

# DANIEL CLINTON ALLEN, PH.D.

---

*Curriculum Vitae* – updated 8/19/2021

Department of Biology, University of Oklahoma, Norman, OK, 73019

Office phone: 405-325-4392, E-mail: [dcallen@ou.edu](mailto:dcallen@ou.edu), Website: [www.allenlab.org](http://www.allenlab.org)

## EDUCATION

---

- 2011 Ph.D. in Ecology and Evolutionary Biology, University of Oklahoma. Advisor: Dr. Caryn C. Vaughn  
2003 B.A. in Biology, Macalester College (St. Paul, MN).

## APPOINTMENTS

---

- 2021–present Assistant Professor, Department of Ecosystem Science and Management, The Pennsylvania State University  
2016–2021 Assistant Professor, Department of Biology, University of Oklahoma  
2014–2016 Assistant Professor, College of Letters and Sciences, Arizona State University, Polytechnic campus  
2012–2014 Postdoctoral Research Fellow, School of Natural Resources and Environment, University of Michigan. Advisor: Dr. Bradley J. Cardinale.  
2011–2012 Postdoctoral Research Fellow, School of Life Sciences, Arizona State University, Tempe campus. Advisor: Dr. John L. Sabo.

## PUBLICATIONS

\*PUBLICATION WITH LEAD AUTHOR STUDENT/POSTDOC FROM ALLEN LAB

#PUBLICATION FROM DRY RIVERS RESEARCH COORDINATION NETWORK

---

2021

41. Besozzi, E., B. Chew, **D. C. Allen**, and A. Contina. *In press*. Stable isotope analysis of an aberrant Painted Bunting (*Passerina ciris*) feather suggests post-molt movements. **Wilson Journal of Ornithology**. [link](#) (early view)
- \*40. Nelson, D., M. H. Busch, D. A. Kopp, and **D. C. Allen**. *In press*. Energy pathways modulate the resilience of stream invertebrate communities to drought. **Journal of Animal Ecology**. [link](#) (early view)
- #39. Zipper, S. C., J. C. Hammond, M. Shanafield, M. Zimmer, T. Datry, C. N. Jones, K. E. Kaiser, S. E. Godsey, R. M. Burrows, J. R. Blaszcak, M. H. Busch, A. N. Price, K. S. Boersma, A. S. Ward, K. Costigan, G. H. Allen, C. A. Krabbenhoft, W. K. Dodds, M. C. Mims, J. D. Olden, S. K. Kampf, Amy J. Burgin, and **D. C. Allen**. 2021. Pervasive changes in stream intermittence across the United States. **Environmental Research Letters**. 16: 084033. [link](#), [highlight in Science](#)
38. Gao, S., M. Chen, Z. Li, S. Cook., **D. C. Allen**, T. Neeson, T. Yang, T. Yami, and Y. Hong. 2021. Mapping dynamic non-perennial stream networks using high-resolution distributed hydrologic simulation: a case study in the upper Blue River basin. **Journal of Hydrology**. 600: 126522. [link](#)
- \*37. Kopp, D. A., and **D. C. Allen**. 2021. Scaling landscape pattern in river networks: the effects of spatial extent, grain size and thematic resolution. **Landscape Ecology**. 36: 2781-2794. [link](#)
36. Albuquerque, F., H. L. Bateman, C. Boheme, **D. C. Allen**, and L. Cautela. 2021. Variation in temperature, precipitation, and vegetation productivity drive changes in seasonal variation of avian diversity in an urban desert landscape. **Land**. 10(5) 480. [link](#)

- \*35. Kopp, D. A. and **D. C. Allen**. 2021. Trait-environment relationships could alter the spatial and temporal characteristics of aquatic insect subsidies at the macrospatial scale. **Ecography**. 44(3): 391-402. [link](#)
- #34. Hammond, J., M. Zimmer, M. Shanafield, K. Kaiser, S. Godsey, M. Mims, S. Zipper, R. Burrows, S. Kampf, W. Dodds, C. N. Jones, C. Krabbenhoft, K. Boersma, T. Datry, J. Olden, G. Allen, A. Price, K. Costigan, R. Hale, A. Ward, and **D. C. Allen**. 2021. Spatial patterns and drivers of non-perennial flow regimes in the contiguous U.S. **Geophysical Research Letters**. 48(2). e2020GL090794. [link](#)

2020

33. Lopez, J. W., T. B. Parr, **D. C. Allen**, and C. C. Vaughn. 2020. Animal aggregations promote emergent aquatic plant production at the aquatic-terrestrial interface. **Ecology**. 101(10): e03126 [link](#)
- #32. **Allen, D. C.**, **T. Datry**, K. Boersma, M. Bogan, A. Boulton, M. Busch, K. Costigan, W. Dodds, K. Fritz, S. Godsey, J. Jones, T. Kaletova, S. Kampf, M. Mims, T. Neeson, J. Olden, A. Pastor, N. L. Poff, B. Ruddell, A. Ruhi, G. Singer, P. Vezza, A. Ward, M. Zimmer. 2020. River ecosystem conceptual models and non-perennial rivers: A critical review. **Wiley Interdisciplinary Reviews - Water**. 7: e1473. indicates co-lead authors [link](#)
- \*#31. Busch, M. H., Costigan, K. H., Fritz, K. M., Datry, T., Krabbenhoft, C. A., Hammond, J. C., Zimmer, M., Olden, J. D., Burrows, R. M., Dodds, W. K., Boersma, K. S., Shanafield, M., Kampf, S. K., Mims, M. C., Bogan, M. T., Ward, A. S., Perez Rocha, M., Allen, G. H., Blaszcak, J. R., Jones, C. N., and **D. C. Allen**. 2020. What's in a name? Patterns and trends in the definition of non-perennial rivers and streams. **WATER**. 12(7): 1980. [link](#)
- #30. Zimmer, M., K. Kaiser, J. Blaszcak, S. Zipper, J. Hammond, K. Fritz, K. Costigan, J. Hosen, S. Godsey, G. Allen, S. Kampf, R. Burrows, C. Krabbenhoft, W. Dodds, R. Hale, J. Olden, M. Shanafield, A. DelVecchia, A. Ward, M. Mims, T. Datry, M. Bogan, K. Boersma, M. Busch, C. N. Jones, A. Burgin, and **D. C. Allen**. 2020. Zero or not? Causes and consequences of zero-flow stream gage readings. **Wiley Interdisciplinary Reviews - Water**. 7(3): e1436. [link](#)
- #29. Shanafield, M., S. Godsey, T. Datry, R. Hale, S. C. Zipper, K. Costigan, C. A. Krabbenhoft, W. K. Dodds, M. Zimmer, **D. C. Allen**, M. Bogan, K. E. Kaiser, R. M. Burrows, J. C. Hammond, M. Busch, S. Kampf, M. C. Mims, A. Burgin, and J. D. Olden. 2020. Science gets up to speed on dry rivers. **Eos** 101: <https://doi.org/10.1029/2020EO139902>.

2019

28. **Allen, D. C.**, H. L. Bateman, P. Warren, F. S. Albuquerque, S. Arnett-Romero, and B. Harding. 2019. Long-term effects of land-use change on bird biodiversity and community structure depend on spatial scale and land-use type. **Ecosphere** 10(11): e02952. [link](#)
27. von Shiller, D., et al (**D. C. Allen** 15<sup>th</sup> of 92 authors). 2019. Sediment respiration pulses in intermittent rivers and ephemeral streams. **Global Biogeochemical Cycles**. 33(10): 1251-1263. [link](#)
- \*26. Kopp, D. A. and **D. C. Allen**. 2019. Stream Network Geometry and the Spatial Influence of Aquatic Insect Subsidies across the Contiguous US. **Ecosphere**. 10(11): e02926. [link](#)
25. **Allen, D. C.** 2019. Nutritional hotspots? Prey from one ecosystem provide key fatty acids required for consumers in multiple ecosystems. **Functional Ecology**. 33(10): 1816-1817. [link](#)
- #24. **Allen, D. C.**, D. A. Kopp, T. Datry, K. Costigan, B. Hugueny, D. L. Turner, G. Bodner, and T. Flood. 2019. Citizen scientists document long-term streamflow declines in intermittent rivers of the desert southwest, USA. **Freshwater Science**. 38(2): 244-256. [Featured on journal cover, link](#)

23. Patrick., C. J., D. McGarvey, W. Cross, **D. C. Allen**, A. Benke, T. Brey , A. Huryn, J. Jones, C. Murphy, C. Ruffing, P. Saffarinia, M. Whiles, B. Wallace, and G. Woodward. 2019. Precipitation and temperature drive continental to global patterns in stream invertebrate secondary production. **Science Advances**. 5(4), eaav2348. [link](#)
22. Shumilova, O, et al. (**D. C. Allen** 9<sup>th</sup> of 77 authors). 2019. Simulating rewetting events in intermittent rivers and ephemeral streams: A global analysis of leached nutrients and organic matter. **Global Change Biology**. 25(5): 1591-1611. [link](#)
21. Tiegs, S. et al. (**D. C. Allen** 12<sup>th</sup> of 151 authors). 2019. Global patterns and drivers of ecosystem functioning in rivers and riparian zones. **Science Advances**. 5(1): eaav0486. [link](#)

#### 2018

20. Marshall, J. C., V. Acuña, **D. C. Allen**, N. Bonada, A.J. Boulton, S. M. Carlson, C. N. Dahm, T. Datry, C. Leigh, P. Negus, J. S. Richardson, S. Sabater, R. J. Stevenson, A. L. Steward, R. Stubbington, K. Tockner, R. Vander Vorste. 2018. Protecting U.S. temporary waterways. **Science**. 361(6405): 856. [link](#)
19. Datry, T. et al. (**D. C. Allen** 13<sup>th</sup> of 94 authors). 2018. A global analysis of terrestrial plant litter dynamics in non-perennial waterways. **Nature Geoscience**. 11: 497–503. [link](#)
18. Rodriguez Rodriguez, M, D. A. Kopp, **D. C. Allen**, and Y. Kang. 2018. Dynamical implications of bi-directional resource exchange within a meta-ecosystem. **Mathematical Biosciences**. 301: 167-184. [link](#)
17. **Allen, D. C.**, T. Wynn-Thompson, D. A. Kopp and B. J. Cardinale. 2018. Riparian plant biodiversity reduces stream channel migration rates in 3 rivers in Michigan, USA. **Ecology**. 99(4): e1972. [link](#)
16. Andrade, R., H. L. Bateman, J. Franklin, and **D. C. Allen**. 2018. Waterbird community composition, abundance, and diversity along an urban gradient. **Landscape and Urban Planning**. 170: 103-111. [link](#)
15. Hornbach, D. J., **D. C. Allen**, M. C. Hove, and K. R. MacGregor. 2018. Long-term decline of native freshwater mussel assemblages in a federally protected US river. **Freshwater Biology**. 63(3): 243-263. [link](#)
14. Atkinson, C. A., **D. C. Allen**, L. Davis, and Z. L. Nickerson. 2018. Incorporating ecogeomorphic feedbacks to better understand resiliency in streams: a review and directions forward. **Geomorphology**. 305: 123-140. [link](#)

#### 2016 and earlier

13. **Allen, D. C.** and J. S. Wesner. 2016. Synthesis: comparing effects of resource and consumer fluxes into recipient food webs using meta-analysis. **Ecology**. 97(3): 594-604. [link](#)
12. **Allen, D. C.** 2016. Microclimate modification by riparian vegetation affects the structure and resource limitation of arthropod communities. **Ecosphere** 7: e01200. [link](#)
11. **Allen, D. C.**, B. J. Cardinale, and T. Wynn-Thompson. 2016. Effect of plant biodiversity in reducing fluvial erosion is limited to low species richness. **Ecology** 97: 17-24. [link](#)
10. Albertson, L. K., and **D. C. Allen**. 2015. Meta-analysis: Organism size, abundance, behavior, and hydraulic energy shape biotic effects on sediment transport in streams. **Ecology** 96: 1329-1339. [link](#)
9. **Allen, D. C.**, B. J. Cardinale, and T. Wynn-Thompson. 2014. Towards a better integration of ecological principles into interdisciplinary ecogeoscience research. **BioScience** 64: 444-454. [link](#)
8. **Allen, D. C.**, K. E. McCluney, S. R. Elser, and J. L. Sabo. 2014. Water as a trophic currency in dryland food webs. **Frontiers in Ecology and the Environment** 12(3): 156-160. [link](#)

7. **Allen, D. C.**, H. S. Galbraith, C. C. Vaughn, and D. E. Spooner. 2013. A tale of two rivers: implications of water management practices on freshwater mussel biodiversity outcomes during a multi-year drought. **AMBIO** 42(7): 881-891. [link](#)
6. **Allen, D. C.**, C. C. Vaughn, J. F. Kelly, J. T. Cooper, M. H. Engel. 2012. Bottom-up biodiversity effects increase resource subsidy flux between ecosystems. **Ecology** 93(10): 2165-2174. *This paper won the [2014 Hynes Award for New Investigators from the Freshwater Society for Freshwater Science](#).* [link](#)
5. **Allen, D. C.**, and C. C. Vaughn. 2011. Density-dependent biodiversity effects on physical habitat modification by freshwater bivalves. **Ecology** 92(5): 1013-1019. [Featured in Nature Research Highlights and on journal cover](#), [link](#)
4. **Allen, D. C.**, and C. C. Vaughn. 2010. Hydraulic and substrate variables limit species richness and abundance of freshwater mussel communities. **Journal of the North American Benthological Society** 29(2): 383-394. [link](#)
3. **Allen, D. C.**, and C. C. Vaughn. 2009. Burrowing behavior of freshwater mussel species in experimentally manipulated communities. **Journal of the North American Benthological Society** 28(1): 93-100. [link](#)
2. **Allen, D. C.**, D. M. Morris, and C. C. Vaughn. 2008. *Nerodia sipedon* (northern water snake). Mortality caused by mussel? **Herpetological Review** 39(4): 471-472.
1. **Allen, D. C.**, M. C. Hove, B. E. Sietman, D. E. Kelner, J. E. Kurth, J. M. Davis, J. L. Weiss, and D. J. Hornbach. 2007. Early life-history and conservation status of *Venustaconcha ellipsiformis* (Bivalvia: Unionidae) in Minnesota. **American Midland Naturalist** 157(1): 74-91. [link](#)

*Manuscripts in review/revision:*

- \*1. Kopp, D. A., A. I. Strand, J. F. Kelly, and **D. C. Allen**. *In revision*. Climate change may affect aquatic insect subsidies emerging from streams and rivers and impact energy supply for avian insectivores. **Ecosystems**.
2. Gao, S., Z. Li, M. Chen, P. Lin, Z. Hong, **D. C. Allen**, T. Neeson, and Y. Hong. *In revision*. Examining spatiotemporal variability of global river extent and the natural causal factors using three decades of Landsat observation. **Remote Sensing of Environment**.
- #3. DelVecchia, A. G., M. Shanafield, M. A. Zimmer, M. H. Busch, C. A. Krabbenhoft, R. Stubbington, K. E. Kaiser, R. M. Burrows, J. Hosen, T. Datry, S. Kampf, S. C. Zipper, K. Fritz, K. Costigan, and **D. C. Allen**. *In review*. Reconceptualizing the hyporheic zone of non-perennial rivers and streams. **Freshwater Science**.
- \*4. Busch, M.H., **Allen, D. C.**, Marske, K.A., Kuczynski, L. *In review*. The only lasting truth is change: Multiple dimensions of biodiversity show historical legacy effects in community assembly processes of freshwater fish. **Ecography**.
- #5. Compson, Z. G., W. A. Monk, R. Sarremejane, A. G. DelVecchia, R. M. Burrows, S. Gao, B. L. Ruddell, Y. Hong, and **D. C. Allen**. *In review*. Dryland Rivers and Streams. Chapter in Encyclopedia of Inland Waters, 2<sup>nd</sup> edition. Eds: K. Tockner, T. Mehner, and G. Likens. Elsevier press.

**EXTERNAL FUNDING AWARDED**

---

*As Assistant Professor at the University of Oklahoma and PI/Co-PI (Total awarded: \$10,047,189; OU portion: \$2,558,934)*

**National Science Foundation**, 2020 – 2024. “RII Track-2 FEC: Aquatic Intermittency effects on Microbiomes in Streams (AIMS).” PI: A. Burgin. Co-PIs: **D. C. Allen**, C. Atkinson, S. Godsey, K. Kuehn. Senior Personnel: K. Aho, J. Benstead, J. Brooks-Kieffer, R. Hale, K. Lohse, C. Jackson, J. Johnson, N. Jones, J. Meisel, E. Seybold, Y. You, L. Zeglin, S. Zipper. Award number 2019603. \$5,998,875; OU portion: \$349,067.

**National Science Foundation**, 2019-2023. "COLLABORATIVE RESEARCH: MSB-FRA: Scaling Climate, Connectivity, and Communities in Streams. **PIs: D. C. Allen (lead)**, M. Bogan (U. Arizona), K. Costigan (U. Louisiana Lafayette), M. Mims (Virginia Tech), B. Ruddell (Northern Arizona U.), A. Ruhí (U. California Berkeley). Co-PIs: Y. Hong (U. Oklahoma), T. Neeson (U. Oklahoma), R. Pastel (Michigan Tech. U.), A. Springer (Northern Arizona U.). Award number 1802872. \$3,038,833; OU portion: \$1,399,944.

**National Science Foundation**, 2018-2022. "RCN: Intermittent River Research Coordination Network (IRRCN): Integrating Intermittent River Ecology and Hydrology." **PI: D. C. Allen**. Co-PI: K. Costigan (U. Louisiana Lafayette). Senior personnel: K. Boersma, M. Bogan, T. Datry, K. Fritz, S. Godsey, M. Mims, J. Olden, A. Ruhí. Award number 1754389. \$499,955; OU Portion: \$300,397.

**Oklahoma Department of Wildlife Conservation**, 2019-2022. "Native and non-native crayfishes in southeastern Oklahoma: assessing their distribution and ecology as important prey sources for sportfish." **PI: D. C. Allen**. Co-PI: D. Nelson. \$233,385.

**Oklahoma Department of Wildlife Conservation**, 2018-2021. "Life history and ecology of the Ozark Emerald (*Somatochlora ozarkensis*) and associated crayfishes in the Ouachita Mountains/West Gulf Coastal Plain Region." **PI: D. C. Allen**. Co-PI: D. Nelson, B. Smith-Patten. \$138,452.

**Oklahoma Department of Wildlife Conservation**, 2018-2020. "Targeted Surveys for Peppered Shiner in the Kiamichi, Little, Glover, and Mountain Fork Rivers." **PI: D. C. Allen**. Co-PI: W. Matthews. \$137,689.

*As Assistant Professor at the University of Oklahoma and Senior Personnel/Participant (Total awarded: \$7,357,945 + €7,000,000)*

**European Union Horizon**, 2020-2024. "DRYvER: Securing biodiversity, functional integrity and ecosystem services in DRYing rivER networks." PI: T. Datry, co-PI: JP Vidal, N Bonada, G Singer, J Martin-Ortega, L Domis Sernepont, Z Czabai. **Participants: D. C. Allen**, one of 26. €7,000,000.

**National Science Foundation**, 2020-2022. "BII-Design: Institute for the Biogeography of Behavior." PI: L. Stein. Co-PIs: H. Lanier, K. Marske, A. Rowe, C. Siler. **Senior Personnel: D. C. Allen**, D. Arcila, R. Betancur, L. Fornelli, R. Broughton, M. Kaspari, J. Kelly, M. Markham, M. Rowe. Total awarded: \$199,169.

**National Science Foundation**, 2018-2021. "NSF-MRI: Acquisition of an Inductively Coupled Plasma Mass Spectrometer (ICP-MS) System to Enable Elemental Analysis in Research, Training and Education." PI: M. Nanny. Co-PIs: J. Kelly, R. Ramesh, I. Sellers, J. Vogel. **Senior Personnel: D. C. Allen**, L. Bartley, L. Bement, R. Childers, P. Harikumar, C. Hofman, B. Kemp, A. Lamar, X. Liu, M. Minghetti, P. Mukherjee, C. Mao, R. Nairn, N. Riedinger, B. Saporov, S. Wilhelm, Z. Yang. Total awarded: \$396,778.

**National Science Foundation**, 2018-2022, "LTER: CAP IV: Design with nature infrastructure in Phoenix: A research framework for exploring urban ecology and sustainability." PI: D. Childers. Co-PIs: N. Grimm, S. Hall, B. Turner, A. York. **Senior Personnel: D. C. Allen**, one of 50. Total awarded: \$4,507,998.

**National Science Foundation**, 2016-2018, "LTER: CAP IV: Design with nature infrastructure in Phoenix: A research framework for exploring urban ecology and sustainability." PI: D. Childers. Co-PIs: N. Grimm, S. Hall, B. Turner, A. York. **Senior Personnel: D. C. Allen**, one of 45. Total awarded: \$2,254,000.

#### **COMPETITIVE INTERNAL FUNDING AWARDED**

---

*As Assistant Professor at the University of Oklahoma (\$30,000)*

University of Oklahoma, Presidential International Travel Fellowship, 2019, \$1000.

University of Oklahoma, College of Arts and Sciences, Junior Summer Faculty Fellowship,

2018, \$7000. "Ecosystem Resiliency to Climate Change: A Test with Stream Food Webs." **PI: D. C. Allen**

University of Oklahoma, Office of the Vice President for Research-Research Council, Junior Faculty Fellowship, 2017, \$7000. "FlowCam: A tool for Ecology and Hydrology Research." **PI: D. C. Allen**

University of Oklahoma, Office of the Vice President for Research-Research Council, Faculty Investment Program, 2017, \$15,000. "Expanding the Artificial Streams at OU's Aquatic Research Facility." **PI: D. C. Allen**, co-PI: KE Marshall.

*As Assistant Professor at Arizona State University (\$42,000)*

*CAP LTER Working Group: "Effects of the Riparianization of the Phoenix Metropolitan Area on Ecosystem Services Provided by Urban Riparian Systems", Central Arizona Phoenix Long-Term Ecological Research Site, 2015, \$16,000. (PI: D. C. Allen; B. Ruddell, N. Grimm, B. L. Turner, Xioxiao Li, co-PIs).*

*CAP LTER Working Group: "Long-term analysis of land-use and climate anomalies on urban community structure: food web dynamics and biodiversity patterns", Central Arizona Phoenix Long-Term Ecological Research Site, 2015, \$16,000. (PI: D. C. Allen; H. Bateman, C. Martin, A. Ruhi, J. Sabo, J. Stutz, co-PIs).*

*Faculty Summer Research Grant, School of Letters and Sciences, 2015, \$5000.*

*Faculty Summer Research Grant, School of Letters and Sciences, 2014, \$5000.*

#### **HONORS, AWARDS AND FELLOWSHIPS**

---

- 2014 **Hynes Award for New Investigators**, for an outstanding primary publication by an early career scientist, Society for Freshwater Science.
- 2012 – 14 **NSF Postdoctoral Research Fellowship in Biology** (DBI-103500), University of Michigan.
- 2011 **Graduate Student Research Award** for best publication by a graduate student, Department of Zoology, University of Oklahoma.
- 2009 – 10 **NSF Doctoral Dissertation Improvement Grant** (DEB-0910086), University of Oklahoma.
- 2009 **Best Student Oral Presentation** (2<sup>nd</sup> place). Freshwater Mollusk Conservation Society.
- 2008 **Best Student Oral Presentation** on Basic Research (2<sup>nd</sup> place). Society for Freshwater Science.
- 2007 **Best Student Poster Presentation** (1<sup>st</sup> place). Freshwater Mollusk Conservation Society.

#### **HONORS, AWARDS AND FELLOWSHIPS: ADVISED STUDENTS/POSTDOCS**

---

- 2020 **NSF National Research Traineeship Fellowship**, Steven Bittner, PhD Student.
- 2019 – 20 **NSF National Research Traineeship Fellowship**, Michelle Busch, PhD Student.
- 2019 **Hynes Award for New Investigators**, Society for Freshwater Science, Dr. Daniel Nelson, Postdoctoral Researcher.
- 2018 – 20 **NSF Louis Stokes Alliances for Minority Participation Bridge to Doctorate Fellowship**, Steven Bittner, PhD Student.
- 2018 **NSF Graduate Research Fellowship Program**, Honorable Mention, Steven Bittner, PhD Student.
- 2017 **NSF Graduate Research Fellowship Program**, Honorable Mention, Michelle Busch, PhD Student.

#### **INVITED SEMINARS (10 MOST RECENT OF 18)**

---

University of North Texas, Department of Biological Sciences. April 3, 2020, Denton, Texas.  
*Cancelled due to COVID-19 pandemic.*

French National Institute for Agriculture, Food and Environment (INRAE). February 11, 2020.  
Lyon, France.

Science and Management of Intermittent Rivers and Ephemeral Streams (SMIRES) Closing  
Conference. February 4, 2020. Tirana, Albania.

University of Oklahoma, Department of Biology (mid-tenure review seminar). September 18,  
2019. Norman, OK.

University of California Riverside, Department of Evolution, Ecology, and Organismal Biology.  
May 9, 2019. Riverside, CA.

University of Florida, Department of Biology. April 23, 2019. Gainesville, FL.

University of Montana, Division of Biological Sciences. March 9, 2016. Missoula, MT.

University of Oklahoma, Department of Biology. February 8, 2016. Norman, OK.

Virginia Tech, Department of Biological Sciences. November 10, 2015. Blacksburg, VT.

Cary Institute of Ecosystem Studies, October 30, 2014. Millbrook, NY.

## **MEDIA COVERAGE**

---

“Water willow and mussels and deer, oh my!” *Envirobites*, August 31, 2020. Coverage of  
publication in the journal *Ecology*. [link](#)

“Is the river really dry? Scientific interpretations of zero flow readings,” *Advanced Science News*,  
April 14, 2020. Coverage of publication in the journal *WIREs Water*. [link](#)

“Citizen scientists tracking intermittent rivers,” *Environmental Monitor*, July 24, 2019. Coverage  
of publication in the journal *Freshwater Science*. [link](#)

“World Water Day: Citizen scientists provide valuable information on intermittent rivers,”  
*National Science Foundation* discovery article, March 22, 2019. Coverage of publication  
in the journal *Freshwater Science*. [link](#) Article also published on Phys.org ([link](#)), Science  
Daily ([link](#)), and EurekAlert! ([link](#)).

“OU professor leads dry stream research,” Norman Transcript (Norman, OK, newspaper),  
December 3, 2018. Coverage of NSF Macrosystems Biology and Dry Rivers Research  
Coordination Network grants. [link](#)

“Now streaming: OU professor leads dry stream research across U.S.,” The Oklahoman  
(Oklahoma City, OK, Newspaper), November 1, 2018. Coverage of NSF Macrosystems  
Biology and Dry Rivers Research Coordination Network grants. Front page. [link](#)

“OU professors to lead ecological research project.” OU Daily (student university newspaper),  
August 22, 2018. Coverage of NSF Macrosystems Biology Grant. [link](#)

“Research grant could clarify water issue,” *The Journal Record* (Oklahoma City based business  
newspaper), July 17, 2018. Coverage of NSF Dry Rivers Research Coordination  
Network grant. [link](#)

Local News Minute, KGOU Norman, National Public Radio, July 13, 2018. Coverage of NSF Dry  
Rivers Research Coordination Network grant.

## **PROFESSIONAL PRESENTATIONS (10 MOST RECENT OF 74)**

\*LEAD AUTHOR STUDENT/POSTDOC FROM ALLEN LAB (25 TOTAL)

---

74. Hammond, J., S. Zipper, M. Zimmer, M. Shanafield, K. Kaiser, S. Godsey, N. Jones, R.  
Burrows, M. Mims, T. Datry, S. Kampf, W. Dodds, C. Krabbenhoft, J. Blaszcak, M.  
Busch, A. Price, K. Boersma, A. Ward, J. Olden, G. Allen, K. Costigan, R. Hale, A.  
Burgin, and **D. C. Allen**. 2021. Spatial patterns of temporal change in non-perennial flow  
regimes across the United States. *Temporary Rivers & Streams 2021, June 22, online*.
73. Krabbenhoft, C., G. Allen, J. Olden, P. Lin, S. Godsey, **D. C. Allen**, H. Beck, A. Burgin, R.  
Burrows, K. Costigan, T. Datry, A. DelVecchia, W. Dodds, C. Franklin, K. Fritz, R. Hale,

- N. Jones, M. Mims, A. Ruhi, M. Shanafield, A. Ward, M. Zimmer, and S. Zipper. 2021. Is our finger on the pulse? Global analysis reveals biases in the streamflow gage network. *Society for Freshwater Science Annual Meeting, May 23-27, online.*
72. Compson, Z., S. Cook, M. Malish, T. Neeson, and **D. C. Allen**. 2021. Trait-based food webs reveal continental metacommunity patterns. *Society for Freshwater Science Annual Meeting, May 23-27, online.*
- \*71. Cook, S. C., M. Malish, M. Perez Rocha, A. Ruhi, D. Kopp, M. T. Bogan, M. C. Mims, T. M. Neeson, K. H. Costigan, S. Gao, Z. Compson, S. Silknetter, and **D. C. Allen**. 2021. Continent-wide drivers of temporal  $\beta$ -diversity in stream communities from the national ecological observatory network. *Society for Freshwater Science Annual Meeting, May 23-27, online.*
- \*70. Busch, M. H., **D. C. Allen**, K. Marske, and L. Kuczynski. Legacy effects of historical richness cause change in fish community assembly over time. *Society for Freshwater Science Annual Meeting, May 23-27, online.*
- \*69. Malish, M. C., S. Gao, T. Neeson, and **D. C. Allen**. 2021. Stream drying patterns and fish assemblages in the blue river watershed, Oklahoma. *Society for Freshwater Science Annual Meeting, May 23-27, online.*
68. Hammond, J., S. Zipper, M. Zimmer, M. Shanafield, K. Kaiser, S. Godsey, N. Jones, R. Burrows, M. Mims, T. Datry, S. Kampf, W. Dodds, C. Krabbenhoft, J. Blaszczyk, M. Busch, A. Price, K. Boersma, A. Ward, J. Olden, G. Allen, K. Costigan, R. Hale, A. burgin, and **D. C. Allen**. 2021. Spatial patterns of temporal change in non-perennial flow regimes across the United States. *Society for Freshwater Science Annual Meeting, May 23-27, online.*
- \*67. Kopp, D. A., A. I. Strand, J. F. Kelly, and **D. C. Allen**. 2021. Climate change may affect aquatic insect subsidies emerging from streams and rivers and impact energy supply for avian insectivores. *Society for Freshwater Science Annual Meeting, May 23-27, online.*
- \*66. Kopp, D. A. and **D. C. Allen**. 2021. Scaling landscape pattern in river networks: the effects of spatial extent, grain size and thematic resolution. *NSF Macrosystems PI meeting, online.*
65. Gao, S., M. Chen, Z. Li, **D. C. Allen**, T. Neeson, and Y. Hong. 2021. Investigating the Capability of Distributed Hydrologic Modeling and Remote Sensing in Capturing the Spatiotemporal Dynamics of Small Intermittent Streams. *NSF Macrosystems PI meeting, online.*

## TEACHING AND MENTORING EXPERIENCE

---

### Courses Taught

*As Assistant Professor at the University of Oklahoma*

- 2016 – 21. Biol 4983, Senior Seminar. 3 credits. Fall or spring semester (5 times total). Topics: *Climate Change, Science Use and Misuse in Society*. 28 students.
2020. Biol 4970, Aquatic Insect Ecology. 3 credits. Spring intersession. 21 students.
2019. Biol 3403, Principles of Ecology, 3 credits (with lab section). Fall semester. 48 students.
2019. Biol 5471, Seminar in Ecology & Evolutionary Biology, 1 credit. 12 students.
2019. Biol 4970/5970, Stable Isotope Ecology, 3 credits. Spring semester. 7 students.
2019. Biol 4961/6970, Seminar in Biology, 1 credit. Spring semester. 43 students.
2018. Biol 4961, Seminar in Biology, 1 credit. Fall semester. 37 students.
2018. Biol 2913, Introduction to Quantitative Biology, 3 credits. Spring semester. 35 students.

*As Assistant Professor at Arizona State University*

2016. ABS 474, Stream and Riparian Ecology, 3 credits, Spring semester. 18 students.
2015. ABS 350, Biological Statistics, 3 credits, Fall semester. 30 students.

2014 – 2016. ABS 370, Ecology, 3 credits (lecture only), spring and fall semesters. 72 students.

### **Postdocs and Students Mentored**

#### *Postdoctoral Researchers:*

Dr. Stephen Cook, University of Oklahoma, 2020 – present.  
Dr. Mariana Perez Rocha, University of Oklahoma, 2019 – 2020.  
Dr. Daniel Nelson, University of Oklahoma, 2017 – 2020.

#### *Graduate Students, advisor:*

Megan Malish, PhD, Geography and Environmental Sustainability. 2020 – present. Co-advisor.  
Michelle Busch, PhD, Ecology and Evolutionary Biology. 2017 – present. Advisor.  
Darin Kopp, PhD, Ecology and Evolutionary Biology. 2016 – present. Advisor.  
Steven Bittner, PhD, Ecology and Evolutionary Biology. 2017 – 2020. Advisor.

#### *Graduate Students, advisory committee member:*

Zhifang Yang, PhD, Microbiology and Plant Biology, 2020 – present. Jizhong Zhou, Advisor.  
Sean Wineland, PhD, Geography and Environmental Sustainability, 2019 – present. Tom Neeson, Advisor.  
Matthew Weserbe, PhD, Ecology and Evolutionary Biology. 2018 – present. Larry Weider, Advisor.  
Addison Allen, MS, Biology. 2018 – present. Hayley Lanier, Advisor.  
Jonathan Lopez, PhD, Ecology and Evolutionary Biology. 2017 – present. Caryn Vaughn, Advisor.  
Zepei (Maggie) Tang, PhD, Environmental Engineering. 2016 – 2020. Robert Nairn, Advisor.

#### *Undergraduate Students:*

28 students mentored as Assistant Professor at the University of Oklahoma from 2016 – present.  
15 students mentored as Assistant Professor at Arizona State University from 2014 – 2016.

### **PROFESSIONAL DEVELOPMENT**

---

2019. **NEON Data Education Faculty Mentoring Network.** Fall semester. National Ecological Observatory Network.  
2017. **Isotope Ratio Mass Spectrometer and Elemental Analyzer Operator Course.** One week. Isomass Scientific, Ottawa, Canada.  
2017. **LGTBQ Ally 2.0 Training.** University of Oklahoma Gender and Equality Center.  
2016. **LGTBQ Ally Training.** University of Oklahoma Gender and Equality Center.  
2016. **Faculty Leadership Academy,** Fall semester. University of Oklahoma, Office for the Vice President of Research.  
2013. **Postdoctoral Course on Teaching in Science and Engineering** (8-weeks), University of Michigan, Center for Research on Learning and Teaching.

### **PROFESSIONAL SOCIETY MEMBERSHIPS**

---

British Ecological Society, Society for Freshwater Science, National Center for Faculty Development & Diversity

### **SERVICE**

---

*As Assistant Professor at the University of Oklahoma*

2021 – present Instructor, Coding Outreach and Data Education (CODE) Workshop, STEM Inclusion Council, University of Oklahoma

2018 – present Chair, Central US Chapter of the Society for Freshwater Science  
 2018 – present Graduate Scholarships Committee, Department of Biology, University of Oklahoma  
 2017 – present National Science Foundation, panelist and ad hoc reviewer  
 2016 – present Associate editor, *Functional Ecology*  
 2016 – present Graduate Studies Committee, Department of Biology, University of Oklahoma  
 2016 – present Aquatic Research Facility Committee, Department of Biology, University of Oklahoma  
 2015 – present Research collaboration and outreach with water monitoring citizen science groups: Friends of the Agua Fria National Monument, The Nature Conservancy, Blue River Foundation of Oklahoma.  
 2020 Co-chair, 2020 Virtual Great Plains Limnology Conference; co-organized and implemented this regional conference virtually, with Dr. William Mausbach, Grand River Dam Authority  
 2017 – 2019 General Seminar Committee, Department of Biology, University of Oklahoma  
 2014 – 2018 Associate editor, *Freshwater Science*  
 2017 Assistant Professor/Curator of Ichthyology Search Committee Member, Department of Biology

*As Assistant Professor at the Arizona State University*

2015 – 16 Academic Standards Committee member, College of Letters and Sciences  
 2014 – 15 Secretary, College of Letters and Sciences, Science and Mathematics Faculty  
 2014 – 15 Assistant Professor in Animal Ecology search committee member, College of Letters and Sciences, Science and Mathematics Faculty

**Ad hoc reviewer for:** American Midland Naturalist, BioScience, Clam Fisheries and Aquaculture, Climatic Change, Ecohydrology, Ecography, Ecological Applications, Ecological Monographs, Ecology Letters, Ecology and Evolution, Ecosystems, Environmental Management, Environmental Monitoring and Assessment, Freshwater Biology, Freshwater Science, Frontiers in Ecology and the Environment, Fundamental and Applied Limnology, Global Change Biology, Global Ecology and Biogeography, Hydrobiologia, Journal of Applied Ecology, Journal of Animal Ecology, Journal of Molluscan Studies, Journal of the North American Benthological Society, Journal of Thermal Biology, Journal of Urban Ecology, Malacologia, Oecologia, PLoS ONE, Restoration Ecology, Royal Society Open Science, Science Advances, Science of the Total Environment, Water Resources Research.