

Curriculum Vitae  
**Lora A. Richards**

Lora A. Robinson  
Biology Department  
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EDUCATION

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<i>University of Utah, Salt Lake City UT</i> Ph.D. in Biology, Advisor: Phyllis Coley	2006
<i>University of California, Davis, CA</i> B.S. in Evolution and Ecology	2000

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PROFESSIONAL APPOINTMENTS

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Assistant Research Faculty, Biology Department, University of Nevada, Reno	2013-present
Postdoctoral Fellow at University of Nevada, Reno Advisors: Lee Dyer, Chris Jeffrey	2009 – 2013
NSF International Postdoctoral Fellow, Macquarie University, Sydney Australia Advisor: Mark Westoby	2006-2008

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PUBLICATIONS

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- 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 (35) 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. 2014. Percentage leaf herbivory across vascular plant species. *Ecology* 95(3):788 <http://dx.doi.org/10.1890/13-1741.1>
- 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(1): 148-153.
- Dyer LA, **Richards LA**, Short S, Dodson CD. 2013. Synergistic and interacting effects of CO<sub>2</sub> and temperature on tritrophic interactions. *PLoS One PLOS One* 8(4): e62528.
- Richards LA**, Lampert EC, Bowers MD, Dodson CD, Smilanich AM, Dyer LA. 2012. Synergistic effects of iridoid glycosides on the specialist buckeye caterpillars. *J Chem Ecol* 38:1276 - 1284
- Onoda Y, **Richards LA**, Westoby M. 2012. The importance of leaf cuticle for carbon economy and mechanical strength. *New Phytol* 196(2):441-447.
- Richards LA**, Coley PD. 2012. Domatia morphology and mite occupancy of *Psychotria horizontalis* (Rubiaceae) across the Isthmus of Panama. *Arthropod – Plant Inte* 6:129-136
- Onoda Y, Westoby M et al. 2011. Global patterns of leaf mechanical properties. *Ecol Lett* 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. *J Chem Ecol* 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(6): 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.

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Richards LA, Windsor D. 2007. Seasonal variation of arthropods in gaps and understorey of a lowland moist forest in Panama. *J Trop Ecol* 23: 169-176.

#### Other publications

Richards LA and PrometheusWiki contributors. 2011. Determining herbivory rate, PrometheusWiki, [http://www.publish.csiro.au/prometheuswiki/tiki-pagehistory.php?page=Determining herbivory rate&preview=7](http://www.publish.csiro.au/prometheuswiki/tiki-pagehistory.php?page=Determining+herbivory+rate&preview=7)

#### *To be submitted within six months*

Glassmire AE, Jeffrey CS et al 2015. Caterpillars on acid: intraspecific phytochemical variation drives population and community structure for specialist caterpillars *submitted to Ecology*

Richards LA, Dyer LA, Dodson CD, Jeffrey CS. Network analysis of <sup>1</sup>H-NMR to identify compounds from complex mixtures. *In prep for Analytical Chemistry*

Richards LA, Glassmire AE, McDermott KM, Jeffrey CS, Dyer LA. Synergistic effects of plant defenses. *In prep for Phytochemistry Reviews*

Jahner JP, Tepe EJ, Richards LA, Forister ML, Dyer LA, Smilanich AM, Dodson CD, Jeffrey CS. Phylogenetic signal and the evolution of secondary chemistry in *Radula* (Piperaceae): persistent trait correlations despite rampant trait lability. *In prep for Ecol Lett*

Jahner JP, Forister ML, Smilanich AM, Parchman TL, Wilson JS, Tepe EJ, Richards LA, Quijano-Abril MA, Jeffrey CS, Glassmire AE, Dyer LA. Host conservatism, geography, and elevation in the evolution of a Neotropical moth radiation. *In prep for Molecular Ecology*

Matocq, MD, Richards, LA, McDermott KM, Jeffrey CS. Fecal evidence of diet specialization in a Woodrat hybrid zone of California

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#### GRANTS AND FELLOWSHIPS

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##### Awarded

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| NSF, Division of Integrative Organismal Systems, Integrative Ecological Physiology - \$646,787<br>“Differential adaptation to plant toxins: the role of chemically-mediated selection in reproductive isolation between mammalian herbivores.”<br>PI: Marjorie Matocq; coPIs: Lora Robinson, Chris Jeffrey, Jack Hayes       | 2015-2019        |
| NSF, Division of Environmental Biology, Dimensions of Biodiversity - \$1,502,447<br>“Collaborative Research: Dimensions US-Biota Sao Paulo: Chemically mediated multi-trophic interaction diversity across tropical gradients”<br>PI: Lee Dyer; coPIs: Lora Robinson, Thomas Parchman, Christopher Jeffrey, Angela Smilanich | 2014-2019        |
| NSF International Postdoctoral Fellowship - \$238,232<br>“Interactions between plants, herbivores and natural enemies along a latitudinal gradient of Australian rainforests”<br>PI: Lora Richards   | 2006 – 2008      |
| 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, 2004, 2005 |
| 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             |

##### In Revision

- NSF, Division of Chemistry, Chemistry of Life Processes – \$689,446  
“Understanding Phytochemical Diversity and its Role in the Synergistic Biological Activities of Natural Products”  
PI: Chris Jeffrey coPIs: Lora Robinson, Angela Smilanich, Lee Dyer

NSF, Division of Environmental Biology, Population & Community Ecology Program –  
“Understanding patterns in phytochemical diversity and herbivore communities in species rich tropical  
genera”

PI: Lora Robinson; coPIs: Christopher Jeffrey, Lee Dyer

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#### TEACHING EXPERIENCE

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*University of Nevada, Reno*

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

*University of Utah,*

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

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

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#### SERVICE

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Graduate Committee member for: Kaitlin McDermott (Chemistry, Ph.D.), Jane Dell (Biology, Ph.D.), Celso Oliveira Jr (Chemistry, Ph.D.), Tara Langus (Biology, MS), Gift Poopat (Biology,MS) Current

Peer Review service – Functional Ecology (3), Biotropica (4), Ecology (3), Plant-Arthropod Interactions (1), International Journal of Tropical Biology (1), Oecologia (2), Ecosphere (1), AIMS Environmental Science (1), Acta Oecologia (1), Journal of Environmental Entomology (1), Ecological Entomology (1) Ecography(1). 2008 – current

University of Utah Graduate Travel Award Committee Biology 2005 – 2006

Graduate Student Representative on the College of Science Retention, Promotion and Tenure Committee 2004 – 2005

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#### INVITED SPEAKER

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Metabolomics Workshop – University of Leiden, Netherlands 2014  
\*The longest running metabolomics workshops

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#### PRESENTATIONS

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Phytochemical Society of North America – Poster Presentation 2015

Bioorganic Chemistry short course by the São Paulo School of Advanced Science, Araraquara, Brazil – Poster Presentation 2013

Plant-Herbivore Interactions: Gordon Research Conference – Poster presentation 2007, 2013

Ecological Society of America Meeting – Oral session 2004, 2005, 2014

Association of Tropical Biology Meetings, Uberlandia, Brazil – Oral Session 2005

Entomological Society of America Meeting, Salt Lake City – Oral Session 2004

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#### SYNERGISTIC ACTIVITIES

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K-12 outreach in Reno: Veteran’s Elementary School, Career day speaker and STEM night; Reno High School Environmental Sciences Honors class, taught field techniques, data collection, management and insect identifications 2009 – present

Co-advised three teachers through RET program 2011 – 2012

Mentored a student through a UNR based program to provide research experience for students from historically African American universities 2010

Co-advised ten undergraduate students from University of Nevada 2009 – present

Assist with Earthwatch teams 2009 – present

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