Nathan J Sanders - cv

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Education

PhD, Stanford University (2000)

BA, University of Colorado (1995)

Appointments

Professor, University of Michigan (2020 - present)

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

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, 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 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

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 am involved in approving research and developing the research mission of the Lab, which has nearly 200 scientists. (2010 – present)

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)

Recent external funding (Total External Funding 2003 – present: $9.8 million)

Current

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

Previous

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 Højgaards 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

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)
General Ecology (BS Course)
Community Ecology (BS Course)
Conservation Biology (BS Course)
Advanced Topics in Community Ecology (PhD course)
Graduate Core Course in Ecology (PhD course)

Additional courses

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)

Current graduate students

Kenna Rewcastle, PhD expected 2022 (Vermont, co-advised with Aimée Classen)

Current postdoctoral students

Service on graduate student committees

Robert Semmler (Lancaster University, PhD expected 2022); Sean Moore (University of New England, Australia, PhD expected 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

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

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 2020); 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 at North Carolina State University
Tara E. Sackett, now a Postdoc at University of Toronto
Sharon Bewick (NIMBioS), now a postdoc at the University of Maryland
Orou Gaoue (NIMBioS), now an Assistant Professor at the University of Tennessee
Keenan Mack (NIMBioS), now an Assistant Professor at Illinois College
Chris Remien (NIMBioS), now Assistant Professor at the University of Idaho
Israel del Toro (Copenhagen), now an Assistant Professor at Lawrence University
Xin Jing (Vermont), now a Postdoc at KU Leuven, Belgium
Case Prager

Select invited seminars and workshops

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 (EEBB Graduate Student Distinguished Speaker)
Kellogg Biological Station
Concordia University (Canada)

Middlebury College
Harvard Forest
University of Göttingen (Distinguished Lecturer, Germany)

2017

Okinawa Institute of Technology (Japan)
University of Vermont (Biology)
University of Oklahoma
iDiv Center for Integrative Biodiversity Studies (Germany)

2016

University of Vermont
Danish Natural History Society (Denmark)
International Entomology Congress, Orlando, Florida
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 Frieburg (Germany)
University of Girona (Spain; University lectures)
University of Frankfurt (Germany)
Synthesis Workshop on Biosecurity in Mountains (Sweden)
EUMacro 2015 (Keynote speaker, Copenhagen)

2014

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

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 speaker at Annual Symposium)
University College London (UK)

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
Center of Macroecology and Evolution, 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

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 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

Fellows and Early Career Fellows Selection Subcommittee, Ecological Society of America (2019 - 2022)

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)

Departmental service

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

Faculty Standards Committee (2017 – 2019)

Ad hoc committee on retention of probationary faculty (2010 – 2011)

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

University service

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

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.

Peer-reviewed publications

h-index = 60, i10-index = 137, total citations = 13426

* = graduate student; ** = undergraduate student (22 publications with undergrads as co-authors)

In press

McGlinn DJ, Engel T, Blowes SA, Gotelli NJ, Knight TM, McGill BJ, Sanders NJ, Chase JM (In press) A multiscale framework for disentangling the roles of evenness, density and aggregation on diversity gradients. Ecology

Bager Olsen AT*, Geldman J, Harfoot M, Tittensor DP, Price B, Sinovas P, Nowak K, Sanders NJ, Burgess ND (In press) Thirty-six years of legal and illegal wildlife trade entering the USA. Oryx

2020

Jing X, Prager CM, Classen AT, He J-S, Sanders NJ (2020) Do biodiversity-multifunctionality relationships depend on the number of ecosystem functions? Journal of Plant Ecology 13: 431-441

Welti E, Kuczynski L, Marski K, Sanders NJ, de Beurs K, Kaspari M (2020) Salty, mild, and low plant biomass grasslands increase top-heaviness of invertebrate trophic pyramids. Global Ecology and Biogeography 29: 1474-1485

Sheard JK, Nelson AS, Berggreen JD, Boulay R, Dunn RR, Sanders NJ (2020) Trade-offs as a mechanism for coexistence: a test with ants. Journal of Biogeography 47: 1899-1909

Sundqvist MK, Sanders NJ, Dorrepaal E, Linden E, Metcalfe DB, Newman GS, Olofsson J, Wardle DA, Classen AT (2020) Responses of tundra net ecosystem carbon exchange to warming and dominant species removal at a high and a low elevation. Functional Ecology 34: 1497-1506

Essl F, Lenzner B, Bacher S, Bailey S, Capinha C, Daehler C, Dullinger S, Genovesi P, Hui C, Hulme P , Jeschke J, Katsanevakis S, Kühn I, Leung B, Liebhold A, Chunlong L, MacIsaac H, Meyerson L, Nunez M, Pauchard A, Pysek P, Rabitsch W, Richardson D, Roy H, Ruiz G, Russell J, Sanders N, Sax D, Scalera R, Seebens H, Springborn M, Turbelin A, van Kleunen M, Von Holle B, Winter M, Zenni R, Mattson B, Roura-Pascual N (2020) rivers of future alien species impacts: an expert-based assessment. Global Change Biology 26:4880-4893

Welti EA, Kuczynski L, Marske KA, Sanders NJ, de Beurs KM, Kaspari M (2020) Bottom-up when it is not top-down: Predators and plants control biomass of grassland arthropods. Journal of Animal Ecology 89: 1286-1294

Wang H, Liu G, Ma Z, Li Y, Zhang F, Zhao X, Zhao XQ, Jiang L, Sanders NJ, Classen AT, He J-S (2020) Alpine grassland plants grow earlier and faster, but biomass remains unchanged under long-term climate change. Ecology Letters 23: 701-710

Sheard JK, Sanders NJ, Gundlach C, Schär S, Larsen RS (2020) Monitoring the influx of new species through citizen science: The first introduced ant in Denmark. PeerJ 8: e8850

2019

Henning J*, Read QD, Sanders NJ, Classen AT (2019) Fungal colonization of plant roots is resistant to nitrogen addition and resilient to dominant species losses. Ecosphere 10: e02640

Suonan J, Classen AT, Sanders NJ, He J-S (2019) Plant phenological sensitivity to climate change is greater on the Tibetan Plateau than in other areas of the world. Ecosphere 10: e02543

Welti E, Sanders NJ, de Beurs K, Kaspari M (2019) A distributed experiment demonstrates widespread sodium limitation in grassland food webs. Ecology 100: e02600

Lau MK, Ellison AM, Nguyen A, Penick C, DeMarco B, Gotelli NJ, Sanders NJ, Dunn RR, Helms Cahan S. 2019. Draft *Aphaenogaster* genomes expand our view of ant genome size variation across climate gradients. *PeerJ* 7: e6447

Meineke E, Classen AT, Sanders NJ, Davies TJ (2019) Herbarium specimens reveal increasing herbivory over the past century. Journal of Ecology 107: 105-117

2018

Shade A, Dunn RR, Blowes SA, Keil P, Bohannan BJM, Herrmann M, Küsel K, Lennon JT, Sanders NJ, Storch D, Chase J (2018) Macroecology to unite all life. Trends in Ecology and Evolution 33: 731-744

Keith SA, Baird AH, Hobbs JPA, Woolsey ES, Hoey AS, Fadli N, Sanders NJ (2018) Synchronous behavioural shifts in reef fishes linked to mass coral bleaching. Nature Climate Change 8: 996 - 991

Arnan X, Andersen AN, Parr CL, Sanders NJ, Dunn RR, Angulo E, Baccaro F, Bishop T, Castracani C, Cerda X, Del Toro I, Delsinne T, Donoso, DA, Elten E, Fayle T, Fitzpatrick M, Gomez C, Grasso D, Grossman B, Guenard B, Gunawardene N, Heterick B, Hoffmann B, Janda M, Jenkins C, Klimes P, Lach L, Laeger T, Leponce M, Lucky A, Majer J, Menke SB, Mezger D, Mori A, Moses J, Munyai T, Paknia O, Pfeiffer M, Philpott S, Souza J, Tista M, Vasconcelos H, Retana J (2018) Dominance - diversity relationships in ant communities: a global analysis reveals dominance-impoverishment for invaded communities but dominance-diversification for native communities. Global Change Biology 24: 4614-4625

Prather R*, Roeder K*, Sanders NJ, Kaspari M (2018) Using metabolic logic to predict temperature dependent ecosystem activity: a test with prairie ants. Ecology 99: 2113-2121

Blume-Werry G, Lindén E, Andresen L, Classen AT, Sanders NJ, von Oppen J, Sundqvist MK (2018) Proportion of fine roots, but not plant biomass allocation belowground, increases with elevation in arctic tundra heath communities. Journal of Vegetation Science 29: 226-235

Gibb H, Sanders NJ, Dunn RR, Arnan X, Vasconcelos HL, Donoso DA, Andersen AN, Silva RR, Bishop TR, Gomez C, Grossman BF, Yusah KM, Luke SH, Pacheco R, Pearce-Duvet J, Retana J, Tista M, Parr CL (2018) Habitat disturbance selects against both small and large species across varying climates. Ecography 41: 1184-1193

Sheldon KS, Huey RB, Kaspari M, Sanders NJ (2018) 50 years of mountain passes: a perspective on Dan Janzen's classic paper. The American Naturalist 191: 553-565

Liu H, Mi Z, Lin L, Wang Y, Zhang Z, Zhang F, Wang H, Liu L, Zhu B, Cao G, Zhao X, Sanders NJ, Classen AT, Reich PB, He J-S (2018) Shifting plant species composition in response to climate change stabilizes grassland primary production. Proceedings of the National Academy of Sciences 115: 4051-4056

Read QD*, Henning JA*, Classen AT, Sanders NJ (2018) Aboveground resilience to species loss but below ground resistance to nitrogen addition in montane plant communities. Journal of Plant Ecology

11:351-363

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2017

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