

Nathan J Sanders - cv

Department of Ecology and Evolutionary Biology
1105 North University Ave
Biological Sciences Building
University of Michigan
Ann Arbor, MI 48109-1085

njsander@umich.edu
@natejsanders.bsky.social
www.Nate-Sanders.org

Education

PhD, Stanford University (2000)

BA, University of Colorado (1995)

Appointments

Chair, Department of Ecology and Evolutionary Biology (2023 - present)

Professor, University of Michigan (2020 - present)

Director, E. S. George Reserve (2020 - 2023)

Associate Dean for Academic Affairs and Faculty Development, Rubenstein School of Environment and Natural Resources, University of Vermont (2019 - 2020)

Professor, University of Vermont (2017 - 2020)

Director of the Natural Areas, University of Vermont (2018 - 2019)

Director of the Environmental Program, University of Vermont (2017 - 2019)

Head of Biodiversity Section, University of Copenhagen (2015 - 2016)

Professor, Natural History Museum of Denmark, University of Copenhagen (2014 - 2017)

James R. Cox Professor, University of Tennessee (2012 - 2014)

Professor, University of Tennessee (2012 - 2014)

Visiting Associate Professor, University of Copenhagen (December 2009 - July 2010)

Associate Professor, University of Tennessee (2008 - 2011)

Assistant Professor, University of Tennessee (2004 - 2008)

Assistant Professor, Humboldt State University (2001 - 2003)

Postdoctoral Fellow, University of Tennessee (2001)

Senior editorial positions

Senior Editor, Journal of Animal Ecology (2015 - present)

Deputy Editor-in-Chief, Ecography (2010 - 2015)

Recent awards

Fellow of the British Ecological Society (2025)

Fellow of the Ecological Society of America (2018)

Gund Fellow, Gund Institute for Environment, University of Vermont (2018 – 2020)

James R. Cox Professorship (2012 – 2015)

Omicron Delta Kappa Faculty Appreciation Award (2011)

College of Arts and Sciences Junior Faculty Teaching Award (2008 – 2009)

Chancellor's Award for Professional Promise in Research and Creative Achievement (2008)

Alistair McCrone Promising Faculty Scholars Award, Humboldt State University (2003)

Ronald J. Wessells Award for excellence in undergraduate education, Stanford University (1999)

Program building and administrative experience

Chair of the Department of Ecology and Evolutionary Biology, University of Michigan. I am chair of a department with ~40 faculty, 90 graduate students, and 500 majors. (2023 – present)

Chair of the Awards Committee, Ecological Society of America. I oversee all of the awards committees for the ESA. (2023 – present)

Co-chair of the LSA Year of Sustainability Steering Committee, University of Michigan. Along with Anne McNeil, I am organizing a year-long Year of Sustainability in LSA that will focus educational offerings, seminars, incentives, awards, and more. (2022 – 2024)

Director of the ES George Reserve, University of Michigan. The 1300-acre ES George Reserve provides research and education opportunities in the natural sciences while preserving the native flora and fauna. There has been a rich history of long- and short-term biological research studies conducted on the ESGR. More than 475 research papers have been published on studies carried out wholly or in part on the ESGR, and 81 Ph.D. dissertations and 31 Masters theses have resulted from graduate studies on the ESGR. (2020 – 2023)

Associate Dean for Academic Affairs and Faculty Development, Rubenstein School of Environment and Natural Resources. The school has 55 faculty members, more than 100 graduate students, and more than 700 undergraduates. My focus so far has been on raising the research profile of the faculty, streamlining procedures, and reinvigorating the curriculum. (2019 - 2020)

Director of the Environmental Program, University of Vermont. The Environmental Program is an interdisciplinary, cross-college program with >450 undergraduate majors, 15 core faculty, 16 affiliated faculty, and ~10 part-time faculty. During my tenure, I streamlined processes, implemented a new advising model, helped refine the cross-college curriculum, strengthened ties across campus, added several new faculty, and increased focus on undergraduate research. (2017 – 2019)

Director of the University of Vermont Natural Areas, The Environmental Program also oversees the University of Vermont Natural Areas which consists of 10 sites in Vermont and over >2,000 acres. During my tenure as Director, I worked with The Nature Conservancy and Vermont Land Trust to add three new parcels, totaling ~200 additional acres, to existing Natural Areas. (2018 – 2019)

Head of Biodiversity Section, University of Copenhagen. The position entailed leading a group of ~80 faculty, postdocs, staff, and PhD and MSc students. (2015 - 2016)

Chair of the Graduate Admissions Committee, Department of Ecology & Evolutionary Biology, University of Tennessee. Beginning in 2004, I served on this committee (except 2011). Beginning in 2011, I served as chair of committee charged with admitting ~10 graduate students each year. (2011 - 2013)

Faculty Fellow for Research, University Honors Programs, University of Tennessee. I was in charge of developing resources and programming initiatives related to undergraduate research for ~1100 students in the Haslam and Chancellor's Honors Programs and more generally at the University of Tennessee. (2010 - 2012)

Graduate Program Director, Department of Ecology & Evolutionary Biology, University of Tennessee. I led the design and implementation of a new departmental graduate curriculum, steered the admissions committee toward admitting more PhD students, and helped grow the overall size of the program to ~50 students. Additionally, I was PI or co-PI on two (unsuccessful) NSF IGERT interdisciplinary proposals. (2008 - 2010)

Chair, National Ecological Observatory Network (NEON) Domain 7 Science and Education Coordination Committee. I chaired the committee for the Appalachians and Cumberland Plateau domain. This committee provided feedback to NEON and shared information with stakeholders at field stations, universities, colleges, national labs, and federal lands in the domain. (2009 - 2014)

Member of the Campus Committee on the Environment. This committee advised the Chancellor on institutional policies and behaviors that promote environmental stewardship at the University of Tennessee. (2009 - 2014)

Co-organizer of undergraduate Interdisciplinary Program in Sustainability. With two other colleagues at the University of Tennessee, I helped design and implement an undergraduate interdisciplinary program in Sustainability. The curriculum includes courses from the Departments of Economics, Forestry, Geography, Sociology, Philosophy, Ecology & Evolutionary Biology, Anthropology, and Earth & Planetary Sciences. (2009 - 2014)

Increasing diversity in STEM fields. I participated in developing an NSF ADVANCE proposal to increase the number of women in Science, Technology, Engineering, and Mathematics at UTK, and I was a co-PI on a proposal to provide resources for female scientists at RMBL. Finally, I co-organized the Haines-Morris Lecture Series on Ecology, Evolution, and Work-Life balance. This seminar series and associated graduate discussions took place during spring 2011. The intent was to bring world-class scientists to UTK to discuss phylogenetics in ecology, gender issues, and work-life balance in academia. (2009 - 2014)

Admissions Committee, Chancellor's and Haslam Scholars Honors Programs. I served on the admissions committee for this prestigious honors program at the University of Tennessee. Each year, we assessed and interviewed students (many of whom were first generation students) and provided them with exceptional opportunities to thrive at the university. (2011 - 2014)

Member of the Core Biology Curriculum Task Force. This committee was charged with revamping the undergraduate curriculum in biology across three departments in the biological sciences. (2010 - 2012)

REU Program Coordinator, Rocky Mountain Biological Lab. As the REU Program Coordinator, I

oversaw the research of 37 undergraduates and advised them on the design and implementation of their independent projects. (2009)

Research Committee, Rocky Mountain Biological Lab. As a member of the Research Committee, I was involved in approving research and developing the research mission of the Lab, which has nearly 200 scientists. (2010 - 2020)

Editorial boards

Elementa, Academic Editor (2013 - 2019)

Insectes Sociaux, Editorial Board (2010 - 2019)

Ecology, Subject Editor (2009 - 2019)

PeerJ, Academic Editor (2012 - 2017)

BioScience, Editorial Board (2015)

Biological Invasions, Associate Editor (2010 - 2013)

Ecography, Subject Editor (2007 - 2010)

Diversity and Distributions, Associate Editor (2007 - 2010)

Oecologia, Editorial Board Member (2006 - 2009)

External funding (Total External Funding 2003 - present: \$10.7 million)

Current

Using artificial intelligence and unmanned aerial vehicles to quantify ant impact on the Arctic ecosystem carbon dynamics. FORMAS, The Swedish Research Council. \$475,194; Co-PI (2021-2024)

A framework to understand the ecological strategies of ants. Australian Research Council. \$497,069; Co-PI (2021-2024)

Previous

WaRM: Warming and Removal in Mountains to predict the future of biodiversity and ecosystem responses. Carlsberg Fondet. \$822,366; PI (2016-2021)

Collaborative Research: Exploring the geography of Na as a catalyst in terrestrial communities and ecosystems. National Science Foundation. \$740,233; Co-PI; (2016-2020)

Catalyzing research, scholarship, and teaching in montane systems. Catalyst Grant, Gund Institute for Environment. \$46,538 (2017-2019)

Future Keepers: impacts of climate change on ecosystem function providers. Australian Research Council. \$325,600; Co-PI; (2016-2019)

Citizen Science for children and young people: The ant hunt. 15. Juni Fonden, Augustinus Fonden, Beckett-Fonden, Knud Højgaard's Fond. \$350,098; Co-PI; (2016-2018)

Concept, Competency, and Community-driven Curriculum Reform in Undergraduate Biology Education (C3UBE). National Science Foundation. \$200,000; Co-PI; (2013-2016)

DIMENSIONS: Collaborative Research: The climate cascade: functional and evolutionary consequences

of climatic change on species, trait, and genetic diversity. National Science Foundation. \$1,997,317; Lead PI; (2012-2016)

A global scale analysis of functional traits in the face of global change. Australian Research Council. \$250,000 (Australian); Co-PI; (2012-2015)

Do projected temperature increases have the potential to exacerbate the impact of fire ants and affect the abundance and/or geographic distribution of native ants? Department of Energy; \$3,029,934; Co-PI (2008-2013)

Dissertation Research: Climatic warming shapes the structure of function of natural communities: an experimental test with ants (For Katie Stuble) National Science Foundation; \$12,881; (2011-2013)

Dissertation Research: Direct and indirect effects of invasive species on plant-seed disperser mutualisms. (For Mariano Rodriguez-Cabal) National Science Foundation; \$12,850; (2011-2013)

Working Group – A synthesis of patterns, analyses, and mechanisms of β -diversity along ecological gradients. National Center for Ecological Analysis and Synthesis; \$90,000; Co-PI (2009-2012)

Predicting global patterns of ant (and insect) diversity and endemism using fine-grained remote sensing data. NASA; \$543,861; Co-PI (2009-2012)

Combining molecular biology with ecology to determine the genetic and environmental constraints to primary productivity. Science Alliance, Joint Directed Research and Development; \$64,940; Co-PI (2010-2011)

Developing a systems biology approach for linking genetic and environmental constraints to primary productivity – can patterns scale to the field? Science Alliance, Joint Directed Research and Development; \$64,940; Co-PI (2009-2010)

Using experiments, equilibrium tests, and historical data to improve distribution models—a study with ants. Department of Energy; \$120,508; Co-PI (2007-2008)

Potential of 18 SER Parks as reserves for conservation of aquatic insect species. United States Geological Survey; \$243,974; Co-PI (2005-2008)

Mechanisms of community re-assembly after a catastrophic fire. National Science Foundation; \$73,139; Co-PI (2003-2005)

Ant diversity in Great Smoky Mountains National Park. Discover Life in America; \$26,116; PI (2004-2009)

Invasive fire ants, biodiversity, and cattle: an early warning system for northern California. Nielsen Foundation; \$6,986; PI (2002-2003)

Dissertation Research: Historical and ecological causes of ant diversity along environmental gradients. (For JP Lessard) National Science Foundation; \$8,180; 2009-2011

Dissertation Research: The Community and Ecosystem Consequences Of Plant Genotypic Diversity. (For GM Crutsinger). National Science Foundation; \$9,310; 2007-2009

Teaching

Frequently taught courses

Principles of Ecology (Grad course)

General Ecology (BS Course)

Additional courses

Ecology, Ecosystems, and the Environment (BS course)
Climate Change and Biodiversity (Interdisciplinary MSc course)
Invasion Biology (co-taught MSc course)
Macroecology & Community Ecology (co-taught MSc course)
Sustainability in a Changing World (Interdisciplinary BS course)
Community Ecology (BS Course)
Conservation Biology (BS Course)
Advanced Topics in Community Ecology (PhD course)
Graduate Core Course in Ecology (PhD course)
Tropical Forest Ecology (BS course)
Tropical Ecology (Graduate Organization for Tropical Studies course)
Climate Change, Ecology, and Biogeography (Graduate course at Peking University, China)
Coupled Natural and Human Systems in a Changing World (Honors Field course in Costa Rica)
Ecology and Evolutionary Biology Graduate Student Seminar
FYS 129 First-year studies course (Bill Gates, the Beatles, and Michael Jordan)
Ecological Processes and Structure
Introduction to Faculty Research
Grant writing 101

Previous graduate students

Jaime Ratchford, MA 2005 (Humboldt State)
Kristin Lane, MA 2006 (Humboldt State)
Matthew Fitzpatrick, PhD 2008 (Tennessee)
Windy Bunn, MS 2008 (Tennessee)
Lara Souza, PhD 2008 (Tennessee) [co-advised with Dan Simberloff]
Margaret Patrick, MS 2008 (Tennessee)
Greg Crutsinger, PhD 2009 (Tennessee)
Jarrod Blue, MS 2010 (Tennessee)
Jean-Philippe Lessard, PhD 2010 (Tennessee)
Mariano Rodriguez Cabal, PhD 2012 (Tennessee)
Katie Stuble, PhD 2013 (Tennessee)
Melissa Burt, MS 2013 (Tennessee)
Patrick Philipsen, MSc 2015 (Copenhagen)
Lacy Chick, PhD 2015 (Tennessee)
Emilie Elten, MSc 2016 (Copenhagen)
Quentin Read, PhD 2016 (Tennessee)
Niklas Sundebo, MSc 2016 (Copenhagen)
Louise Kjær-Hansen, MSc 2016 (Copenhagen, co-advised with Neil Burgess)
Maria Olsen, MSc 2016 (Copenhagen, co-advised with Neil Burgess)
Josefine Møller, MSc 2017 (Copenhagen)
Chelsea Chisholm, PhD 2017 (Copenhagen)
Jeppe Berggreen, MSc 2017 (Copenhagen)
Julie Koch Sheard, PhD 2020 (Copenhagen)
Kirby Mills, PhD 2023 (University of Michigan)

Ashley Schuler, MS 2024 (University of Michigan)

Julia Eckberg, PhD 2025 (University of Michigan)

Current graduate students

Emma Dawson-Glass, PhD expected 2027 (University of Michigan)

Current postdoctoral students

Yuhao Zhou

Service on graduate student committees

Current graduate student committees

Iris Rivera Salinas (University of Michigan, PhD expected 2025)

Olivia Vought (University of Michigan, PhD expected 2025)

Rosemary Gloss (University of Michigan, PhD expected 2027)

Matt Hack (University of Michigan, PhD expected 2027)

Abbey Soule (University of Michigan, PhD expected 2027)

Matheus Januario Lopes de Sousa (University of Michigan, PhD expected 2027)

Jason Hagani (University of Michigan, PhD expected 2028)

Colin Richter (University of Michigan, PhD expected 2028)

Mariah Schlis-Elias (University of Michigan, PhD expected 2028)

Jacob Longmeyer (University of Michigan, PhD expected 2030)

Darene Assadia (University of Michigan, PhD expected 2030)

Aadia Mosely-McCloud (University of Michigan, PhD expected 2031)

Previous graduate student committees

Anna Paraskevopoulos (University of Colorado, PhD 2025); Darene Assadia (University of Michigan, MS 2023); Elizabeth O'Brien (University of Michigan, MS 2023); Sorrel Hartford (University of Michigan, MS 2023); Chatura Vaidya (University of Michigan, PhD 2022); Jacob Longmeyer (University of Michigan, MS 2022); Kenna Rewcastle (University of Vermont, PhD 2021); Robert Semmler (Lancaster University, co-advised with Sal Keith, PhD 2021); Xian Yang (Georgia Tech, PhD 2019); Jeremiah Henning (PhD 2017); Leigh Moorhead (PhD 2017); Christine Dumoulin (PhD 2016); Zach Marion (PhD 2016); Jessica Moore (PhD 2016); Jon Kennedy (PhD 2015); Austin Milt (PhD 2015); Sara Kuebbing (PhD 2013); Romina Dimarco (PhD 2013); Noelia Barrios (PhD 2012); Melissa Cregger (PhD 2012); Jason Robinson (PhD 2012); Mark Genung (PhD 2012); Arijana Barun (PhD 2011); John Sakulich (PhD 2011); Michael Lawton (PhD 2010); Sunshine Brosi (PhD 2010); Noa Davidai (MS 2009); Angeles Ana Paula Raymundo (MS 2009); Kerry Hansknecht (PhD 2009); Aurora Toennisson (MS 2009); Kim Kennard (MS 2008); Martin Nuñez (PhD 2008); Catherine Sheehy (MS 2008); Jane Zelikova (University of Colorado PhD 2008); Carla Dilling (MS 2007); Nick Reynolds (MS 2007); Marc Cadotte (PhD 2006); Mary Caflisch (MS 2006); Sean McMahon (PhD 2006); Michelle Smith (MS 2006); Jessica Blois (Humboldt State University MA 2004); Jennifer Millard (Humboldt State University MA 2004); Julie Nygard (San Francisco State University MA 2006); Karen Warburton (Humboldt State University MA 2005)

External examiner/opponent for international PhD students

Sarah Dolson (University of Ottawa, PhD 2024); Cong Liu (Okinawa Institute of Technology PhD 2017);

Tom Bishop (University of Liverpool PhD 2016); Maria Hällfors (University of Helsinki PhD 2016); Stefan

Ferger (University of Frankfurt PhD 2015); Aapo Kahilainen (University of Jyväskylä PhD 2015); André do Amaral Nogueira (Instituto Nacional de Pesquisas da Amazônia PhD 2011); Christian Hof (University of Copenhagen PhD 2010); Irina Levinsky (University of Copenhagen PhD 2010); Alisa Kerswell (James Cook University PhD 2007)

Undergraduate thesis research

Annie Cress (Honors, University of Michigan, 2024); Ethan VanValkenberg (Honors, University of Michigan, 2023); Eva Schwarz (High Honors, University of Michigan 2022); Elliot Smith (University of Michigan 2022); Akane Hubbard (University of Michigan, current); Mac Mahacek (PitE Honors, University of Michigan 2021); Joscie Norris (University Honors, University of Vermont 2020); Gordon Coates (REU, University of Vermont 2020); Laura Pinover (REU, University of Vermont 2020); Carrie Finkelstein (REU, University of Vermont 2021); Raina Fitzpatrick (REU student, Haverford College 2018); Lukas Ringvad Friederich (University of Copenhagen 2016); Alicia Smith (Departmental Honors 2013); Kamry Clark (College Honors 2013); Johannah Reed (College Honors 2012); Carissa Chambers (College Honors 2011); Jessica Welch (Departmental Honors 2010); Claire Brown (Departmental Honors 2009); Mark Genung (2007); Melissa Habenicht (Departmental Honors 2007); Ashley Vollmar (2006); Kerri Crawford (Departmental Honors 2006); Melissa Geraghty (2005); Cheran Cavanaugh (Humboldt State University); Greg Crutsinger (Humboldt State University); Matt Lau (Humboldt State University); Lori Miles (Humboldt State University); Kim McFarland (Humboldt State University); Raynelle Rino (Humboldt State University); Julie Nilsen (REU student, Carleton College)

Previous postdoctoral researchers

Robert R. Dunn, now a Professor and Vice Provost at North Carolina State University
Tara E. Sackett, now Treasury Board Secretariat, Ontario Public Service
Sharon Bewick (NIMBioS), now an Assistant Professor at Clemson University
Orou Gaoue (NIMBioS), now an Associate Professor at the University of Tennessee
Keenan Mack (NIMBioS), Data Analyst II at MedPro Group
Chris Remien (NIMBioS), now Associate Professor at the University of Idaho
Xin Jing (Vermont), now an Assistant Professor at Lanzhou University
Case Prager (Vermont), now a AAAS Fellow
Rose Brinkhoff (Michigan), now a postdoc at Lund University
Leo Ohyama (Michigan), now a data scientist at the University of Florida

Select invited seminars and workshops

2025

Gordon Research Conference on Plant-Herbivore Interaction (Keynote)
XXVII Simpósio de Mirmecologia, Recife, Brazil (Keynote)

2024

CSIC, Doñana National Park, Spain

2023

Institute for Global Change Biology, University of Michigan
East China Normal University, Shanghai, China
University of Mainz, Germany

2022

Cal Poly Humboldt
University of Central Arkansas
Arkansas State University

2021

European IUSSI Congress (Keynote)
University of Colorado

2020

University of Illinois

2019

Sterling College
Montana State University
University of Michigan
Lincoln University, England
Beyond the Academy workshop at Cambridge University, England

2018

University of Sherbrooke, Canada
Oxford University, England
University of Aberdeen, Scotland
Michigan State University (Grad student invite)
Kellogg Biological Station
Concordia University, Canada
Middlebury College
Harvard Forest
University of Göttingen, Germany (Distinguished Lecturer)

2017

Okinawa Institute of Technology, Japan
University of Vermont
University of Oklahoma
iDiv Center for Integrative Biodiversity Studies, Germany

2016

University of Vermont
Danish Natural History Society (Keynote)
International Entomology Congress
North American Section of the International Union for the Study of Social Insects

2015

University of Notre Dame
Dartmouth College
Lund University, Sweden

Rocky Mountain Biological Lab
University of Freiburg, Germany
University of Girona, Spain (Keynote University lectures)
University of Frankfurt, Germany
Synthesis Workshop on Biosecurity in Mountains, Sweden
EUMacro 2015 (Keynote)

2014

University of Würzburg, Germany
University of Tours, France
Organization for Tropical Studies, Costa Rica
Peking University, China
University of Oslo, Norway (Keynote speaker on Darwin Day)
Danish Oikos Society (Keynote)

2013

Yale University
Chinese Academy of Sciences, Institute for Geographical and Ecosystem Research
Chinese Academy of Sciences, Institute of Zoology
Universität of Leipzig, Germany

2012

University of Houston
Peking University, China
University of New Mexico
University of Tennessee-Chattanooga
University of British Columbia, Canada

2011

University of North Carolina, Wilmington
Georgia Institute of Technology
Humboldt State University
University of North Carolina, Chapel Hill
Emory University (Graduate Students' Invitee)
University of Kentucky (Keynote)
University College London, England

2010

Section of Population Biology, University of Copenhagen, Denmark
Center for Macroecology, Evolution, and Climate, University of Copenhagen, Denmark
Imperial College, Silwood Park, England
Estación Biológica de Doñana, CSIC, Spain
University of Girona, Spain
Centre Tecnològic Forestal de Catalunya, Spain
International Union for the Study of Social Insects, Denmark

2009

Peking University, China
National Center for Ecological Analysis and Synthesis
Centre College
Duke University (Graduate Students' Invitee)
Louisiana State University
Middle Tennessee State University
University of California, San Diego
University of Copenhagen, Denmark
Montane Biodiversity Working Group, NESCent

2008

Natural Areas National Meeting (Invited speaker)
Entomological Collections Network Annual Meeting (Invited speaker)
Washington University
International Entomology Congress, South Africa
Montane Biodiversity Working Group, NESCent
Argentine Ant Workshop, Stellenbosch, South Africa

2007

Global Mountain Biodiversity Assessment Workshop, Denmark
Appalachian State University
University of Oklahoma
University of Copenhagen
Virginia Tech
University of Illinois

2006

International Union for the Study of Social Insects, International Meeting, DC

2005

University of Notre Dame
National Institute for Global Environmental Change (Invited Plenary Speaker)
North Carolina State University

2004

University of Kansas
Rice University
Northern Arizona University
Ecological Society of America meeting in Savannah, GA (Invited)

2001

Oberlin College
Mountain Lake Biological Station, University of Virginia
The College of Wooster
Appalachian State University
University of Tennessee

University of Central Arkansas
Western Carolina University

1999

University of Arkansas

Symposia and workshops organized

2023

Symposium co-organizer, "Leveraging natural history collections to understand the impacts of global change", British Ecological Society & Natural History Museum London, London, England

2011

Symposium co-organizer, "Synthesizing community ecology, phylogenetics and macroecology", European Ecological Federation Congress, Avila, Spain

2010

Symposium co-organizer, "Linking colonies to communities", International Union for the Study of Social Insects International Meeting, Copenhagen, Denmark

2009-2012

Working Group co-leader, "A synthesis of patterns, analyses, and mechanisms of β -diversity along ecological gradients." National Center for Ecological Analysis and Synthesis

2006

Symposium co-organizer, "Niche vs. neutral and the middle ground: what have we learned about community assembly" Ecological Society of America Annual Meeting, Memphis, TN

2002

Symposium co-organizer, "World-wide odyssey: the ecology of invasive social insects" Entomological Society of America National Meeting, San Diego, CA

Professional service

National Agency Review Panels

NSF Panel Spring 2022; NSF Panel Fall 2020; NSF Panel Spring 2020; NSF Panel Spring 2019; NSF Panel, Fall 2017; NSF Panel, Spring 2012; NSF Panel, Spring 2011; NSF Panel Spring 2010; NSF Panel, Spring 2009; USDA Panel, Spring 2007; NSF Panel, Fall 2006

Service to professional societies

Chair, Awards Committee, Ecological Society of America (2023 - present)

Diversity Working Group, Ecological Society of America (2023 - present)

Chair, Fellows and Early Career Fellows Selection Subcommittee, Ecological Society of America (2021 - 2023)

Publications Committee, British Ecological Society of America (2023 - present)

Task Force to Recommend a Policy on Naming Awards, Ecological Society of America (2022 - 2023)

Fellows and Early Career Fellows Selection Subcommittee, Ecological Society of America (2019 - 2021)
Student Poster Judge, International Union for the Study of Social Insects, Copenhagen, Denmark (2010)
Student Poster Judge, International Biogeography Society, Merida, Mexico (2009)
Student Travel Awards Panel, International Biogeography Society (2008)

Other professional service

Advisory Board of BugNet, a globally distributed experiment at nearly 100 sites around the world.

Departmental service

Departmental Executive Committee, University of Michigan (2022 - 2023)
Faculty Sponsor, MEEBS, University of Michigan (2022 - present)
Research Committee, University of Michigan Biological Station, University of Michigan (2022 - 2023)
Search Committee for Global Change Biologist in Institute for Global Change Biology, University of Michigan (2021 - 2022)
Search Committee for Assistant Professor in Global Change Biology/Environmental Justice in Institute for Global Change Biology, University of Michigan (2021 - 2022)
Chair of Search Committee for Assistant Professor in Ecology and/or Evolution, University of Michigan (2021)
Director, ES George Reserve, University of Michigan (2020 - present)
Frontiers Masters Program Admissions Committee, University of Michigan (2020 - 2021)
Graduate Admissions Committee, University of Michigan (2020 - present)
Macroecologist Search Committee, University of Copenhagen (2016)
Chair, Graduate Admissions Committee (2011 - 2013)
Undergraduate Curriculum Committee (2010 - 2011)
Community Ecologist Search Committee (2010)
Core Biology Curriculum Task Force (2010 - 2013)
Strategic Planning Committee (2010 - 2013)
Departmental Awards Committee (2010 - 2013)
Graduate Program Director (2008 - 2010)
Department Head Search Committee (2008)
Departmental Planning Subcommittee (2006)
Executive Committee (2005 - 2010; 2011 - 2013)
Field Ecologist Search Committee (2005)
Graduate Admissions Committee (2005 - 2010)
Graduate Affairs Committee (2005 - 2010)

Departmental Seminar Series organizer (2004 - 2005)

Landscape Ecologist Search Committee (2004 - 2005)

College service

Co-chair, College-wide "Year of Sustainability" planning committee (2023 - 2025)

Carbon Neutrality Program Manager Search Committee (2023 - 2024)

Ad hoc Carbon Neutrality Committee, University of Michigan (2021 - 2022)

Chair, Scope 3 steps toward Carbon Neutrality committee, University of Michigan (2021 - 2022)

Faculty Standards Committee, University of Vermont (2017 - 2019)

Ad hoc committee on retention of probationary faculty, University of Tennessee (2010 - 2011)

Participant in The College of Arts and Sciences' Math and Science Partnership program to engage middle and high school teachers in science, University of Tennessee (2005 - 2006)

University service

Rackham Executive Board, University of Michigan (2025 - present)

Reviewer for International Institute grants, University of Michigan (2025)

Internal NSF NRT grant reviews, University of Michigan (2023)

Postdoc Program Chair, Institute for Global Change Biology, University of Michigan (2022 - present)

Institute for Global Change Biology Faculty Steering Committee, University of Michigan (2020 - present)

Ad hoc committee for Safe Resumption of Research, University of Vermont (2020)

Library Advisory Council, University of Vermont (2019 - 2020)

Honors College Council, University of Vermont (2019 - 2020)

Search Committee, Vice President for Research, University of Vermont (2020)

Faculty Panel, Presidential Search Committee, University of Vermont (2018-2019)

Leader and evening presenter, 63rd Spring Wildflower Pilgrimage (2013)

Life of the Mind, Book selection committee (2012)

External evaluator, Entomology and Plant Pathology Departmental Review (2011)

Undergraduate Research Faculty Advisory Committee (2011 - 2012)

Faculty Fellow for Research, Chancellor's Honors and Haslam Scholars Programs (2010 - 2012)

Faculty sponsor, Undergraduate Researchers Student Association (2011 - 2014)

Centripetals speaker (2011)

Committee on the Campus Environment (2009 - 2014)

NSF-ADVANCE proposal preparation team (2009)

Inaugural Invited Speaker, Haslam Scholars Dinner (2009)

Outreach: Speaker at West Knoxville Library and Burlington Branch Library (2008)

Campus Committee for Udall Scholarships (2008 - 2014)

Invited speaker, University Science Forum (2006)

Interviewee, School of Journalism course in Writing about Science and Medicine (2006)

Regional representative to COREO (Consortium on Regional Ecological Observatories) (2005)

Life of the Mind Program, University of Tennessee (2006 - 2008)

Books

Sanders NJ, Fisher BA (Under contract) The Princeton Guide to Environmental Studies. Princeton University Press, Princeton, NJ.

Sanders NJ (Under contract) Ant ecology, from individuals to ecosystems. Princeton University Press

Peer-reviewed publications

h-index = 78, i10-index = 188, total citations = 25,753

* = graduate student; ** = undergraduate student (30 publications with undergrads as co-authors)

In review

Eckberg JN and Sanders NJ (In review) A dominant plant species and insects independently and interactively shape plant community structure and ecosystem function above- and below-ground.

Stuble KL, Read QR, Chick LD, Dunn RR, Sanders NJ, Rodriguez-Cabal MA (In review) The temporal niche: a means of coexistence and persistence in the face of ongoing climate change?

Leahy L, Parr K, Bishop T, Wright I, Sanders NJ, Gibb H (In review) The economic strategies of superorganisms.

Jing X, Wang H, Xu W, Fan X, Jiang L, Li Y, Ma Z, Manning P, Sanders NJ, Schmid B, Yang Y, Zhang Z, Nan Z, He J-S (In review) Stakeholder priorities impact perceptions of climate change on ecosystem-service multifunctionality.

Vought OK*, Sanders NJ, Ibañez I, Sundqvist MK, Henning JA, Prager CM, Read QR, Rewcastle KE, Brinkhoff RE, Classen AT (In review) The effects of warming and dominant species removal on plant biomass are driven by early-season production and the timing of water availability.

Shik JZ, Specht V, Mallett S, Petersen EM, Bolander M, Conlon BH, Donoso DA, Behmer ST, Sanders NJ, Arnan X (In review) Using nutritional geometry to predict risks of competitive exclusion.

In press

224. Brinkhoff RE, Sanders NJ, Henning JA, Newman G, Read QR, Sundqvist MK, Hovenden MJ, Prager CM, Rewcastle KE, Souza L, Vought OK*, Classen AT (In press) The impact of warming on ecosystem carbon uptake depends on elevation and is mediated by dominant species.

2025

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