

CURRICULUM VITAE
VALERIE S. BANSCHBACH

Contact Information

Address: Dept. of Biology, Saint Michael's College, Colchester, VT 05439
Phone: Office (802) 654-2633
E-mail: vbanschbach@smcvt.edu

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

2010 – present Director, Environmental Studies Program, Saint Michael's College, VT
2008 – present Professor, Saint Michael's College, VT
2005 - 2010 Chair, Biology Department, Saint Michael's College, VT
2004 Chair, sabbatical leave substitute, Biology Department
2001 - 2008 Associate Professor, Saint Michael's College
1997 - 2001 Assistant Professor, Saint Michael's College
1995 - 97 Visiting Assistant Professor, Davidson College, Davidson, NC
1994 - 95 Research Associate and Instructor, Colorado State University, Ft.
Collins, CO
1992 - 94 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 - 89 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 - 87 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

Valerie S. Banschbach

Courses Taught

- 2010 - 11 **Introduction to Environmental Studies**, core course for ENV majors
2007 - 09 **Solving Environmental Problems**, seminar for first-year students for Liberal Studies Requirement lab science requirement or social science requirement
- 2005 - 07 **Population Ecology**, lecture and laboratory course for Biology majors
2003 - 11 **Tropical Ecology** course for Biology and ENV majors, during winter break, co-taught in Costa Rica with other SMC Biology faculty
- 2003 **Topics in Animal Behavior** course for LSR lab science requirement
2000 - 11 **Senior Seminar**, seminar for senior Biology majors
2000 **Independent Research** advisor to Samantha Beck
1999 - 2007 **Biological Reading and Writing**, writing-intensive seminar course for Biology majors
- 1999, 2009-11 **General Biology: Introduction to Ecology and Evolution**, lecture
1998 - 2011 **Animal Behavior**, lecture and laboratory course for Biology majors
1997 - 2007 **Senior Research** advisor to Emily Ogilvy, Kaitlyn O'Donnell, 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: Ecology; Cellular and Molecular** laboratories
1997 - 2004 **Ecology**, lecture and laboratory course for Biology majors
1997 - 98 **Independent Research** co-advisor for Kenneth Howard, Davidson College
- 1997 – present **Academic advisor** to 20 to 45 SMC students each semester
1996 - 97 **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 - 96 **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 - 91 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

Valerie S. Banschbach

Grant Awards and Honors

- 2011 Politi Fund Award from Saint Michael's College for site visit to India to develop study abroad experience for Environmental Studies students
- 2010 Faculty Development Curriculum Grant: Project title: Association for Environmental Studies and Sciences Conference Attendance and Panel Participation, Portland, OR
- 2006 Inducted as Graduate Member into the Biological Honor Society, *Beta Beta Beta* Faculty Development Grant. Project title: Ants as Bioindicators, for work at the 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. (\$8,000)
- 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) (\$3000)
- Promoted to Full Member of *Sigma Xi*, the Scientific Research Society
- 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 (\$209,000)
- 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

Valerie S. Banschbach

Refereed Publications (*denotes undergraduate researchers)

- Banschbach, V.S., *Yeaman, R.L., *Brunelle, A., *Gulka, A. and *M. Holmes. *Submitted*.
Ants as bioindicators: Impacts of edge habitats on community and social structure of North temperate deciduous forest ants.
- Banschbach, V.S. and R. Letovsky. 2011. Teaming Environmental Biology and Business Administration Seniors on “Green” Enterprise Plans at Saint Michael's College, Colchester, VT. **Journal of Environmental Studies and Sciences**. Available at: <http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s13412-011-0036-x>
- Letovsky, R. and V.S. Banschbach. 2011. Developing “green” business plans: Using entrepreneurship to teach science to Business Administration majors and business to Biology majors. **Journal of College Science Teaching**, 40(6):
- Banschbach, V.S. and R. Letovsky. 2011. The use of corn and sugarcane to produce biofuel. Pages 6 – 16. In *Tested Studies for Laboratory Teaching*, Volume 32 (K. McMahon, Editor). Proceedings of the 32nd Conference of the Association of Biology Laboratory Educators (ABLE), 383 pages.
<http://www.ableweb.org/volumes/vol-32/v32reprint.php?ch-1>
- Banschbach, V.S. and R. Letovsky. 2010. The use of corn and sugarcane to produce ethanol fuel: A fermentation experiment for environmental studies. **American Biology Teacher**, 72(1): 31 – 36.
- 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.

Valerie S. Banschbach

Refereed Publications (*denotes undergraduate researchers) (cont'd)

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.

Other Recent Published Writings

Banschbach, V.S. "I Believe" column for the **Burlington Free Press**, Green Mountain Section, September, 22, 2010.

Conference Presentations and Invited Lectures (*denotes undergraduate coauthors)

- 2011 Entomological Society of America, National Meeting, Reno, Nevada, USA; Co – author on Emily Ogilvy*'s presentation "A study of ant diversity in burned and unburned sandplain forest in Vermont". Poster presentation scheduled for November 16, 2011.
Association for Environmental Studies and Sciences, Annual Meeting, University of Vermont, Burlington, VT, USA; Panelist for session on "Environmental Studies and Sciences Program Development and Assessment"; Presentation "Developing an Environmental Studies Program at Saint Michael's College in Vermont". Co-authors J. Ayres, B. Findley and R. Kujawa.
- 2010 Association for Environmental Studies and Sciences, Annual Meeting, Lewis and Clark College, Portland, OR, USA; Panelist for Session on "Capstones and Practica in Environmental Studies and Sciences"; Co-author R. Letovsky.
Association for Biology Laboratory Education, Annual Conference, Dalhousie University, Halifax, CANADA; Major workshop presenter, "The use of corn and sugarcane to produce ethanol biofuel: A fermentation laboratory exercise for environmental studies." Coauthor: R. Letovsky.
- 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*

Valerie S. Banschbach

Contributed Presentations and Invited Lectures (cont'd)

- 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"
- 1998 Invited presentation at the XIIIth Congress of the International Union for the Study of Social Insects, Adelaide, AUSTRALIA; Presentation title, "Teaching Ecology and Behavior Courses Using Forest Ants"
- 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 by Kenneth Howard*, 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*"
- Invited presentation at the University of North Carolina, Charlotte, NC, USA; Presentation title, "Ecological Determinants of Social Structure in Forest Ants"
- 1995 Invited presentation at the University of Central Oklahoma, Edmond, OK, USA; Presentation title, "Ecological Determinants of Social Structure in Forest Ants"
- Invited presentation at Montclair State University, Upper Montclair, NJ, USA: Presentation title, "Ecological Determinants of Social Structure in Forest Ants"
- 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*"
- Invited presentation at 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*"
- 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"
- 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*"

Valerie S. Banschbach

Contributed Presentations and Invited Lectures (cont'd)

- 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"

Recent Academic Presentations to the Saint Michael's College Community

- 2010 Panelist and essayist for the Common Text, Orientation Week for First-Year Students; Topic was climate change and Elizabeth Kolbert's *Field Notes from a Catastrophe*
Social Science Research Consortium Seminar, "Developing Green Business Plans: Teaming Biology and Business Students"; Co-presenter: R. Letovsky

Conferences and Workshops Attended

- 2010 Sustainability Across the Curriculum, Campus Compact, Middlebury College, Middlebury, VT
2009 Renewing the Campus: The Catholic University and Sustainability, Notre Dame University, South Bend, Indiana
2008 Vermont Businesses for Social Responsibility, conference held at Champlain College, Burlington, VT
NSF Grant writing workshop, 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

- 2010 – present Scientific Advisory Board Member, Keeping Track, Inc. wildlife monitoring and conservation planning non-profit organization

Valerie S. Banschbach

Service

Professional (cont'd)

- 2008 External reviewer for the Biology program at Western New England College in Springfield, Massachusetts
- 2006 Guest journal editor: **Northeastern Naturalist**
- 2004 Vermont Institute of Natural Science, BioBlitz Volunteer Scientist
- 2003 Grant proposal reviewer: National Science Foundation/VT EPSCoR
- 1999 - 2000 Secretary, Vermont Chapter of Sigma Xi, the Scientific Research Society
- 1998 Moderator for Science and Math Session II of the Vermont Acad. 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**

Community

- 2011 – present Future of the Flats, Underhill ID School Board “Champion” for Safe Routes to Schools planning in the Underhill Flats Community, VT
- 2006 - present Public School Director, Underhill Incorporated District School Board, Jericho, VT; Board Chair March 2007 -08; Vice Chair 2008 -10;
- 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 - 94 Volunteer Scientist, Science-By-Mail program for elementary school children
- 1992 - 93 Association for Women in Science, Vermont Chapter, mentor for undergraduate women interested in science

College

- 2011 - present Faculty Welfare Committee, elected member for 2011 - 2013
- 2010 – present Career Advisory Committee member
- Member of the Faculty Dispute Resolution Panel
- 2010 – 2011 Chair of Search Committee for Environmental Studies faculty position
- 2010 Sponsor/organizer or co-sponsor of visiting speakers: Dr. Vandana Shiva; Dr. John Kricher; Dr Michael McCormick
- Mentor for student Emily Ogilvy’s successful application for an SMC VPAA research grant for summer research project
- Independent study advisor for Anna DiSanto: Friends of the Winooski Internship follow-up project
- 2009 – 2010 Environmental programs curricular working group leader; Sponsor, organizer or co-sponsor of visiting speakers: The Beehive Collective, artists for social justice; the Mountaintop Removal Roadshow

Valerie S. Banschbach

Service

College (cont'd)

- 2008 – 2010 Faculty Council elected member; Chair for 2009 -10 academic year; Faculty Executive Committee member
- 2008 – 2009 Chair of Search Committee for Biology faculty position at SMC
- 2008 Panel member for Teaching Resources Committee discussion of interdisciplinary courses: “A Room with Two Views”
- 2007- present Environmental Council member
Internship advisor for Krissy Oines (Essex Junction Wastewater Treatment Plant), Kevin O’Riordan (Keeping Track Inc.), Lynsey Nally (Sopher Investments and Native Energy), Andrea Navia-Macozek (Veterinary clinic), Corey Mosizek (Keeping Track Inc.), Mike Nadeau (Fish and Wildlife Service, Massachusetts)
- 2007 Internship Advisory Committee
Faculty Evaluation of Administrators Committee
Initiator and editor of electronic newsletter for Biology Department alumni, students and prospective students
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 weekend for Biology and pre-healthcare career students, each September
- 2004 - 2010 Reader for Environmental Studies Minor students’ Senior theses: Erin Brosnan; Erica Kensey; Lynsey Nally
- 2003 - present SMC institutional representative to School for Field Studies, affiliate field study abroad program
- 2003 - 04 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
- 2003 Mentor for Becca Yeaman’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

Valerie S. Banschbach

Service

College (cont'd)

- 2000 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
- 1996-97 Honors Thesis Reader for Janet Stevens, undergraduate, Davidson College
- 1996 Sponsored successful Sigma Xi Grant-in-Aid proposal by Kenneth Howard, undergraduate student at Davidson College

Professional Affiliations and Honor Societies

- | | |
|--|---|
| Animal Behavior Society | Entomological Society of America |
| Assoc. for Envntl Studies and Sciences | International Union for the Study of Social Insects |
| <i>Beta Beta Beta</i> | <i>Sigma Xi</i> |