

David L. Boose, Ph.D.

Professor of Biology
Gonzaga University

EDUCATION

Ph.D., Ecology, University of California, Davis, CA (1995)

M.S., Soil Science, Cornell University, Ithaca, NY (1986)

B.A., Chemistry, European History, University of Pennsylvania, Philadelphia, PA (1983)

POSITIONS HELD

Professor, 2014 – present.

Associate Professor. 2004 – 2014.

Assistant Professor. 1998 – 2004.

Department of Biology, Gonzaga University, Spokane, WA. Teach introductory and advanced courses in biological diversity, ecology, evolution, and genetics for majors, as well as courses for non-majors; mentor undergraduate research students; participate in department-level course and curriculum assessment, revision and design.

Director, Center for Teaching and Advising. 2007 – 2015.

Gonzaga University, Spokane, WA. Directed the university's faculty development center, facilitating learning communities, workshops, discussion groups, and on-line resources to help faculty improve their teaching and advising; collaborated with steering committee of faculty and staff on program development and long-term strategic planning for the center; directed faculty fellow program; coordinated with other campus divisions to develop and implement programming; hired, supervised and evaluated staff; oversaw budget (ca. \$70,000 in FY 2014).

Research Associate. 1997-1998.

Rancho Santa Ana Botanic Garden, Claremont, CA. Molecular genetic research on genetic diversity in populations of *Argyroxiphium kauense*, an endangered Hawaiian plant.

Visiting Assistant Professor. 1996-1997.

Visiting Lecturer. 1996.

Biology Department, Pomona College, Claremont, CA. Taught introductory and advanced courses in general biology, ecology, evolution, and conservation. Supervised senior theses of Biology majors.

ADMINISTRATIVE EXPERIENCE

Core Faculty Member, Environmental Studies Program. 2005 – 2013.

Gonzaga University, Spokane, WA. Collaborated with four other faculty members to design and implement an interdisciplinary curriculum for a new concentration, and then a major and minor in Environmental Studies; designed and taught a key required course in the program; coordinated with other core faculty members to administer the program; participated in and wrote key portions of the program's 2012 strategic plan; participated in hiring the program's first tenure-track faculty member.

Co-Chair, Core Curriculum Committee, January 2010 – May 2011

Member, Core Curriculum Committee, Spring 2008 – January 2010

Gonzaga University, Spokane, WA. Co-led a committee of 16 faculty that developed baccalaureate learning goals for the undergraduate experience at Gonzaga, proposed learning outcomes for the university core curriculum, and proposed two alternative models for a revised university core curriculum. Organized and facilitated campus-wide discussions of learning goals, pedagogical approaches, and comparisons of core curricula from other institutions in support of the committee's work. Attended national conferences and institutes sponsored by the American Association of Colleges and Universities (AAC&U) on general education, assessment, civic engagement, and other topics related to the committee's work.

PEER-REVIEWED PUBLICATIONS

(* indicates undergraduate student co-author)

Boose, D.L., and P. Hutchings. 2016. The scholarship of teaching and learning as a subversive activity. *Teaching & Learning Inquiry*, 4(1).

DOI: <http://dx.doi.org/10.20343/teachlearningqu.4.1.6>

Boose, D.L., and P. Hutchings. 2015. Bridging faculty development and organizational development: A faculty learning community on the scholarship of teaching and learning. *Learning Communities Journal* Vol. 7.

Boose, D.L. 2014. Teaching quantitative reasoning for nonscience majors through carbon footprint analysis. *Journal of College Science Teaching* 44(2):18 – 25.

Boose, D.L. 2013. A Green Light for CFLs? Case Study Collection, National Center for Case Study Teaching in Science, University at Buffalo. Online at:
http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=674&id=674

Boose, D.L., S. Harrison, S. Clement, and S. Myer. 2011. Population genetic structure of the seed pathogen *Pyrenophora semeniperda* on *Bromus tectorum* in western North America. *Mycologia* 103(1):85-93.

Boose, D.L., B.R. Harmeling*, and R.T. Turcotte*. 2005. Genetic variation in Eastern Washington populations of *Navarretia leucocephala* (Polemoniaceae) a vernal pool endemic. *Madroño* 52(2):99-106.

Friar, E.A., D.L. Boose, T. LaDoux, E.H. Roalson, and R.H. Robicheaux. 2001. Population structure in the endangered Mauna Loa silversword, *Argyroxiphium kauense* (Asteraceae), and its bearing on reintroduction. *Molecular Ecology* 10:1657-1663.

Boose, D.L. 1997. Sources of variation in floral nectar production rate in *Epilobium canum* (Onagraceae): implications for the operation of natural selection. *Oecologia* 110:493-500.

GRANTS RECEIVED

U.S. Forest Service Joint Venture Agreement. “MacFarlane’s four-o’clock Reintroduction, Soil Analysis.” Soil collection and analysis, plus installation of soil moisture and temperature monitoring equipment in populations of MacFarlane’s four-o’clock (*Mirabilis macfarlanei*) in Idaho and Oregon. August, 2016. \$25,000.

Selkirk Conservation Alliance, Sandpoint, ID. A Geographic Information Systems (GIS) analysis of habitat quality in the Priest Lake State Forest (PLSF) of northern Idaho. May, 2008. \$27,000.

E. L. Wiegand Foundation, Reno, NV. Grant to purchase three environmental growth chambers and ten sets of plant physiology analysis equipment for the Biology Department. July 2007. \$191,000.

U.S. Department of Agriculture National Research Initiatives (NRI) grant. “Evolutionary and community ecology of the seed bank pathogen *Pyrenophora semeniperda* on cheatgrass-dominated rangelands.” Collaborative research with Dr. Julie Beckstead, Gonzaga University, Dr. Susan Meyer, USDA Forest Service Rocky Mountain Research Station Shrub Sciences Laboratory, and Drs. Phil Allen, Craig Coleman, and Mikel Stevens, Brigham Young University. June 2007. \$399,000 (\$130,000 to GU).

National Science Foundation Research Opportunity Award. “Phylogenetic and evolutionary inference in the *Collomia-Navarretia* clade (Polemoniaceae).” Support for collaborative research with Dr. Leigh Johnson, Brigham Young University 2006 – 2007. \$28,900.

U.S. Fish and Wildlife Service, Sacramento Field Office, CA. “The utility of chloroplast DNA sequence data for population-level genetic analysis of vernal pool *Navarretias*.” 2005 – 2006. \$10,000.

LI-COR Biosciences Genomics Education Matching Fund. Matching fund grant for purchase of an automated DNA analysis system for Gonzaga University. March, 2005. \$45,000

California Department of Fish and Game. Funds to cover travel, sample collection, and DNA sequencing for samples from 8 California populations of *Navarretia*. Contract #S0485100, February, 2005. \$2,500

M.J. Murdock Charitable Trust. “An investigation of genetic variation within and among vernal pools populations of *Navarretia minima* using allozymes and microsatellites.” February 1999; \$36,000

CONFERENCE PRESENTATIONS

“More Than Lip Service: Faculty Development for Institutional Mission.” Professional and Organizational Development Network in Higher Education, Louisville, KY, November, 2016. 75-minute roundtable discussion co-facilitated with Linda Beane-Boose, Spokane Falls Community College.

- “Sustaining Faculty Development Programs at Small Colleges: Theory & Practice.” *Professional and Organizational Development Network in Higher Education*, Louisville, KY, November, 2016. 75-minute interactive workshop co-facilitated with Jason Craig, Marymount University, and Kevin Gannon, Grand View University.
- “NACADA Faculty Guide to Advising: Highlights from the Authors.” NACADA Annual Meeting, Atlanta, GA, October 2016. 60-minute panel presentation co-facilitated with Allison Hoffman, Northwest Missouri State University.
- “Starting & Sustaining Faculty Development Programs at Small Colleges: Theory & Practice.” *Professional and Organizational Development Network in Higher Education*, San Francisco, CA, November, 2015. 3-hour interactive workshop co-facilitated with Sal Meyers, Simpson College, and Jason Craig, Marymount University.
- “What's Next??? Exploring Future Career Options for Faculty Developers.” *Professional and Organizational Development Network in Higher Education*, Dallas, TX, November, 2014. 75-minute roundtable discussion co-facilitated with James Sloat, Colby College.
- “Starting & Sustaining Faculty Development Programs at Small Colleges: Theory & Practice.” *Professional and Organizational Development Network in Higher Education*, Dallas, TX, November, 2014. 3-hour interactive workshop co-facilitated with Sal Meyers, Simpson College, and Jason Craig, Marymount University.
- “Panel Discussion: Teaching about the Genetics of Race,” *2014 Race and Pedagogy National Conference*, University of Puget Sound, Tacoma, WA, September, 2014. 2-hour panel discussion on teaching about race and genetics, co-facilitated with Peter Wimberger and Alexa Tullis, University of Puget Sound, and Christine Manganaro, Maryland Institute College of Art.
- “Connecting Faculty and Organizational Development Through SoTL.” *Professional and Organizational Development Network in Higher Education*, Pittsburgh, PA, November, 2013. 75-minute interactive workshop co-facilitated with Heather Easterling, Gonzaga University.
- “Newer Small College Faculty Developers: Starting and Sustaining Faculty Development Programs at Small Colleges: Theory and Practice” *Professional and Organizational Development Network in Higher Education*, Pittsburgh, PA, November, 2013. 3-hour interactive workshop to be co-facilitated with Linda Beane-Katner, St. Norbert College, and Sal Meyers, Simpson College.
- “Starting and Sustaining Faculty Development Programs at Small Colleges: Theory and Practice” *Professional and Organizational Development Network in Higher Education*, Seattle, WA, October, 2012. 3-hour interactive workshop co-facilitated with Linda Beane-Katner, St. Norbert College, and Sal Meyers, Simpson College.
- “Advising as Teaching: A Framework for Developing Faculty Advisors.” *Professional and Organizational Development Network in Higher Education*, Seattle, WA, October, 2012. 75-minute interactive workshop co-facilitated with Gemma D’Ambruoso, Gonzaga University.

- “The Advising Academy: A year-long cohort-based training model for faculty advisors.” National Meeting, NACADA, The Global Community for Academic Advising. Nashville, TN. October, 2012. 60-minute interactive session co-facilitated with Gemma D’Ambruoso, Gonzaga University.
- “Overcoming Issues Facing Mid-Career Faculty Developers at Small Colleges,” *Professional and Organizational Development Network in Higher Education*, Atlanta, GA, October, 2011. 75-minute interactive session co-facilitated with Linda Beane-Katner, St. Norbert College, and Carolyn Oxenford, Marymount University.
- “Genetic diversity of the seed pathogen *P. semeniperda* isolated from diverse plant hosts.” Kristina Bair* and David Boose. Poster presentation, 19th Regional Conference on Undergraduate Research, McMinnville, OR, November, 2010.
- “Population Genetic Structure of the Seed Bank Pathogen Black Fingers of Death (*Pyrenophora semeniperda*) on Cheatgrass (*Bromus tectorum*).” Susan E. Meyer, Steven Harrison, David Boose, and Mikel Stevens. Poster presentation, Society for Range Management annual meeting, Denver, CO, February, 2010.
- “Mycelial culture and DNA extraction of *Pyrenophora semeniperda*, a seed pathogen of cheatgrass.” Barbara Williams*, Robert Wheeler*, and David L. Boose. Poster presentation, 17th Regional Conference on Undergraduate Research, Tacoma, WA, November, 2008.
- “The Phylogeography of a widespread habitat specialist: the vernal pool obligate *Navarretia leucocephala*.” Tom Fabrizio* and David L. Boose. Poster presentation, 15th Regional Conference on Undergraduate Research, Portland, OR, November, 2006.
- “Genetic variation in Eastern Washington populations of *Navarretia leucocephala*, a vernal pool endemic plant.” Marc O. Langland* Dan T. Rott* and David L. Boose. Poster presentation, 14th Regional Conference on Undergraduate Research, Nampa, ID, November, 2005.
- “PCR-RFLP analysis of genetic variation in *Navarretia leucocephala*, a vernal pool plant.” Gregory C. Finnigan*, Lesley T. Merkle*, and David L. Boose. Poster presentation, 13th Regional Conference on Undergraduate Research, Portland, OR, November, 2004.
- “Genetic variation within and among populations of *Navarretia leucocephala* (Polemoniaceae), a vernal pool endemic plant”. D.L. Boose, B.R. Harmeling*, and R.T. Turcotte*. Poster presentation, Ecological Society of America Annual Meeting, Portland, OR, August 2004.
- “Genetic variation among vernal pool populations of *Navarretia leucocephala minima* in Eastern Washington. Joni Goodman*, Justin Cruz*, and David Boose. Poster presentation, Eleventh Regional Conference on Undergraduate Research, Walla Walla, WA, November, 2002.
- “Identification of microsatellite regions in the *Navarretia leucocephala minima* genome: Preliminary steps in a study of genetic variation and phylogeny.” Roger Turcotte*, Dharshini Arul*, and David Boose. Poster presentation, Tenth Regional Conference on Undergraduate Research, Spokane, WA, November, 2001.

“Random Amplified Polymorphic DNA (RAPD) markers in *Navarretia leucocephala* ssp. *minima*.” James Duane*, Mike Janes*, and David Boose. Poster presentation, Ninth Regional Conference on Undergraduate Research, Tacoma, WA, November, 2000.

“Looking for molecular measures of diversity in a vernal pool plant species, I: Allozymes.” Robin Marushia*, Anthony Thatcher*, and David Boose. Poster presentation; Eighth Annual Murdock College Science Research Conference, McMinnville, OR, October, 1999.

“Looking for molecular measures of diversity in a vernal pool plant species, II: Microsatellites” Anthony Thatcher*, Robin Marushia*, and David Boose. Poster; Eighth Annual Murdock College Science Research Conference, McMinnville, OR, October, 1999.

“Effects of diurnal temperature mean and range on seed germination in two native coastal sage shrubs and an invasive grass.” David L. Boose and Senanu Pearson*. Poster; Ecological Society of America, Spokane, WA, August, 1999.

OTHER SCHOLARLY AND PROFESSIONAL ACTIVITIES

Resource faculty member for First Annual Teaching and Learning National Institute, July, 2016. Served as a resource faculty member for 4-day intensive institute sponsored by The Washington Center at The Evergreen State College. Led three 75-minute interactive workshops, and worked as a consultant to faculty-staff teams from four different institutions.

Accreditation visit team member, Northwest Commission on Colleges and Universities. Served on year-seven accreditation site visit teams to George Fox University (April 2014) and Corban University (October 2015).

Panel member on NACADA webinar presentation, “Balancing Academic Advising with other Faculty Responsibilities,” April, 2014. Served as one of four panel members for a 60-minute online presentation on faculty advising.

Small College Committee, Professional and Organizational Development Network in Higher Education (POD). 2009 – present.
Elected Chair-elect in November 2011; will serve two years as chair-elect, then two years as chair, then two years as past chair; committee is charged with creating community among, promoting the interests of, and providing resources for faculty developers at smaller colleges and universities; co-lead a three-hour workshop at the annual POD conference on starting and sustaining a faculty development center at small colleges.

Board of Trustees, Discovery School, Spokane, WA. Chair, May 2009 – June 2011; Secretary, September 2007 – May 2009; Member, December 2006 – May 2007.
Served on board of a private non-profit elementary school in Spokane. Oversaw and participated in \$180,000 capital campaign for the school; participated in year-long self-study program leading up to accreditation by regional accrediting body; worked with other board members and school head to carry out the school’s strategic plan; approved and oversaw

budget. Coordinated hiring of new Head of School, and guided the eventual closure of the school due to financial losses.

Peer reviewer for:

Professional and Organizational Development Network in Higher Education (POD).

Conference proposal reviewer, 2012, 2013, 2015.

Scientific journals: *Plant Ecology*, *Plant Systematics and Evolution*, *American Journal of Botany*, and *Oikos*, *Teaching Issues and Experiments in Ecology*, and the EcoED Digital Library of the Ecological Society of America.

Textbooks from Benjamin Cummings

U.S. Fish and Wildlife Service critical habitat designation

Invited public lecture: “What can evolution tell us about God?” Science on Tap series sponsored by the Pacific Science Center, Seattle, WA, in conjunction with the opening of the exhibit, “Lucy’s Legacy: The Hidden Treasures of Ethiopia”. October, 2008.

Public lecture: “Global choices: Population, consumption, and limits.” September, 2006. Presented as part of a faculty-sponsored series on globalization and its effects. Invited to present the lecture again to the Spokane Chapter of the United Nations Association, December 2006, and to the Cliff/Cannon Neighborhood Council (Spokane), January 2008.

Led discussion sessions at the Faculty Conference, Fall 2003. Marketplace of Ideas” aimed at bringing together people from different disciplines to foster collaborative teaching efforts, and “Toward a Peer Review of Teaching” explored the possibility of developing peer evaluations that would supplement the current means of evaluating teaching at the university.

Public lecture: “War and the Environment”, Spring 2003. Presented as part of a series of lectures entitled “Ain’t Gonna Study War No More”, organized and sponsored by the Department of Religious Studies, the Women’s Studies Program, and the Gonzaga University Justice Committee.

Thesis committee member for Jessica Krzyzanek, MS program in Nursing. Fall 2001. Research involved testing the effects of hand washing on the presence of bacteria on the wrists of nurses in a Spokane hospital. I performed a statistical analysis of her data, gave her a brief tutorial on the analytical tools I used, discussed her results, and commented on drafts of her thesis.

Workshop on critical race theory, Whitworth College, Spring 2001. Follow-up activities included participation in a panel discussion at Whitworth on the nature of evil (Fall 2001), and the development of a new course for biology majors, Advanced Genetics: Race and Racism.

HONORS AND AWARDS

Faculty Diversity Leadership Award. Gonzaga University. 2006.

COMMITTEE SERVICE

Selection committee, Faculty Diversity Leadership Award. 2012, 2013. Reviewed nomination materials, ranked candidates, selected recipients.

Ad Hoc Committee of the Academic Council on E-portfolios. 2010 – 2011. Researched options, uses, benefits, and potential costs of electronic portfolios for departmental and institutional assessment. Provided recommendations to the Academic Council.

Biology Department Teagle Grant committee. 2009 – 2010. Worked with other members of the department to develop learning outcomes for the Biology program, identify embedded assignments that could be used to assess our achievement of those outcomes, and develop a rubric to be used in scoring those assignments.

Thematic Programming Committee. 2008 – 2010. Collaborated with faculty and staff from across the university to choose a common theme for academic and co-curricular activities for an academic year; select a common reading for incoming students relating to the theme; identify faculty and outside speakers who can present curricular and co-curricular activities on the theme.

Committee on Academic Standing (appointed member): Spring 2003 – 2012. Made recommendations to the Academic Vice President on cases of academic probation and potential dismissal for academic reasons. Advise the Office of Academic Services on matters relating to academic standing.

Arts and Sciences Strategic Plan Committee: Spring 2004 – Spring 2006. Participated in the writing of vision and mission statements for the College of Arts and Sciences, and in the development of an academic strategic plan for the college, as part of the university-wide strategic planning process.

Committee on Health Science Careers: Fall 1999 – Spring 2006. Advised current and prospective students on academic preparations for medical school, and participated in interviews of students who are in the process of applying. Wrote and contributed to committee letters of recommendation for students. Gave presentations to juniors on the process of applying to medical school, writing a personal statement and preparing for the interview process. Gave presentations at new student orientation and at visit days for students interested in majoring in the sciences or considering health-science careers.

College of Arts and Sciences Curriculum Committee (elected member): Spring 2002 – Spring 2006. Advised the Dean of the College of Arts and Sciences on curriculum matters, including approval of courses that meet particular core requirements (e.g., social justice requirement). Fostered development of new courses and curricular initiatives.

Core Review Committee: Spring 2004 – Fall 2005. Analyzed the core requirements of the University and the College of Arts and Sciences; developed objectives for the core curriculum; coordinated visits from outside speakers on core curriculum review and design; provided final report with recommendations.

Faculty Forum committee: Fall 1999 – Spring 2002. Helped plan and carry out a variety of campus activities to foster creative intellectual exchange among faculty members. Committee disbanded in Spring 2002.

PROFESSIONAL ASSOCIATIONS

Ecological Society of America

Society for the Study of Evolution

Botanical Society of America

Sigma Xi, the Scientific Research Society

Professional and Organizational Development (POD) Network

National Academic Advising Association (NACADA)

Association of American Colleges and Universities (AAC&U)