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5- Needle Pine Research – Restoration of Key Species

Report from the Working Party 2.02.15 'The Breeding and Genetic Resources of Five-Needle Pines' Conference in Yangyang, Korea, 22-26 September 2008, by JN King[1], R Sniezko [2] and EW Noh [3]

The conference in Korea highlighted work related to quantitative and molecular genetics, resistance to diseases and pests, hybridization, selection and improvement, genecology and conservation genetics in all five-needle pines. Underlying this work is the threat that this species group faces from climate change and disease especially white pine blister rust. Excursions were made to the natural stands of Pinus Koraiensis in the Sorak and Odae mountains and a special presentation on the Korean effort to control white pine blister rust by eradication of Pedicularis spp.was included.

Conservation efforts in 5-needle pines

Among the major themes of the meeting were the international efforts and concerns towards conserving important gene pools of these ecologically and culturally important species. This ranged from *P. chiapensis* in southern Mexico and Guatemala, which plays a key role in ecosystem regeneration in areas managed under slash-and-burn agricultural systems for indigenous peoples, to critically endangered species in Vietnam, and efforts in conservation genetics in Siberia and the North American Rockies.

Control efforts against white pine blister rust: international cooperation

Another major theme of the conference focused on concerns about white pine blister rust caused by the pathogen *Cronartium ribicola*. Efforts through breeding and selection from countries ranging from Canada, Romania and the USA were discussed as well as the Korean control efforts in the native *P. koraiensis* forests. A commitment to international cooperation and coordination in understanding and helping control this pathogen was made at the meeting.

Photo by Ned Klopfenstein
Participants viewing Pinus strobus (Eastern white pine) provenance trial

Meeting success, next meeting and publication of proceedings

This conference was the first time this group has met in East Asia. Participants were grateful to our Korean hosts for their generosity and providing a very well run and informative conference. There was a commitment to strengthen the international efforts at research in this important species group and encourage ongoing exchange of information and material. The Russian delegation offered to host the next meeting in Tomsk in Siberia and we hope to coordinate this with the IUFRO World Congress to be held in Seoul, Korea in 2010.

1- *BC Ministry of Forests, Victoria, BC Canada*
2- *USDA Forest Service Dorena Genetic Resource Center*
3- *Korean Forest Research Institute*

The following organizations sponsored the Conference:
The Korean Forest Research Institute, The Korean Pine Society, and IUFRO

Number of participants of each representing country: Bulgaria (1), Canada (6), China (1) Japan (2), Korea (45), Mexico (1), Romania (1), Russia (65), Thailand (2), U.S.A.(5), Vietnam (1).

For the publication of the full proceedings, please check the IUFRO Working Party 2.02.15 site in summer 2009 for details.

Also, please note that the September 2006 conference that took place, in Valiug, Romania has recently been published in the Annals of Forest Research, journal of forestry and environmental sciences (Vol. 51, 2008, 180p.) of the Bucharest Forest Research & Management Institute. The proceedings can be ordered free of charge from Dr. Iovu Biris: ecologie@icas.ro; also, the proceedings can be downloaded from the following website: http://www.e-afr.org
Selected papers from the symposium were published in a special issue of Forest Genetics 13 (1), 2008.