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ECOLOGICAL GENETICS OF LOTUS ALPINUS

Preliminary investigations on chromosome numbers and cyanogenesis in Lotus corniculatus s. l. from Switzerland let to reveal a karyological differentiation within L. alpinus. Diploids ($2n=12$) and tetraploids ($2n=24$) occurring most frequently in homoploid populations; manifest differences in their distribution within the alpine zone and show an interesting pattern of frequency of their respective cyanogenic and acyanogenic variants (Urbanska-Worytkiewicz and Wildi 1975).

The research program established so far deals with reproduction system(s) of the two chromosomic races of L. alpinus and their crossability, cold hardiness, auto- and synecology, detailed distribution within a limited alpine region comprising various types of soils etc. Comparative studies of caryotype and observations on germination are foreseen for 1977. Field work is being completed by pluriserial experiments at 2400 m. a. s. l. and 400 m. a. s. l., respectively as well as by studies carried out in chambers with programmed temperature-light-humidity conditions.