

Committee on Nature Conservation  
Polish Academy of Sciences

W. Szafer Institute of Botany  
Polish Academy of Sciences

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# 6<sup>th</sup> Planta Europa Conference ACTIONS FOR WILD PLANTS

W. Szafer Institute of Botany PAS, Kraków  
23-27 May 2011

BOOK OF ABSTRACTS



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Kraków, Poland 2011

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## Environmental regulation of embryo growth and seed germination in *Delphinium fissum* subsp. *sordidum*

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**Key words:** germination ecology, morphophysiological seed dormancy, Iberian endemism.

Studies on seed dormancy in threatened plants in the Mediterranean Basin are scarce. The aims of this study were to determine the requirements for embryo growth, dormancy break, and germination of *Delphinium fissum* subsp. *sordidum*, a critically endangered Ranunculaceae species in central Spain. Embryo growth and thus germination was responsive to cold stratification. In addition, dry storage (i.e., seed age) and warm stratification prior to cold stratification shortened the cold stratification period required for germination. This evidence lead to conclude that *D. fissum* subsp. *sordidum* seeds have intermediate complex MPD. Germinative ability showed a pronounced inter-annual and inter-population variability. High temperatures induced seeds to secondary dormancy, so seedling emergence in the framehouse was restricted to February–March. The requirements for dormancy break and germination reflect an adaptation to trigger germination in late winter. This study is the first one to document a gradual increase in germination percentage with seed age for plant species with intermediate complex MPD.