

Stephen Peter Klassen

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EDUCATION:

MS Civil and Environmental Engineering, December 1998
Utah State University, Logan

BS Biology, June 1989
Minor: Chemistry
University of Utah, Salt Lake City

EMPLOYMENT HISTORY:

Senior Research Associate, Crop Physiology

March 1998 to Present
Utah State University

- Co-Investigator on 3 year \$650K NASA funded proposal: "Ethylene Synthesis and Sensitivity in Salad Crops: Interactions with Root and Shoot Environmental Stress in Microgravity Conditions"
- Manager of the Agricultural Experiment Station Research Greenhouse & Crop Physiology Laboratories providing research and infrastructure support to 20⁺ faculty and student users
- Conduct independent research in controlled environments and assist graduate student research
- Lead author on research publications and an active participant at national meetings
- Facility Safety Coordinator handling all aspects of building safety in cooperation with the USU Environmental Health and Safety office and the Fire Marshall
- Supervisor of a staff of three to five employees

Graduate Research Assistant, Environmental Engineering

September 1994 to October 1997
Utah State University

- Investigated plant-soil interactions in the natural attenuation of soil contaminants (phytoremediation)
- Responsible for field studies involving plant, soil/sediment, and surface water environmental analysis
- Conducted laboratory experiments to evaluate the vegetative buffering of heavy metal leachates
- Published findings in the Journal of Environmental Quality

Laboratory Specialist, Plant Physiological Ecology

June 1989 to August 1991
University of Utah

- Investigated relationships between hydrological processes and the development of natural plant communities and plant physiological adaptations
- Managed field studies including plant, soil, and water sampling, monitoring, and analysis
- Trained in the use of stable isotopes, field gas exchange, elemental analysis, micrometeorological data acquisition, water potential measurements, and vegetation surveys
- Co-author on one publication

Laboratory Assistant, Plant Physiological Ecology

January 1988 to June 1989
University of Utah

- Assisted in plant ecological field studies
- Promoted to full time position following completion of BS in Biology

Volunteer Laboratory Assistant, Evolutionary Ecology

January 1988 to June 1989
University of Utah

- Conducted research on host-race evolution in seed eating bugs (*Jadera heamatoloma*)
- Authored a successful grant for \$1000 from the Sigma Xi Research Society for field research in Belize
- Co-author on two publications

Volunteer Laboratory Assistant, Evolutionary Ecology

November 1987 to January 1988
University of Utah

- Conducted research on sexual dimorphism in ground dwelling wasps

PUBLICATIONS:

Klassen, S.P., G. Ritchie, J. Frantz, D. Pinnock, and B. Bugbee. (In press) Real-Time Imaging of Ground Cover: Relationships with Radiation Capture, Canopy Photosynthesis, and Daily Growth Rate. In *Digital Imaging Techniques in Agriculture*, A Special Publication of the Crop Science Society of America (CSSA).

Klassen, S.P., and B. Bugbee (2002). Sensitivity of Wheat and Rice to Low Levels of Atmospheric Ethylene. *Crop Science* Vol 42:746-753

Campbell, W.F., F.B. Salisbury, B. Bugbee, S. Klassen, et al. (2001) Comparative Floral Development of Mir-Grown and Ethylene-Treated, Earth-Grown Super Dwarf Wheat. *Journal of Plant Physiology*, Vol 158:1051-1060.

Klassen, S.P., J.E. McLean, P.R. Grossl, and R.C. Sims (2000). Effects of Metal Tolerant Plants (*Betula occidentalis* and *Carex microptera*) on the Fate and Behavior of Lead in Contaminated Soils. *Journal of Environmental Quality*, Vol 29 :1826-1834

Klassen, S.P., W.F. Campbell, and B. Bugbee (1999). Effects of Low Ethylene Levels on Crop Plants. Proceedings of the 29th International Conference on Environmental Systems, July 12-15, Denver, CO. Administered by the Society of Automotive Engineers, SAE Technical Paper Series 1999-01-2025

Klassen, S.P. (1998). Plant Species Native to the Intermountain West for Use in the Phytoremediation of Lead-Contaminated Soils. M.S. Thesis, Utah State University, Logan, UT

Carroll, S.P., S.P. Klassen, and H. Dingle (1998). Rapidly Evolving Adaptations to Host Ecology and Nutrition in the Soapberry Bug. *Evolutionary Ecology*, Vol 12:955-968

Carroll, S.P., H. Dingle, and S.P. Klassen (1997). Genetic Differentiation of Fitness-Associated Traits Among Rapidly Evolving Populations of the Soapberry Bug. *Evolution*, Vol 51:1182-1188

Ehleringer, J.R., S.P. Klassen, et al. (1991). Carbon Isotope Discrimination and Transpiration Efficiency in Common Bean. *Crop Science*, Vol 31:1611-1615

INVITED TALKS:

Klassen, S.P. and B. Bugbee (2001). Demonstration of a Method for Quantifying Plant Growth and Stress Responses with a Digital Camera. Invited speaker to the Annual Meeting of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. Oct 21-25, Charlotte, NC.

Bugbee, B., and S.P. Klassen (1998). Ethylene Effects on the Growth and Performance of Crop Plants in Controlled Environments. Invited Speaker to the NASA-Kennedy Advanced Life Support Group (ALS). Nov. 24, NASA-Kennedy, FL.

Klassen, S.P. (1997). Lead Resistance in *Betula occidentalis* and *Carex microptera*: On the Natural Attenuation of Lead Contaminated Mine Spoils. Invited speaker to the Utah Geological Association (UGA). April 1, Salt Lake City, UT.

PRESENTATIONS:

Klassen, S.P., T. Hudelson, and B. Bugbee (2002). Genetic and Environmental Interactions with Ethylene Sensitivity in Crop Plants. Poster presented at the 18th Annual Meeting of the American Society for Gravitational and Space Biology. Nov. 6-10, Cocoa Beach, FL.

Bugbee, B., S.P. Klassen, J. Frantz, D. Pinnock, and J. Robson. (2002) Unique Characteristics of the Six Super Dwarf Crop Plants Under Study at Utah State University. Poster presented at the 18th Annual Meeting of the American Society for Gravitational and Space Biology. Nov. 6-10, Cocoa Beach, FL.

Klassen, S.P. and B. Bugbee (2000). Ethylene Sensitivity of Crops in Controlled Environments. Paper presented at the Annual Meeting of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. Nov 5-9, Minneapolis, MN.

Klassen, S.P. and B. Bugbee (2000). Differential Sensitivity of Crops to Ethylene & Interactions with Elevated CO₂. Paper presented at the 4th Annual Meeting of Life Support and Biosphere Science. Aug. 6-10, Baltimore, MD.

Klassen, S.P., W.F. Campbell, and B. Bugbee (1999). Ethylene Sensitivity of Crop Plants: Implications for Advanced Life Support and Space Flight. Paper presented at the 15th Annual Meeting of the American Society for Gravitational and Space Biology. Nov. 10-13, Seattle, WA.

Klassen, S.P., W.F. Campbell, and B. Bugbee (1999). Effects of Low Ethylene Levels on Wheat. Paper presented at the 91st Annual Meeting of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. Oct 31-Nov 4, SLC, UT.

Klassen, S.P., J.E. McLean, P.R. Grossl, and R.C. Sims (1998). An Investigation of Plant Species Native to the Intermountain West for Use in the Phytoremediation of Lead-Contaminated Soils. Paper presented at the 1998 Conference on Hazardous Waste Research. May 19-21, Snow Bird, UT.

Klassen, S.P., J.E. McLean, P.R. Grossl, and R.C. Sims (1996). An Investigation of Native Plant Species for the Phytoremediation of Abandoned Mine Sites. Poster presented to the 11th Annual Conference for the Great/Plains Rocky Mountain Hazardous Substance Research Center. May 21-23, Albuquerque, NM.

Klassen, S.P. and J.R. Ehleringer (1991). Heterotrophy in a Xylem tapping Mistletoe. Presented to the 2nd Annual Utah Plant Ecology Meetings. January, Brighton, UT.

HONORS:

Utah State University environmental engineering research assistantship (1994)
Sigma Xi Scientific Research Society grant (1989)
Mayo Foundation academic scholarship (1983)