

B546 Population Dynamics of *Salix nipponica* and *S. koreensis* during the Riverbed Sedimentation in the Wetland around the Nam-River

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The population dynamics of *Salix nipponica* and *S. koreensis* and the factors were investigated in the wetland around the Nam-River, Chinju, Gyeongsangnam-do, Korea. Each population of *S. nipponica* and *S. koreensis* was divided into four stages during the riverbed sedimentation: the first stage of establishment by *S. nipponica*, the second stage of coexistence by *S. nipponica* and *S. koreensis*, the third stage of dominance by *S. koreensis*, while *S. nipponica* was decreased during the increase of the water table in the sediment, and the fourth stage of the climax by *S. koreensis*, while *S. nipponica* almost died when the water table was twice to the third stage. Tree height, DBH, and density of *S. nipponica* were decreased along the sedimentation, while *S. koreensis* increased. And the composition of understory species showed no differences in each stage. The water table and the clay content effected on the distribution of *Salix* spp. in each stage, according to the PCA. The water table and the clay content increased during the sedimentation, while the other factors were almost the same.

B547 The Relationship Between Occurrence of El Niño and La Niña and First Flowering Date of Three Spring Flowering Species

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Many changes of plant environment have occurred due to recent frequent occurrence of abnormal climate in the world. These changes have caused a serious problem of abnormal phenomenon in plant growth and a disturbance of the ecosystem. This study was carried out to estimate relationship between an occurrence of El Niño and La Niña and first flowering date (FFD) of spring flowering species. A data set of 25 years (1971-1998) of observations on FFD of three species, *Forsythia koreana* Nakai, *Rhododendron mucronulatum* Turcz., and *Prunus serrulata* var. *spontanea* (Max.) Wils. in 20 regions of South Korea was analyzed. There was a close relationship between an occurrence of El Niño and La Niña and FFD of three species in different regions. In Eastern coast and Southern and Central region, mean FFD in El Niño year was 3-4 days earlier than in La Niña or Normal year. But in Southern coast, mean FFD in La Niña year was 4 days later than in El Niño or Normal year. There was also regional difference of mean FFD among three species. Flowering time of *F. koreana* and *R. mucronulatum* was earlier than of *P. serrulata* in Eastern and Southern coast. In Southern and Central region, three species flowered in order of *F. koreana*, *R. mucronulatum*, and *P. serrulata*. As a conclusion, flowering time of three species was affected by the occurrence of El Niño and La Niña and the patterns were differed from regions.