

Curriculum Vitae

Oswald Joseph Schmitz
Oastler Professor of Population and Community Ecology

WORK ADDRESS Yale University, School of Forestry and Environmental Studies, 195 Prospect St.,
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DEGREES

1985-1989 Ph.D. University of Michigan, School of Natural Resources.
1983-1984 M.Sc. University of Guelph, Department of Zoology
1978-1982 B.Sc. University of Guelph, Department of Zoology

PROFESSIONAL POSITIONS

2019-present Senior Associate Dean for Research, Yale University School of Forestry and
Environmental Studies and Director of Doctoral Studies
2011-2018 Director, Yale Institute for Biospheric Studies
2004-2009 Associate Dean for Academic Affairs, Yale University, School of Forestry and
Environmental Studies
2000-present Professor, Yale University, School of Forestry and Environmental Studies
2000-present Joint Professor, Yale University, Department of Ecology and Evolutionary Biology
(courtesy appointment subject to biannual re-approval)
1997-2000 Joint Associate Professor, Yale University, Department of Ecology and Evolutionary
Biology
1996-2000 Associate Professor with term, Yale University, School of Forestry and Environmental
Studies
1992-1996 Assistant Professor with term, Yale University, School of Forestry and Environmental
Studies
1990-1992 N.S.E.R.C. (Canada) Postdoctoral Fellow, Department of Zoology, University of British
Columbia
1988-1989 Rackham Predoctoral Fellow, School of Natural Resources, University of Michigan

FELLOWSHIPS/AWARDS/HONORS

2019 Bruce MacLaren Distinguished Lecture, Eastern Kentucky University Chautauqua
Lecture Series in Celebration of Science Week
2017 Keynote Speaker—3rd International Workshop on Trait-based Approaches to Ocean Life
2017 Keynote Speaker—University of Wisconsin Ecology Spring Symposium
2016 Riser Lecture—Northeastern University Marine Science Center
2015 Named Fellow of the Ecological Society of America
2015 Bronze Medal, the Federated Garden Clubs of Connecticut's highest honor awarded for 10
years of dedicated service teaching in the Federation's Environmental Studies School.
2014 Charles Jenner Memorial Lectureship— Curriculum for the Environment and Ecology,
University of North Carolina - Chapel Hill
2014 Class of 2014 Teaching Award for Professor Most Exemplifying Aldo Leopold's Land Ethic,
Yale School of Forestry and Environmental Studies
2011 Distinguished Ecologist Lecture Series—Michigan Tech University

- 2010 Biodiversity, Ecology and Global Change Lecture—Harvard University Center for the Environment.
- 2009 Ledermann Lecture in Natural History and Conservation Biology—College of the Environment and Life Sciences, University of Rhode Island
- 2006 Named the Oastler Professor of Population and Community Ecology, Yale School of Forestry and Environmental Studies
- 2006 Elected Fellow of the AAAS (American Association for the Advancement of Science) for distinguished fundamental contributions towards understanding the emergence and maintenance of ecosystem structure and functioning and for relating ecosystem patterns to individual behaviors.
- 2005 The Walton Lecture Series—Mountain Lake Biological Station, Virginia, USA
- 1999 Class of 1999 Teaching Award, Yale School of Forestry and Environmental Studies
- 1994 Yale University Nominee, Packard Foundation Science Fellowship
- 1992 University Postdoctoral Fellowship, University of Calgary,
(Declined to accept position at Yale)
- 1990-1992 N.S.E.R.C. Postdoctoral Fellowship, University of British Columbia
- 1988-1989 Rackham Predoctoral Dissertation Fellowship, University of Michigan
- 1987 Rackham Research Fellowship, University of Michigan
- 1987 The Howard M. Wight Prize for Outstanding Qualities of Scholarship and Leadership, University of Michigan School of Natural Resources

BIOGRAPHICAL SKETCH

Oswald Schmitz is the Oastler Professor of Population and Community Ecology, in the Yale University School of Forestry and Environmental Studies. He studies the linkage between two important components of natural systems: biodiversity and ecosystem services. These issues are examined using field experimentation guided by formal mathematical theory of species interactions. His research explains how predator and herbivore species determine the species composition and productivity of plants in ecosystems, and ensuing ecosystem processes such as nutrient and carbon cycling. Research also focuses on elucidating how important environmental disturbances, such as global climate change and natural resource exploitation, alter the nature and strength of species interactions in ecosystems and ensuing ecosystem services. The scientific insights aid efforts to conserve vital services that species in ecosystems provide to humankind. His research evaluates how to rethink conservation strategies by considering species as part of a natural portfolio. This portfolio represents a wealth of potential alternatives to contemporary technologically intensive and expensive approaches in environmental management. His book “The New Ecology: Rethinking a Science for the Anthropocene” encapsulates much of his thinking about biodiversity and ecosystems and, heavily inspired by the writings of Aldo Leopold, makes ecological science accessible to a broader readership.

PROFESSIONAL AFFILIATIONS

Ecological Society of America; American Association for the Advancement of Science; Society of American Naturalists,

PROFESSIONAL SERVICE

To Conservation and Policy

- 2017-present Member, Board of Directors, Ocean Conservancy, Washington, DC.
- 2014-present Member, Science Advisory Council, Ocean Conservancy, Washington, DC.

- 2012 Science Advisor, Open Space Institute's Northeast Resilient Landscapes Initiative, NY
2005-2009 Advisory Board Member, Center for Conservation Solutions, American Forest Foundation, Washington, DC.
- 2004 Member, US Environmental Protection Agency (EPA) Scientific Advisory Board ad hoc panel reviewing the EPA Report on the Environment.
- 2004 Presented "The effects of global climate change on species diversity and ecosystem functioning within the continental USA" to the spring meeting of the New England Governors and Eastern Canadian Premier's conference. This was a prelude to the fall meeting that led to significant New England wide agreements and subsequent legislation on controlling greenhouse gas emissions in New England.
- 1994 – 2000 Scientific Advisory Board, Mistik Forest Management Ltd., Saskatchewan, Canada
1999 Member, Scientific Advisory Panel on "Total Land Management", Mining Prospectors and Developers Association of Canada.

To Academics/Professional Societies

- 2016-2018 Member, Fellows Selection Committee, Ecological Society of America
2017 Member, University of Massachusetts Biology Department External Review Committee
2015 Member, NSF site review panel evaluating the National Socio-Environmental Synthesis Center (SESYNC) for a second 5-year term funding renewal.
- 2012 Member, Society of American Naturalists ad hoc committee to select the Editor-in-Chief of *The American Naturalist*
- 2012-2014 Member, Steering Committee, Predator-Prey Gordon Research Conference
2011-2012 Member, Steering Committee for Workshop: Climate change and species interactions: ways forward. Institute of Ecosystem Studies, Millbrook NY
- 2010-2013 Member, Editorial Advisory Board, *Encyclopedia of Sustainability Volume 5: Ecosystem Management and Sustainability*.
- 2010, 2013 Judge, Blavatnik Awards for Young Scientists, New York Academy of Sciences.
2010 Member, Millennium Conferences proposal review committee, Ecological Society of America.
- 2004-2010 Invited Faculty Member, Community Ecology and Biodiversity Group (1 of 9 original Internationally) Faculty of 1000 Biology—A next-generation literature awareness tool in which faculty members highlight the most interesting papers published in the biological sciences.
- 2006-2014 Review Panel Member, on various US National Science Foundation (NSF) Environmental Biology Panels (DDIG, General Ecology, Population & Community Ecology preproposal)
- 2004 External Faculty Opponent, Ph.D. Dissertation, Umeå University
2002 External Faculty Opponent, Ph.D. Dissertation, University of Amsterdam
2002 Organized a Special Feature entitled "Linking Individual-scale trait plasticity to community dynamics" published in *Ecology*.
2002 Review Panel Member, US National Science Foundation (NSF) Biocomplexity in the Environment Program.
- 2000 Review Panel Member, United States Department of Agriculture (USDA) Ecosystem Science Grants Program
2000 Review Panel Member, US National Science Foundation (NSF) Doctoral Dissertation Improvement Grants Program
- 1996 Guest Editor, Special issue of *Evolutionary Ecology* (November 1997) on the theme "The population and community dynamical implications of optimal foraging theory" commemorating the 30th anniversary of optimal foraging theory.

To the Community

2005- 2008 Member, New Haven Science Fair Steering Committee
 2005 Yale-New Haven Teacher’s Institute—Teaching Fellow: Ecology and Conservation
 for New Haven Public School teachers.
 1995- present Mentor, New Haven Science Fair

EDITORIAL SERVICE

2017-2018 Section editor for a special issue in CURRENT OPINION IN INSECT SCIENCE on Global
 Change Biology—Eco-Evolutionary Ecology and Adaptation.
 2014- Associate Editor, ECOLOGY AND EVOLUTION
 2012, 2013 Guest Editor, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCE USA
 (3 manuscripts)
 2006-2014 Associate Editor, ECOSCIENCE
 2010-2013 Associate Editor, ECOSPHERE
 2009-2013 Associate Editor, THE AMERICAN NATURALIST
 2007-2009 Associate Editor, RESEARCH LETTERS IN ECOLOGY
 2004-2008 Editor, ECOLOGY LETTERS
 2001-2007 Associate Editor, OECOLOGIA
 1999-2005 Associate Editor, ECOLOGY & ECOLOGICAL MONOGRAPHS

PEER REVIEW CONTRIBUTIONS

- Proposal Reviewer for USA National Science Foundation (NSF): Population and Community Ecology, Ecosystem Ecology, Physiology and Behavior, and LTER panels.
- Proposal Reviewer for Academy of Sciences of the Czech Republic
- Proposal Reviewer for Canada Natural Sciences Research Council (NSERC)
- Proposal Reviewer for Israeli National Science Foundation
- Proposal Reviewer for National Geographic Committee for Research and Exploration
- Proposal Reviewer for Netherlands Organization for Scientific Research
- Proposal Reviewer for Royal Society of New Zealand Marsden Fund
- Proposal Reviewer for South African Science Foundation
- Proposal Reviewer for US-Israel Binational Science Foundation
- Proposal Reviewer for UK Natural Environment Research Council (NERC)

SERVICE TO YALE UNIVERSITY

Administrative service

2019- Senior Associate Dean for Research, Yale Forestry and Environmental Studies
 2001- Member, Yale College Environmental Studies Major Faculty Advisory
 Committee
 2011-2018 Director, Yale Institute for Biospheric Studies
 2012-2016 Member, Strategic Planning Committee, Yale Forestry and
 Environmental Studies
 2015-2016 Member, Yale School of Public Health SAC Committee
 2015 Member, Yale Divinity School SAC Committee
 2009-2011 Chair, Faculty Development and Appointments Committee, Yale Forestry and
 Environmental Studies
 2003-2005 Member, Yale University International Education Committee
 2001-2008 Member, Yale University Technological Services Committee
 2001-2006 Member, Yale University Press Publications Committee
 2001-2004 Director of Doctoral Studies, Yale Forestry and Environmental Studies
 2000-2001 Acting Chair, F&ES Curriculum Committee

1998-2002

Director, Yale University Center for Computational Biology

TEACHING**Courses taught**

Population/Community Ecology	Conservation Biology	Experimental Design
Wildlife Conservation Ecology	Developing a Conservation Ethic	Biostatistics
Evolutionary Ecology	Bioreserve Design	Research Methods
Ecology & Environmental Problem Solving	Ecosystem Ecology	Ethics and Conservation
		Conservation Science and Land use planning

Student Advising**Senior Undergraduate Theses Supervised*****Environment Studies***

Anne Guerry. 1995. The fusion of ecology and wildlife management: perspectives on wolf control in Alaska.

Leana Rosette 1998. The reintroduction of two Mantled Howler Monkeys in Manuel Antonio, Costa Rica.

Anna Gross 2003-2004. Evaluating habitat conservation plans.

Dawn Lippert 2005-2006. Vieques' Vanishing Residents: An Analysis of Leatherback Sea Turtle Management on Vieques Island, Puerto Rico

Karen Stamieszkin 2005-2006. Assessing ecological viability of oyster farming in Maine.

Christa Anderson 2006-2007. Interactions between humans and lions in southern Tanzania.

Kathy Hughes 2009-2010. Empirical study of habitat complexity and predator-prey interactions as it informs ecosystem conservation. (*Winner of the 2010 Donnelley Prize for best senior thesis in the Environmental Studies Major*).

Sabrina Clevenger 2017-2018. Range contraction of the American Pika: Climate refugia and the defense against climate warming.

Madeline Zimmerman. 2017-2018. The changing fate of Thailand's elephants, but a future worth fighting for: the interplay of culture and ecology for conservation.

Ecology & Evolution

Joann Lo. 1997. Associational defense hypothesis: the efficacy of trichomes as a defense against herbivory for associated defended and undefended plants.

Blake Suttle. 1997. Agonistic interactions of prey between coexisting spiders: the effects of habitat structural complexity and food limitation.

Kara Rodgers. 1998. The effects of herbivory and plant competition on an oldfield plant community.

Lauge Sokol-Hessner. 2000. Understanding the effects of multiple spider predator combinations on grasshopper prey populations.

Megann Young. 2001. Effects of intermediate trophic complexity on top-down effects in food webs.

Farrin Anello. 2002. Effects of prey body size state on predation-risk avoidance behavior.

Charlie Liu. 2006. Grasshopper mouthpart plasticity and implications for population dynamics.

Katherine Urban-Mead. 2013. Influence of land use variation on pollinator diversity and abundance.

Zachary Miller. 2017. Elemental cycling, physiological stress, and ecosystem functioning: Confronting a stoichiometrically-explicit model with data.

Katherine Wyatt. 2017. Adapting Predator-Prey Interactions between *Melanoplus femurrubrum* grasshopper and *Pisaurina mira* spider in New England Warming Conditions.

Adam Houston. 2017-2018. Nutrient cycling, top-down, and bottom-up controls in old-fields.

Jonah Ury. 2018-2019. The climate bioeconomics of forest management: Maximizing the carbon-inclusive profits of the North American boreal forest.

Applied Mathematics

Sacha Litman. 1995. Stability analysis of a plant-adaptive herbivore system.

Masters students who did research in my lab

Andrew Beckerman 1992-1994	Jennifer Garrison 1997-1999	Jessica Price 2009-2011
Erin Girdler 1992-1994	Tierney Kelly 2000-2001	Kevin Barrett 2010-2012
Scott Mathison 1992-1994	Elisabeth Jones 2000-2002	Jeff Carroll 2010-2012
Theodore Wong 1993-1995	Krithi Karanth 2000-2003	Jason Clark 2010-2012
Andrew Cooper 1993-1995	Elizabeth Kalies 2002-2004	Judith Ament 2011-2013
Brett Eldered 1993-1995	Jennifer Molnar 2002-2004	Henry Glick 2011-2013
Kristina Rothley 1993-1995	Tendro Ramaharitra 2003-2005	Robert Buchkowski 2012-2014
Kathleen O'Brien 1994-1996	Radhika Dave 2004-2006	Bryan Crowley 2012-2014
Maria Uriarte 1994-1996	Rebecca Sanborn 2004-2006	Jeffrey Smith 2013-2015
Jay West 1994-1996	Charlie Liu 2005-2007	Meredith VanAcker 2014-2016
Heinrich zu Dohna 1996-1998	Maya Cahn 2005-2007	Katherine Urban-Meade 2016
Kevin Drury 1996-1998	Kelsey Kidd 2006-2008	Adam Eichenwald 2016-2018
Andrei Podolsky 1996-1998	Angela Rutherford 2006-2008	Nathalie Somer 2017- 2019
Benjamin Ruttenberg 1997-1998	Sarah Fierce 2008-2010	Kimberly Zamuda 2017- 2019
Rebecca Young 1997-1999	Kathryn Freund 2008-2010	Courtney Anderson 2018-
Anne Axel 1997-1999		Danielle Glass 2018-
	Alexandra Whitney 2008-2010	
Drue DeBerry 1997-1999		

Doctoral Students

Current

Robert Buchkowski (2014-) *recipient of an NSERC-Canada Graduate Scholarship*

Mary Burak (2016-) *recipient of an NSF Graduate Research Fellowship*

Julia Monk (2016-) *recipient of a Yale Graduate School Dean's Emerging Scholars Fellowship (1 of 15 awarded in 2016)*

Kristy Barnes (2018-) *recipient of an NSF Graduate Research Fellowship (co-advised with Mark Bradford)*

Katherine Orrick (2018-)

Nathalie Sommer (2019-)

Past

Andrew Beckerman (1995-1999). *The distribution of the red-legged grasshopper, Melanoplus femurrubrum, among oldfields: resolving a counterintuitive pattern.* Currently Senior Lecturer (Associate Professor in US system), Department of Animal and Plant Sciences, University of Sheffield, Sheffield UK.

Susan Koenig, (1995-1999). *The reproductive biology of Jamaica's black-billed parrot (Amazona agilis) & conservation implications.* Currently the Executive Director, Windsor Research Station, Windsor Jamaica.

Kristina Rothley (1996-1999). *Trade-offs between conflicting demands and the management of habitat.* Currently Environmental Law Student, University of Maine Law School.

Jason Gear (1998-2003) *Mechanisms determining spatial dynamics of forest collembolans.* Currently Ecologist, EPA Atlantic Ecology Division National Health and Environmental Effects Research Laboratory, Narragansett, RI

Catherine Burns (1999-2004: recipient of an NSF Graduate Research Fellowship) *Investigating the response of white-footed mice to habitat loss: from individual behavior to landscape ecology*. Currently Associate Director, Water and Habitat for Nature, The Nature Conservancy, California.

Michael Booth (1999-2005) *Effects of ectomycorrhizal fungi on forest plant competition*. Deceased 2011.

Elizabeth Jones (2002-2007: co-advised with Lisa Curran) *The influence of mammalian seed predation on five species in Papua New Guinea: differential effects of recruitment, distribution and implications for community composition*. Currently: teaching high school science in Palo Alto, CA.

Brandon Barton (2005-2010). *Species Interactions in a Warming Climate: Examining the Direct and Indirect Effects of Climate Change on New England Grassland Food Webs*. Currently Assistant Professor, Department of Biological Sciences, Mississippi State University.

Holly Jones (2005-2010). *Evaluating island recovery following invasive species removal and seabird restoration*. Currently Associate Professor, Department of Biological Sciences, Northern Illinois University.

Jennifer Miller (2009-2015: recipient of an NSF Graduate Research Fellowship). *Examining Predation Risk as a Guide for Mitigating Large Carnivore Attacks on Livestock*. Currently Senior Scientist, Defenders of Wildlife, Washington, DC.

Kevin McLean (2010-2016: recipient of a NASA Earth and Space Science Fellowship) *Canopy habitat and arboreal mammal Community: Integration of movement ecology and wildlife monitoring in a Neotropical forest*. Currently Postdoctoral Fellow, UC Davis.

Colin Donihue (2011-2016). *Drivers of functional trait variability in Podarcis erhardii, the Aegean Wall Lizard*. Currently Postdoctoral Associate, Department of Organismic and Evolutionary Biology, Harvard University.

Karin Burghardt (2010-2016: recipient of an NSF Graduate Research Fellowship) *Linking plasticity in Goldenrod anti-herbivore defense to population, community and ecosystem processes*. Currently Assistant Professor, Department of Entomology, University of Maryland.

Alexandria Moore (2013-2018) *Trophic interactions, ecosystem functioning, and restoration of New England tidal wetlands*. Currently Postdoctoral Fellow, American Museum of Natural History, NY.

Postdoctoral Associates

Current

Annise Dobson (2018-): (PhD Cornell University)

Past

Peter Hambäck (1997-1999): Currently Professor, Department of Botany, Stockholm University, Stockholm, Sweden

Barney Luttbeg (1997-1999): Currently Associate Professor, Department of Zoology, Oklahoma State University

Ofer Ovadia, (1999-2003): Currently Professor, Department of Life Sciences, Ben Gurion University, Beer Sheva, Israel

Joohyoung Lee (2003-2005): Currently Research Scientist, Wayne State University.

Dror Hawlena (2007-2011): Currently Senior Lecturer, Institute of Life Sciences, Hebrew University, Jerusalem, Israel

Chia-Ying Ko (2010-2012): Currently Assistant Professor, Institute of Fisheries Science and Department of Life Science, National Taiwan University

Anne Trainor (2011- 2015): Currently Development by Design Spatial Scientist, The Nature Conservancy Africa Region program.

Adam Rosenblatt (2013-2016): Currently Assistant Professor, Department of Biology, University of North Florida

Lauren Smith (2014-2016): Currently Postdoctoral Fellow, National Institute for Mathematical and Biological Synthesis.

PUBLICATIONS

Books

- 1) Schmitz, O.J. 2016. *The New Ecology: Rethinking a Science for the Anthropocene*. Princeton University Press.
- 2) Ohgushi, T., O.J. Schmitz and R.D. Holt (Editors). 2012. *Trait-Mediated Indirect Interactions: Ecological and Evolutionary Perspectives*. Cambridge University Press with the British Ecological Society Ecological Reviews Series.
- 3) Schmitz, O.J. 2010. *Resolving Ecosystem Complexity*. Princeton University Press Monographs in Population Biology.
- 4) Schmitz, O.J. 2007. *Ecology and Ecosystem Conservation*. Island Press—Foundations of Contemporary Environmental Studies Series.

Articles in Peer-reviewed Journals

2019

- 5) Benedek, K., J. Bálint, I. Máthé, G. Mara, T. Felföldi, A. Szabó, C. Fazakas, C. Albert, R.W. Buchkowski, O.J. Schmitz, A. Balog. 2019. Linking intraspecific variation in plant chemical defence with arthropod and soil bacterial community structure and N allocation. *Plant and Soil* 444:383-397.
- 6) Buchkowski, R.W., O.J. Schmitz and M.A. Bradford. 2019. Nitrogen recycling in coupled green and brown food webs: weak effects of herbivory and detritivory when nitrogen passes through soil. *Journal of Ecology* 107:963–976
- 7) Buchkowski, R.W., S.J. Leroux and O.J. Schmitz. 2019. Microbial and animal nutrient limitation change the distribution of nitrogen within coupled green and brown food chains. *Ecology* 100(5): e02674.
- 8) Flecker, A.S., C.W. Twining, O.J. Schmitz, S.J. Cooke, and N. Hammerschlag. 2019. Aquatic predators influence micronutrients: important but understudied. *Trends in Ecology and Evolution* 34: 882-883
- 9) Hammerschlag, N., O.J. Schmitz, A.S. Flecker, K.D. Lafferty, A. Sih, T.B. Atwood, A.J. Gallagher, D.J. Irschick, R. Skubel and S.J. Cooke. 2019. Ecosystem function and services of aquatic predators in the Anthropocene. *Trends in Ecology and Evolution* 34:369-383.
- 10) Miller, J.R.B. and O.J. Schmitz. 2019. Landscape of fear and human-predator coexistence: applying spatial predator-prey interaction theory to understand and reduce carnivore-livestock conflict. *Biological Conservation* 236:464-473.
- 11) Rosenblatt, A.E., K.S. Wyatt and O. J. Schmitz. 2019. Will like replace like? Linking thermal performance to ecological function across predator and herbivore populations. *Ecology* 100(4): e02643.

- 12) Schmitz, O.J. 2019. Fearful effects on ecological competitors. *Nature* 570: 43-44.
- 13) VanAcker, M, M.R. Lambert, O.J. Schmitz, and D.K. Skelly. 2019. Suburbanization increases echinostome infection in green frogs and snails. *EcoHealth* 16:235-247.
- 14) Yona, L., B. Cashore and O.J. Schmitz. 2019. Integrating policy and ecology within a single system to achieve path dependent climate solutions. *Environmental Science and Policy* 98: 54-60.

2018

- 15) Barton, B.T. and O.J. Schmitz. 2018. Opposite effects of daytime and nighttime warming on top-down control of plant diversity. *Ecology* 99:13-20.
- 16) Burak, M.K., J.D. Monk and O.J. Schmitz. 2018. Eco-evolutionary dynamics: The predator-prey adaptive play and the ecological theater. *Yale Journal of Biology and Medicine* 91:481-489. (invited for special issue on ecology and evolution)
- 17) Burghardt, K.T., M.A. Bradford, and O.J. Schmitz. 2018. Acceleration or deceleration of litter decomposition by herbivory depends on nutrient availability through intraspecific differences in plant defense expression. *Journal of Ecology* 106:2380-2394.
- 18) Kofler, N., J.P. Collins, J. Kuzma, E. Marris, K. Esvelt, M.P. Nelson, A. Newhouse, L.J. Rothschild, V.S. Vigliotti, M. Semenov, R. Jacobsen, J. E. Dahlman, S. Prince, A. Caccone, T. Brown and O.J. Schmitz. 2018. Editing nature: local roots of global governance. *Science* 362: 527-529.
- 19) Rutenbeck, N.E., B.R. Frey, K.R. Covey, G.P. Berlyn, O.J. Schmitz, B.C. Larson and M.S. Ashton. 2018. Influence of gap position and competition control on the leaf physiology of planted *Picea glauca* and natural regeneration of *Populus tremuloides*. *Forest Ecology and Management* 424:228-235.
- 20) Schmitz, O.J. 2018. Species in ecosystems and all that jazz. *PloS Biology* 16(7): e2006285.
- 21) Schmitz, O.J. and A.E. Rosenblatt. 2018. Editorial overview: Global change, evolutionary ecology and adaptation. *Current Opinion in Insect Science* 29: iii-v.
- 22) Schmitz, O.J., C.C. Wilmers, S.J. Leroux, C.E. Doughty, T.B. Atwood, M. Galetti, A.B. Davies, S. J. Goetz. 2018. Animals and the zoogeochemistry of the carbon cycle. *Science* 362: eaar3213.
- 23) Smith-Ramesh, L.M., A.E. Rosenblatt and O.J. Schmitz. 2018. Multivariate climate change can favor large herbivore body size in food webs. *American Naturalist* 191: 333-342.
- 24) van Eeden, L.M., A. Eklund, J.R.B. Miller, J.V. López-Bao, G. Chapron, M.R. Cejtin, M.S. Crowther, C.R. Dickman, J. Frank, M. Krofel, D.W. Macdonald, J. McManus, T.K. Meyer, A.D. Middleton, T.M. Newsome, W.J. Ripple, E.G. Ritchie, O.J. Schmitz, K.J. Stoner, M. Tourani and A. Treves. 2018. Carnivore conservation needs evidence-based livestock protection. *PLoS Biology* 16(9): e2005577.

2017

- 25) Buchkowski, R.W., M.A. Bradford, A.S. Grandy, O.J. Schmitz and W. R. Wieder. 2017 Applying population and community ecology theory to advance understanding of belowground biogeochemistry. *Ecology Letters* 20:231-245.

- 26) Northfield T., B.T. Barton and O.J. Schmitz 2017. A spatial theory for emergent multiple predator-prey interactions in food webs. *Ecology and Evolution* 28: 6935-6948.
- 27) Rosenblatt, A.E., L.M. Smith-Ramesh and O.J. Schmitz. 2017. Interactive effects of multiple climate change variables on food web dynamics: modeling the effects of warming, CO₂ and water availability on a tri-trophic food web. *Food Webs* 13:98-108.
- 28) Schmitz O.J. 2017. Predator and prey functional traits: understanding the adaptive machinery driving predator-prey interactions (*invited contribution*). *F1000Research* 6(F1000 Faculty Rev):1767 (doi: 10.12688/f1000research.11813.1).
- 29) Schmitz, O.J., R.W. Buchkowski, J.R. Smith, M. Telthorst, A.E. Rosenblatt. 2017. Predator community composition is linked to soil carbon retention across a human land use gradient. *Ecology* 98:1256-1265.
- 30) Schmitz, O.J., J.R.B. Miller, A.M. Trainor, and B. Abrahms. 2017. Toward a community ecology of landscapes: predicting multiple predator-prey interactions across geographic space. *Ecology* 98:2281-2292.
- 31) Schmitz, O.J. and A.E. Rosenblatt. 2017. The temperature dependence of predation stress and prey nutritional stoichiometry (*invited contribution*). *Frontiers in Ecology and Evolution* 5:73 doi: 10.3389/fevo.2017.00073.
- 32) Smith-Ramesh, L.M., A.C. Moore and O.J. Schmitz. 2017. Global synthesis suggests that food web connectance correlates to invasion resistance. *Global Change Biology* 23:465-473

2016

- 33) Benedek, K., S.E. Zytynska, J. Bálint, R.V. Salamon, M. Mehrparvar, W.W. Weisser, O.J. Schmitz and A. Balog. 2016. Intraspecific differences in plant chemotype determines the structure of arthropod food webs. *Oecologia* 180:797-807.
- 34) Ko, C-Y, O.J. Schmitz and W. Jetz. 2016. The limits of direct community modeling approaches for broad-scale predictions of ecological assemblage structure. *Biological Conservation* 201: 396-404.
- 35) Mendelsohn, R, I.C. Prentice, O.J. Schmitz, B. Stocker, R.W. Buchkowski and B. Dawson. 2016. The ecosystem impacts of severe warming. *American Economic Review: Papers and Proceedings* 106:612-614.
- 36) Miller, J.R.B., Y.V. Jhala and O.J. Schmitz. 2016. Human perceptions mirror realities of carnivore attack risk for livestock: Implications for mitigating human-carnivore conflict. *PLoS ONE* 11(9): e0162685.
- 37) Miller, J.R.B., K.J. Stoner, M.R. Cejtin, T.K. Meyer, A.D. Middleton, and O.J. Schmitz. 2016. Effectiveness of contemporary techniques for reducing livestock depredations by large carnivores. *Wildlife Society Bulletin* 40: 806–815.
- 38) Ripple, W.J., J.A. Estes, O.J. Schmitz, V. Constant, M.J. Kaylor, A. Lenz, J.L. Motley, K.E. Self, D.S. Taylor, and C. Wolf. 2016. What is a trophic cascade? *Trends in Ecology and Evolution* 31:842-849.
- 39) Rosenblatt, A.E., B.T. Crowley and O.J. Schmitz. 2016. Linking trophic interactions to plasticity in

thermal sensitivity of geographically separated populations of a herbivore. *Evolutionary Ecology* 30:649-661.

- 40) Rosenblatt, A.E., and O.J. Schmitz. 2016. Climate change, nutrition, and bottom-up and top-down food web processes. *Trends in Ecology and Evolution* 31:965-975.
- 41) Schmitz, O.J., A.E. Rosenblatt and M. Smylie. 2016. Temperature dependence of predation stress and the nutritional ecology of a generalist herbivore. *Ecology* 97:3119-3130.
- 42) Schmitz, O.J. and G.C. Trussell. 2016. Multiple stressors, state-dependence and predation risk — foraging trade-offs: toward a modern concept of trait-mediated indirect effects in communities and ecosystems (*invited contribution*). *Current Opinion in Behavioral Sciences* 12:6-11.
- 43) Smith, J.R. and O.J. Schmitz. 2016. Cascading ecological effects of landscape moderated arthropod diversity. *Oikos* 125: 1261-1271.
- 44) Wilmers, C.C. and O.J. Schmitz. 2016. Effects of wolf-induced trophic cascades on ecosystem carbon cycling. *Ecosphere* 7:e01501.

2015

- 45) Buchkowski, R.W., and O.J. Schmitz. 2015. Detritivores ameliorate the enhancing affect of plant-based trophic cascades on N cycling in an old-field system. *Biology Letters* 11:20141048. **Featured as Editor's Choice in Ecology by The Scientist** <http://www.the-scientist.com/?articles.view/articleNo/43334/title/1---1---1/>
- 46) Buchkowski, R.W., O.J. Schmitz, and M.A. Bradford. 2015. Microbial stoichiometry overrides biomass as a regulator of soil carbon and nitrogen cycling. *Ecology* 94:1139-1149.
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Peer Reviewed Invited Encyclopedia and Bibliographic Contributions

- 169) Schmitz, O.J. 2013. Predators and community organization. *Oxford Bibliographies in Ecology*. In D Gibson Ed. New York: Oxford University Press, forthcoming.
- 170) Miller, J.R. and O.J. Schmitz. 2012. Food Webs. In: R. Craig, J. Nagle, B. Pardy, O. Schmitz and W. Smith (Eds.) *Encyclopedia of Sustainability Vol. 5: Ecosystem Management and Sustainability*, Berkshire Publishing.
- 171) Schmitz, O.J., H.P. Jones and B.T. Barton. 2008. Scavengers. In: S.E. Jorgensen (ed.) *Encyclopedia of Ecology*.
- 172) Schmitz O.J. 2007. Indirect effects in communities and ecosystems. In: S. Levin (ed.) *The Princeton Guide to Ecology*.

- 173) Schmitz, O.J. and A.P. Beckerman. 2007. Food webs. In: Encyclopedia of Life Sciences. John Wiley & Sons, Ltd: Chichester <http://www.els.net/> [DOI: 10.1002/9780470015902.a0003740]
- 174) Vogt, K.A., O.J. Schmitz, K.H. Beard, J.L. O'Hara and M. Booth. 2000. Conservation biology — contemporary issues. In: S Levin (ed.) Encyclopedia of Biodiversity, Academic Press

Essays and blogs

- 175) Schmitz, O.J. 2018. Earth environmentalism and jazz. Princeton University Press Blog <http://blog.press.princeton.edu/2018/04/17/oswald-schmitz-earth-environmentalism-jazz/>
- 176) Schmitz, O.J. 2017. Reflecting on hope for life in the anthropocene. March for Science Blog <http://blog.press.princeton.edu/2017/04/21/oswald-schmitz-reflecting-on-hope-for-life-in-the-anthropocene/>
- 177) Schmitz, O.J. 2017. Sustaining a high tech economy using inspiration from nature. Scientific American <https://blogs.scientificamerican.com/guest-blog/sustaining-a-high-tech-economy-using-inspiration-from-nature/>
- 178) Schmitz, O.J. 2016. How 'Natural Geoengineering' can help slow global warming. Yale e360 http://e360.yale.edu/feature/how_natural_geo-engineering_can_help_slow_global_warming/2951/
- 179) Tallis, H. et al. 2014. A call for inclusive conservation. Nature 515: 27-28.
- 180) Schmitz, O.J. and T. Graedel. 2010. The consumption conundrum: driving destruction abroad. Yale e360 <http://e360.yale.edu/content/feature.msp?id=2266>.

Book Reviews

- 181) Schmitz, O.J. 2018. Defending biodiversity in the age of humans. Review of Defending biodiversity: environmental science and ethics by J.A. Newman, G. Varner and S. Linquist. Ecology 99:22412-2413.
- 182) Schmitz, O.J. 2015. Review of: The Predator Paradox: Ending the War with Wolves, Bears, Cougars and Coyotes by J. Shivik. Quarterly Review of Biology 90: 329.
- 183) Schmitz, O.J. 2005. Pushing the boundaries of ecosystems. *Essay review* of: Food Webs at the Landscape Level by G.A. Polis, M.E. Power and G.R. Huxel. Perspectives on Science and Medicine 48:301-306.
- 184) Schmitz, O.J. 2001. Review of Partnerships for Protection: New Strategies for Planning and Management of Protected Areas edited by S. Stolton and N. Dudley. Natural Resources Forum.
- 185) Schmitz, O.J. 1993. Review of Mammoths Mastodons and Elephants: biology, behavior and the fossil record by G. Haynes. Journal of Evolutionary Biology 6:147-148.

Additional publications supported by funding to my lab

**Articles arising from my students' doctoral dissertation work. I do not require that doctoral students list me as a coauthor on publications arising from their dissertation work.*

- Booth, G. 1997. Gecko: a continuous 2-D world for ecological modeling. *Artificial Life* 3:147-163.
- *Rothley, K.D. 1999. Designing bioserve networks to satisfy multiple conflicting demands. *Ecological Applications* 9:741-750.
- *Beckerman, A.P. 2000. Counterintuitive outcomes of interspecific competition between two grasshopper species along a resource gradient. *Ecology* 81:948-957.
- Hambäck, P. 2001. Direct and indirect effects of herbivory: Feeding by spittlebugs affects pollinator visitation rates and seed set of *Rudbeckia hirta*. *Ecoscience* 8: 45-50.
- *Koenig, S.E. 2001. The breeding biology of Black-billed Parrot *Amazona agilis* and Yellow-billed Parrot *Amazona collaria* in Cockpit Country, Jamaica. *Bird Conservation International* 11: 205-225.
- *Rothley, K.D. 2001. Manipulative, multi-standard test of a white-tailed deer habitat suitability model. *Journal of Wildlife Management* 65:953-963.
- *Beckerman, A.P. 2002. The distribution of *Melanoplus femurrubrum*,: fear and freezing in Connecticut *Oikos* 99:131-140.
- *Rothley, K.D. 2002. Use of multiobjective optimization models to examine behavioural trade-offs of white-tailed deer habitat use in forest harvesting experiments. *Canadian Journal of Forest Research* 32:1275-1284.
- Ovadia, O. and H. zu Dohna. 2003. The effect of intra- and inter-specific aggression on patch residence time in Negev Desert gerbils: a competing risk analysis. *Behavioral Ecology* 14:583-591.
- Ovadia, O. 2003. Ranking hotspots of varying sizes: a lesson from the nonlinearity of the species-area relationship. *Conservation Biology* 17:1-3.
- *Booth, M.G. 2004. Micorrhizal networks mediate overstorey-understorey competition in a temperate forest. *Ecology Letters* 7: 538-546.
- *Burns, C.E., B.J. Goodwin and R.S. Ostfeld 2005. A prescription for longer life? Bot fly parasitism of the white-footed mouse. *Ecology* 86:753-761.
- *Burns, C.E. 2005. Behavioral ecology of disturbed landscapes: The response of territorial animals to relocation. *Behavioral Ecology* 16:898-905.
- *Gear, J. and C.E. Burns. 2007. Evaluating effects of low quality habitats on regional population growth in *Peromyscus leucopus*: Insights from field-parameterized spatial matrix models. *Landscape Ecology* 22: 45-60.
- *Burns, C.E. and J. Gear. 2008. Effects of habitat loss on white-footed mice: Testing matrix model predictions with landscape-scale perturbation experiments. *Landscape Ecology* 17:817-831.
- Stamieszkin, K., J. Wielgus and L.R. Gerber. 2009. Management of a marine protected area for sustainability and conflict resolution: lessons from Loreto Bay National Park (Baja California Sur,

Mexico). *Ocean and Coastal Management* 52:449-458. Based in part on Masters of Environmental Science research conducted under my supervision.

*Barton B.T. 2010. Climate warming and predation risk during herbivore ontogeny. *Ecology* 91:2811-2818.

*Jones, H.P. 2010. Prognosis for ecosystem recovery following rodent eradication and seabird restoration in an island archipelago. *Ecological Applications* 20:1204-1216. *Recommended by Faculty 1000 Biology*

*Jones, H.P. 2010. Seabird islands take mere decades to recover following rat eradication. *Ecological Applications*. 20:2075-2080

*Barton, B.T. 2011. Local adaptation to temperature conserves top-down control in a grassland food web. *Proceedings of the Royal Society London B* 278: 3102-3107.

Glick, H.B. 2014. Modeling cougar habitat in the Northeastern United States. *Ecological Modelling* 285:78-89.

*Donihue, C.M., and M.R. Lambert. 2015. Adaptive evolution in urban ecosystems. *Ambio* 44: 194-203.

*Miller, J.R.B. 2015. Mapping attack hotspots to mitigate human-carnivore conflict: Approaches and applications of spatial predation risk modeling. *Biodiversity and Conservation* 24: 2887-2911.

*Donihue, C.M., K.M. Brock, J. Foufopoulos, and A.R. Herrel. 2015. Feed or fight: testing the impact of food availability and intraspecific aggression on the functional ecology of an island lizard. *Functional Ecology* DOI: 10.1111/1365-2435.12550.

*Donihue, C. M. 2016. Aegean wall lizards switch foraging modes, diet, and morphology in a human-built environment. *Ecology and Evolution* 6:7433–7442.

*McLean, K.A, A.M. Trainor, G.P. Asner, MC. Crofoot, M.E. Hopkins, C.J. Campbell, R.E. Martin, D. E. Knapp, P.A. Jansen. 2016. Movement patterns of three arboreal primates in a Neotropical moist forest explained by LiDAR-estimated canopy structure. *Landscape Ecology* 31(8): 1849-1862.

Buchkowski, R.W. 2016. Top-down consumptive and trait-mediated control do affect soil food webs: It's time for a new model. *Soil Biology and Biochemistry* 102: 29-32.

Smith-Ramesh, L.M. 2017. Invasive plant alters community and ecosystem dynamics by promoting native predators. *Ecology* 98: 751–761.

*Moore, A.C. 2018. Context-dependent consumer control in New England tidal wetlands. *PLoS ONE* 13(5):e0197170.

Rosenblatt, A.E. 2018. Shifts in plant nutrient content in combined warming and drought scenarios may alter reproductive fitness across trophic levels. *Oikos* doi.org/10.1111/oik.05272

**Articles arising from my students' doctoral dissertation work. I do not require that doctoral students list me as a coauthor on publications arising from their dissertation work.*

RESEARCH GRANTS & CONTRACTS

2017-2018	RAHSS supplement to DEB-1354762 The macrophysiology of food chain dynamics. \$8,064
2016-2017	REU Supplement to DEB-1354762 The macrophysiology of food chain dynamics. \$6000
2014-2019	The macrophysiology of food chain dynamics. NSF DEB-1354762. \$509,320
2014-2016	Doctoral Dissertation Improvement Grant of Karin Burghardt: Linking phenotypic variation in plant anti-herbivore defense to spatial variation in soil nutrient pools NSF DEB-1404120. \$21,645
2011-2013	Yale Mapping Framework for Wildlife Conservation and Climate Adaptation. Co-Funded by Doris Duke Charitable Foundation, Kresge Foundation & Wilburforce Foundation. \$1,400,000
2010-2011	Climate warming, species interactions and transformation of ecosystem carbon cycling. Yale Climate and Energy Institute \$94,675 (Co-PI with M. Bradford)
2009-2010	Vertebrates on the Move: Managing Cascadia Wildlife in the Face of Climate Change. US National Park Service 1 H9471091063 \$6800.
2009-2010	Doctoral Dissertation Improvement Grant of Holly Jones: Quantifying a chronosequence of seabirds and island ecosystem recovery after rat eradication. NSF OISE 0853846 \$15,000.
2009-2010	Doctoral Dissertation Improvement Grant of Brandon Barton: How will climate change affect trophic interactions? NSF DEB 0910047 \$13,000.
2008-2013	Complexity and stability in an old-field ecosystem: the role of asymmetrical interaction strengths and food web topology. NSF DEB-0816504 \$474,346.
2007	REU Supplement to DEB 0515014 Predator identity and trophic control of biodiversity and ecosystem function. \$4,500
2006-2009	OARE: Online Access to Research in the Environment--provides developing world free or greatly discounted access to the scholarly environmental record of the world's leading scientific publishers through a secure internet portal. Co-funded: William and Flora Hewlett Foundation and John D. and Catherine T. MacArthur Foundation \$500,000.
2005-2009	Predator identity and trophic control of biodiversity and ecosystem function. NSF DEB 0515014 \$475,017

- 2003-2004 Doctoral Dissertation Improvement Grant of Michael Booth: Do common mycorrhizal networks limit plant competition and species exclusion in temperate forests? NSF DEB 0309225 \$10,080
- 2002 REU Supplement to NSF DEB 0107780 \$5938
- 2001-2005 Perturbation and recovery of an old-field food web. NSF DEB 0107780 \$212,833
- 2001-2002 Assessing sensitivity of wildlife species to anticipated climate change in parks and protected areas in the continental United States. Edward John Noble Foundation \$100,000.
- 2000 Computational Ecology: teaching implementation phase. Yale University Library and Information Technology Services Faculty Support Grant \$10,000
- 1999 Understanding the role of individual-scale processes in community-level dynamics. NSF-National Center for Ecological Analysis and Synthesis (NCEAS): \$34,560.
- 1998-1999 A computer-based learning environment for teaching community ecology. Yale University Library and Information Technology Services Faculty Support Grant \$10,000
- 1998-1999 Doctoral Dissertation Improvement Grant of Andrew Beckerman: The distribution of a grasshopper species among New England Fields: population ecology along an environmental gradient. NSF DEB-9801665 \$5672
- 1997-1999 Modelling the industrial ecosystem CoPI with T. Graedel and L. Bennett NSF BES-9729295 \$100,000
- 1996-1999 Adaptive management of boreal ecosystems for productivity and diversity: Applying exploitation ecosystems concepts to forestry and forest management MISTIK Forest Management Ltd., Saskatchewan, Canada \$240,000
- 1996 REU Supplement to NSF DEB-9508604 \$4,688
- 1995-1997 Organizational complexity in ecological food webs: experimental analysis of interaction strength in an old-field system NSF DEB-9508604 \$50,000
- 1994-1997 Multiscale models in computational biology. CoPI with G. Wagner and L. Buss, Yale Center for Computational Ecology NSF BIR-9400642 \$165,230
- 1993-1995 Influence of global climate change on the distribution and population dynamics of selected wildlife species. Electric Power Research Institute \$104,651
- 1986-1987 Development of cost effective management of wintering deer. Ontario Ministry of Natural Resources Renewable Resources Research Grants. \$20,000.

CONFERENCE SYMPOSIA ORGANIZED

O.J. Schmitz and Christopher Wilmers. Animating the carbon cycle. Ecological Society of America, Portland, OR, August, 2017.

O.J. Schmitz, P. Beier and A. Trainor. Towards conservation assessments for climate adaptation: presentation and evaluation of a framework. North America Congress for Conservation Biology. Oakland, CA, July 15-18, 2012.

A.P. Beckerman and O.J. Schmitz. Food webs and climate change. Ecological Society of America, Pittsburgh, August 1-6, 2010.

T. Oghushi, O.J. Schmitz and R. Holt. Trait-mediated indirect effects in insect communities. International Congress of Entomology, Durban, South Africa, July 5-12, 2008.

CONFERENCE PRESENTATIONS

Schmitz, O.J. Trophic control from the middle out: the evolutionary ecology of coupled plant-based and detritus-based food webs. **Keynote talk** Plant-herbivore Interaction Gordon Research Conference, Ventura CA, February 2019.

Schmitz, O.J. The macrophysiology of food web interactions. **Invited presentation** in the Revealing Food Web Rewiring Under Ecosystem Change Session, Canadian Society of Ecology and Evolution Annual Meeting, Guelph, ON, July 2018.

Schmitz, O.J. The evolutionary ecology of ecosystem functioning: Functional traits, trophic interactions, and ecosystem nutrient cycling. **Keynote address** 3rd Workshop on Trait-Based Approaches to Ocean Life, Bergen, Norway, August 2017.

Schmitz, O.J., and C.C. Wilmers. A conceptual framework for integrating animal effects into analyses of ecosystem carbon cycling and storage. Animating the Carbon Cycle Symposium, Ecological Society of America, Portland, OR, August, 2017.

Schmitz, O.J. Toward a community ecology of landscapes. **Keynote address** Symposium on Frontiers in Resource and Habitat Selection Analysis, Canadian Society of Ecology and Evolution Annual Meeting, Saskatoon, SK, May 2015.

Schmitz, O.J. and S.J. Leroux. The evolutionary ecology of predator-driven elemental cycling: a stoichiometrically explicit approach. Ecological Society of America Annual meeting August 2014.

Schmitz, O.J. Developing a cohesive, holistic view of predator-prey interactions. **Invited Presentation** Gordon Research Conference on Predator-Prey Interactions, Ventura, CA, January 2014.

Schmitz, O.J. Fields of dreams: rebuilding food web structure to restore grassland ecosystems. **Invited Presentation** Annual Meeting of the Canadian Society for Ecology and Evolution, June 2013.

Schmitz, O.J. Global climate change and the evolutionary ecology of ecosystem functioning. **Invited Presentation** Climate Change and Species Interactions: Ways Forward, Carey Institute of Ecosystem Studies, Millbrook, NY, Nov 2012.

Schmitz, O.J. A framework to guide the use of adaptation approaches for conservation of biodiversity in an era of climate change. Towards Conservation Assessments for Climate Adaptation: Presentation and Evaluation of a Framework Session, North America Congress for Conservation Biology. Oakland, CA, July 2012.

Schmitz, O.J. Climate change, food web reorganization and implications for carbon and nitrogen cycling. **Invited presentation** Biodiversity, Global Change and Insect-Mediated Ecosystem Services Session, Entomological Society of America Annual meeting November 2011.

- Schmitz, O.J. Climate change and the potential for transformation of food web connectedness. Ecological Society of America, Pittsburgh, August 2010.
- Schmitz, O.J. Predator identity and the nature of trait-mediated indirect effects. International Congress on Entomology, Durban South Africa, July 2008.
- Schmitz, O.J. Predator diversity and trophic interactions. **Invited Presentation** Trophic cascades across ecosystems session. Annual Meeting of the Ecological Society of America, San Jose CA, August 2007.
- Schmitz, O.J. Stoichiometry and Food web interactions: what are the questions and how do we answer them? **Invited Presentation** Stoichiometry of terrestrial systems contributed session, Annual Meeting of the Ecological Society of America, Memphis, TN, August 2006.
- Schmitz, O.J. Looking at biodiversity and ecosystem functioning vertically as well as horizontally. **Invited presentation**, International Symposium on Biodiversity and Dynamics of Communities and Ecosystems: Structures, Processes and Mechanisms Osaka, Japan, March 2006.
- Schmitz, O.J. Perturbation and alternate states of trophic control of biodiversity and productivity. Annual Meeting of the Ecological Society of America, Portland OR, August 2004.
- Schmitz, O.J. Evolutionary ecology: the theater and the play. **Invited Presentation:** A Day of Commemoration honoring G. Evelyn Hutchinson on the occasion of his 100th birthday. Yale University, October 2003.
- Schmitz, O.J. Biodiversity cascades: effects of top predators on plant diversity mediated by herbivore antipredator behavior. **Invited Presentation:** Trophic Cascades in Terrestrial Systems Symposium, Annual Meeting of the Ecological Society of America, Tucson, AZ, August 2002.
- Schmitz, O.J. Trait variation and direct and indirect effects in an old-field system. **Invited Presentation:** Mini Symposium on structured population dynamics. University of Amsterdam, Amsterdam, The Netherlands, May 2002.
- Schmitz, O.J. Climate change effects on wildlife species distribution and life-history: synthesis and future steps. **Invited Presentation:** Mini-conference on “The big unknowns in global change”. Athens, GA, April 2001.
- Schmitz, O.J. Herbivore state-dependence and behavior-mediated trophic interactions: toward generalizable theory for the dynamics of plant-herbivore systems. **Invited presentation:** Gordon Research Conference on Plant-Herbivore Interactions. Ventura, CA, February 2001
- Schmitz, O.J. and K.B. Suttle. Predator hunting mode and emergent indirect effects in old-field interaction webs. Annual Meeting of the Ecological Society of America, Spokane WA, August 1999.
- Luttbeg, B. and O.J. Schmitz. Predator and prey models with flexible individual behavior and imperfect information. International Society for Behavioral Ecology, Monterey, CA, August 1998.
- Schmitz, O.J. Combining mathematical modeling with field experimentation to unravel the nature and strength of species interactions. **Invited Presentation**, Symposium on Theoretical, Empirical and Statistical Approaches to Measuring Interactions Strengths. Annual Meeting of the Ecological Society of America, Albuquerque, NM. August 1997

Schmitz, O.J. Organizational complexity of old-field food webs. Annual Meeting of the Ecological Society of America, Providence, RI, August 1996.

Schmitz, O.J. Multiple ecosystem states: rethinking the role of deer in forest ecosystem dynamics. **Invited Presentation** in a symposium entitled "The Science of Overabundance: the ecology of unmanaged deer populations" Smithsonian Institution, Conservation and Research Center, National Zoological Park, November 1994.

Schmitz, O.J. Optimal foraging and consumer-resource dynamics. **Invited Presentation**, Predation Symposium, 6th International Theriological Congress, Sydney, Australia, August 1993.

Belovsky, G.E. and O.J. Schmitz. Herbivore optimal foraging and plant defenses. **Invited Presentation**, Plant-herbivore interactions symposium, 6th International Theriological Congress, Sydney, Australia, July 1993.

Schmitz, O.J. Risk-sensitivity and diet selection by mammals. **Invited Presentation**, Optimal foraging Symposium, 5th International Theriological Congress, Rome, Italy, August 1989.

Schmitz, O.J. Optimal activity and habitat choice of wintering deer. Annual Meeting of the Ecological Society of America, Toronto Ontario, August 1989.

Schmitz, O.J. Optimal diet selection by white-tailed deer: balancing reproduction with starvation risk. 2nd International Behavioral Ecology Conference, Vancouver, B.C. October 1989.

Schmitz, O.J. Risk-sensitive foraging by wintering deer. Annual Meeting of the Ecological Society of America, Columbus, Ohio, August 1988.

INVITED SEMINARS

- | | |
|------|---|
| 2018 | Department of Biology, Western University (Ontario)
Department of Ecology, Evolution, and Marine Biology, UC Santa Barbara |
| 2017 | Ecology Program, University of Wisconsin
Carnegie Institute, Stanford University
Department of Biological Sciences, Northern Illinois University
Department of Biological Science, University of Alabama |
| 2016 | Department of Marine and Environmental Sciences, Northeastern University
Department of Biological Sciences, Mississippi State University |
| 2014 | Curriculum for the Environment and Ecology, University of North Carolina-Chapel Hill
Ecology, Evolutionary Biology, and Behavior Program, Michigan State University
Harvard Forest, Harvard University
W.K. Kellogg Biological Station, Michigan State University
Department of Ecology and Evolutionary Biology, Princeton University
Institute of Ecology, Friedrich Schiller University (Germany) |
| 2013 | Department of Ecology and Evolution, Stony Brook University
Department of Biological Sciences, Northern Illinois University
Department of Ecology and Evolution, University of California—Davis
Department of Ecology, Evolution and Behavior, Hebrew University (Israel)
Department of Biodiversity, Earth and Environmental Science, Drexel University |
| 2012 | Department of Integrative Biology, University of Guelph |

- Netherlands Institute of Ecology, Wageningen (Netherlands)
- 2011 Department of Zoology, Miami University of Ohio
Department of Biology, Case Western Reserve University
School of Forest Resources and Environmental Science, Michigan Technological University
Department of Ecology, Evolution and Conservation Biology, University of Nevada-Reno
- 2010 Department of Organismal and Evolutionary Biology, Harvard University
Department of Biology, Duke University
School of Biology, Georgia Institute of Technology
Division of Biology, University of California—San Diego
Department of Animal and Plant Sciences, University of Sheffield (UK)
Ecology and Evolution Section, Imperial College—Silwood Park (UK)
- 2009 Department of Biological Sciences, Florida International University
College of the Environment and Life Sciences, University of Rhode Island
Department of Entomology, University of Maryland
Department of Biology, Wesleyan University
Department of Biology, North Carolina State University
- 2008 Department of Biological Sciences, Stanford University
Department of Biology, University of Houston
Department of Ecology, Evolution and Natural resources, Rutgers University
Department of Biological Science, Florida State University
- 2007 Department of Zoology and Physiology, University of Wyoming
School of Forestry, Northern Arizona University
Department of Ecology, Evolution, and Environmental Biology, Columbia University
Department of Biology, University of Montana
Department of Biology, University of Pennsylvania
Department of Biology, Syracuse University
Department of Ecology and Evolutionary Biology, University of Michigan
- 2006 Department of Ecology and Evolution, University of Tennessee
Department of Integrative Biology, University of Guelph
Department of Biology, McGill University
- 2005 Department of Biology, Laval University
Department of Integrative Biology, University of California Berkeley
Department of Entomology, Cornell University
Department of Entomology, and Organismal and Evolutionary Biology, University of Massachusetts—Amherst
- 2004 Department of Ecology and Environmental Science, Umeå University (Sweden)
Department of Biological Sciences, University of Pittsburgh
Department of Biology, Fordham University
Department of Zoology, University of New Hampshire
Institute for Biospheric Studies, Yale University
- 2003 Department of Biological Science, Simon Fraser University
- 2002 Department of Zoology, Miami University of Ohio
Institute of Biodiversity and Ecosystem Dynamics, University of Amsterdam

- Department of Ecology and Evolutionary Biology, Yale University
Interdisciplinary Bioethics Project, Yale University
- 2000 Department of Entomology, University of Maryland
- 1998 Department of Ecology and Evolution, University of California, Davis
Department of Zoology, University of Toronto
- 1997 Department of Ecology and Evolution, University of Chicago
Department of Ecology and Evolution, SUNY Stony Brook
Department of Biology, Brown University
Department of Biological Sciences, Dartmouth College
- 1996 Institute of Ecosystem Studies, Millbrook New York
- 1995 Department of Computer Science, University of Michigan
Department of Biology, Boston University
Ecosystem Group, Woods Hole Oceanographic Institute
- 1994 Department of Computer Science, University of Michigan
Department of Zoology, University of Guelph
Department of Animal Ecology, Swedish University of Agricultural Science, Uppsala
(Sweden)
- 1992 Department of Fisheries and Wildlife, Utah State University