

Gene Conservation Technical Advisory Committee (GCTAC)
December 13th, 2005 Meeting
UBC Forest Sciences Building

Attending: Sally Aitken, Jack Woods, Dave Kolotelo, Alvin Yanchuk, Andreas Hamaan, Scott Green, Alex Woods, Diane Douglas, Tongli Wang, Christine Chourmouzis, Andy Bower, Makiko Mimura, Pia Smets

1. **New members**

Alex Woods (Regional Pathologist, Northern Interior Forest Region) and Scott Green (Assistant Professor UNBC) were welcomed to the GCTAC. Alex and Scott bring additional skill sets and diversity to the group.

2. **ETAC**

Diane Douglas addressed the group for ETAC to determine if there were GCTAC projects that ETAC could assist with. TicTalk was also discussed and participation was encouraged. Other ideas came up during the session such as a Trees of BC booklet that would be similar to the Ontario Tree Atlas.

3. **Cataloguing Work**

Sally introduced the subject and Christine Chourmouzis summarized how the data would be organized by species and BEC zone into headings of Climate, Species Overview, Protection Levels and an overall Priority Ranking. Christine is going to forward her draft plan to GCTAC members for comment.

4. **Climate Change**

Tongli Wang provided an overview of the climate change research and a discussion of the Various Climate BC models. Version 2.0 has been released for general use and version 3.0 is currently being worked on. Tongli will write an article comparing the Climate BC models for the TicTalk Newsletter.

5. **Budget and Planning**

Sally provided an overview of 2005/06 expenditures and status of projects. Tongli Wang has taken over Assistant Director duties at the Gene Conservation Centre with Andreas Hamman accepting employment at the University of Alberta. Thank fully Andreas will continue to be involved in GCTAC. A draft budget for 2006-07 was presented and the new students at the Gene Conservation Centre identified:

Karolyn Keir	<i>Cornus nuttallii</i>
Colin Huebert	<i>Quercus garryana</i>
Sierra Curtis-McLane	Climate Change

6. **CFGFC Project Updates**

Makikio Mimura who is planning on defending her PhD in February presented some of her results on the consequences of range peripheries. This research was largely funded outside the FGC Gene Conservation Program, her results have implications for gene conservation. She found that while isolated peripheral populations of Sitka spruce have lower genetic diversity and higher inbreeding than continuous populations, they are better adapted to their local environments than peripheral continuous populations due to a lack of gene flow carrying alleles from other environments. Such populations may be the source of new genetic material for adaptation to new environmental conditions. A high conservation priority should be put on the conservation of isolated peripheral populations. She also found that analyzing pollen haplotypes rather than embryo genotypes is an efficient way to study genetic diversity in seedlots from relatively few seed parents.

Andy Bower who is planning on defending his PhD thesis in the spring of 2006 presented results on his work with germination, early growth, frost hardiness and blister rust resistance in whitebark pine. He has analyzed results from a common garden experiment and is developing recommendations for seed transfer for restoration plantings of this species. The traits showing the steepest genetic clines were timing of needle flush and cold hardiness.

There was some additional discussion on what we can do with whitebark pine. There are individuals who are interested in the species and some have provided samples to the Tree Seed Centre (Brendan Wilson, Selkirk College provided a few cones from putatively blister rust resistant trees / Randy Moody provided seed from putatively blister rust resistant trees as a bulk sample of extracted seed. The TSC will process and clean the Selkirk collection and final clean and store the seed contributed by Randy Moody. These are in-kind donations from the TSC, but if the program expands then funds will be required for processing.

There are no comprehensive plans for whitebark pine and current MOFR resourcing does not support work with this species. We felt that obtaining ex-situ gene conservation samples was an important and do-able immediate strategy for gene conservation.

MOTION : That GCTAC facilitate mechanisms for obtaining seed collections in whitebark pine for conservation. Unanimously Passed.

7. **Mountain Pine Beetle**

We discussed the overwhelming impact that Mountain Pine Beetle is having on forestry in BC. Based on the fact that mortality averages 80% in stands and that regeneration will still occur from dead trees we felt that there was not an immediate gene conservation issue with Pli and that no immediate response was necessary. There was some discussion on an article for TicTalk, but I don't

think anyone volunteered to do this.

8. **Other Initiatives**

I indicated to members that Dale Simpson had conducted a survey of ex-situ gene conservation efforts that were only for gene conservation. I supplied them with a summary of our seed bank. The meeting in January that Sally and Alvin were invited to were discussed and this will lead into the Forum of Conservation of Forest Genetic Resources that will occur with CTIA next summer in PEI.

Meeting Adjourned