BIOGRAPHY: ROBERT B. JACKSON August 2026

ADDRESS

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EDUCATION

B.S. Chemical Engineering	Rice University, 1983
M.S. Ecology and Environment	Utah State University, 1990
M.S. Statistics	Utah State University, 1992
Ph.D. Ecology and Environment	Utah State University, 1992

PROFESSIONAL & TEACHING EXPERIENCE

Environmental Justice Coordinating Council and Working Group, Stanford (2020-present)
CSU School of Global Environmental Sustainability, Board of Advisors (chair, 2020-2025)
Chair, Department of Earth System Science, Stanford University (2016-2019)
Douglas Provostial Professor of Energy and Environment, School of Earth Sciences, Stanford University (2014-present)
Senior Fellow, Woods Institute for the Environment, Stanford University (2014-present)
Senior Fellow, Precourt Institute for Energy, Stanford University (2014-present)
Senior Associate Dean for Research, Nicholas School of the Environment (2010-2012)
Nicholas Chair of Global Environmental Change, Nicholas School of the Environment, Duke University (2007-2013)
Director, National Inst. for Climate Change Research, DOE, southeast region (2005-2010)
Co-Founder and Co-Director, Climate Change Policy Partnership (2005-2011)
Director, Duke Center on Global Change (2004-2013)
Professor, Department of Biology and Nicholas School of the Environment & Earth Sciences, Duke University (2003-2013)
Associate Professor, Department of Biology and Nicholas School of the Environment & Earth Sciences, Duke University (2001-2002)
Director, Duke University Program in Ecology (2002-2006)
Director, Duke University Laboratory for Isotope Ratio Mass Spectrometry, (2000-2013)
Assistant Professor, Department of Biology and Nicholas School of the Environment, Duke University (1999-2000)
Assistant Professor, Department of Biology, UT Austin (1995-1998)
Department of Energy Distinguished Postdoctoral Fellow for Global Change, Stanford University (1993-1994)
Dow Chemical Co. (1983-1987)

GRANTS, FELLOWSHIPS, & AWARDS

Selected Awards, Offices, and Recent Extracurricular Service

U.S. National Academy of Sciences (2026)
Distinguished Honorary Professorship, Tsinghua University (2026)
Blue Planet Prize (2025), Laureate
Board of Trustees, Djerassi Resident Artists Program (2025-present)
Artist in Residence, North Coast Project (2025)
Fellow, Djerassi Resident Artists' Program (2024)
National Academy of Sciences, Engineering, and Medicine, Methane Removal (2023-2024)
Fellow, American Academy of Arts and Sciences (2022)
International Recognition Award, Mexican Carbon Program (PMC) (2021)
Fellow, Center for Advanced Studies in the Behavioral Sciences (2019)
Fellow, John Simon Guggenheim Memorial Foundation (2018)
Global Carbon Project, Chair (co-Chair 2014-2016; Chair 2017-present)
Fellow, American Association for the Advancement of Science (2017)
Chair, Publications Committee, Ecological Society of America (2017-2020)
CA Council on Science and Technology, Steering Committee, Natural Gas Storage Report (2017)
American Geophysical Union, Rights and Responsibilities Position Statement (2016-2017)
Fellow, Ecological Society of America (2012)
Global Carbon Project, Scientific Steering Committee (2012-present)
U.S. Carbon Cycle Science Plan, co-chair (2009-2012)
Fellow, American Geophysical Union (2008-present)
Vice President for Science, Ecological Society of America (2007-2011)
President, Biogeosciences Section, American Geophysical Union (2004-2006)
ISI Highly Cited (ISIHighlyCited.com, 2004-present)
President, Physiological Ecology Section, Ecological Society of America (2000-2002)
Presidential Early Career Award in Science and Engineering, National Science Foundation (1999)
Global Change and Terrestrial Ecosystems, Task 1.3.1 Leader (International Geosphere Biosphere Programme; 1996-present)
Biospheric Aspects of the Hydrological Cycle, Activity 2.4 leader (IGBP; 1999-present)
Murray F. Buell Award for Excellence in Ecology (Ecological Society of America, 1990)

Selected Recent Grants and Gifts (>$100,000)

Aspen Global Change Institute, Methane Alert: What measurement framework is needed to monitor increasing natural methane emissions? ($250,000, Cadillo-Quiroz H, RB Jackson, D Potocek, S Natali, E Jack Scott, October 2025 workshop)
USGS, John Wesley Powell Center, Scaling tropical wetland methane fluxes regionally and globally ($100,000, RB Jackson, S Knox, L Windham-Myers, A Hoyt)
Woods Institute for the Environment, Stanford University, Management Practices to Minimize Nitrogen Losses in Crop Production ($240,000, RB Jackson, S Fendorf, et al., 9/24-8/26)
Tides Foundation: Healthy Buildings Study ($704,000, RB Jackson et al., 6/24-5/25)
Moore Foundation: Tropical FLUXNET-CH_4 ($2,750,000, RB Jackson and 10 co-PIs; 10/22-9/26)
Carbon Mapper Inc.: Global Landfill Mapping using Deep Learning on Satellite Imagery

($165,000, RB Jackson; 1/24-12/24)

Stanford Accelerator: Old-Growth Relics as a Model for Forest Restoration and Natural Climate Solutions ($150,000, RB Jackson and K Peay, PIs; 1/24-1/25)

High Tide Foundation: METER: Methane Emissions Tracking Reference ($1,040,000, RB Jackson and three co-PIs; 7/21-6/23)

United Nations Environment Programme: Improving estimates of industrial emissions in the global methane cycle ($815,000, RB Jackson and four co-PIs; 3/21-2/23)

Ecosystem Services Market Consortium LLC: Neural Network for gap-filling and estimating N_2O emissions ($150,000; C Dorich, R Conant, RB Jackson; 11/20-11/21)

Stanford University: Initiative for Environmental Equity and Sustainability ($125,000; RB Jackson and four co-PIs; 9/20-8/22)

CA Energy Commission, SUMMATION: SUper eMitters of Methane Detection Using Aircraft, Towers, and Intensive Observational Network ($6,000,000, S Biraud, RB Jackson, and six co-PIs, 10/19-9/22)

Woods Institute for the Environment, Stanford University, Methane removal and atmospheric restoration ($185,000, RB Jackson and E Solomon, 10/19-9/21).

USGS, John Wesley Powell Center, Wetland fluxnet synthesis for methane: understanding and predicting methane fluxes at daily to interannual timescales ($175,000, RB Jackson, S Knox, L Windham-Myers, B Poulter)

Moore Foundation, Advancing understanding of the global methane cycle ($2,500,000, RB Jackson and five co-PIs; 10/16-9/21)

CA Energy Commission, Quantification of methane from California's plugged & abandoned oil and gas wells: effects of land subsidence and other factors ($650,000, M Fischer and four co-PIs, 7/17-6/19)

Woods Institute for the Environment, Stanford University, Developing and deploying a real-time benzene laser in the field ($200,000, RB Jackson, R Sur, and R Hanson, 10/16-9/18).

NSF, SusChEM: Geochemical Characterization and Evaluation of the Environmental Impacts of Hydraulic Fracturing Fluids ($258,000, A Vengosh, RB Jackson, T Darrah, 9/14-8/18)

Precourt Institute for Energy, Stanford University, Simultaneous atmospheric C_1-C_3 detection with a compact mid infrared laser sensor ($192,000, R Hanson, RB Jackson, 10/15-9/18)

NASA, Quantifying drought-induced tree mortality at multiple scales across Texas: regional carbon cycling, biophysics, and regime shifts ($270,000, RB Jackson; 9/13-8/17)

USDA, Drought-induced mortality of trees: ecosystem changes under climate change ($750,000, RB Jackson, D Johnson, J-C Domec, J Swenson, HW Polley; 9/12-8/17)

Precourt Institute for Energy, Stanford University, Imaging-based approaches to detecting and quantifying natural gas leaks ($185,000, RB Jackson and A Brandt, 10/14-9/16)

SELECTED PROFESSIONAL ACTIVITIES

Editorial, Governing, and Advisory Boards

Djerassi Resident Artists Program, Board of Trustees (2025-present)

Stanford Sustainability Review, Board of Advisors (2024-present)

XPrize, Global Visioneering Committee (2024-present)

Gulbenkian Prize for Humanity, Jury (2024-present)

Spark Climate Solutions, Board of Science Advisors (2023-present)

Center for Advanced Study in the Behavioral Sciences, Board of Directors (2022-present)

Carbon Mapper, Policy Advisory Board (2022-present)
Methane Action, Advisory Board (2021-present)
Environmental Research Letters, Executive Board (2018-present)
CREAF, External Advisory Board (2016-present), Barcelona, Spain
School of Global Environmental Sustainability, CSU, Advisory Board (2014-2025, Chair)
Annual Review of Ecology, Evolution, and Systematics (2009-2013)
Issues in Ecology, Editorial Board (2007-2013)
Springer-Verlag Ecological Studies, Book Series (2003-present)
Faculty of 1000 Biology (2005-2006)
Ecology and Ecological Monographs, Special Features Editor (2001-2006)
Functional Ecology (2000-2005)
National Science Foundation, Biogeosciences Working Group (2002-2005)
Oecologia (2000-2004)
Organization for Tropical Studies, Assembly of Delegates (2000-2004)

Professional society memberships

AAAS, American Chemical Society, American Geophysical Union, Ecological Society of America, Geological Society of America

Recent Invited panels, seminars, and workshops (>400 in total)

2026 From Fire to Wire; Dalberg, London Climate Week
2026 Imperial College, London Climate Week
2026 Stabilize Earth!; San Francisco Climate Week
2026 Stanford Energy Seminar
2026 Climate Action, Sustainability, and Resiliency (CASR), City and County of Denver
2026 Clean Energy Legislative briefing, New York
2025 Silicon Valley Clean Energy
2025 Kyoto University
2025 Asahi Glass Foundation/Blue Planet Prize
2025 Aspen Global Change Institute
2025 Duke University, Oosting Lecture
2025 Global Methane Hub
2025 Cupertino Rotary Club
2025 Stanford University, Woods Institute Book Club
2025 Rice University, Chevron Lecture
2025 Acterra, 55th Anniversary Celebration
2025 Peninsula Interfaith Climate Action (PICA)
2025 In Plain Site (Photography and Climate Festival), Alameda
2025 Gulbenkian Foundation, Berlin
2025 CASBS Board of Directors
2025 Microsoft Sustainability, Redmond, WA
2025 The Vi, Residents Lecture Series
2025 Uncommon Dialogue (Indoor Air Quality), Stanford University
2025 Dean's Lecture, Stanford University
2025 Operation Sierra Storm Conference, Tahoe, CA

2025 Institute for Responsible Carbon Removal, American University
2025 Spark Climate, Methane Removal
2024 Columbia, Institute for Responsible Carbon Removal
2024 Spark Climate, Stanford University, Methane Removal keynote
2024 XPrize, Global Visioneering 2024
2024 Djerassi Artful Harvest
2024 Wall Memorial Lecture, Colorado State University
2024 Heirloom Carbon
2024 Rotary Club, San Mateo
2024 Sustainable San Mateo County
2024 Kiwanis Club, Palo Alto
2024 Stanford SPICE (FSI)
2024 Djerassi Resident Artists Program
2024 Lyndsay Distinguished Lecture, Chemical Engineering, Texas A&M
2024 NASA Carbon Monitoring System
2024 UC Berkeley, FLUXNET Annual Meeting Keynote
2024 City of Hayward and Climate Protection and Restoration (CPR) Initiative
2024 McCoy Family Center for Ethics in Society, Stanford University, Brazil Day
2024 OATH, Inc., Soil Stars
2024 Lawrence Berkeley National Laboratory, Environmental Genomics & Systems Biology
2024 CA Assembly Hearing, AB 2513
2024 CA Energy Commission
2024 NASEM Methane Removal workshop
2024 Spark/Bezos Methane meeting
2023 Fudan University, School of Life Sciences Distinguished Lecture
2023 Planet Labs
2023 CA Energy Commission
2023 Century Summit
2023 Colorado Department of Health Briefing
2023 Wilkes Center Plenary, University of Utah
2023 Earth Day, Cities of Atherton, East Palo Alto, Menlo Park, and Palo Alto, CA
2023 NASEM Committee on Methane Removal
2023 Spark Climate Solutions, Methane Removal
2023 UCLA Extension Speaker Series
2022 Sámi Council
2022 Carnegie Institution of Washington, Department of Global Ecology
2022 Environmental Defense Fund
2022 Climate Action Network
2022 Cambridge University, Center for Climate Repair
2022 SEEC (U.S. House Sustainable Energy and Environment Coalition)
2022 Global Methane Hub
2022 EDF Science Day
2022 NCAR, CESM Annual Meeting Plenary, Boulder, CO
2022 Urban Methane Emissions, EDF, Washington, DC
2022 OGCI, McKinsey, Methane Removal
2022 City of Lost Altos Hills, Climate and Emergency Preparedness

2022 City of Atherton, Earth Day
2022 Climate Change Task Force, Earth Day
2022 Los Angeles City Health Commission
2022 Joint Institute for Strategic Energy Analysis (JISEA)
2022 MIT, Global Methane Meeting
2022 Climate Action Network
2022 Climate Leadership Coalition, Helsinki, Finland
2022 MIT, Department of Civil and Environmental Engineering, Climate Snacks
2021American Geophysical Union, three sessions organized
2021 Cold Spring Harbor Laboratory
2021 Mexican Carbon Program
2021 Royal Society UK
2021 Cambridge Center for Climate Repair
2021 New Scientist Symposium
2021 Joint Mathematics Symposium
2021 Bayer
2020 Gates Foundation, Forestry briefing to Bill Gates, Seattle, WA
2020 Salk Institute, Plant Carbon Drawdown 2020, La Jolla, CA
2020 Edison Electric Institute, The Role of Forestry in Addressing Climate
2020 Coronavirus and the Environment, Foundation for Science and Technology, London, UK
2020 Natural Pathways for Carbon Sequestration, California Council on Science and Technology
2020 G20 Workshop on the Implications of COVID-19 on Sustainable Economic Recovery
2020 Global Carbon Project, Scientific Steering Committee
2020 World Farmers' Organization (WFO), Advisory Council
2020 Plenary Lecture, Ecological Society of America
2020 Citizens Climate Lobby
2020 School of Natural and Environmental Sciences, Newcastle University
2020 Stanford Carbon Management Symposium
2020 University of British Columbia, Geography Colloquium
2020 Harvey Mudd College
2020 Instituto Potosino de Investigación Científica y Tecnológica, A.C. (IPICYT), Mexico
2019 Carbon Cycle Assessments, Simon Fraser University, Vancouver, Canada
2019 Oil Field Injection, Cal State University Bakersfield, Bakersfield, CA
2019 Emissions Briefing, National Press Club, Washington, DC
2019 Land Cover Mapping, Google, Mountain View, CA
2019 Palo Alto Garden Club, Palo Alto, CA
2019 Regional Carbon Cycle Assessments 2 (RECCAP2), Gotemba, Japan
2019 Green New Deal, Stanford, CA
2019 John Wesley Powell Center, U.S. Geological Survey, Ft. Collins, CO
2019 Distinguished Scientist Seminar, Lawrence Berkeley National Lab, Berkeley, CA
2019 SB100 Workshop, San Francisco, CA
2019 Sustainability Science 2.0, George Mason University, Arlington, VA
2019 Global Carbon Project, Scientific Steering Committee, University of Minnesota
2019 Sustainable Healthy Cities, University of Minnesota, Minneapolis, MN
2019 World Meteorological Organization, Global Climate Summit, New York, NY
2019 Climate Briefing, Hungarian President János Áder, New York, NY

2019 Ecology Center, Utah State University, Logan, UT
2019 Council for the Advancement of Science Writing, Penn State University, State College, PA

Peer-reviewed publications (Citations: Google Scholar >200,000, h≥190; https://scholar.google.com/citations?user=G3NBUzwAAAAJ&hl=en&oi=ao)

2026

Pascual D, G Hugelius, JG Canadell, J Harden, RB Jackson, K Georgiou, A Jonshagen, J Lindström, K Ljung, E Register, C Volle, J Asch, U Ervander, G Fälthammar De Jong, J Sun, A Ahlström 2026 Higher carbon storage in primary than secondary boreal forests in Sweden. ***Science*** 391:1256-1261.

Reek JE, CM Zohner, G Reuben Smith, SC Cook-Patton, P De Frenne, P D'Odorico, MG Floriancic, RB Jackson, JA Jones, JW Kirchner, M Laguë, Y Liang, YJ Masuda, RI McDonald, LA Parsons, BS Probst, JT Spector, TAP West, NH Wolff, F Zellweger, TW Crowther 2026 More than mitigation: The role of forests in climate adaptation. ***Science*** 391:6786.

Watts JD, E Ordway SL Malone, Q Zhu, PI Palmer, D Patel-Tupper, P Ciais, F Li, DR Monteverde, KA Arndt, L Bruhwiler, B Buma, H Cadillo-Quiroz, E Euskirchen, AM Hoyt, M Holgerson, G Hugelius, RB Jackson, D Jacob, M Kuhn, SM Natali, S Peng, B Poulter, C Rey-Sánchez, LeB Sagang, EAG Schuur, RK Varner, R Vargas 2026 From pledges to action: Investing in a global methane observing system for verifiable climate impact. ***Science*** 391:1324-1327.

Ciais, P, Y Zhu, Y Cai, X Lan, SE Michel, B Zheng, Y Zhao, DA Hauglustaine, X Lin, Y Zhang, S Sun, X Tian, M Zhao, Y Wang, J Chang, X Dou, Z Liu, R Andrew, CA Quinn, B Poulter, Z Ouyang, W Yuan, K Yuan, Q Zhu, F Li, N Pan, H Tian, X Yu, G Rocher-Ros, MS Johnson, M Li, M Li, D Feng, P Raymond, X Yang, JG Canadell, R.B. Jackson, X Yu, Y Li, M Saunois, P Bousquet, S Peng 2026 Why methane surged in the atmosphere during the early 2020s. ***Science*** 391:eadx8262.

Zheng Q, H Mao, C Liang , X Dou, S McElhany, C Carlos , X Zhu, J Wang , Y Li, X Chi, D Parkinson, R Maboudian, P Ercius, RB Jackson, Y Cui, PJM Monteiro 2026 Sustainable cement production *via* a liquid-phase pathway. ***Nature***, in press.

Zhang Z, B Poulter, Z Wang, L Bruhwiler, JG Canadell, N Gedney, A Ito, RB. Jackson, JR Melton,, C Peng, WJ Riley, M Saunois, A Wiltshire, Q Zhang, Q Zhu, Q Zhu, X Li 2026 Emergent constraints of temperature dependence on projected global wetland methane emissions. ***Nature Geoscience*** 19:654–659.

Li F, Q Zhu, K Yuan, E Fluet-Chouinard, X Zhang, J Wang, SH Knox, H You, M Chen, M Li, R Stern, AM Hoyt, G McNicol, WJ Riley, S Peng, B Poulter, A Malhotra, S Cooley, Z Zhang, S Hong, Z Chen, Z Zhu, PA Raymond, P Ciais, RB Jackson 2026 The underappreciated importance of small wetlands in global methane emissions. ***Nature Climate Change*** 16:535–539.

Zhang J, H Tian, X-Z Liang, JG Canadell, P Ciais, RB Jackson, Z Ouyang, J Zhang, S Pan 2026 Global rice paddy greenhouse gas emissions have doubled over the past six decades driven by area expansion and intensified residue incorporation. ***Nature Food*** **7**:474–487.

Jackson RB, JA Irvin, N Ramachandran, C Wang, Z Ouyang, PA Tulloch, FY Liu, AY Ng 2026 MEthane Tracking Emissions Reference (METER): A global database of methane-emitting infrastructure. ***Earth System Science Data***, in revision.

Li M, Jackson RB, M Saunois, P Ciais, B Poulter, JG Canadell, Patra, PK, H Tian, Z Zhang, E Fluet-Chouinard, Z Ouyang, T Zhang, DJ Beerling, DA Belikov, P Bousquet, D Custodio, N Chandra, X Dou, N Gedney, PO Hopcroft, AM Hoyt, K Ichii, A Ito, AK Jain, K Jensen, F Joos, T Kleinen, M Kondo, F Li, T Li, X Liu, S Maksyutov, A Malhotra, A Martinez, K McDonald, JR Melton, J Müller, Y Niwa, S Pan, S Peng, C Peng, Z Qin, P Raymond, W Riley, A Segers, RL Thompson, A Tsuruta, X Yi, K Yuan, W Zhang, B Zheng, Q Zhu, Q Zhu, Q Zhuang 2026 Machine-learning-based estimates of global natural vegetated wetland methane emissions (2000-2025). ***Earth System Science Data*** 8:3507–3524.

Yu, X, JG Canadell, DK Henze, PK Patra, M Saunois, X Cen, X Lan, B Riddell-Young, T Röckmann, RB Jackson 2026 Incorporating methane isotopologues alters tropical and subtropical methane emission estimates. ***Nature Communications*** 6002.

Sparks TL, YS Kashtan*, ST Rowland, ED Lebel*, JSW Goldman, C Finnegan*, G Huang, N Lucha, A Shankute*, S Bisogno, N Heath, KR Bilsback, A Garg*, LA Hill, RB Jackson, SBC Shonkoff, DR Michanowicz 2026 Hazardous air pollutants in downstream natural gas leakage in Europe. ***Environmental Research Letters*** 21:064008.

Kessler, MI, R Randall, G Wan, K Xu, Y Zhang, JA Dionne, RB Jackson, A Majumdar 2026 A humidity-tolerant photocatalyst for methane removal. ***Environmental Science and Technology*** 60: 5442–5452.

Randall R, MI Kessler, RB Jackson, A Majumdar 2026 The efficiencies and products of dilute methane oxidation in a chlorine radical photoreactor. ***Environmental Science & Technology***; https://pubs.acs.org/doi/10.1021/acs.est.6c04737.

Van Galen LG et al. 2025 A global database of soil microbial phospholipid fatty acids and enzyme activities. ***Scientific Data*** 12:1568.

Li T, L Wang, Z Qiu, P Ciais, SJ Davis, Z Deng, Y Zhao, GP Peters, P Ke, MW Jones, RM Andrew, Y Hao, T Sun, X Huang, RB Jackson, P Friedlingstein, C Lu, D Cui, Z Liu 2026 Global daily CO2 emissions from 1970 to 2024. ***Scientific Data*** 13:605.

Liu, Z., Ke, P., Deng, Z. *et al.* 2026 China's net-zero budget. ***Nature Reviews Earth & Environment*** 7:392–406. https://doi.org/10.1038/s43017-026-00791-1

Feron S, RR Cordero, A Damiani, P Upham, R Bintanja, X Sun, J Pizarro, C Wang, Z Ouyang, X Sun, A Beaulieu, RB Jackson 2026 Photovoltaic power response to El Niño–southern oscillation. ***Nature Communications Earth and Environment*** 7:325.

Morales-Betancourt R, Galbán-Malagón CJ, T Montejo-Barato, E Blanco, P Tapia-Pino, R Vargas, C Cordova, C Finnegan, A Shankute, N Huneeus, JS Hernández-Suárez, P Valencia, M Mena-Carrasco, RB Jackson 2026 Methane and NOx emissions from natural gas cooking stoves, the case of Chile and Colombia. ***Amospheric Chemistry and Physics*** 26:8355–8365.

Määttä T, A Desai, M Ueyama, R Vargas, EJ Ward, Z Zhang, G Bohrer, K Delwiche, E Fluet-Chouinard, J Järveoja, S Knox, L Melling, MB Nilsson, M Peichl, A Che Ing Tang, E-S Tuittila, J Wang, S Bansal, S Feron, M Helbig, A Korrensalo, KW Krauss, G McNicol, S Niu, Z Ouyang, K Savage, O Sonnentag, RB Jackson, A Malhotra 2026 A cross-site comparison of ecosystem- and plot-scale methane fluxes across multiple sites. ***Biogeosciences*** 23:4379–4445.

Ciais P, S Peng, J Chang, F Li, Q Zhu, K Yuan, G Hugelius, H Li,, Y Cai, F Chevallier, K Tibrewal, EA Kort, K Arndt, J Watts, B Buma, N Besic, PI Palmer, H Cadillo-Quiroz, E Euskirchen, MJ Gondwe, A Hoyt, RB Jackson, S Malone, D Monteverde, S Natali, M Ramonet, C Rey-Sanchez, LB Sagang, EAG Schuur, R Vargas, R Varner, B Poulter 2026 A global methane observation system to reduce uncertainty for anthropogenic and natural sources and sinks for detecting and attributing climate feedbacks. ***Advanced Science*** e76624.

Peng S, Y Cai, Y Zhu, X Lan, SE Michel, B Zheng, Y Zhao, DA Hauglustaine, R Parker, X Lin, Y Zhang, S Sun, X Tian, M Zhao, Y Wang, J Chang, X Dou, Z Liu, R Andrew, CA Quinn, B Poulter, Z Ouyang, W Yuan, K Yuan, Q Zhu, F Li, N Pan, H Tian, X Yu, G Rocher-Ros, MS Johnson, M Li, M Li, D Feng, P Raymond, X Yang, JG Canadell, RB Jackson, X Yu, Y Li, M Saunois, P Bousquet, P Ciais. 2026 A synthesis of global methane emissions and removals in the year 2024, submitted.

Kashtan Y, DR Michanowicz, S Leskin, SBC Shonkoff, RB Jackson 2026 Residential San Francisco Bay Area air conditioners leak less refrigerant than expected. ***Environmental Research Letters*** 21:114015.

Yu X, DB Millet, DK Henze, HM Worden, C Vigouroux, PK Patra, JD Hill, RB Jackson 2026 Multi-species constraints resolve methane source versus sink changes: lessons from 2020. ***Earth's Future*** 14:e2025EF007067.

Zhao P, Z Zhang, G Huang, Z Wang, JG Canadell, P Ciais, H Chen, S Chen, JB Cohen, F Dai, P Gong, RB Jackson, F Jiang, W Ju, C Mu, PK Patra, B Poulter, K Qin, M Saunois, X Wang, W Yuan, Y Zhang, Y Zhang, Q Zhu, S Piao, X Li 2026 Two decades of methane budgets at the sub-national scale in China. ***Science Bulletin*** 10.1016/j.scib.2026.06.019.

Fajer E, K Peay, RB Jackson, J Yeam, Z Rehnborg, P Pellitier 2026 Ectomycorrhizal communities underlie trade-offs between greater long-term tree-growth and reduced soil carbon concentrations in boreal forests. ***Journal of Ecology***, in press.

Finnegan C, Z Ouyang, K Reichl, A Moyes, A Santos, J Gonzalez-Rocha, F Hopkins, E Sherwin, S Biraud, RB Jackson 2026 Quantifying Methane Emissions from Oil Wells in Kern County, CA. ***Environmental Science & Technology Air***, in press.

Sharma B, WR Chan, WW Delp, ED Lebel, YS Kashtan, CJ Finnegan, RB Jackson, Z Merrin, PW Francisco, ML Fischer, SC Biraud, H Blum, VH Rapp, BC Singer 2026 Methane emissions from post-meter residential natural gas infrastructure: integrating existing data to inform California's statewide inventory. ***Environmental Science & Technology Air***, in press.

Kashtan YS, ED Lebel, N Lucha, C Finnegan, G Huang, TL Sparks[1] A Shankute, AF Saporito, CA Galazra, RB Jackson, SBC Shonkoff, DR Michanowicz 2026 Combustion-derived air pollution and heat in gas-fired commercial kitchens can exceed health-based guidelines. ***Environmental Research Letters***, in press.

Abernethy S, D Monteverde, C Schädel, B Buma, PB Duffy, RB Jackson, SM Natali, I Ocko, BM Rogers, B Poulter 2026 Projected amplification of global warming by warming-induced greenhouse gas emissions. ***Environmental Research Letters***, in press.

Buma B, PH Badiou, S Bansal, I Creed, MA Holgerson, RB Jackson, SH Knox, D Monteverde, EA Ury, Z Zhang 2026 Effectively and efficiently mitigating warming-induced emissions and bioclimate feedbacks needs strategic science. ***Environmental Research Letters***, in revision.

Yona L, C Rocchi, RB Jackson, K Mach 2026 Lifecycles and loopholes. ***Ecology Law Quarterly***, in revision.

Qu Z, PB Reich, U Niinemets, CP Carmona, RP Phillips, GT Freschet, JHC Cornelissen, RB Jackson, J Hennecke, HYH Chen, H Lambers, G Chen, OJ Valverde-Barrantes, T Su 2026 Asymmetric integration of above- and belowground traits shapes whole-plant strategies worldwide. Submitted.

Kashtan YS, N Lucha, DR Michanowicz, C Finnegan, S Derrick, G Huang, JK Domen, Z Ouyang, RB Jackson, SBC Shonkoff, ED Lebel 2026 Quantifying leakage and combustion emissions from the hydrogen-blended natural gas on O'ahu, Hawai'i. ***Environmental Research Letters***, submitted.

2025

Ouyang, Z, RB Jackson, et al. 2025 The global hydrogen budget. ***Nature*** 648:616–624.

Zhang Z et al. 2025 Ensemble estimates of global wetland methane emissions over 2000–2020. ***Biogeosciences*** 22:305–321.

Pan N et al. 2025 Climate change rivals fertilizer use in driving soil nitrous oxide emissions in the northern high latitudes: Insights from terrestrial biosphere models. ***Environment International*** 196: 109297.

Canadell JG et al. 2025 From global to national GHG budgets: the REgional Carbon Cycle Assessment and Processes-3 (RECCAP3). ***National Science Review*** 12:nwaf037.

Friedlingstein P et al. 2025 Global Carbon Budget 2024 ***Earth System Science Data*** 17:965-1039.

Poulter B et al. 2025 The North American Greenhouse Gas Budget: emissions, removals, and integration for CO_2, CH_4, and N_2O (2010-2019): Results from the Second REgional Carbon Cycle Assessment and Processes Study (RECCAP2) ***Global Biogeochemical Cycles*** 39:e2024GB008310.

Garg, A, M Nicholson, CJ Finnegan, ED Lebel, DR Michanowicz, SBC Shonkoff, KC Nadeau, RB Jackson 2025 Exposure and health risks of benzene from combustion by gas stoves: a modeling approach in U.S. homes. ***Journal of Hazardous Materials*** 492:137986.

Lehner B et al. 2025 Mapping the world's inland surface waters: an update to the Global Lakes and Wetlands Database (GLWD v2). ***Earth System Science Data*** 17:2277–2329.

Jackson RB 2025 Climate rites. ***Leonardo*** 58:262.

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Reasons to Smile, Summer 2016, Avocet
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It's Complicated, 2022, Dawn Songs

Children's Books

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Current and Former Postdoctoral Advisees

A Ahlström, LJ Anderson, C Armas, T Bleby, M Brito Caldeira, G Bulltail, S Cooley, T Darrah, K Delwiche, X Dou, C Ellis, R Emanuel, V Engel, K Farley, S Féron, N Fierer, E Fluet-Chouinard, M Gallagher, A Garg, K Georgiou, J Gewirtzman, RA Gill, A Hedgpeth, M Henn, WA Hoffmann, G Hugelius, D Hui, D Jayawickreme, DM Johnson, EG Jobbágy, M Kang, A Kelley, S Knox, L Krebs, F Li, M Li, MG Little, M Lu, H Maherali, A Malhotra,

RL McCulley, AJ McElrone, G McNicol, M Nosetto, M Nuno Bugalho, S Osborn, S Palmer, A Pellegrini, P Pellitier, G Piñeiro, WT Pockman, CD Reid, HJ Schenk, M Sherrard, R Stern, J Strauss, C Terrer, K van Sundert, L Vielstädte, O Vindušková, C Wang, D Way, Z Yang, X Yu, A Zanne, K Zhao, T Zheng

Current and Former Graduate Students

A Appling, S Abernethy, A Balogun, S Berthrong, MS Brumbaugh, S Castañeda, A Down, G Geier, WS Gordon, R Herring, KS Hofmockel, EG Jobbágy, Y Kashtan, J Kim, E Lebel, J Loreti, R Marinos, D McMahon, C Moura, L Neftaliem, M Nicholson, V Palacios, F Perret, A Pillai Hausner, A Procter, P Roberge, A Schwantes, C Scott-Buechler, A Spitzig, E Thorsos, S Tumber-Davila, C Willson, L Yona