

A213 An unrecorded and a new taxon of *Smilacina* in Korea

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Five taxa of genus *Smilacina* were listed in Korea: *S. bicolor*, *S. davurica*, *S. japonica*, *S. trifolia*, and *S. japonica* var. *mandshurica*. However, an unrecorded *S. robusta* was found in Isl. Cheju. Morphologically it is difficult to identify *S. robusta* from *S. japonica* var. *mandshurica* and *S. japonica* complex. The taxon which has been previously called as *S. davurica* in Korean flora was distinctive from original description and Chinese one and its taxonomic identity was uncertain. To reveal the taxonomic identity and affinities of these two taxa, PCA and clustering analysis were performed based on 35 quantitative and 25 qualitative morphological characters. As a result, unrecorded *S. robusta* in Korea was named "Kunsomdae" and phenogram showed that it was more similar to *S. japonica* var. *mandshurica* than *S. japonica*. The taxon which has been regarded as *S. davurica* in Korea was closely related to *S. bicolor* by having verrucate pollen surface and no hairs on the stem and leaf. Based on these characters, this taxon was newly designated to *S. bicolor* var. *flavovirens* N.S. Lee & J.Y. Kim, var. nov.

A214 Molecular Systematics of the Kelp Families Based on 18S Ribosomal DNA Sequences

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There have been reports on a systematic query that the genus *Undaria* may be separated from the mother family Alariaceae based on ITS data. We reinvestigated that suggestion using 18S-rDNA sequence of the *Undaria* spp., *Ecklonia cava*, *Laminaria japonica*, *Kjellmaniella crassifolia* and *Agarum cribrosum*. As outgroups we used *Pelvetia canaliculata*, *Ascophyllum nodosum* and *Padina tenuis*. Genomic DNAs were extracted by Chelex 100 and CTAB for amplifying the fragments. Nucleotide sequences were analyzed by direct sequencing. The sequences were aligned and compared with the published 18S rDNA sequences of the related species. Parsimony, maximum likelihood and distance method were used for constructing phylogenetic trees. Phylogenetic and systematic discussion on the genus *Undaria* and the related genera will be given in this poster.