

CURRICULUM VITAE

VALERIE S. BANSCHBACH

Personal

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Education

1992 Ph.D., Biology, University of Miami, Coral Gables, FL;
Dissertation advisor: Keith D. Waddington
1989 Tropical Biology: An Ecological Approach, course #89-1,
Organization for Tropical Studies, San Jose, COSTA RICA
1986 B.A., Biology, Pomona College, Claremont, CA
1985 Primate Social Behavior course in PANAMA, School for Field
Studies, Cambridge, MA

Professional Appointments

2008 – present Full Professor, Saint Michael's College
2005 - present Chair, Biology Department, Saint Michael's College
2004 Chair, sabbatical leave substitute, Biology Department
2001 - 2008 Associate Professor, Saint Michael's College
1997 - 2001 Assistant Professor, Saint Michael's College
1995 - 1997 Visiting Assistant Professor, Davidson College, Davidson, NC
1994 - 1995 Research Associate and Instructor, Colorado State University, Ft.
Collins, CO
1992 - 1994 Postdoctoral Research Associate, University of Vermont,
Burlington, VT; Grant from National Science Foundation
(P.I. Joan M. Herbers); Studied ecological determinants of
social structure in the ant *Myrmica punctiventris*
1988 - 1989 Graduate Research Assistant, University of Miami; Grant from
Whitehall Foundation (P.I. Keith D. Waddington); Studied
foraging behavior of the honey bee *Apis mellifera*
1986 - 1987 Herbarium Technician, Rancho Santa Ana Botanic Gardens,
Claremont, CA
1986 Field Research Assistant in Coahuila, MEXICO, for Marcie Friedman
University of California, Berkeley; Studied parental care
behavior and mate choice of the freshwater fish *Cichlasoma*
minckleyi

Teaching Experience

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- 2000 - 2009 **Senior Seminar**, capstone seminar for Biology majors on the history of science, with project work for environmental biology students: development of start-up business plans to address environmental problems
- 2007 - 2008 **Solving Environmental Problems**, seminar for first-year students for LSR lab science requirement or social science requirement
- 2005 - 2008 **Population Ecology**, lecture and laboratory course for Biology majors
- 2003 - 2006 **Tropical Ecology** course for Biology majors, during winter break, co-taught in Costa Rica with Peter Hope
- 2003 **Topics in Animal Behavior** course for LSR lab science requirement
- 2000 **Independent Research** advisor to Samantha Beck
- 1999 - 2007 **Biological Reading and Writing**, writing-intensive seminar course for Biology majors
- 1999 **General Biology**, lecture
- 1998 - 2009 **Animal Behavior**, lecture and laboratory course for Biology majors
- 1997 - present **Academic advisor** to 20 to 40 SMC students per semester
- 1997 - 2007 **Senior Research** advisor to Phil Smith, Ann Brunelle, Becca Yeamans, Karen Bocchi, Nick Gill, Brendan Gow, Dan Prasol, Judy Grivetti, Amie Rennie, Kristen Bartlett, and Jake Bailey;
- General Biology** laboratory
- 1997 - 2004 **Ecology**, lecture and laboratory course for Biology majors
- 1997 - 1998 **Independent Research** co-advisor for Kenneth Howard, Davidson College
- 1996 - 1997 **Introductory Organismal Biology, Evolution and Ecology**, lecture and laboratory, Davidson College;
- Evolution**, several lectures, as part of a team-taught course, Davidson College;
- Independent Research** advisor, Davidson College
- 1995 - 1996 **Introductory Cellular and Molecular Biology**, lecture and laboratory, Davidson College;
- Invertebrate Zoology**, Colorado State University
- 1994 **Independent Research for Undergraduates**, mentor, University of Vermont: Supervised ecological research project carried out by Noah Levit, funded by NSF REU supplement grant (P.I. Joan Herbers)
- 1992 Laboratory Assistant, Laboratory in Cytology and Histology, University of Miami
- 1987 - 1991 Laboratory Instructor, General Biology: Ecology, Evolution, & Organismal Biology for science majors, University of Miami
- Laboratory Instructor, General Biology: Cellular and Molecular Biology for science majors, University of Miami
- 1987 Laboratory Instructor, Developmental Biology, University of Miami

Grant Awards and Honors

- 2006 Faculty Development Grant. Project title: Ants as Bioindicators, for work at the

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- Museum of Comparative Zoology at Harvard University and in Joan Herbers's lab at the Ohio State University
- 2005 Faculty Development Grant. Project title: Ants as Bioindicators, for work in COSTA RICA
- 2004 Vermont Genetics Network Faculty Summer Research Grant. Awarded directly from VGN. Project title: Ant Species Diversity in Edge vs. Interior Forest Habitats in Vermont.
- 2003 Faculty Curriculum Development Grant, from Saint Michael's College for development of field course in tropical ecology in Costa Rica. Co-investigator: Peter Hope, Instructor of Biology.
Vermont Genetics Network Grant for Summer 2004. Project title: Ant Species Diversity in Edge vs. Interior Forest Habitats in Vermont. Awarded from "internal" SMC pool of funding
- 1998 Travel Grant from the North American Section of the I.U.S.S.I. and the National Science Foundation for attendance at the Congress of the International Union for the Study of Social Insects, December 1998, Adelaide, Australia
National Science Foundation, VT Experimental Program to Stimulate Competitive Research (VT EPSCoR) Small College Development Fund Grant; award included summer stipend for student researcher (Kristen Bartlett)
- 1997 Faculty Development Fund Award, SMC
- 1996 Mountain Lake Biological Station, Mountain Lake Virginia, University of Virginia, Walton Fellowship
Davidson College Faculty Study and Research Grant
- 1994 Co-Principle Investigator with Joan M. Herbers on National Science Foundation Grant: Colony structure and queen-worker conflict in social insects
- 1992 Outstanding Teaching Assistant Award, College of Arts and Sciences, University of Miami
- 1991 Biology Department Travel Award, University of Miami
- 1990 Sigma Xi, Grants-in-Aid Award
Biology Department Graduate Research Support Award, University of Miami
- 1989 Florida Entomological Society Minigrant
- 1987 Biology Department Travel Award, University of Miami
- 1986 Inducted as an Associate Member of Sigma Xi, the Scientific Research Society

Refereed Publications (*denotes undergraduate coauthors)

- Banschbach, V.S., *Yeaman, R.L., *Brunelle, A. *Gulka, A., and *M. Holmes. 2009.
Manuscript in preparation: Ants as bioindicators: Does habitat edge affect community or

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- social structure of north temperate deciduous forest ants?
- Banschbach, V.S. and Letovsky, R. 2009. The use of corn and sugarcane to produce ethanol fuel: a fermentation experiment for environmental studies. Submitted to **American Biology Teacher**.
- Banschbach, V.S., *Brunelle, A. *Bartlett, K., *J. Grivetti and *R.L. Yeaman. 2006. Tool use by the forest ant, *Aphaenogaster rudis*: Ecology and task allocation. **Insectes Sociaux**, 53: 463-471.
- Banschbach, V.S. and J.M. Herbers. 1999. Nest movements and population spatial structure of the forest ant *Myrmica punctiventris*. **Annals of the Entomological Society of America**, 92(3): 414-423.
- Herbers, J.M. and V.S. Banschbach. 1999. Plasticity of social organization in a forest ant species. **Behavioral Ecology and Sociobiology**, 45(6): 451-465.
- Herbers, J.M. and V.S. Banschbach. 1998. Food supply and reproductive allocation in forest ants: repeated experiments give different results. **Oikos**, 83: 145-151.
- Banschbach, V.S., *Levit, N. and J.M. Herbers. 1997. Nest temperatures and thermal preferences of a forest ant species: Is seasonal polydomy a thermoregulatory mechanism? **Insectes Sociaux**, 44: 109-122.
- Banschbach, V.S. and J.M. Herbers. 1996. Complex colony structure in social insects: I. Ecological determinants and genetic consequences. **Evolution**, 50(1): 285-297.
- Banschbach, V.S. and J.M. Herbers. 1996. Complex colony structure in social insects: II. Reproduction, queen-worker conflict, and levels of selection. **Evolution**, 50(1): 298-307.
- Herbers, J.M. and V.S. Banschbach. 1995. Size-dependent nest site choice by cavity-dwelling ants. **Psyche**, 102: 13-17.
- Banschbach, V.S. 1994. Colour association influences honey bee choice between sucrose concentrations. **Journal of Comparative Physiology, A**, 175: 107-114.
- Banschbach, V.S. and K.D. Waddington. 1994. Risk-sensitive foraging in honey bees: no consensus among individuals and no effect of colony honey stores. **Animal Behaviour**, 47: 933-941.

Theses and Dissertations

- Banschbach, V.S. 1992. Response to variance in nectar concentration by honey bees, *Apis mellifera*. University of Miami, Ph.D. Dissertation.
- Banschbach, V. 1986. Bird use of lakes in the Claremont-Upland, California area. Pomona College, B.A. Thesis.

Invited Presentations

- 1998 XIIIth Congress of the International Union for the Study of Social Insects, Adelaide, AUSTRALIA; Presentation title, "Teaching Ecology and Behavior Courses Using Forest Ants"
- 1996 University of North Carolina, Charlotte, NC, USA; Presentation title, "Ecological Determinants of Social Structure in Forest Ants"

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Invited Presentations (Continued)

- 1995 University of Central Oklahoma, Edmond, OK, USA; Presentation title, “Ecological Determinants of Social Structure in Forest Ants”
- 1995 Montclair State University, Upper Montclair, NJ, USA: Presentation title, “Ecological Determinants of Social Structure in Forest Ants”
- 1994 XIIth Congress of the International Union for the Study of Social Insects, Paris, FRANCE; Coauthor: J.M. Herbers; Presentation title, “Ecological Genetics of Queen Number in *Myrmica punctiventris*”

Contributed Presentations at Conferences

- 2007 Entomological Society of America, Annual Meeting, San Diego, CA, USA; Presentation title: “Ants as bioindicators: Does habitat edge affect community or social structure of north temperate deciduous forest ants?”; Coauthors: B. Yeamans, A. Brunelle, A. Gulka and M. Holmes
- 2005 Vermont Genetics Network Annual Symposium, South Burlington, VT, USA; Presentation title: “Ants as bioindicators: Habitat fragmentation affects ant social structure”; Coauthors: A. Brunelle, A. Gulka and M. Holmes
- 2000 Entomological Society of America, Joint Meeting with the Entomological Society of Canada and the Société d’Entomologie du Québec, Montréal, Québec, CANADA; Coauthors: K. Bartlett and J. Grivetti, SMC Class of 2000; Presentation title: “Tool use during foraging by a forest ant, *Aphaenogaster rudis*: Interspecific competition and division of labor”
- 1997 Entomological Society of America, National Meeting, Nashville, TN, USA;
1) My presentation had coauthors: N. Levit and J.M Herbers; Presentation title: “Thermal preferences and seasonal polydomy of the forest ant, *Myrmica punctiventris*”
2) I coauthored a presentation given by Kenneth Howard, undergraduate student at Davidson College; Presentation title: “Queen number and reproductive differences between *Leptothorax curvispinosus* populations at two southeastern sites”
- 1996 Animal Behavior Society, National Meeting, Flagstaff, AZ, USA; Coauthors: N. Levit and J.M. Herbers; Presentation title: “Thermal preferences and seasonal polydomy of a cavity-nesting forest ant, *Myrmica punctiventris*”
- 1994 International Behavioral Ecology Congress, Nottingham, UNITED KINGDOM; Coauthor: J.M. Herbers; Presentation title: “Ecology and genetics of social structure in two populations of the ant *Myrmica punctiventris*”
- 1992 Entomological Society of America, National Meeting, Baltimore, MD, USA; Presentation title: “Honey bee foraging behavior: The effects of nectar sugar concentration and color association”

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Contributed Presentations at Conferences (Continued)

- 1991 Animal Behavior Society, National Meeting, Wilmington, NC, USA;
Coauthor: K.D. Waddington; Presentation title: "Effects of Colony honey stores on risk-sensitive foraging by honey bees, *Apis mellifera*"
- 1987 American Society of Zoologists, National Meeting, New Orleans, LA; **American Zoologist** 27(4):45A, Abstract #212; Presentation title: "Association of greater waterbird lake visitation with greater habitat diversity and water surface area"

Conferences and Workshops Attended

- 2008 Vermont Businesses for Social Responsibility, conference held at Champlain College, Burlington, VT
- NSF Grant writing conference, Davis Center, UVM, Burlington, VT
- 2004 Community Mapping Institute, Summer Geographic Information Systems Workshop, Vermont Institute of Natural Science, held at SMC Council on Undergraduate Research, Posters on the Hill Symposium, Washington, D.C. Attended as research mentor to Becca Yeaman
- 2003 Annual Meeting of the Acadian Entomological Society and the Maine Entomological Society, Bar Harbor, Maine; Invited judge of graduate student presentation competition
- 2000 New England Board of Higher Education, Environmental Internship Symposium, Killington, VT
- Vermont Bird and Botanical Society Conference, Quimby, VT
- Vermont Bird Conference, Woodstock, VT
- 1999 Chautauqua Workshop: Conservation Biology Considered, for college teachers of conservation biology and environmental science, Harvard University, Cambridge, Massachusetts
- New England Board of Higher Education, Environmental Internship Symposium, Stowe, VT
- 1998 Vermont Bird Conference, Burlington, VT
- 1997 Teaching workshop at the Entomological Society of America, National Meeting, Nashville, TN

Service

Professional

- 2006 Guest journal editor: **Northeastern Naturalist**
- 2004 Vermont Institute of Natural Science, BioBlitz Volunteer Scientist
- 2003 Grant proposal reviewer: National Science Foundation
- 1999 - 2000 Secretary, Vermont Chapter of Sigma Xi, the Scientific Research Society
- 1998 Moderator for Science and Math Session II of the Vermont Academy of Arts and Sciences Intercollegiate Student Symposium
- 1992 - present Manuscript reviewer for refereed journals: **Animal Behaviour; Environmental Entomology; Evolution; Journal of Animal Ecology; Journal of Experimental Psychology; Animal Behavior Processes; Ecology; Western North American Naturalist**

Service (Continued)

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Community

- 2006 - present School Board Director: Underhill Incorporated District School Board, Jericho, VT; Board Chair 2007 – 08; Board Vice-Chair 2008 -09
- 2006 Lecturer for community workshop: “All in Place: A Celebration of the Local Landscape”, October 14, at the Jericho Research Forest, Jericho, VT
- 2005 – present Volunteer guest teacher for preschool to first grade children at The Green Mountain Montessori School and the Underhill I.D. School
- 1998 Speaker at the University of Vermont’s Biology Career Day
- 1996 Volunteer guest teacher to second and third grade students at Davidson Elementary School, Davidson, NC
- 1992 - 1994 Volunteer Scientist, Science-By-Mail program for elementary school children
- 1992 - 1993 Association for Women in Science, Vermont Chapter, mentor for undergraduate women interested in science

College

- 2008 – present Faculty Council Member
- 2008 Panel member for Teaching Resources Committee discussion of interdisciplinary courses: “A Room with Two Views”
Chair of Search Committee to fill tenure-line Biology position
- 2007- present Editor of Biology Department electronic newsletter: *Biology Matters*
Member of Environmental Council, Saint Michael's College
Internship Advisory Council member
- 2007 Faculty Evaluation of Administrators Committee
Panel member for Teaching Resources Committee discussion of how to write effective letters of recommendation
- 2006 Conducted School for Field Studies program site visit: traveled to Atenas, COSTA RICA in October, 2006 to evaluate “Sustainable Development Studies” SFS program as study abroad option for SMC students
- 2004 – present Participant in Saint Michael's College Service Learning Workshop
Prepared and presented information on SMC Biology Department program for prospective students and their parents on Admissions weekends for Biology and pre-healthcare career students, each Fall and Spring
- 2004 Reader for Environmental Studies Minor students’ Senior theses: Erin Brosnan; Erica Kensey
- 2003 - present SMC institutional representative to School for Field Studies, affiliate field study abroad program

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Service

College (Continued)

- 2003 Admissions and Financial Aid Committee
Mentor for successful Vermont Genetics Grant Summer
Student Research grant proposals by Ann Brunelle, Annie Gulka &
Maggie Holmes; mentored their research projects for 6 weeks during
summer of 2004
Mentor for Becca Yeamans's successful Clare Booth Luce grant
proposal for summer research stipend; mentored her research during
summer of 2003
- 2002 - 03 Faculty Evaluation of Administrators Committee
- 2001 - 02 Human Subjects Committee
- 2000 - 01 Chair of Search Committee to fill Plant Biologist position at SMC;
Association of Vermont Independent Colleges Environmental
Science/Studies Task Force member
Participant at Saint Michael's College Annual Joint Planning
Retreat
- 1999 - 2004 Coordinator of the Environmental Science Major at SMC
- 1999 Sponsored successful Daniel Bean Research Scholarship proposal
by Judy Grivetti, undergraduate student at SMC and mentored
her research during summer 1999;
Evaluated Environmental Studies Senior Paper by Tammy
Martin, undergraduate student at Saint Michael's College;
Member of Search Committee to fill Geneticist/Microbiologist
Position at SMC
- 1998 - 2000 Member of the Curriculum and Educational Policy Committee,
Saint Michael's College (Secretary during 1999 – 2000);
- 1998 Member of Search Committee for Neurobiologist position at SMC;
Participant at Saint Michael's College Annual Joint Planning
Retreat;
Speaker in "Research in an Electronic Environment" Course at Saint
Michael's College (LS 101)
- 1997-98 Member of Search Committee for Visiting Asst. Professor position
in Biology Dept. at SMC
- 1996 Honors Thesis Reader for Janet Stevens, undergraduate, Davidson College
Sponsored successful Sigma Xi Grant-in-Aid proposal by Kenneth
Howard, undergraduate student at Davidson College

Professional Affiliations

- Animal Behavior Society
- Entomological Society of America
- International Union for the Study of Social Insects
- Sigma Xi