

STEVEN H. STRAUSS

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Professor
Department of Forest Science
Oregon State University, FSL 020
Corvallis, Oregon, USA 97331-7501

Phone: 541/737-6578
Fax: 541/737-1393
Email: strauss@FSL.orst.edu
Born: November 28, 1955

PROFESSIONAL EXPERIENCE

- 7/95-present **Professor**, Department of Forest Science, Molecular and Cellular Biology, and Genetics, OSU
- 1/01-4/01 **Visiting Professor**, Oxford University, Department of Plant Science, Oxford Forestry Institute, Linacre College
- 7/90-6/95 **Associate Professor**, Department of Forest Science, OSU
- 7/94-present **Director, Tree Genetic Engineering Research Cooperative**, College of Forestry, OSU
- 6/93-8/93 **Visiting Scientist**, INRA Divisions of Cellular Biology, Versailles & Forestry Research, Orleans, France
- 9/91-6/92 **Visiting Professor**, College of Forestry, Australian National University, Canberra, Australia
- 9/91-8/92 **Visiting Scientist**, CSIRO Division of Plant Industry, Canberra, Australia
- 6/90-7/90 **Visiting Scientist**, Department of Botany, Tromsø University, Norway
- 7/85-6/90 **Assistant Professor**, Department of Forest Science, and Genetics Program, OSU

EDUCATION

- Ph.D. 1985 **University of California at Berkeley**, Department of Forestry and Resource Management (Genetics)
- M.F.S. 1980 **Yale University**, School of Forestry and Environmental Studies (Forest Biology)
- B.S. 1978 **Cornell University**, College of Agriculture and Life Science (Biology)

HONORS AND PROFESSIONAL ACTIVITIES

- ◆ NSF Presidential Young Investigator, 1989
- ◆ Phi Kappa Phi, Oregon State University, Emerging Scholar Award, 1989
- ◆ Dean's Award for Outstanding Achievement, OSU College of Forestry, 1998
- ◆ Chairman, International Union of Forestry Research Organizations Working Party on Molecular Genetics of Forest Trees, S.04-06, 1995-2000.
- ◆ Panel Manager, Biotechnology Risk Assessment Grants, 1998
- ◆ National Science Foundation Grant Review Panelist
 - Conservation & Restoration Biology, 1990

- Population Biology & Physiological Ecology, 1991
- ◆ U.S. Department of Agriculture Competitive Grants Review Panelist
 - Forest Biology, 1990
 - Biotechnology Risk Assessment, 1998
- ◆ National Research Council, National Academy of Sciences, Panelist
 - NSF Graduate Fellowship Panel, 1993
 - Intellectual Property Issues in Plant Biotechnology, 1996
 - Review of Biofuels Research Program of the U.S. Department of Energy, 1999
- ◆ Planning Committee, Institute for Forest Biotechnology, Research Triangle Park, North Carolina, 1999-2000
- ◆ Group Leader, Information Systems for Biotechnology/USDA APHIS Workshop on Ecological Effects of Pest Resistance Genes, 1999
- ◆ Member of Editorial Board, *Forest Genetics*, 1994-96
- ◆ Member, Society of American Foresters and American Association for the Advancement of Science
- ◆ Major professor for degrees: 8 MS, 7 PhD, 1 BS.
 - Advised 11 postdoctoral scientists.
- ◆ Peer review publications: 64.
- ◆ Other publications: 29.

REFEREED PUBLICATIONS

1. Strauss, S.H., R. Meilan, and S. DiFazio. 2001. Transgenic poplars in context. *Forestry Chronicle* (in press).
2. Mohamed, R., R. Meilan, and S.H. Strauss. 2001. Bacterio-opsin gene over-expression fails to elevate fungal disease resistance in transgenic poplar (*Populus*). *Can. J. For. Res.* (in press).
3. Johnson, R., N. Wheeler, and S.H. Strauss. 2000. Economic feasibility of marker-aided selection in Douglas-fir. *Can. J. For. Res.* 30:1942-1952.
4. Bradshaw, H.D., Jr., and S.H. Strauss. 2000. Breeding strategies for the 21st century: domestication of poplar. (book chapter, in press).
5. Brunner, A.M., W.H. Rottmann, L.A. Sheppard, K. Krutovskii, S.P. DiFazio, S. Leonardi and S.H. Strauss. 2000. Structure and expression of duplicate *AGAMOUS* orthologs in poplar. *Plant Molec. Biol.* 44:619-634.
6. Sheppard, L.A., A.M. Brunner, K.V. Krutovskii, W.H. Rottmann, J.S. Skinner, S.S. Vollmer and S.H. Strauss. 2000. A *DEFICIENS* homolog from the dioecious tree *Populus trichocarpa* is expressed in both female and male floral meristems of its two-whorled, unisexual flowers. *Plant Physiology* 124:627-639.
7. Thompson, P.B., and S.H. Strauss. 2000. Research ethics for molecular silviculture. P. 585-611 In: *Molecular Biology of Woody Plants*, S.M. Jain & S.C. Minocha, Eds., Kluwer Academic Publishers, The Netherlands.

8. Meilan, R., K.-H. Han, C. Ma, R.R. James, J.A. Eaton, B.J. Stanton, E. Hoiem, R.P. Crockett and S.H. Strauss. 2000. Development of glyphosate-tolerant hybrid cottonwoods. *TAPPI J.* 83(1):164-166.
9. Rottmann, W.H., R. Meilan, L.A. Sheppard, A.M. Brunner, J.S. Skinner, C. Ma, S. Cheng, L. Jouanin, G. Pilate and S.H. Strauss. 2000. Diverse effects of overexpression of *LEAFY* and *PTLF*, a poplar (*Populus*) homolog of *LEAFY/FLORICAULA*, in transgenic poplar and *Arabidopsis*. *Plant J.* 22: 235-246.
10. Han, K.-H., R. Meilan, C. Ma and S.H. Strauss. 2000. An *Agrobacterium* transformation protocol effective in a variety of cottonwood hybrids (genus *Populus*). *Plant Cell Rep.* 19:315-320.
11. Skinner, J.S., R. Meilan, A.M. Brunner, and S.H. Strauss. 2000. Options for genetic engineering of floral sterility in forest trees. In: S.M. Jain and S.C. Minocha (Eds.), *Molecular Biology of Woody Plants*, volume 1. Kluwer Academic Publishers, Dordrecht, The Netherlands, pp. 135-153.
12. Morrison, D.L., G. Coleman, B.E. Dale, A.J. Finizza, R. Hall, D. Johnson, R. Nichols, D. Sperling, and S.H. Strauss. 1999. Review of the Research Strategy for Biomass-Derived Transportation Fuels. National Research Council (USA), Board on Energy and Environmental Systems. National Academy Press, Washington, D.C. 48 pp.
13. Krutovskii, K.V., S.Y. Erofeeva, J.E. Aagaard, and S.H. Strauss. 1999. Simulation of effects of dominance on estimates of population genetic diversity and differentiation. *J. Hered.* 90:499-502.
14. Wu, J., K. Krutovskii, and S.H. Strauss. 1999. Nuclear DNA diversity, population differentiation, and phylogenetic relationships in the California Closed-Cone Pines based on RAPD and allozyme markers. *Genome* 42:893-908.
15. James, R.R., B.A. Croft, and S.H. Strauss. 1998. Susceptibility of the cottonwood leaf beetle (Coleoptera: Chrysomelidae) to different strains and transgenic toxins of *Bacillus thuringiensis*. *Environ. Entomol.* 28:108-115.
16. Wu, J., K.V. Krutovskii, and S.H. Strauss. 1998. Abundant mitochondrial genome diversity, population differentiation, and convergent phenotypic evolution in pines. *Genetics* 150:1605-1614.
17. Southerton, S.S., S.H. Strauss, M.R. Olive, R.L. Harcourt, V. Decroocq, X. Zhu, D.J. Llewellyn, W.J. Peacock, and E.S. Dennis. 1998. *Eucalyptus* has a functional equivalent of the *Arabidopsis* floral meristem identity gene *LEAFY*. *Plant Molec. Biol.* 37:897-910.
18. Brunner, A.M., R. Mohamed, R. Meilan, L.A. Sheppard, W.H. Rottmann, and S.H. Strauss. 1998. Genetic engineering of sexual sterility in shade trees. *J. Arboricult.* 24(5):263-273.
19. Aagaard, J.E., K.V. Krutovskii, and S.H. Strauss. 1998. RAPDs and allozymes exhibit similar levels of diversity and differentiation among populations and races of Douglas-fir. *Heredity* 81:69-78.
20. Aagaard, J.E., K.V. Krutovskii, and S.H. Strauss. 1998. RAPD markers of mitochondrial origin exhibit lower population diversity and higher differentiation than RAPD markers of nuclear origin in Douglas-fir. *Molec. Ecol.* 7:801-812.
21. James, R., S. DiFazio, A. Brunner, and S.H. Strauss. 1998. Environmental effects of genetically engineered woody biomass crops. *Biomass & Bioenergy* 14:403-414.

22. Krutovskii, K.V., S.S. Vollmer, F.C. Sorensen, W.T. Adams, S.J. Knapp, and S.H. Strauss. 1998. RAPD genome maps of Douglas-fir. *J. Hered.* 89:197-205.
23. Han, K.-H., C. Ma, and S.H. Strauss. 1997. Matrix attachment regions (MARs) enhance transformation frequency and transgene expression in poplar. *Transgen. Res.* 6: 415-420.
24. Han, K.-H., M.P Gordon, and S.H. Strauss. 1997. High frequency transformation of cottonwoods (genus *Populus*) by *Agrobacterium rhizogenes*. *Can. J. Forest. Res.* 27:464-470.
25. Krutovskii, K.V., S.S. Vollmer, F.C. Sorensen, W.T. Adams, and S.H. Strauss. 1997. Effects of megagametophyte removal on DNA yield and early seedling growth in coastal Douglas-fir. *Can. J. For. Res.* 27:964-968.
26. Mullins, K.V., D.J. Llewellyn, V.J. Hartney, S. Strauss, and E.S. Dennis. 1997. Regeneration and transformation of *Eucalyptus camaldulensis*. *Plant Cell Rep.* 16:787-791.
27. Strauss, S.H., S.A. Knowe, and J. Jenkins. 1997. Benefits and risk of transgenic, Roundup Ready[®] cottonwoods. *J. Forestry* 95(5):12-19.
28. Han, K.-H., M.P Gordon, and S.H. Strauss. 1996. Cellular and molecular biology of *Agrobacterium*-mediated transformation of plants and its application to genetic transformation of *Populus*. In: *Biology of Populus and Its Implication for Management and Conservation*, R.F. Stettler, H.D. Bradshaw, Jr., P.E. Heilman, and T.M. Hinckley (eds), National Research Council Canada, Ottawa, ON, pp. 201-222.
29. Krupkin, A.B., A. Liston, and S.H. Strauss. 1996. Phylogenetic analysis of the hard pines (*Pinus* subgenus *Pinus*, Pinaceae) from chloroplast DNA restriction site analysis. *Am. J. Bot.* 83:489-498.
30. Tsumura, Y., K. Ohba, and S.H. Strauss. 1996. Diversity and inheritance of inter-simple-sequence repeat polymorphism in Douglas-fir (*Pseudotsuga menziesii*) and sugi (*Cryptomeria japonica*). *Theor. Appl. Genet.* 92:40-45.
31. Aagard, J. E., S.S. Vollmer, F.C. Sorensen, and S.H. Strauss. 1995. Mitochondrial DNA products are frequent among RAPD profiles and strongly differentiated among races of Douglas-fir. *Molec. Ecol.* 4:441-447.
32. Hipkins, V.H., K.A. Marshall, D.B. Neale, W.H. Rottmann, and S.H. Strauss. 1995. A mutation hotspot in the chloroplast genome of a conifer (Douglas-fir: *Pseudotsuga*) is caused by variability in the number of direct repeats derived from a partially duplicated tRNA gene. *Curr. Genet.* 27:572-579.
33. Strauss, S.H., W.H. Rottmann, A.M. Brunner, L.A. Sheppard. 1995. Genetic engineering of reproductive sterility in forest trees. *Molec. Breed.* 1:5-26.
34. Hipkins, V.H., K. Krutovskii, and S.H. Strauss. 1994. Organelle genomes in conifers: structure, evolution, and diversity. *Forest Genet.* 1:179-189
35. Bae, H., E. M. Hansen, and S.H. Strauss. 1994. Restriction fragment length polymorphisms demonstrate single origin of infection centers in *Phellinus weirii*. *Can. J. Bot.* 72:440-447.
36. Savard, L., P. Li, S.H. Strauss, M.W. Chase, M. Michaud, and J. Bousquet. 1994. Chloroplast and nuclear gene sequences indicate late Pennsylvanian time for the last common ancestor of extant seed plants. *Proc. Natl. Acad. Sci. USA* 91:5163-5167.
37. Boes, T., and S.H. Strauss. 1994. Floral phenology and morphology of *Populus trichocarpa* (Salicaceae). *Amer. J. Bot.* 81:562-567.

38. Howe, G.T., B. Goldfarb, and S.H. Strauss. 1994. *Agrobacterium*-mediated transformation of hybrid poplar suspension cultures and regeneration of transformed plants. *Plant Cell Tiss. Org. Cult.* 36:59-71.
39. Chase, M.W. et al. (35 authors). 1993. Phylogenetics of seed plants: an analysis of nucleotide sequences from the plastid gene *rbcL*. *Ann. Missouri Bot. Gard.* 80: 528-580.
40. Hong, Y.-P., V. Hipkins, and S.H. Strauss. 1993. Chloroplast DNA diversity among trees, populations, and species in the California Closed-Cone Pines (*P. radiata*, *P. muricata*, and *P. attenuata*). *Genetics* 135: 1187-1196.
41. Hong, Y.-P., A.B. Krupkin, and S.H. Strauss. 1993. Chloroplast DNA transgresses species boundaries and evolves at variable rates in the California Closed-Cone Pines. *Molec. Phylog. Evol.* 2:322-329.
42. Strauss, S.H., Y.-P. Hong, and V. Hipkins. 1993. High levels of population differentiation for mitochondrial DNA haplotypes in *Pinus radiata*, *muricata*, and *attenuata*. *Theor. Appl. Genet.* 86:605-611.
43. Strauss, S.H., J. Bousquet, V. Hipkins, and Y.-P. Hong. 1992. Biochemical and molecular genetic markers in biosystematic studies of forest trees. *New Forests* 6:125-158.
44. Strauss, S.H., R. Lande, and G. Namkoong. 1992. Obstacles to molecular-marker-aided selection in forest trees. *Can. J. For. Res.* 22:1050-1061.
45. Bousquet, J., S.H. Strauss, A.H. Doerksen, and R.A. Price. 1992. Extensive variation in evolutionary rate of *rbcL* gene sequences among seed plants. *Proc. Natl. Acad. Sci. USA* 89:7844-7848.
46. Bousquet, J., S.H. Strauss, and P. Li. 1992. Congruence between phylogenies estimated from morphology and *rbcL* sequences in the family Betulaceae. *Molec. Biol. Evol.* 9:1076-1088.
47. Goldfarb, B., S.H. Strauss, G.T. Howe, & J.B. Zaerr. 1991. Transient expression of microprojectile introduced DNA in Douglas-fir cotyledons. *Plant Cell Rep.* 10:517-521.
48. Goldfarb, B., G.T. Howe, L.M. Bailey, S.H. Strauss, & J.B. Zaerr. 1991. A liquid cytokinin pulse induces adventitious shoot formation from Douglas-fir cotyledons. *Plant Cell Rep.* 19:156-160.
49. Strauss, S.H., G. Howe, and B. Goldfarb. 1991. Prospects for genetic engineering of insect resistance in forest trees. *For. Ecol. Manag.* 43:181-209.
50. Hipkins, V.D., C.-H. Tsai, and S.H. Strauss. 1990. Sequence of the gene for the large subunit of ribulose 1,5-bisphosphate carboxylase from a gymnosperm, Douglas-fir. *Plant Molec. Biol.* 15:505-507.
51. Strauss, S.H., A.H. Doerksen, and J.R. Byrne. 1990. Evolutionary relationships of Douglas-fir and its relatives from DNA restriction fragment analysis. *Can. J. Bot.* 68:1502-1510.
52. Strauss, S.H., and G.T. Howe. 1990. An investigation of somatic variability for ribosomal RNA gene number in old-growth sitka spruce. *Can. J. For. Res.* 20:853-856.
53. Strauss, S.H., and A.H. Doerksen. 1990. Restriction fragment analysis of pine phylogeny. *Evolution* 44:1081-1096.
54. Tsai, C.-H., and S.H. Strauss. 1989. Dispersed repetitive sequences in the chloroplast genome of Douglas-fir. *Curr. Genet.* 16:211-218.
55. Strauss, S.H., D.B. Neale, and D.B. Wagner. 1989. Genetics of the chloroplast in conifers. *J. Forestry* 87(8):11-17.

56. Millar, C.I., S.H. Strauss, R.W. Westfall, and M.T. Conkle. 1988. Allozyme differentiation and biosystematics of the Californian closed-cone pines (Subsection *Oocarpae*. Little and Critchfield). *Syst. Bot.* 13:351-370.
57. Strauss, S.H., and C.-H. Tsai. 1988. Ribosomal gene number variability in Douglas-fir. *J. Hered.* 79:453-458.
58. Strauss, S.H., J.D. Palmer, G. Howe, and A. Doerksen. 1988. Chloroplast genomes of two conifers lack a large inverted repeat and are extensively rearranged. *Proc. Natl. Acad. Sci. USA.* 85:3898-3902.
59. Strauss, S.H. 1987. Heterozygosity and developmental stability among inbred and crossbred trees of knobcone pine. *Evolution* 41:331-339.
60. Strauss, S.H., and W.J. Libby. 1987. Allozyme heterosis in radiata pine is poorly explained by overdominance. *Am. Naturalist* 130:879-890.
61. Strauss, S.H. 1986. Heterosis at isozyme loci under inbreeding and crossbreeding in *Pinus attenuata*. *Genetics* 113:115-134.
62. Plessas, M.E., and S.H. Strauss. 1986. Allozyme differentiation among populations, stands, and cohorts in Monterey pine. *Can. J. For. Res.* 16:1155-1164.
63. Strauss, S.H., and M.T. Conkle. 1986. Segregation, linkage, and diversity of allozymes in knobcone pine. *Theor. Appl. Genet.* 72:483-493.
64. Strauss, S.H., and F.T. Ledig. 1985. Seedling architecture and life history evolution in pines. *Am. Naturalist.* 125:702-715.
65. Strauss, S.H., and W.B. Critchfield. 1982. Inheritance of β -pinene in xylem oleoresin of knobcone x Monterey pine hybrids. *Forest Sci.* 28:687-696.

OTHER PUBLICATIONS

1. Strauss, S.H., K. Raffa and P. List. 2000. Ethics and transgenic plantations. *J. Forestry* 98(7):47-48.
2. Strauss, S.H., S. DiFazio, and R. Meilan. 2000. Challenges to commercial uses of transgenic trees in forest plantations: The case of poplars. International Symposium on Biosafety of Transgenic Crops, Saskatoon, Canada.
3. Strauss, S., and R. Meilan. 2000. Tree Genetic Engineering Research Cooperative. *Western Forester* 45(2):14.
4. Meilan, R., Ma, C., Cheng, S., Eaton, J.A., Miller, L.K., Crockett, R.P., DiFazio, S.P., and Strauss, S.H. 2000. High levels of Roundup[®] and leaf-beetle resistance in genetically engineered hybrid cottonwoods. *In*: K.A. Blatner, J.D. Johnson, and D.M. Baumgartner, eds., *Hybrid Poplars in the Pacific Northwest: Culture, Commerce and Capability*. Washington State University Cooperative Extension Bulletin MISC0272, Pullman, WA. pp. 29-38.
5. Strauss, S., W. Boerjan, J. Cairney, M. Campbell, J. Dean, D. Ellis, L. Jouanin, and B. Sandberg. 1999. Forest biotechnology makes its position known. *Nature Biotechnology* 17:1145.
6. DiFazio, S.P., S. Leonardi, S. Cheng, and S.H. Strauss. 1999. Assessing potential risks of transgene escape from fiber plantations. *In* P.W. Lutman (ed.) *Gene flow and agriculture:*

- relevance for transgenic crops. Symposium Proceedings No. 72. British Crop Protection Concil, Farnham, UK. pp. 171-176.
7. Strauss, S.H., J. Davis, J. Eaton, R. Hall, G. Newcombe, and G. Tuskan. 1999. Report of the poplar working group: p. 105-112 in: Proceedings, workshop on ecological effects of pest resistance genes in managed ecosystems, eds P.L. Traynor and J.H. Westwood, January 31 - February 3, 1999, Bethesda, Maryland. Information Systems for Biotechnology, Virginia Polytechnic Univ. (<http://www.nbiap.vt.edu/>)
 8. Strauss, S.H., R. Meilan, S. DiFazio, A. Brunner, S. Leonardi, R. Mohamed, J. Skinner, and K. Krutovskii. 1999. Tree Genetic Engineering Research Cooperative (TGERC) Annual Report: 1998-1999. Forest Research Laboratory, Oregon State University, Corvallis. 45 p.
 9. Strauss, S.H. 1999. Lessons from the IUFRO position statement on transgenic forest plantations. Proceedings of the OECD (Organization for Economic Cooperation and Development) Workshop on Environmental Considerations of Genetically Modified Trees. Norwegian Institute for Nature Research, Trondheim, Norway, September 13-15, 1999.
 10. Strauss, S., and R. Meilan. 1998. Overview of TGERC: Tree genetic engineering research cooperative. Society of American Foresters, Forest Genetics and Tree Improvement Working Group (D-1) Newsletter. August 1998.
 11. Strauss, S., and R. Meilan. 1998. TGERC: Tree genetic engineering research cooperative. AgBiotechNews and Info. 10(9):305N-308N.
 12. Price, R.A., A. Liston and S.H. Strauss. 1998. Phylogeny and systematics of *Pinus*. Pp. 49-68 In: D.M. Richardson, Ed., *Ecology and Biogeography of Pinus*. Cambridge University Press, UK. 527 pp.
 13. Strauss, S.H., R. Meilan, S. DiFazio, A. Brunner, S. Leonardi, J. Skinner, and K. Krutovskii. 1998. Tree Genetic Engineering Research Cooperative (TGERC) Annual Report: 1997-1998. Forest Research Laboratory, Oregon State University, Corvallis. 45 p.
 14. National Research Council. 1997. Intellectual property rights and plant biotechnology. National Academy Press, Washington, D.C. (Member of 16 person panel whose presentations and discussion are the basis of the report.)
 15. Meilan, R. and S.H. Strauss. 1997. Genetically engineered reproductive sterility and accelerated flowering in poplars. Pp. 212-219 In: N.B. Klopfenstein, Y.W. Chun, N.-S. Kim, and M.R. Ahuja, Eds., Micropropagation, genetic engineering, and molecular biology of *Populus*. USDA Forest Serv. Gen. Tech. Rep. RM-GTR-297, Fort Collins, CO.
 16. Strauss, S.H., R. James, A. Brunner, S. DiFazio and R. Meilan. 1997. Tree Genetic Engineering Research Cooperative (TGERC) Annual Report: 1996-1997. Forest Research Laboratory, Oregon State University, Corvallis, 36 p.
 17. Sheppard, L.A., A.M. Brunner, W.H. Rottmann, R. Meilan, and S.H. Strauss. 1996. Floral homeotic genes for genetic engineering of reproductive sterility in poplars. P. 165-172 In: M.R. Ahuja, W. Boerjan, D.B. Neale, Eds. Somatic Cell and Molecular Genetics of Trees, Kluwer, Netherlands.
 18. Strauss, S.H., K.-H. Han, R. Meilan, S. DiFazio, A. Brunner, L. Sheppard and R. James. 1996. Tree Genetic Engineering Research Cooperative (TGERC) Annual Report: 1995-1996. Forest Research Laboratory, Oregon State University, Corvallis, 39 p.

19. Strauss, S.H., K.-H. Han, R. Meilan, and R. James. 1995. Tree Genetic Engineering Research Cooperative (TGERC) Annual Report: 1994-1995. Forest Research Laboratory, Oregon State University, Corvallis, 32 p.
20. Southerton, S., S. Strauss, M. Olive, X. Zhu, R. Hartcourt, and E. Dennis. 1995. Cloning and characterization of a *Eucalyptus* meristem identity gene. P. 424-426 In: Eucalypt Plantations: Improving Fibre Yield and Quality. CRCTHF - IUFRO Conference Proceedings, Hobart, Australia, February 19-24, 1995.
21. Mullins, K.V., V.J. Hartney, D.J. Llewellyn, S. Strauss, and E.S. Dennis. Regeneration and transformation of *Eucalyptus camldulensis*. P. 413-415 In: Eucalypt Plantations: Improving Fibre Yield and Quality. CRCTHF - IUFRO Conference Proceedings, Hobart, Australia, February 19-24, 1995.
22. Strauss, S.H. 1995. Genetic engineering coop brings high-tech genetics to tree farming. Western Forester October 1995:8.
23. Strauss, S.H. 1995. Genetic engineering of poplars in the Northwest. Natl. Biol. Impact Assessm. Prog. News Rep. November:3-5.
24. Strauss, S.H., W.H. Rottmann, A.M. Brunner, L.A. Sheppard. 1994. Genetic engineering of sterility in forest trees. TAPPI Biological Sciences Symposium, Minneapolis, Minnesota, October 2-7.
25. Harry, D.E., S.H. Strauss, and R.R. Sederoff. 1991. Molecular forest genetics comes of age: fourth meeting, molecular genetic working party, IUFRO. Plant Mol. Biol. Rep. 9:169-174.
26. Howe, G.T., S.H. Strauss, and B. Goldfarb. 1991. Insertion of the maize transposable element *Ac* into poplar. pp. 283-294 In: Woody Plant Biotechnology, M.R. Ahuja, Ed. Plenum, NY.
27. Howe, G.T., S.H. Strauss, J.D. Palmer, and A. Doerksen. 1988. Chloroplast restriction site and gene maps for Douglas-fir and radiata pine. p. 54-66 In: Molecular Genetics of Forest Trees, W.M. Cheliak and A.C. Yapa (eds.), Petawawa Natl. Forestry Inst., Chalk River, Ontario, Canada.
28. Strauss, S.H., and C.-H. Tsai. 1988. Genetic polymorphism for nuclear ribosomal gene number in Douglas-fir. p. 79-84 In: Molecular Genetics of Forest Trees, *ibid*.
29. Mattson, W.J., and S.H. Strauss. 1986. Are cone volatiles involved in cone finding by the red pine cone beetle? p. 185-204 In: Proc. Second Conf. on Cone and Seed Insects, IUFRO, Braincon, France.

STUDENTS DIRECTED (MAJOR PROFESSOR)

Undergraduate

1. Chapin, C. 1998. The effect of matrix attachment regions flanking gene constructs on transformant gene expression in two poplar clones. BioResources Research and University Honors College Thesis Project.

Master of Science

1. Tsai, C.-H. 1989. Dispersed repetitive sequences in the chloroplast genome of Douglas-fir. Forest Science.
2. Bae, H. 1992. RFLP variation in the laminated-root-rot fungal pathogen of conifers, *Phellinus weirii*. Forest Science.
3. Krupkin, A.B. 1992. Chloroplast DNA phylogeny of hard pines (Subgenus *Pinus*): inference from site mutations and multiple small inversions. Forest Science.
4. Corcoran, J. 1993. Non-thesis Masters. Genetics.
5. Aagard, J. E. 1997. Genetic diversity and differentiation in Douglas-fir from RAPD markers of nuclear and mitochondrial origin.
6. Wu, J. 1998. Mitochondrial and nuclear DNA diversity in the California Closed Cone Pines (*Pinus attenuata*, *muricata*, and *radiata*).
7. Mohamed, R. 1999. Effect of the *bO* gene on disease resistance in transgenic hybrid cottonwoods. Forest Science.
8. Dye, S. Structure and expression of the *Populus* homolog to the *TERMINAL FLOWER* gene. (expected summer 2000)

Doctorate

1. Goldfarb, B. 1990. Parameters affecting genetic transformation of Douglas-fir via microprojectiles. (Co-directed with J. Zaerr.). Forest Science.
2. Hong, Y.-P. 1991. Chloroplast DNA diversity and phylogeny in the Californian closed-cone pines (Subsect. *Oocarpae*). Forest Science.
3. Howe, G.T. 1991. Transformation and heterologous gene expression in hybrid poplar. Genetics.
4. Hipkins, V.D. 1993. Repeated sequences associated with inversions and length mutations in the chloroplast genomes of *Pinus* and *Pseudotsuga*. Genetics.
5. Sheppard, L. 1997. *PTD*, a floral homeotic gene from *Populus trichocarpa* with homology to transcription factors. Genetics.
6. Brunner, A. 1998. Isolation of *Populus trichocarpa* homologous to the floral homeotic gene *AGAMOUS*. Forest Science.
7. DiFazio, Stephen. Analysis and modeling of gene dispersal from plantations of transgenic hybrid cottonwoods. Forest Science. (expected fall 1999)

POSTDOCTORAL SCIENTISTS ADVISED

1. Boes, Teresa. 1990-1992. Development of floral primordia in black cottonwood (*Populus trichocarpa*).
2. Bousquet, Jean. 1990-91. Rates of evolution in the chloroplast gene *rbcL*.
3. Rottmann, William. 1990-1995. Structure and expression of the poplar homolog of the floral homeotic gene *LEAFY*.
4. Yang, Y. 1993-94. *In vitro* propagation and transformation of triploid cottonwoods.
5. Tsumura, Yoshiko. 1994 (2 months). Inter-simple-sequence-repeat DNA markers in conifers.

6. Han, Kyung-Hwan. 1994-1996. Genetic transformation of poplars via *Agrobacterium*.
7. James, Rosalind. 1994-present. Ecological genetics of resistance to BT transgenes in the cottonwood leaf beetle.
8. Krutovskii, Konstantin. 1994-present. Genome mapping and QTL analysis of adaptive traits in Douglas-fir and cottonwood leaf beetle.
9. Meilan, Richard. 1995-present. Genetic engineering of sterility and precocious flowering in poplars.
10. Skinner, Jeffrey. 1997-present. Recombinant DNA manipulations of poplar floral homeotic genes for induction of floral sterility.
11. Brunner, Amy. 1998-present. Dominant negative mutations of floral homeotic genes for engineering of sterility.