Sam C. Levin

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Education

Martin Luther University Halle-Wittenberg

PhD Biology 2018-Present

Martin Luther University Halle-Wittenberg

MSc Biology 2016-2017

Wake Forest University

BA Biology 2008-2012

Work Experience

Martin Luther University Halle-Wittenberg

Research Officer 2018-Present

Helmholtz-Zentrum für Umweltforschung

Student Research Assistant 2017

German Centre for Integrative Biodiversity

Student Research Assistant 2016 - 2018

University of Missouri-St. Louis

Field Research Technician 2015 - 2016

Washington University in St. Louis

Field Research Technician 2014 - 2015

Student Conservation Association

National Park Service Southeast EPMT Intern 2013 - 2014

Research Interests

Demography: what is the relative importance of life history, abiotic, and biotic factors in determining species success

Invasions: understanding how demography, phylogeny, and functional traits interact to determine who becomes invasive and who remains benign

Open Source Software: creating tools for researchers to efficiently analyze, publish, and share their data

Publications

Journal Articles

[*] *denotes mentee*

Levin SC, Crandall RM, Pokoski TC[*], Stein & Knight TM. Phylogenetic and functional novelty explain alien plant population responses to competition. *In review*

Sandel B, Weigelt P, Kreft H, Keppel G, van der Sande MT, **Levin SC**, Smith S, Craven DC & Knight TM (2019). Current climate, isolation, and history drive global patterns of tree phylogenetic endemism. Global Ecology and Biogeography. DOI: 10.1111/geb.13001

Compagnoni A, Bibian BJ, Ochocki BM, **Levin SC**, Zhu K & Miller TEX (2019). popler: an R package for extraction and synthesis of population time series from the long-term ecological research (LTER) network. Methods in Ecology and Evolution. DOI: 10.1111/2041-210X.13319

Levin SC, Crandall RM, Knight TM (2019) Population projection models for 14 alien plant species in the presence and absence of above-ground competition. Ecology. DOI: https://doi.org/10.1002/ecy.2681

Carl G, **Levin SC**, Kühn I. (2018) spind: an R Package to Account for Spatial Autocorrelation in the Analysis of Lattice Data. Biodiversity Data Journal. 6: e20760. DOI: https://doi.org/10.3897/BDJ.6.e20760

Workshops & Invited Talks

Levin SC. Invasive plants: research, control, and what you can do to help! Point Reyes National Park, May 2020.

Levin SC & Salguero-Gomez R. Effective, efficient, and safe data collection with UAVs. Oxford University, January 2020.

Salguero-Gomez R, Jones OR, *et al.* A gentle introduction to the COMADRE & COMPADRE databases for demographic analyses. British Ecological Society, Belfast, December 2019.

Presentations

[*] *denotes mentee;* [#] *denotes poster presentations, otherwise oral*

2018

Levin SC, RM Crandall, TC Pokoski, Stein C, Knight TM. Mechanisms underlying the differential success of alien plant species. Ecological Society of America – New Orleans, USA

2016

Levin SC, Stein C, Knight TM. Phylogenetic novelty alters the strength of biotic interactions for exotic plant species. NeoBiota 2016 – Vianden, Luxembourg

Levin SC, Stein C, Knight TM. Phylogenetic novelty alters the strength of biotic interactions for exotic plant species. iDiv Conference – Leipzig, Germany

2015

Poor E*,Thompson AH*, **Levin SC**, Knight TM. Novel functional traits aid the success of the invasive biennial Carduus nutans. Washington University in St. Louis Undergraduate Research Symposium – St. Louis, MO #

Workman M*, Thompson AH*, **Levin SC**, Knight TM. Competitive release may increase the fitness of exotic plants in their novel range. Washington University in St. Louis Undergraduate Research Symposium – St. Louis, MO #

2014

Patterson A*, Galluppi CG, **Levin SC**, Maynard EE, Knight TM. How plant species become common: examining the success strategies of native and invasive plants. Washington University in St. Louis Undergraduate Research Symposium – St. Louis, MO #

Van Horn T*, Galluppi CG, **Levin SC**, Knight TM. Examining the enemy release hypothesis in Ozark woody species. Washington University in St. Louis Undergraduate Research Symposium – St. Louis, MO #

Software

Maintainer (current) and developer (> v2.0.0) of *spind*. CRAN and Github

Maintainer and developer of *ipmr*. Github

Maintainer and developer of the *Padrino IPM Database* and *Rpadrino*. Project page

Contributed to development of popler, popdemo, Rcompadre, and Rage.

Languages

Fluent in English and R, proficient with Stan, Git, and C++, and familiar with Python and German.

Certifications

United States FAA Part 107 UAV Pilot License

United States NPS S212 A Faller

Mentoring

Tyler Pokoski	University of Iowa 2017
Tom Collins	Missouri S&T 2017
Amy Patterson	Washington University in St. Louis 2015
Amibeth Thompson	Illinois College 2014
Sami Hunkler	University of California, Berkeley 2017
Thomas Van Horn	Washington University in St. Louis 2018
Sarah Link	Eureka High School 2015

Brenda Alvarado	Francis Howell North 2015
Matilda Workman	Kirkwood High School 2017
Elizabeth Poor	Clayton High School 2017

Service

Reviewer for BMC Ecology, Annals of Botany, and Plant Ecology

Referees

Dr. Tiffany Knight

Martin Luther University, Helmholtz-Zentrum fuer Umweltforschung, German Centre for Integrative Biodiversity

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Dr. Roberto Salguero-Gomez

Oxford University Department of Zoology

rob.salguero@zoo.ox.ac.uk