

Curriculum Vitae
Bradford G. Rence. Ph.D.

Lawrence University
Department of Biology
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Married to Eileen
2 Daughters

Educational Background

University of California, Berkeley, Ph.D. Entomology (1976)
Prof. Werner Loher, Advisor
University of Iowa, Graduate Study, Zoology (1969-1970)
Prof. Hugh Dingle, Advisor
University of Iowa, B.A. Zoology (1969)
Grinnell College (1965-1967)

Chronology of Appointments

Lawrence University
Professor of Biology, 1994-present
Chair of Biology, 1987-1990, 1996-1999, 2006-2009
Director, Lawrence London Program, 2002-2003
Marine Biology Program, co-director 1982-present
Science Construction Coordinator (half-time), 1998-2002
Associate Professor of Biology, 1986-1994
Assistant Professor of Biology, 1979-1986
Simon Fraser University, Burnaby, British Columbia, Canada
Visiting Professor, 2005
Commonwealth Scientific and Industrial Research Organization (CSIRO), Canberra, Australia
Division of Entomology, Visiting Scientist, 1998
Associated Colleges of the Midwest
Field Instructor, Wilderness Field Station, summers 1981-1993
University of California, Berkeley
Research Associate, summer 1980 and 1994
NIH Post Doctoral Fellow, 1976-1979
Teaching Associate, 1974-1976
NIH Pre Doctoral Trainee, 1972-1975
Good Samaritan Hospital and Medical Center, Portland, Oregon
Research Associate, Laboratory of Neurophysiology, 1970-1972
University of Iowa
Teaching Assistant, 1969-1970

Professional Societies

American Association for the Advancement of Science (AAAS)
Animal Behavior Society
Society for Behavioral Ecology
Orthoptists' Society
Xerces Society

Courses Taught

General Zoology, General Endocrinology, Comparative Physiology, Topics in Neuroscience,
Animal Behavior, Invertebrate Zoology, Human Physiology, Human Nutrition, Physiological
Ecology, Wolf Biology, General Entomology, Insects and Society, Exercise Physiology,
Ornithology, Coral Reef Environments

Research Interests

Insect reproductive behavior emphasizing environmental control and physiological bases of behavioral rhythms in crickets
Role of energetics in the evolution of mating behavior
Insects of restored and remnant prairies, effects of sustainable prairie use on insects

Awards and Grant Support

Lawrence Award for Excellence in Teaching, Lawrence University, 2002
Mortar Board Award for Community Service, Lawrence University, 2002
Lawrence Young Teacher of the Year Award, Lawrence University, 1984
AAAS/Merck Undergraduate Science Research Program Grant, Program Director, \$60,000, 2007-2010
Grass Foundation Trustee Grant, \$17,500, 2002-2003
Wisconsin Department of Natural Resources Pheasant Stamp Grant, \$3,000, 2001
Wombat's Top Biology Website with Images, March 2001,
http://www.lawrence.edu/dept/biology/BIOL_81A/invert/invert.html
U.S. Fish and Wildlife Service, Five State Prairie Insect Biodiversity Inventory, \$6,000, co-operator, 1996-present
Howard Hughes Medical Institute Undergraduate Education Grant, \$800,000, Program Director, 1998-2003
National Science Foundation (ILI), \$65,000, Principal Investigator, 1992-1995
Lawrence University Faculty Research Grant, @\$3,000, 1990,1995,1996,1997, 2003, 2004, 2006, 2007, 2008
Alexandar vonHumboldt Foundation Fellowship, University of Tubingen, Germany, Laboratory of Prof. Franz Englemann, 1979-1981 (declined)
National Institutes of Health Post Doctoral Fellowship, Department of Zoology, University of California, Berkeley, \$55,000 Principal Investigator, 1976-1979
National Institutes of Health Pre Doctoral Traineeship, Department of Entomological Sciences, University of California, Berkeley, 1972-1976
Grinnell College Behavioral Science Institute Fellowship, Grinnell College, Summer 1964

Selected Professional Presentations

Barmack, N.H. and Rence, B.G. 1971 Mechanical evidence for a single population of fast contractile elements in extraocular muscle. First Meeting of Society for Neuroscience, Washington, D.C.
Rence, B. G. 1976 Competition between environmental cues in synchronizing a behavioral rhythm. XV International Congress of Entomology, Washington, D.C.
Rence, B. G. and DeVelder, L. 1982 Energy expenditure during reproductive behavior in a cricket:manipulation or co-evolution. Annual Meeting of Animal Behavior Society, Duluth, MN
Rence, B. G. , Marsh, N. and Sisola, L. 1995 Transplantation of sex specific circadian rhythms in the cricket, *Teleogryllus commodus*. 24th International Ethological Conference, Honolulu, HI
Rence, B.G., Shoemaker, M., Wenberg, N. and Nikolai, D. 1999 Examining sustainability at the consumer level: resilience of east-central Wisconsin prairie insects populations to periodic fire and grazing. 9th Annual Prairie Invertebrates Conference, Fall Creek, WI
Rence, B.G. 2003 The Lawrence University Science Building Projects. PKAL:Building Spaces for Science that Make a Difference, Lawrence University, Appleton, WI.

Reviews and other Professional Service

Review of Gwynn, D. T. and Morris, G. K. 1983 Orthopteran Mating Systems, Westview Press; Boulder, in *Journal of Comparative Ethology*, 66:78 (1984)
Review of Little, C. 1983 *The Colonization of Land: Origins and Adaptations of Terrestrial Animals*, Cambridge Univ. Press:Cambridge, in *Journal of Comparative Ethology*, 68:259-260 (1985)
Invited Peer Review of Papers: *Physiological Entomology*, *Journal of Comparative Ethology*, *Journal of Biological Rhythms*, *Journal of Orthoptera Research*
Review of Research Proposals: National Science Foundation, Wisconsin Academy of Arts,

Sciences and Letters, Iowa Science Foundation

Selected Recent Invited Lectures

- Department of Entomology, University of Wisconsin-Madison, April 2006, "Pheromonal Sex Recognition in the House Cricket, *Acheta domestica*"
- Faculty of Sciences, University of British Columbia, May 2005, "Musings on a Modern Life Sciences Undergraduate Curriculum."
- Simon Fraser University, February, 2006, CMPT/MBB 505: Problem Based Learning in Bioinformatics, "Behavioral and Physiological Applications"
- University of California, Berkeley, Department of Entomological Sciences, April 11, 2005, "Pheromonal Sex Recognition in the House Cricket, *Acheta domestica*"
- Recent Advances in Biology Lecture, Lawrence University, April 1998, "Antipodean Phenomena: A Sabbatical Report on the Insects of Australia and New Zealand"
- Biology Department Colloquium, Australian National University, February 1998, "The Biology of Circadian Rhythms in the Black Field Cricket"
- Anthropology 29 (The Family in Cross Cultural Perspective) Lawrence University, "An Introduction to Sociobiology and Its Applications to the Study of Families"

Refereed Professional Publications

- Rence, B.G., Putterman, D., Lokensgard, J. and Wesenberg, A. 2008 Behavioral, physiological and biochemical aspects of pheromonal sex recognition in the house cricket, *Acheta domestica* (L.). Submitted to Journal of Insect Behavior.
- Rence, B. G., Turner, E., Majewski, J. and Nikolai, D. 1999 A longitudinal study of insect diversity and abundance on remnant and restored prairie areas in east central Wisconsin, *Ecological Restoration*, 17(3):157-158.
- Rence, B. G., Lisy, M. T., Garves, B. T., and Quinlan, B. J. 1988 The role of ocelli in circadian singing rhythms in crickets, *Physiological Entomology*, 13:201-212
- Rence, B. G., Ostenson, E. A. and Mueller, L. L. 1987 The effects of age at mating on the rate of egg laying in the cricket, *Teleogryllus commodus*, *Experimental and Applied Entomology*, 44:145-149
- Rence, B. G. 1984 A comparison of light and temperature entrainment: evidence for a multioscillator circadian system, *Physiological Entomology*, 9:215-227
- Rence, B. G. 1978 Evidence for multiplicity in the pacemaker system controlling cricket singing. *The Physiologist* 21:98-99
- Loher, W. and Rence, B. G. 1978 The mating behavior of *Teleogryllus commodus* (Walker) and its central and peripheral control, *Journal of Comparative Ethology*, 46:225-259
- Rence, B.G. and Loher, W. 1977 Contact chemoreceptive sex recognition in the male cricket, *Teleogryllus commodus*, *Physiological Entomology* 2:225-236
- Rence, B. G. and Loher, W. 1976 Arrhythmically singing crickets: re-entrainment after bilobectomy, *Science* 190:385-87
- Barmack, N. H., Bell, C. C. and Rence, B. G. 1971 Tension and rate of tension development during isometric responses of extraocular muscle, *Journal of Neurophysiology*, 34:1072-107

University Committees

- Curriculum Committee
- Committee on Instruction (secretary, chair)
- Committee on Honors (secretary, chair)
- Committee on Public Occasions (secretary, chair)
- Sexual Assault/Sexual Harassment Resource Board
- Committee on Equal Opportunity, Tenure, Reappointment and Promotion

Building Committees

- Union Building Committee
- Sasaki Campus Planning Task Force Focus Group
- New Science Building Committee (chair)
- Youngchild Hall Building Committee (chair)

Ad Hoc Committees and Activities

London Centre Advisory Committee (chair)
Institutional Animal Care and Use Committee
Gender Studies Advisory Board
A.C.M. Minority Student and Academic Careers Program Selection Committee
Committee on Human Subjects (Institutional Review Board)
Student Employment Advisory Committee (faculty representative)
Pilot Advising Project for Underrepresented Racial and Ethnic Groups
A.C.M. Wilderness Field Station Program Advisor
Watson Scholarship Selection Committee
Rhodes Scholarship Selection Committee
University of Chicago Business Fellows Selection Committee
Westinghouse Excellence in Science for Women Scholarship Committee
Udall Scholarship Campus Representative
Faculty Advisor: Lambda Sigma Sophomore Honor Society
Faculty Advisor: Biology Club

Search Committees

Faculty

Chemistry (2)
Mathematics
Geology/ Environmental Studies (2)
Psychology (2)
Biology (6, four as chair)
London Center (8, all as chair)

Staff

Dean of Off Campus Studies
Dean of Students
Biology Laboratory Manager (chair)
Biology Project Manager (chair)

Consultations (Science Building Related)

PKAL (workshop presenter)
Monmouth College, Monmouth, IL
Beloit College, Beloit, WI
Mt. Union College, Alliance, OH
Peforma Architectural, DePere, WI
Austin College, Sherman, TX
St. Norbert's College, DePere, WI
University of Toledo, Toledo, OH
Trinity University, San Antonio, TX
Universidad Jose Cecilio Del Valle, Teguchigalpa, Honduras
University of Wisconsin-Sheboygan, Sheboygan, WI