

Lora Richards

Lora Robinson

Biology Department, University of Nevada, Reno
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ACADEMIC QUALIFICATIONS

Ph.D. Biology

University of Utah, Salt Lake City UT 2006

B.S. Evolution and Ecology

University of California, Davis, CA 2000

PROFESSIONAL APPOINTMENTS

Assistant Professor

starting July 2018

Biology Department, University of Nevada, Reno

Research Assistant Professor

2013 – 2018

Biology Department, University of Nevada, Reno

Postdoctoral Fellow

2009 – 2013

Biology Department, University of Nevada, Reno

NSF International Postdoctoral Fellow

2006 – 2008

Macquarie University, Sydney Australia

PUBLICATIONS

Jahner JP, Forister ML, Smilanich AM, Parchman TL, Wilson JS, Tepe EJ, **Richards LA**, Quijano-Abril MA, Glassmire AE, Dyer LA. 2017. Host conservatism, geography, and elevation in the evolution of a Neotropical moth radiation. *Evolution* 71: 2885-2900

Dell JE, **Richards LA**, O'Brien JJ, Loudermilk EL, Hudak AT, Pokswinski SM, Bright BC, Hiers JK, Williams BW, Dyer LA. 2017. Overstory-derived surface fuels mediate plant species diversity in frequently burned longleaf pine forests. *Ecosphere* 8(10):e01964.

Dell JE, O'Brien JJ, Doan L, **Richards LA**, Dyer LA. 2017. An arthropod survival strategy in a frequently burned forest. *Ecology*. doi:10.1002/ecy.1939

Massad TJ, de Moraes MM, Philbin C, Oliveira Jr C, Torrejon GC, Yamaguchi LF, Jeffrey CS, LA Dyer, **Richards LA**, Kato MJ. 2017. Similarity in volatile communities leads to increased herbivory and greater tropical forest diversity. *Ecology* 98: 1750-1756.

Richards LA, Glassmire AE, Ochsenrider KM, Dodson CD, Jeffrey CS, Dyer LA. 2016. Phytochemical diversity and synergistic effects on herbivores *Phytochemistry Reviews* 15: 1153–1166.

Glassmire AE, Jeffrey CS et al 2016. Intraspecific phytochemical variation shapes community and population structure for specialist caterpillars *New Phytologist* 212: 208 – 219.

Richards LA, Dyer LA, Forister ML, Smilanich AM, Dodson CD, Leonard MD, Jeffrey CS. 2015. Phytochemical diversity drives plant-insect community diversity. *Proceedings of the National Academy of Sciences USA* 112:10973-10978.

- Dyer LA, Parchman TL, Jeffrey CS, **Richards LA**. 2014. New dimensions of tropical diversity: an inordinate fondness for insect molecules, taxa, and trophic interactions. *Current Opinion in Insect Science* 2:1-6.
- Turcotte MM, Thomsen CJM, Broadhead GT, Fine PVA, Godfrey GM, Lamarre GPA, Meyer ST, **Richards LA**, Johnson MJT 2014. Percentage leaf herbivory across vascular plant species. *Ecology* 95:788
- Jeffrey CS, Leonard MD, Glassmire AE, Dodson CD, **Richards LA**, Kato MJ and LA Dyer. 2014. Antiherbivore Prenylated Benzoic Acid Derivatives from *Piper kelleyi*. *Journal of Natural Products* 77: 148-153.
- Dyer LA, **Richards LA**, Short S, Dodson CD. 2013. Synergistic and interacting effects of CO₂ and temperature on tritrophic interactions *PLOS One* 8: e62528.
- Richards LA**, Lampert EC, Bowers MD, Dodson CD, Smilanich AM, Dyer LA. 2012. Synergistic effects of iridoid glycosides on the specialist buckeye caterpillars. *Journal of Chemical Ecology* 38:1276 – 1284
- Onoda Y, **Richards LA**, Westoby M. 2012. The importance of leaf cuticle for carbon economy and mechanical strength. *New Phytologist* 196:441-447.
- Richards LA**, Coley PD. 2012. Domatia morphology and mite occupancy of *Psychotria horizontalis* (Rubiaceae) across the Isthmus of Panama. *Arthropod – Plant Interactions* 6:129-136
- Onoda Y, Westoby M, Adler PB, Choong AMF, Clissold FJ, Cornelissen JHC, Díaz S, Dominy NJ, Elgart A, Enrico L, Fine PVA, Howard JJ, Jalili A, Kitajima K, Kurokawa H, McArthur C, Lucas PW, Markesteijn L, Pérez-Harguindeguy N, Poorter L, **Richards LA**, Santiago LS, Sosinski EE, Van Bael SA, Warton DI, Wright IJ, Wright JS and Yamashita N. 2011. Global patterns of leaf mechanical properties. *Ecology Letters* 14:1-12.
- Richards LA**, Dyer LA, Smilanich AM, Dodson CD. 2010. Synergistic effects of amides from two *Piper* species on generalist and specialist herbivores. *Journal of Chemical Ecology* 36:1105-1113.
- Richards LA**, Coley PD. 2008. Combined effects of host plant quality and predation on a Tropical Lepidopteran: A comparison between tropical treefall gaps and the understory. *Biotropica* 40: 736-741.
- Richards LA**, Coley PD. 2007. Seasonal and habitat differences affect the impact of food and predation on herbivores: a comparison between gaps and understory of a tropical forest. *Oikos* 116: 31-40.
- Richards LA**, Windsor D. 2007. Seasonal variation of arthropods in gaps and understorey of a lowland moist forest in Panama. *Journal of Tropical Ecology* 23: 169-176.

GRANTS AND FELLOWSHIPS

Awarded

- | | |
|---|-----------|
| NSF- IOS, Integrative Ecological Physiology - \$646,787 | 2015-2019 |
| “Differential adaptation to plant toxins: the role of chemically -mediated selection in reproductive isolation between mammalian herbivores.” | |
| PI: M Matocq; coPIs: LA Richards, CS Jeffrey, J Hayes | |
| NSF- DEB, Dimensions of Biodiversity - \$1,502,447 | 2014-2019 |
| “Collaborative Research: Dimensions US-Biota Sao Paulo: Chemically mediated multi-trophic interaction diversity across tropical gradients” | |

PI: LA Dyer; coPIs: LA Richards, T Parchman, CS Jeffrey, AM Smilanich
 Earthwatch Institute - \$600,000 2016-2021
 “Climate change and caterpillars in diverse ecosystems”
 PI: LA Dyer; coPIs: LA Richards, TL Parchman, CS Jeffrey, AM Smilanich
 NSF International Postdoctoral Fellowship - \$238,232 2006-2008
 “Interactions between plants, herbivores and natural enemies along a
 latitudinal gradient of Australian rainforests”
 PI: LA Richards
 NSF K-12 Fellowship (Water, the Environment, Science and Teaching) 2004-2005
 A. Herbert and Marian W. Gold Scholarship - \$2,000/yr 2003-2005
 Utah Biology Travel Awards - \$500, \$340, \$800 2001, 04, 05
 Grants-in-Aid of Research, Sigma Xi, The Scientific Research Society \$1000/yr 2002, 2003
 Short-term Fellowship, Smithsonian Tropical Research Institute \$4,000 2001

Other grant contributions

Dept. of Defense, SERDP - \$756,954 2012-2017
 “Patterns and Processes: Monitoring and Understanding Plant
 Diversity in Frequently Burned Longleaf Pine Landscapes”
 PIs: LADyer and JJ O’Brien
 NSF-DEB, Population & Community Ecology Program – \$382,045 2012-2015
 “Collaborative research: Phylogenetic and phytochemical cascades
 and the evolution of tropical diversity”
 PI: AM Smilanich; coPIs: ML Forister, CS Jeffrey, LA Dyer

TEACHING EXPERIENCE

University of Nevada, Reno

Instructor - Introduction to Organic Chemistry (CHEM220A, 220L) 2014

University of Utah, Department of Biology

Teaching Assistant - Evolution and Diversity of Life (Lecture) 2001, 2004- 2006

Teaching Assistant – Mammology 2005

Teaching Assistant - Evolution and Diversity of Life (Lab) 2002, 2004

Organize and teach lab exercises, write lab practicum

Teaching Assistant - Ecology lab 2003

Lab lectures, field trips, and supervised independent student projects

Mentoring

Graduate Committee member for: Jane Dell (EECB, Ph.D.), Ericka Kay (EECB, Ph.D.), Andrea Glassmire (EECB, Ph.D.), Nadya Muchoney (EECB, Ph.D.), Danielle Salcido (EECB, Ph.D.), Tara Langus (Biology, MS), Kaitlin Ochsenrider (Chemistry, Ph.D.), Celso Oliveira Jr (Chemistry, Ph.D.), Arjun Acharya (Chemistry, Ph.D.)

Co-advised 13 undergraduate students from University of Nevada, including participating in the McNair and Upward bound programs and a program that provides research experience for students from historically African American universities.

PRESENTATIONS

Invited Speaker

University of Cincinnati, Department of Biological Sciences	2017
University of Georgia, Atlanta; Plant Biology Dept.	2017
University of Leiden, Netherlands; Metabolomics Workshop	2014

Conference oral presentations

Ecological Society Meeting – Organized oral session	2016, 2017
International Chemical Ecology Meeting	2016
Ecological Society of America Meeting	2004, 2005
Association of Tropical Biology Meeting	2005
Entomological Society of America Meeting	2004

Conference Posters presentations

Symposium of insect-plant interactions, Tours France	2017
Plant-Herbivore Interactions: Gordon Research Conference	2007, 2013, 2017
Phytochemical Society of North America Meeting	2015
Bioorganic Chemistry short course by the São Paulo School of Advanced Science, Araraquara, Brazil	2013

SYNERGISTIC ACTIVITIES

K-12 outreach:

Co-advised three teachers through RET program

CoPI on grants to Earthwatch Institute which incorporates citizen scientists in data collection and field work. The most of the Earthwatch teams are comprised of K-12 teachers or high schools students.

Peer Review services – Acta Oecologia, AIMS Environmental Science, Annals of ESA, Biotropica, Ecography, Ecology, Ecology Letters, Ecological Entomology, Ecological Monographs, Ecosphere, Functional Ecology, International Journal of Tropical Biology, Journal of Chemical Ecology, Journal of Ecology, Journal of Environmental Entomology, Journal of Insect Physiology, Plant-Arthropod Interactions, Oecologia, and Scientific Reports