COURTNEY M. CURRIER, Ph.D.
Curriculum Vitae

Postdoctoral Research Associate, University of Cambridge | cc2228@cam.ac.uk
Department of Plant Sciences, Downing Street, Cambridge CB1 3EA United Kingdom

RESEARCH INTERESTS

I am an ecosystem ecologist at the University of Cambridge focusing on carbon storage potential and persistence in drylands. I am interested in understanding how climate change and increasing disturbances, like fire, are affecting cycling of essential nutrients between plants and soils in dryland ecosystems. Tools I use are fire and rainfall manipulation experiments in the field, synthesis of spatial datasets, and stable isotopes.

ACADEMIC QUALIFICATIONS

2018–2023	Ph.D. Environmental Life Sciences, Arizona State University, Tempe, AZ
2013–2015	M.Sc. Biology, Arizona State University, Tempe, AZ
2009–2013	B.S. Environmental Sciences (Hons.), University of Notre Dame, Notre Dame, IN

PROFESSIONAL EXPERIENCE

Exp. 2026	Postdoctoral Research Associate, Doerr School of Sustainability, Stanford University
2023–present	Postdoctoral Research Associate, Department of Plant Sciences, University of Cambridge, United Kingdom
2017–2018	Project Manager, Global Drylands Center, School of Sustainability, Arizona State University
2015–2018	Research Specialist and Lab Manager, Sala Laboratory, Arizona State University

HONORS AND AWARDS

2022	Presidential Management Fellowship – semifinalist
2022	Achievement Rewards for College Scientists – semifinalist
2021	"Grad Slam" Elevator Pitch 3rd Place Winner, Arizona State University Graduate and Professional Student Association
2020	Outstanding Research Award, Arizona State University Graduate and Professional Student Association
2018–2022	The Graduate College Excellence Award, Arizona State University
2013	Honorable Mention Fall 2013 National Science Foundation – Graduate Research Fellowship Program (NSF-GRFP)
2013	Outstanding Environmental Scientist Award, University of Notre Dame
2012–2013	Honors Research Student in Biological Sciences, University of Notre Dame
2012	Dean's List, University of Notre Dame, College of Science, Fall and Spring
2011	Dean's List, University of Notre Dame, College of Science, Spring
2011	Clare Boothe Luce Undergraduate Research Award, University of Notre Dame College of Science Summer Research Fellow

FELLOWSHIPS AND GRANTS RECEIVED

($62,290 total funds earned)

2022	PhD Completion Fellowship, School of Life Sciences, Arizona State University
2022	Graduate College Travel Award, Arizona State University
2020	Student Registration Award, Ecological Society of America Biogeosciences Section
2019–2021	Jornada LTER Graduate Research Fellowship
2019	Student Travel Award, Ecological Society of America Southwest Section
2019	Research Training Initiative Grad Student Support Grant, Arizona State University
2018–2019	Arizona State University Graduate College Fellowship
2018	Excellence in Rangeland Ecology Research Travel Award, Ecological Society of America Rangeland Ecology Section
2017	Travel Grant Award, ASU, Graduate and Professional Student Association
2015	Travel Grant Award, ASU, School of Life Sciences
2015	Travel Grant Award, ASU, Graduate and Professional Student Association
2012	National Science Foundation – Research Experience for Undergraduates Fellowship, Niwot Ridge LTER
2012	Travel Grant Award, University of Notre Dame, College of Science
2012	Travel Grant Award, National Science Foundation – Biology REU

PEER-REVIEWED PUBLICATIONS

(H index = 8 | Google Scholar)

Currier, C.M., Parrinello, C., Dick, C., Augustine, D.J., Blair, J.M., Boughton, E.H., Coetsee, C., David, A., Derner, J.D., Hobbie, S.E., Isbell, F., Mkansi, N., Modimola, K.S., Reich, P.B., Wigley, B. Worm, K., Zeglin, L.H., and A.F.A. Pellegrini. 2025. Disturbance effects on plant allocation patterns in savanna ecosystems. In preparation for submission to *Journal of Ecology*.

Currier, C.M., Reichmann, L.G., and O.E. Sala. 2025. Unresponsive drylands to nitrogen availability: Access to alternative sources? In preparation for submission to *Journal of Geophysical Research: Biogeosciences*.

Currier, C.M., Reichmann, L.G., and O.E. Sala. 2025. Acclimation of the nitrogen cycle to changes in precipitation. In review. *Ecosystems*. https://doi.org/10.6073/pasta/8929d93801db656ae1ad0f3a12a1345c

Biancari, L., ..., **Currier, C.M.**, ..., et al. 2024.. Drivers of woody dominance across global drylands. *Science Advances* 10,eadn6007. https://doi.org/10.1126/sciadv.adn6007

Díaz-Martínez, P., ..., **Currier, C.M.**, ..., et al. 2024. Vulnerability of mineral-associated soil organic carbon to climate across global drylands. *Nature Climate Change* 14: 976–982. https://doi.org/10.1038/s41558-024-02087-y

Maestre, F., …**Currier, C.M.**, …, et. al. 2022. Grazing and ecosystem service delivery in global drylands. *Science* 378: 915-920. https://doi.org/10.1126/science.abq4062

Currier, C.M. and O.E. Sala. 2022. Precipitation versus temperature as phenology controls in drylands. *Ecology*. https://doi.org/10.1002/ecy.3793

Osborne, B. B., Bestelmeyer, B. T., **Currier, C. M.**, Homyak, P. M., Throop, H. L., Young, K., and Reed, S. C. 2022. The consequences of climate change for dryland biogeochemistry. *New Phytologist*. https://doi.org/10.1111/nph.18312

Currier, C.M., Makings, E., Anderson, J., Slagel, K., and J. Maranville. 2021. Solanaceae Part Seven: Browallia, Calibrachoa, Capsicum, Jaltomata, and Salpichroa. *Canotia* 17: 46-60.

Currier, C.M., Chaloner, D.T., Ruegg, J., Tiegs, S.D., D'Amore, D., and G.A. Lamberti. 2020. Beyond macronutrient resource subsidies: Pacific salmon (Oncorhynchus spp.) as potential vectors of micronutrients. *Aquatic Sciences* 82:50. https://doi.org/10.1007/s00027-020-00725-z

Sala, O.E., Boone, C.G., Turner II, B.L., and **C.M. Currier**. 2019. The sustainability gap and its implications. *Current Opinion in Environmental Sustainability* 39: 39-43. https://doi.org/10.1016/j.cosust.2019.06.006

Delgado-Baquerizo, M., Bardgett, R.D., Vitousek, P.M., Maestre, F.T., Williams, M.A., Eldridge, D.J., Lambers, H., Neuhauser, S., Gallardo, A., Sala, O.E., Abades, S., Alfaro, F.D., Berhe, A.A., Bowker, M.A., **Currier, C.M.**, Cutler, N.A., García-Velázquez, L., Hart, S.C., Hayes, P.E., Hseu, Z., Kirchmair, M., Peña-Ramírez, V.M., Pérez, C.A., Reed, S.C., Santos, F., Siebe, C., Sullivan, B.W., Weber-Grullon, L., and N. Fierer. 2019. Changes in belowground biodiversity during ecosystem development. *Proceedings of the National Academy of Science* 116(14): 6891-6896. https://doi.org/10.1073/pnas.1818400116

Currier, C.M., and J.J. Elser. 2017. Beyond monoculture stoichiometry studies: assessing growth, respiration, and feeding responses of three Daphnia species to P-enriched, low C:P lake seston. *Inland Waters* 7(3): 348-357. https://doi.org/10.1080/20442041.2017.1319180

Rüegg, J., **C.M. Currier**, D.T. Chaloner, S.D. Tiegs, and G.A. Lamberti. 2014. Habitat influences Pacific salmon (Oncorhynchus spp.) tissue decomposition in riparian and stream ecosystems. *Aquatic Sciences* 76(4): 623-632. https://doi.org/10.1007/s00027-014-0359-2

OTHER PUBLICATIONS AND ART

C.M. Currier and T. Feltus. 2023. Finding joy through art, ecology, and bikes. Feature in *The Radavist*. Online only.

C.M. Currier. 2019. Feature in *Phoenix Transect*. Online only

C.M. Currier and O.E. Sala. 2018. Art provides a new lens for moving through the scientific method. *SciArt Magazine* 33: (Special topics issue) How can art influence science? Online only

C.M. Currier. 2018. Feature in *Life Raft Zine.* Online only

SELECTED CONFERENCE PRESENTATIONS

(last five years)

Currier, C.M., Parrinello, C., Dick, C., Augustine, D.J., Blair, J.M., Boughton, E.H., Coetsee, C., David, A., Derner, J.D., Hobbie, S.E., Isbell, F., Mkansi, N., Modimola, K.S., Reich, P.B., Wigley, B. Worm, K., Zeglin, L.H., and A.F.A. Pellegrini. 2025. Fire and aridity controls on soil carbon inputs. Baltimore, MD, USA. August 2025. (talk)

C.M. Currier and O.E. Sala. Nitrogen plant uptake in a semiarid ecosystem is modulated by water and plant type. Ecological Society of America Annual Meeting. Montreal, Quebec, Canada. August 2022. (talk)

C.M. Currier and O.E. Sala. A temporal perspective of nitrogen cycling in a semiarid grassland under extreme rainfall conditions. Ecological Society of America Annual Meeting. Virtual. August 2021. (talk)

C.M. Currier and O.E. Sala. Re-envisioning plant phenology: From data points to painting. Ecological Society of America Annual Meeting. Virtual. August 2020. (Inspire talk, co-organizer of session)

C.M. Currier and O.E. Sala. Extreme precipitation interacts with N cycling in a semi-arid grassland. Ecological Society of America Annual Meeting. Virtual. August 2020. (talk)

INVITED TALKS

(last five years)

Archbold Biological Station, Microbial Ecology Workshop. August 2025.

Emmanuel College, University of Cambridge, College Research Symposium. February 2025.

Department of Plant Sciences, University of Cambridge, Dept. Seminar Series. February 2025.

University of the Third Age, Botany Seminar. January 2025.

Cambridge Botanical Garden, Science on Sunday Series. July 2024.

GROUP ART EXHIBITIONS

THIRST 2022: Artists for Humanitarian Aid. Online only. July 2022 (original paintings)

Dimensions of Science. Onyx Gallery, Phoenix, AZ. February 2019 (original painting)

Portraits of Science. MonOrchid Gallery. Phoenix, AZ. May 2017 (original paintings)

SYNERGISTIC ACTIVITIES

2024–present	College Research Associate, Emmanuel College, University of Cambridge
2022	Abstract Reviewer for the Ecological Society of America Southwestern Chapter
2020–2022	Grant Reviewer for the Graduate and Professional Student Association, Arizona State University
2019–2023	Vision Kids Art Program Instructor, Chandler, AZ
2019–2021	Jornada Basin LTER Graduate Student Representative
2019	IsoCamp, University of Utah, Stable Isotope Ratio Facility for Environmental Research
2018	Explore NEON Workshop, National Ecological Observatory Network, Boulder, CO.
2017–present	BIODESERT Global Research Group
2017–present	Alumni Mentor, Environmental Sciences undergraduate program, Notre Dame
2016–present	Asombro Institute, New Mexico State University, Jornada LTER, volunteer
2013–2014	Arizona State University, School of Life Sciences Graduate Executive Committee, secretary
2013–present	Arizona State University Ask a Biologist, volunteer
2012–2013	Notre Dame Biological Sciences Senior Leadership Committee

TEACHING

University of Cambridge Lecturer
Part II Plant Sciences Module: Global Change

Graduate Teaching Assistant at Arizona State University
Biology 426: Limnology
Biology 320: Fundamentals of Ecology
Biology 281: General Biology I for Majors
Biology 282: General Biology II for Majors
Biology 181: General Biology I
Biology 182: General Biology II
Biology 100: The Living World

Undergraduate Teaching Assistant at Notre Dame
Biology 30312: General Ecology