

GANCHO TRIFONOV SLAVOV

July 17, 2006

Department of Biology, West Virginia University
53 Campus Drive, Morgantown, WV 26506

Tel: 304-293-5201 ext. 31480

E-Mail: gancho.slavov@mail.wvu.edu

Research interests

Population genetics and evolutionary biology of forest trees, molecular bases for adaptation, tree improvement and gene conservation, biostatistics

Education

- 2000 – 2004 **PhD**, Oregon State University (OSU), Corvallis, Oregon, USA
Major: Forest Science *Minor:* Statistics
Thesis: Development and application of SSR markers for measuring gene flow in Douglas-fir
- 1994 – 2000 **MS**, University of Forestry (UF), Sofia, Bulgaria
Major: Forestry
Thesis: Population genetic structure of mountain dwarf pine (*Pinus mugo* Turra) in Bulgaria

Professional experience

- Apr 2006 – present **Research Associate**, Department of Biology, West Virginia University
Conduct research on the population genetics, genomics, and molecular bases of adaptation of aspen and cottonwood species.
- May 2005 –
Feb 2006 **Assistant Professor**, Department of Dendrology, UF, Sofia, Bulgaria
Taught plant anatomy and systematics. Developed and submitted 4 research proposals. Planned and conducted research on the population genetics of local tree species.
- May 2005 –
Apr 2006 **Technical Editor**, Propagation of Ornamental Plants
Edited 23 journal articles.
- Oct 2005 –
Mar 2006 **English Instructor**, BRITANICA Education Centre, Sofia, Bulgaria
Taught an intensive upper intermediate English class for the Bulgarian Ministry of Finance personnel.
- Jan – Apr 2005 **Research Associate**, Forest Research Institute, Sofia, Bulgaria
Developed 2 research proposals.
- 2000 – 2004 **Graduate Research Assistant**, Department of Forest Science (OSU), and Pacific Northwest Tree Improvement Research Cooperative
Developed microsatellite markers for Douglas-fir. Using computer simulations, evaluated the statistical properties of a paternity exclusion approach for estimating pollen flow using microsatellite markers. Analyzed genetic data from a clonal seed orchard of Douglas-fir to estimate pollen flow and characterize mating patterns.
- 1997 – 2000 **Graduate Research Assistant**, Department of Dendrology, UF
Characterized the isozyme diversity of mountain dwarf pine in Bulgaria.

Professional service

- 2002 – present **Ad Hoc Journal Referee**, Canadian Journal of Forest Research (3 manuscripts), Forest Ecology and Management, Theoretical and Applied Genetics, Proceedings of the National Academy of Sciences of the USA, New Phytologist (5 manuscripts), Heredity, New Zealand Journal of Crop and Horticultural Research, Propagation of Ornamental Plants (2 manuscripts)
- Winter 2003 **Co-instructor** (jointly with Drs. Amy Brunner, Joyce Eberhart, and Loretta Winton at OSU). *Taught a one-credit, graduate-level class on the use of PCR techniques in ecology.*
- Summer 2002 **Co-mentor** (jointly with Dr. Steven Strauss at OSU), Apprenticeships in Science and Engineering (ASE) Program. *Co-mentored Jacob Eccles, a high school student.*
- 2001 – 2002 **Co-host** (jointly with Drs. Steven Strauss and Glenn Howe at OSU). *Hosted Dr. Igor Yakovlev, a visiting Fulbright Scholar from Russia.*

Peer-reviewed publications

- Slavov GT, Howe GT, Birkes DS, Gyaourova AV, Adams WT (2005) Estimating pollen flow using SSR markers and paternity exclusion: accounting for mistyping. *Molecular Ecology*, 14: 3109-3121
- Slavov GT, Howe GT, Adams WT (2005) Pollen contamination and mating patterns in a Douglas-fir seed orchard as measured by simple sequence repeat markers. *Canadian Journal of Forest Research*, 35: 1592-1603
- Slavov GT, Howe GT, Yakovlev I, Edwards KJ, Krutovskii KV, Tuskan GA, Carlson JE, Strauss SH, Adams WT (2004) Highly variable SSR markers in Douglas-fir: Mendelian inheritance and map locations. *Theoretical and Applied Genetics*, 108: 873-880
- DiFazio SP, Slavov GT, Burczyk J, Leonardi S, Strauss SH (2004) Gene flow from tree plantations and implications for transgenic risk assessment. *In: Plantation forest biotechnology for the 21st century.* Walter C, Carson M (eds.) Research Signpost. Trivandrum, India. Pp. 405-422
- Slavov GT, DiFazio SP, Strauss SH (2004) Gene flow in forest trees: Gene migration patterns and landscape modeling of transgene dispersal in hybrid poplar. *In: Introgression from genetically modified plants into wild relatives.* den Nijs HCM, Bartsch D, Sweet J (eds.) CABI Publishing, Wallingford, UK. Pp. 89-106
- Slavov GT, Zhelev P (2004) Allozyme variation, differentiation, and inbreeding in populations of *Pinus mugo* in Bulgaria. *Canadian Journal of Forest Research*, 34(12): 2611-2617

Other publications

- Cherry M, Howe GT, Slavov GT (2005) Pacific Northwest Tree Improvement Research Cooperative Annual Report, 2003-2004. Oregon State University, College of Forestry, Corvallis, OR. 27 pp.
- Howe GT, Cherry M, Slavov GT (2004) Pacific Northwest Tree Improvement Research Cooperative Annual Report, 2002-2003. Oregon State University, College of Forestry, Corvallis, OR. 45 pp.

Howe GT, Slavov GT, Anekonda TS (2003) Pacific Northwest Tree Improvement Research Cooperative Annual Report, 2001-2002. Oregon State University, College of Forestry, Corvallis, OR. 29 pp.

Slavov GT, DiFazio SP, Strauss SH (2002) Gene flow in forest trees: From empirical estimates to transgenic risk assessment. *In: Ecological and agronomic consequences of gene flow from transgenic crops to wild relatives. Meeting proceedings.* Pp. 113-133

<http://www.biosci.ohio-state.edu/~asnowlab/Proceedings.pdf>

Howe GT, Anekonda TS, Slavov GT (2001) Pacific Northwest Tree Improvement Research Cooperative Annual Report, 2000-2001. Oregon State University, College of Forestry, Corvallis, OR. 33 pp.

Invited talks

Slavov GT (2002) Molecular markers: an overview. Genomics of Douglas-fir: implications for applied tree improvement and gene conservation (Workshop). Oregon State University, Corvallis, OR, November 14, 2002

Howe GT, Slavov GT (2002) Research priorities for tree improvement in the Pacific Northwest. Northwest Seed Orchard Managers Association Meeting, Eureka, California, June 18, 2002

Slavov GT (2002) Applications of DNA fingerprinting techniques in forest tree breeding. Northwest Seed Orchard Managers Association Meeting, Eureka, California, June 19, 2002

Abstracts, posters, and contributed presentations

Slavov GT, Howe GT, Strauss SH, Adams WT (2004) SSR Markers for measuring gene flow in Douglas-fir. Population, evolutionary and ecological genomics of forest trees. (IUFRO Meeting), Asilomar, California, September 13-17, 2004. *Presentation and abstract*

Slavov GT, Yakovlev I, Howe GT, Strauss SH (2002) Identification and characterization of microsatellite markers in Douglas-fir (*Pseudotsuga menziesii* (Mirb.) Franco). *In: Dynamics and conservation of genetic diversity in forest ecosystems. International conference, Strasbourg, France, Dec 2-5, 2002. Poster and abstract*

<http://www.pierroton.inra.fr/genetics/Dygen/abstracts.pdf>

Slavov GT, DiFazio SP, Howe GT, Adams WT (2002) SSR-based parentage analysis: options and challenges. Studying mating system and gene flow in conifers using microsatellite markers (Workshop). Madrid, Spain, September 16-20, 2002. *Presentation*

Slavov GT, Howe GT, Adams WT (2002) Measuring pollen contamination in Douglas-fir seed orchards using microsatellites. Studying mating system and gene flow in conifers using microsatellite markers (Workshop). Madrid, Spain, September 16-20, 2002. *Presentation*

Computer skills

Statistical software (e.g., S-PLUS, SAS)

Population genetics software (e.g., GENEPOP, FSTAT, GENETIX, GDA)

Parentage analysis software (e.g., CERVUS, FAMOZ)

Programming languages (MATLAB, C)

Foreign languages

Fluent in English and Spanish. Working knowledge of Russian and French.

Honors, awards, and scholarships

Gamma Sigma Delta, The Honor Society of Agriculture (2004)

Outstanding PhD student, Department of Forest Science, OSU (2003)

Henry and Mildred Fowells Fellowship, Department of Forest Science, OSU (2003)

Oregon Sports Lottery Graduate Scholarship, OSU (2002)

Jack Morgan Fellowship, College of Forestry, OSU (2002)

A. W. Moltke Memorial Fellowship, College of Forestry, OSU (2000, 2001)

Eureka Foundation Scholarship, Sofia, Bulgaria (1994–1998)

References

1. Dr. Stephen DiFazio, post-doctoral advisor at WVU (Tel: 304-293-5201/ext.31512, E-mail: Stephen.Difazio@mail.wvu.edu).
2. Dr. Peter Zhelev, MS thesis advisor and supervisor at UF (Tel: +3592-91-907/ext.389, E-mail: Zhelev@ltu.bg).
3. Dr. Glenn Howe, PhD thesis advisor at OSU (Tel: 541-737-9001, E-mail: Glenn.Howe@oregonstate.edu).
4. Dr. W. Tom Adams, PhD thesis advisor at OSU (Tel: 541-737-6583, E-mail: W.T.Adams@oregonstate.edu).
5. Dr. Steven Strauss, PhD thesis advisor at OSU (Tel: 541-737-6578, E-mail: Steve.Strauss@oregonstate.edu)