

Martin J. Huss

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PROFESSIONAL PREPARATION:

Ph.D. in Botany – May 1992

Advisor: Dr. R. W. Lichtwardt, The University of Kansas, Lawrence, Kansas, USA.

Ph.D. Dissertation: Population structure of the puffball, *Lycoperdon pyriforme*. The University of Kansas, Lawrence, Kansas, USA. *Defended:* April 3, 1992.

M.A. in Botany – October 1988

Advisor: Dr. R. W. Lichtwardt, The University of Kansas, Lawrence, Kansas, USA.

Master's Thesis: Investigations on the dispersal of cellular slime molds (Eumycetozoa: Dictyostelia) by soil microfauna. The University of Kansas, Lawrence, Kansas, USA.

Defended: September 23, 1988.

B.A. in Biology. Minor: Education – December 1983

Benedictine College, Atchison, Kansas, USA, December 1983.

WORK EXPERIENCE

1997-Present

Associate Professor of Botany, Department of Biological Sciences, Arkansas State University, Jonesboro, Arkansas, USA

1993-1997

Assistant Professor of Botany, Department of Biological Sciences, Arkansas State University, Jonesboro, Arkansas, USA

1992-1993

Postdoctoral Research Associate, Department of Plant Pathology, Kansas State University, Manhattan, Kansas, USA (*Post-doctoral Advisor:* Dr. J. L. Leslie, Kansas State University, Manhattan, KS)

1985-1992

Teaching/Research Assistant, Department of Botany, University of Kansas, Lawrence, Kansas, USA

1984-1985

High School Science Teacher, Midway High School, Denton, Kansas, USA

TEACHING (LIST OF UNDERGRADUATE AND GRADUATE COURSES TAUGHT AT ARKANSAS STATE UNIVERSITY – JONESBORO – 1993 TO PRESENT)

Biological Science
Biological Seminar
Biology of the Cell
Biology of Plants (formerly called General Botany)
Economic Botany
Evolution
Evolution in the Science Classroom

Human Anatomy & Physiology I
Medical Mycology
Mycology (Biology of Fungi)
Teaching Science by Exploring Nature
Plant Pathology
Science in the Elementary Classroom
Virology (Team-Taught)
Web-Assisted Biological Science

PUBLICATIONS

Peer reviewed:

- Bednarz, J. C.; Huss, M. J.; Benson, T. J.; Varland, D. E. 2013. **The efficacy of fungal inoculation of live trees to create wood decay and wildlife-use trees in managed forests of western Washington, USA.** Forest Ecology and Management (In press).
- Gaspar, J.; McKay, T.; Huss, M. J. 2012. **First report of *Aedes japonicus* in natural and artificial habitats in northeast Arkansas.** Journal of the American Mosquito Control Association 28: 38-42.
- Lee, K.-M.; Gilmore, D. F.; Huss, M. J. 2005. **Fungal degradation of the bioplastic PHB (poly-3-hydroxybutyric acid).** Journal of Environmental Polymer Degradation 13: 213-219.
- Farris, K. L.; Huss, M. J.; Zack, S. 2004. **The influence of foraging woodpeckers on the decomposition of ponderosa pine.** The Condor 106: 50-59.
- Huss, M. J.; Bednarz, J. C.; Juliano, D. M.; Varland, D.E. 2002. **The efficacy of inoculating fungi into conifer trees to promote cavity excavation by woodpeckers in managed forests in western Washington.** In: *Proceedings of the Symposium on the Ecology and Management of Dead Wood in Western Forests* (technical coordinators: W. F. Laudenslayer, Jr., P. J. Shea, B. E. Valentine, P. C. Weatherspoon, T. E. Lisle), pp. 777-794. 1999 November 2-4; Reno, NV. Gen. Tech. Rep. PSW-GTR-181. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 949 p.
- Huss, M. J.; Campbell, C. L.; Jennings, D. B.; Leslie, J. F. 1996. **Isozyme variation among biological species in the *Gibberella fujikuroi* species complex (*Fusarium* section *Liseola*).** Applied and Environmental Microbiology 62: 3750-3756.
- Huss, M. J. 1996. **Application of a modified Ziehl-Neelsen's carbol-fuchsin stain for observing nuclei in vegetative hyphae of the puffball species *Lycoperdon pyriforme*.** Proceedings of the Arkansas Academy of Sciences 50: 70-74.
- Huss, M. J. 1996. **Isozyme analysis of population structure and diversity in the puffball species *Lycoperdon pyriforme*.** Mycologia 88: 977-985.
- Huss, M. J. 1993. **Spatial distribution among mycelial individuals of *Lycoperdon pyriforme* occurring on decaying logs.** Mycological Research 97: 1119-1125.
- Lichtwardt, R. W.; Huss, M. J.; Williams, M. C. 1993. **Biogeographic studies on trichomycete gut fungi in winter stonefly nymphs of the genus *Allocapnia*.** Mycologia 85: 535-546.
- Lichtwardt, R. W.; Peterson, S. W.; Huss, M. J. 1991. ***Orphella hiemalis*: A new and rare Trichomycete occurring in winter-emerging stoneflies (Plecoptera, Capniidae).** Mycologia 83: 214-219.
- Huss, M. J. 1989. **Dispersal of cellular slime molds by two soil invertebrates.** Mycologia 81: 677-682.

Non peer-reviewed articles:

Gaspar, J.; McKay, T.; Huss, M. 2009. **Controlling mosquito larvae using fungi.** The Jonesboro Sun. 22 November.

Romero, A.; Huss, M. 2008. **ASU honors distinguished faculty member.** The Jonesboro Sun. 14 December.

Huss, M.; Justice, J. 2006. **Morel mushroom is spring treasure for mycologist.** The Jonesboro Sun. 26 March.

Romero, A.; Huss, M. 2005. **As puffball season approaches, it pays to know your mushroom.** The Jonesboro Sun. 14 August.

GRANTS: (Funded: listed as the principle or a co-principle investigator)

Interactions between fungi and cavity nesters: applications to managing wildlife and forests in western Washington. Submitted to cooperating funding sources including Rayonier, Washington Department of Natural Resources, Weyerhaeuser, Hancock Forest Management, and the Fruitgrowers Supply Company. 2006. \$17,000; with J. C. Bednarz and D. Varland.

Exploring science in the Natural State, K-12. Arkansas Department of Higher Education/ U.S. Department of Education. No Child Left Behind. 2004/2005. This project is one of several funded and provided in part as \$124,354 or 74% federal source (S367B020004); with J. T. Kennon and C. Miller.

Evolution in the science classroom. Arkansas Department of Higher Education/U.S. Department of Education. Teacher Quality Enhancement Grant Program. 2002-2003. \$45,283; with R. Hannigan.

Wood-decay fungi associated with active nesting cavity trees utilized by woodpeckers in western Washington. Rayonier Corporation and the Washington Forest Protection Association. 1998. \$40,800.00; with J. C. Bednarz and D. E. Varland.

Interactions between fungi and cavity nesters: Applications to managing wildlife and forests in western Washington. Rayonier Corporation and the Cooperative Monitoring, Evaluation and Research (CMER) Program. 1996. \$115,800.00; with J. C. Bednarz and D. E. Varland.

Equipment grant for participation in the Arkansas Science Crusade Course at Arkansas State University. Arkansas Departments of Education and Higher Education/National Science Foundation. 1995. \$5,000.

A proposal to establish a task force for the investigation and development of Middle School mathematics and science curricula for in-service and pre-service teachers. Arkansas Departments of Education and Higher Education/National Science Foundation. 1995. \$54,434; with J. L. Linstaedter, T. D. Bishop, R. W. Abernathy, R. S. Mitchell, C. Vaupel, and M. K. Cramer.

Distribution of mating populations and vegetative compatibility groups of *Gibberella fujikuroi* infecting rice in Arkansas. ASU Faculty Research Grant. 1995. \$5,977.

Research proposal grant related to the interactions between fungi and birds. Rayonier Corporation. 1994. \$1,000; with J. C. Bednarz.

GRANTS: (Funded: listed as a consultant)

Arkansas biology expeditions (BioE). Arkansas Department of Higher Education/ U.S. Department of Education. Mathematics and Science Partnership Grant through No Child Left Behind. 2009-2011. Grant recipient: Crowley's Ridge Educational Service Cooperative. \$405,000.00; with N. A. Johnson-Leslie, J. R. Grady, T. Winslow, B. Hunter-Cox, and J. Manning.

CSI: Classroom Student Investigations. National Science Foundation. 2009-2012. \$1,075,000 with K. Yanowitz, C. Ross, T. McKay, and S. Vanderpool.

Lipid analysis of Arkansas bat integument, fungal fatty acid metabolism, and control of white-nose syndrome in Arkansas. Arkansas State Wildlife Grant. 2010-2012. \$42,790; with T. Risch, E. L. Pannkuk, B. Savary, E. Benjamin, and M. C. Dolan.

PRESENTATIONS TO LEARNED FORUMS

Hampton, R.; Jason, G.; McKay, T.; Huss, M. 2012. Behavioral and developmental effects of trichomycete fungi (*Smittium culisis*) on Culicidae (*Culex pipiens*) larvae (oral presentation; author only). 88th Kansas (Central States) Entomological Society Annual Meeting.

Gaspar, J.; McKay, T.; Huss, M. 2012. Trichomycete fungi associated with mosquito larvae (Diptera: Culicidae) in northeastern Arkansas (oral presentation; author only). Southeastern Branch Meeting of the Entomological Society of America.

Kennon, J.T.; Ali, H.; Huss, M.; Bennett, B.; Roberts, E. 2011. BalloonSat and Near Space Research (oral presentation). Arkansas NASA EPSCoR Workshop.

Huss, M. J.; Johnson-Leslie, N. A.; Grady, J. R.; Hunter-Cox, B.; Winslow, T. 2011. Biology expeditions: building content knowledge through exploration (oral presentation). Math and Science Partnerships Regional Conference, U.S. Department of Education, Baltimore, Maryland.

Gaspar, J.; McKay, T.; Huss, M. 2011. Trichomycete fungi associated with mosquito larvae in northeastern Arkansas (poster presentation; author only). 1st Place President's Award for Graduate Student Poster Display Competition for the Medical, Veterinary and Urban Entomology (MUVE-2) section. The 59th Annual Meeting of the Entomological Society of America.

Dunn, T. L.; Bennett, B.; Huss, M. J. 2010. A morphological analysis of the differences in the dioecious tree *Ginkgo biloba* (poster presentation). Undergraduate Students Completing Summer Research Internships in Science of the Environment - RISE, College of Sciences and Mathematics, Arkansas State University, Jonesboro, Arkansas.

Pannkuk, E. L.; Savary, D.; Gilmore, D.; Benjamin, E.; Risch, T.; Huss, M. J. 2010. Fungal digestion of chiropteran integument (oral presentation; author only). Midwest Bat Working Group, U.S. Fish and Wildlife Service, Pittsburg, PA.

Pannkuk, E. L.; Savary, D.; Gilmore, D.; Benjamin, E.; Risch, T.; Huss, M. J. 2010. Fungal digestion of chiropteran integument (oral presentation; author only). Midwest Bat Working Group, ISU Center for North American Bat Research and Conservation, Terre Haute IN.

Gaspar, J.; McKay, T.; Huss, M. 2010. Trichomycete fungi associated with mosquito larvae in northeastern Arkansas (poster presentation; author only). The 58th Annual Meeting of the Entomological Society of America.

Gaspar, J.; McKay, T.; Huss, M. 2010. Trichomycete fungi associated with mosquito larvae in Northeastern Arkansas (poster presentation; author only). Arkansas Entomological Society Meeting.

Bednarz, J.; Huss, M.; Benson, T.J.; Varland, D.L. 2008. Status of experimental fungal inoculations to establish heart-rot and promote cavity nests and wildlife habitat in managed forests in Washington (poster presentation; author only). Fourth International Partners in Flight Conference. McAllen, Texas.

Huss, M. J.; Kennon, J.T. 2007. The edge of space over Arkansas: Arkansas BalloonSat (poster presentation; author only). Arkansas Academy of Science 91st Annual Meeting.

Huss, M.; Kennon, J.T. 2007. Arkansas High altitude balloon initiative (poster presentation; author only). 15th Annual Arkansas Space Grant Symposium.

Bednarz, J.; Huss, M. J.; Varland, D.E. 2007. Status of experimental fungal inoculations to establish heart-rot and promote cavity nests and wildlife habitat in managed forests in Washington (oral presentation; author only). 125th State Meeting of the American Ornithologists Union. University of Wyoming, Laramie, Wyoming.

Bednarz, J.; Huss, M. J.; Benson, T. J.; Varland, D. E. 2007. Status of experimental fungal inoculations to establish heart-rot and promote cavity nests and wildlife habitat in managed forests in Washington (poster presentation; author only). Fourth International Partners in Flight Conference, Partners in Flight, McAllen, Texas.

Kennon, J.; Huss, M. J. 2007. Arkansas high altitude balloon initiative (oral presentation; author only). Arkansas Space Grant Symposium, Arkansas Space Grant Consortium, The Winthrop Rockefeller Center, University of Arkansas, Morrilton, Arkansas

Kennon, J.; Huss, M. J. 2007. The edge of space over Arkansas: Arkansas BalloonSat (poster presentation; author only). Arkansas Academy of Science 91st Annual Meeting, Arkansas Academy of Science, Arkansas Tech University, Russellville, Arkansas.

Huss, M. J.; Kennon, J. 2004. Arkansas science expedition (oral presentation). Arkansas Conference on Teaching. Little Rock, Arkansas.

Huss, M. J.; Bednarz, J. C.; Varland, D. E. 1999. The efficacy of inoculating fungi into conifer trees to promote cavity excavation by woodpeckers in managed forests in western Washington (oral presentation). Symposium on the Ecology and Management of Dead Wood in Western Forests sponsored by The Western Section of The Wildlife Society. Reno, Nevada.

Huss, M. J., Bednarz, J. C.; Chen, H.; Gipson, C. E. 1997. Wood-decay fungi associated with active nesting cavity trees utilized by woodpeckers in western Washington (poster presentation). 48th Meeting of the American Institute of Biological Sciences. Montréal, Canada.

Huss, M. J.; Mitchell, R. S.; Bishop, T. D. 1996. Integration of Science and Math at the Middle Level - a report. Arkansas' First Joint Conference on Teaching Science & Mathematics (oral presentation). Little Rock, Arkansas.

Arjula, V.; Huss, M. J.; Leslie, J. F. 1996. Construction of "near-isogenic" lines in *Fusarium moniliforme* (*Gibberella fujikuroi*) mating population A (poster presentation). American Phytopathological Society and Mycological Society of America Joint Annual Meeting. Indianapolis, Indiana.

Huss, M. J. 1996. Patterns of isozyme variation among populations of the puffball species *Lycoperdon pyriforme* (poster presentation). American Phytopathological Society and Mycological Society of America Joint Annual Meeting. Indianapolis, IN. Indiana.

Huss, M. J. 1996. A novel technique for staining nuclei of vegetative hyphae of the puffball *Lycoperdon pyriforme* (oral presentation). 80th Annual meeting of the Arkansas Academy of Science. Fort Smith, Arkansas.

Huss, M. J. 1994. Evidence for genetic homogeneity among populations of *Lycoperdon pyriforme* based on patterns of isozyme variation (oral presentation). 78th Annual Meeting of the Arkansas Academy of Science. Jonesboro, AR.

Huss, M. J.; Leslie, J. F. 1993. Isozyme variation among six different biological species within *Gibberella fujikuroi* species complex (*Fusarium* section *Liseola*) (poster presentation). 17th Fungal Genetics Conference. Pacific Grove, California.

Huss, M. J.; Leslie, J. F. 1993. A novel technique for the selection of "near-isogenic" lines using vegetative compatibility differences (poster presentation). 17th Fungal Genetics Conference. Pacific Grove, California.

Huss, M. J. 1991. Population structure of the puffball, *Lycoperdon pyriforme*, using somatic incompatibility studies and isozyme analysis (oral presentation). Mycological Society of America Annual Meeting. San Antonio, Texas

PROFESSIONAL SERVICE ACTIVITIES

Academic advisor at Arkansas State University for pre-service teachers seeking licensure in Life Science (Grades 7-12) in the State of Arkansas.

Academic advisor at Arkansas State University for students seeking a B.S. degree in Biology with emphasis in Botany.

Academic advisor at Arkansas State University for students seeking a degree in a B.S.E. degree in General Science: Biology Emphasis.

Arkansas BalloonSat Team Member and Contributor. 2006-Present. For more information and photographs about Arkansas BalloonSat visit <http://www.arkballoons.com/BalloonSats.html>.

Consultant and Summer Workshop Presenter for CSI: Creating student and teacher investigators at Arkansas State University during spring and summer of 2012.

Consultant and Workshop Presenter for Crowley's Ridge Education Cooperative, Harrisburg, Arkansas. Development and teaching of a professional development workshop for high school biology teachers from 2008 to 2011.

Departmental Screening Committee for Applicants Seeking Entrance into the Teacher Education Program.

Director of the Northeast Arkansas Regional Science Fair (2000-2004).

Past or current member (and/or Chair) of various departmental, college, university committees (e.g., student thesis committees [i.e., undergraduate honor and graduate students], search committees, Departmental Curriculum Committee, Departmental Promotion, Tenure, and Retention Committee, Graduate Assistant Selection Committee, Departmental Teacher Education Program Screening Committee), University Disability Committee, and University Disciplinary Committee.

Student Marshall at Graduation and Commencement Exercises for the College of Sciences and Mathematics starting in 2011 (three year term).

Web Page Coordinator for Department of Biological Sciences Web Site (1994-2008).

CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT

Teaching Evolution Workshop – participant in workshop held August 8-10, 2013 at the University of Missouri, Columbia. This workshop is targeted to college faculty who teach *evolution* as part of an undergraduate biology course with the goal to improve the teaching of evolution in the classroom. The workshop was offered through **Project Teach Evolution** at the University of Missouri with support and funding provided by a grant from the National Science Foundation.

Second Life Workshop during Summer Session II – 2010 sponsored by the ASU Interactive Teaching and Technology Center. Training in virtual reality web design and usage of technology for communicating information in the digital age.

CLT Institute during Summer Session II – 2008 sponsored by the ASU Interactive Teaching and Technology Center, formerly known as the Center for Learning Technologies. Participant in a training session that took place over a three week period for four hours per day, and four days per week. This workshop was done in anticipation for offering a web-assisted version of BIOL 1003 - Biological Science starting in the spring of 2009.

Rare & Invasive Plants of Arkansas Conference – Attended conference held on October 22-24, 2003 at the University of Arkansas in Fayetteville, AR.

Team member of Arkansas delegation that participated in the BalloonSat Workshop - Starting Student Space Hardware Programs V held on July 12-15, 2006 at the University of Colorado at Boulder. Trip and workshop sponsored by funds through the Arkansas Space Grant Consortium.

Fusarium Laboratory Workshop - Attended this week long course, taught by an international team of experts, was attended by 42 scientists from 13 states and 17 countries. Species of the *Fusarium* fungus are significant causes of a wide variety of plant diseases. These fungi also have the potential to contaminate grain through the production of mycotoxins that are known to be injurious to animal and human health. The workshop focused on laboratory identification and characterization of fungal cultures using standard and molecular biology techniques. Workshop held on June 22-27, 2003 at Kansas State University in Manhattan, KS.

Professional Development Workshop: Web Course Design - Attended three weeks of classes focused on development and implementation of a web-based course (with focus on a non-majors biology course). Sponsored by the Center for Learning Technologies at Arkansas State University. Training workshop taught by Dr. William Allen from July 2-July 20, 2001.

Electronic Learning Environment Institute - Attended series of workshops focusing on the application of current electronic technologies and multimedia in the classroom. Sponsored by the Arkansas Leadership Academy and Arkansas Educational Television Network (AETN) on November 2-7, 1997, Fairfield Bay, AR.

Strategic Leadership Seminar "SciCon 97" - Attended seminar/conference, sponsored by the Arkansas Leadership Academy and Arkansas State University on September 11-13, 1997, Fairfield Bay, AR.

Conference on Science and Math Integration at the Middle Level - Attended conference on the status of integrating math and science at the Middle Level in Arkansas, sponsored by Science and Math at the Middle Level Task Force Committee at Arkansas State University on September 5-6, 1997, State University, AR.

NSF/SSI Team Leadership Institute - Attended Team Leadership Institute, sponsored by the Arkansas Leadership Academy for Mathematics and Science on June 15-20, 1997, Fairfield Bay, AR.

ETC w/CareerTrack Seminar - Attended an ETC w/CareerTrack seminar entitled "How to Build a Successful Web Site". February 18, 1997. Riverfront Hilton, North Little Rock, AR.

Arkansas Science Crusade - Enrolled and successfully completed the Arkansas Science Crusade promoted and sponsored by the Arkansas Department of Higher Education (ADHE). September 26, 1995 - March 12, 1996. Arkansas State University, State University, AR.

CURRENT AND PAST MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

Arkansas Mycological Society
Arkansas Science Teachers Association
Mycological Society of America
Northeast Arkansas Science Teachers' Association

PROFESSIONAL REFERENCES

Anne Grippo, Ph.D., Professor of Biology, Associate Dean for the College of Sciences and Mathematics, Arkansas State University, Department of Biological Sciences, P.O. Box 599, State University, AR 72467-0599; Phone (870) 972- 3493; Fax: (870) 972-2638; E-mail: agrippo@astate.edu

Ronald Johnson, D.A., Professor of Zoology, Assistant Chair, Arkansas State University, Department of Biological Sciences, P.O. Box 599, State University, AR 72467-0599; Phone (870) 972-2366; Fax: (870) 972-2638; E-mail: rj@astate.edu

Aldemaro Romero, Ph.D., Professor of Biology, Dean of the College of Arts and Sciences, Campus Box 1608, Southern Illinois University Edwardsville, Edwardsville, Illinois 62026; Phone 618 650-5047; Fax: 618 650-5050; E-mail: aromero@siue.edu

Robert W. Lichtwardt, Ph.D., Emeritus Professor of Botany, Department of Ecology & Evolutionary Biology, University of Kansas, Lawrence, Kansas 66045-7534; Phone 785 864-3740; Fax: 785 864-5321; E-mail: licht@ku.edu