

Sara L. Jackrel
Ecology, Behavior, and Evolution
University of California, San Diego
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EMPLOYMENT

University of California, San Diego La Jolla, CA
Assistant Professor 2020 - Present
Section in Ecology, Behavior and Evolution, Division of Biological Sciences

University of Michigan Ann Arbor, MI
Post-doctoral Fellow, Dow Sustainability Fellow, 2016 - 2019
Advisor: Vincent J. Denef, Co-Advisor: Bradley J. Cardinale.

EDUCATION

The University of Chicago Chicago, IL
PhD, Ecology and Evolution, Advisor: J. Timothy Wootton, 2010 - 2016
Dissertation: Drivers and consequences of intraspecific trait variation: ecology of a forest-stream community.

Organization for Tropical Studies, Costa Rica La Selva Biological Station
Neotropical Rivers Course 2011

The College of New Jersey Ewing, NJ
B.S. Biology, *Summa Cum Laude*, full-merit scholarship, 2006 - 2010
Faculty Award for Excellence in Biology, and Honors Program Outstanding Scholar Award.

School for Field Studies, Boston University Yungaburra, QLD Australia
Centre for Rainforest Studies Wet/Spring Semester 2009

PUBLICATIONS

K. Schmidt, **S.L. Jackrel**, D.E. Smith, G.J. Dick, and V.J. Denef. 2020. Genotype and host microbiome alter competitive interactions between *Microcystis aeruginosa* and *Chlorella sorokiniana*. *Harmful Algae*. 99: 101939.

Jackrel, S.L., J. Yang, K. Schmidt, and V.J. Denef. 2020. Host-specificity of microbiome assembly and its fitness effects in phytoplankton. *ISME Journal*. 1-15.

***Jackrel, S.L.**, K. Schmidt[#], B.J. Cardinale, and V.J. Denef. 2020. Microbiomes reduce their host's sensitivity to interspecific interactions. *mBio*. 11.1:e02657-19.

* **mBio Spotlight Article**

[#] Co-first author.

Jackrel, S.L., J.A. Gilbert, and J.T. Wootton. 2019. The origin, succession, and predicted metabolism of bacterial communities associated with leaf decomposition. *mBio*. 10.5:e01703-19.

Jackrel, S.L., J.D. White, J.T. Evans, K. Buffin, K. Hayden, O. Sarnelle, and V.J. Denef. 2019. Genome evolution and host microbiome shifts correspond with intraspecific niche divergence within harmful algal bloom-forming *Microcystis aeruginosa*. *Molecular Ecology*. 28.17:3994-4011.

***Jackrel, S.L.**, A. Narwani, B. Benthage, R.B. Levine, D.C. Hietala, P.E. Savage, T.H. Oakley, V.J. Denef and B.J. Cardinale. 2018. Ecological engineering helps maximize function in algal oil production. *Applied and Environmental Microbiology*. 84.15:e00953-18.

* **AEM Spotlight Article**

***Jackrel, S.L.** and T.C. Morton. 2018. Inducible phenotypic plasticity in plants regulates aquatic ecosystem functioning. *Oecologia*. 186.4:895-906.

* **Ehleringer Prize**

Sara L. Jackrel

*** Highlighted Student Research Article**

- Jackrel, S.L.**, S.M. Owens, J.A. Gilbert and C.A. Pfister. 2017. Identifying the plant associated microbiome across aquatic and terrestrial environments: The effects of primer type on taxa discovery. *Molecular Ecology Resources* 17:931-942.
- Jackrel, S.L.**, T.C. Morton and J.T. Wootton. 2016. Intraspecific leaf chemistry drives locally accelerated ecosystem function in aquatic and terrestrial communities. *Ecology* 97:2125-2135.
- Jackrel, S.L.** and J.T. Wootton. 2015. Diversity of riparian plants among and within species shapes river communities. *PLoS One* 10: e0142362.
- Jackrel, S.L.** and J.T. Wootton. 2015. Cascading effects of induced terrestrial plant defences on aquatic and terrestrial ecosystem function. *Proceedings of the Royal Society B* 1805: 20142522.
- Jackrel, S.L.** and J.T. Wootton. 2014. Local adaptation of stream communities to intraspecific variation in a terrestrial ecosystem subsidy. *Ecology* 95:37-43.
- Jackrel, S.L.** and H.K. Reinert. 2011. Behavioral responses of a dietary specialist, Queen Snakes (*Regina septemvittata*), to potential chemoattractants released by its prey. *Journal of Herpetology* 45:272-276.
- Heise-Pavlov, S.R., **S.L. Jackrel** and S. Meeks. 2011. Conservation of a rare arboreal mammal: habitat preferences of the Lumholtz's tree-kangaroo, *Dendrolagus lumholtzi*. *Australian Mammalogy* 33:5-12.
- Jackrel, S.L.** and R.S. Matlack. 2010. Influence of surface area, water level, and adjacent vegetation on bat use of artificial water sources. *American Midland Naturalist* 164:74-79.
- Klug, P.E., **S.L. Jackrel** and K.A. With. 2010. Linking snake habitat use to nest predation risk in grassland birds: the dangers of shrub cover. *Oecologia* 162:803-813.

OTHER PUBLICATIONS

- Jackrel, S.L.** 2009. Habitat use by nesting grassland birds and their snake predators in the tallgrass prairie. *TCNJ Journal of Student Scholarship* XI: <www.tcnj.edu/~joss/>.

RESEARCH FUNDING

- 2020 - 2021:** DOE-JGI New Investigator Community Science Program: Bacterial drivers of the home-field advantage and the role of locally accelerated litter decomposition in the carbon cycle (PI). 500 Gbp of bacterial, archaeal, and fungal shotgun metagenomics.
- 2016 – 2018:** University of Michigan Dow Sustainability Postdoctoral Fellowship. \$15,000.
- 2014 – 2015:** Achievement Rewards for College Scientists (ARCS) Foundation. \$20,000.
- 2014:** American Society of Naturalists Student Research Grant. Aquatic microbe community change in response to intraspecific variation in a terrestrial ecosystem subsidy. \$2,000.
- 2014:** National Geographic Society Young Explorer’s Grant. Local adaptation in aquatic communities to intraspecific variation in a terrestrial ecosystem subsidy. \$5,000.
- 2013:** National Science Foundation Doctoral Dissertation Improvement Grant. Drivers and consequences of intraspecific trait variation: Ecology of a forest-stream community. \$20,180.
- 2012:** University of Chicago Hinds Fund. Drivers and consequences of intraspecific trait variation: Food web ecology of a forest-stream community. \$1,900.
- 2011:** University of Chicago Hinds Fund Evolution of stream macro-invertebrate and riparian floral communities. \$1,800.

NATIONAL HONORS

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|---|---------------|
| National Science Foundation Graduate Research Fellowship Program | 2010 |
| Barry M. Goldwater Scholarship | 2009 |
| Morris K. Udall Scholarship for the Environment | 2008 and 2009 |
| National College Leadership Council | 2007 – 2010 |
| Jane Goodall Institute Roots & Shoots Environmental Action Program | |

Sara L. Jackrel

INVITED PRESENTATIONS

Biology Department. Eastern Michigan University, March 2019.

School of Public and Environmental Affairs. Indiana University, February 2019.

Ecology, Behavior and Evolution. UC San Diego, January 2019.

Center for Population Biology. UC Davis, February 2018.

Environmental Science, Policy, & Management. UC Berkeley, February 2017.

John Harvard Distinguished Science Symposium. Harvard University, December 2015.

Current as of 1/10/2021