* and *Majanthemum bifolium* based on the characterized table obtained from whole Mt. Halla national park area.

DISCUSSION

Comparing above mentioned three papers, we can find the differences in selection of character species and nomenclature. *Sasa palmata* in Song and Nakanishi (1985) is one of the character species of Saso—*Abietetum koreanae* Song et Nakanishi 1985 and the important dominant species in nomenclature. But it seems to be a misidentification of *Sasa quelpaertensis* considering the reports of Kim and Nam (1985), Yim *et al.* (1990) and many other references. Besides, Song and Nakanishi (1985) recorded *Lonicera tartarinowi* var. *leptantha*, while *Lonicera sachalinensis* by Kim and Nam (1985) and *Lonicera maackii* by Yim *et al.* (1990) as a character species. *Majanthemum bifolium* was recorded as a character species by Kim and Nam (1985) and Yim *et al.* (1990) but as a companion species by Song and Nakanishi (1985). Many other character species by Song and Nakanishi (1985) were not recorded by Kim and Nam (1985) and Yim *et al.* (1990) or they recorded as the character and/or differential species of other associations or upper units by Yim *et al.* (1990).

Nomenclature of associations by Kim and Nam (1985) did not follow to the code of phytosociological nomenclature (Barkman *et al.*, 1976, 1986).

Therefore, by the rule of the code (Barkman *et al.*, 1986), Saso—*Abietetum koreanae* by Song and Nakanishi (1985) and Yim *et al.* (1990) should be corrected to Saso *quelpaertensis*—*Abietetum koreanae* (Song et Nakanishi) corr. Yim et Kim 1990, and *Abies koreana*, *Sasa quelpaertensis*, *Lonicera maackii* and *Majanthemum bifolium* must be recorded as the character species of the association.

摘 要

漢拏山 國立公園 구상나무군집에 대한 標徵種의 選定 및 同 群集名들을 植物社會學的 命名規約에 따라 再檢討하였다. 檢討結果 金과 南(1985)은 同群集의 命名에 있어 植物社會學的 命名規約을 따르지 않았고, Song and Nakanishi(1985)가 選定한 重要한 標徵種의 하나인 *Sasa palmata*는 *Sasa quelpaertensis*의 誤同定이며 기타의 標徵種들에 있어서의

差異點들도 隣接群集들을 포함하여 檢討하지 않은 점에 비추어 Song and Nakanishi (1985)가 命名한 *Saso-Abietetum koreanae* Song et Nakanishi 1985와 任等(1990)에 의한 *Saso-Abietetum koreanae* Yim et al. 1990은 결국 同一群集으로 看做되므로 *Saso-Abietetum koreanae* Song et Nakanishi 1985는 *Saso quelpaertensi-Abietetum koreanae*(Song et Nakanishi) corr. Yim et Kim 1990으로 修正하여 記載함이 타당하다.

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