F822 Mating Systems in Natural and Artificial Populations of Silk Tree, *Albizia jubrissin* Druzz

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Plant populations are often structured in space, presumably reflecting kinship structure that has arisen through due to restricted dispersal. The mating systems of two groups of natural populations (ca. 30-45 yr.) and artificial populations (ca. 10-15 yr.) of *Albizia jubrissin* Druzz in Korea were determined using enzyme electrophoresis. *A. jubrissin* has at least intermediate outcrossing rate. The low outcrossing rates (*t*m) of artificial populations could be attributed to transplantation of sib for the purpose of construction new habitat, low density, and isolation of flowering mature trees. Especially, transplantation is a major factor that affects the mating system in Korean silk tree. There were heterozygotes observed in all natural populations, whereas artificial populations exhibited varying degrees of inbreeding and heterozygote deficit. Thus, selection againt homozygotes operated in the progony populations thoughout the life cycle. Artificial populations are expected to diverge genetically due to transplants, the random lose of alleles due to small population size by genetic drift.

F823 Comparison of Genetic Diversity Between *Juniperus rigida* and *J. coreana*

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Genetic diversity within and genetic differentiation among geographic areas of *Juniperus rigida* and *J. coreana* were investigated using young shoots as materials. In *J. rigida*, sixteen of the 22 loci (72.7%) showed detectable polymorphism. Genetic diversity (0.224) was higher than average values for species with similar life history traits. The endemic species (*J. coreana*) was to have fewer alleles per locus (1.61 vs. 1.39), lower percent polymorphic locus (72.7% vs. 54.6%), and lower heterozygosity (0.224 vs. 0.199). In population level, genetic diversity parameters also indicated that *J. coreana* was genetically depauperate relative to its presumptive progenitor *J. rigida*. Analysis of fixation indices, calculated for all polymorphic loci in each population, showed a substantial heterozygosity deficiency relative to Hardy-Weinberg expectations. Its deficiency is expected that some of the inbreeding detected is due to consanguineous. Based on the degree of genetic similarity and information on the glacial history of the region, we suggest that *J. coreana* is a local derivative of *J. rigida*, having arisen no more than 100,000 years ago.