

Systematics 2008

Programme and Abstracts

Göttingen 7-11 April 2008

10th Annual Meeting of the
Gesellschaft für Biologische Systematik

18th International Symposium
„Biodiversity and Evolutionary Biology“
of the German Botanical Society



Edited by S. Robbert Gradstein, Simone Klatt, Felix Normann,
Patrick Weigelt, Rainer Willmann and Rosemary Wilson



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***Oxytropis* species in Northeast Asia: genetic diversity and cryopreservation**

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Oxytropis is a large and diverse genus comprising about 300 species (Yurtsev, 1999), among them many rare, endemic and medicinal plants that are in danger of extinction due to natural disasters and human pressure. To conserve the genetic resources of these species, it is necessary to assess its genetic diversity, revealing the centers of diversity for sample collecting and suitable temperature regimes for seed storage. We explore allozyme variation in eight *Oxytropis* species from Northeast Asia: *O. kamtschatica*, *O. revoluta* (sect. *Arctobid*), *O. ochotensis*, *O. erecta*, *O. retusa*, *O. bidakamontana*, *O. calcareorum* (sect. *Orobid*), *O. chankaensis* (sect. *Baicalid*); and we tested the effect of deep freezing in liquid nitrogen (-196°C) on seed viability. The highest level of polymorphism was observed in octoploid *O. ochotensis* ($P = 61.9\%$), the lowest in the rare endemic species from Kurils, *O. retusa* and *O. bidakamontana* ($P = 14.3\%$ for both species). The results indicated that the freezing did not lead to seed death. Responses to cryopreservation appeared as significant increase of germination without scarification, especially in *O. chankaensis* (seed germination was about 90%).