

Dr. Pat Lu-Irving
Ecology and Evolutionary Biology
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Professional preparation

- 2015 – **University of Arizona**, postdoctoral research associate
PI: Dr. K.M. Dlugosch
- 2007 – 2013 **University of Washington, Ph.D.**, Biology
Advisor: Dr. R.G. Olmstead
- 2001 – 2005 **University of Sydney, B.Sc. (Hons.)**, Biology
Advisor: Dr. M.J. Henwood

Other appointments

- 2014 – 2015 Research associate, University of Washington Herbarium
- 2013 – 2015 Museum specialist (illustrator), University of Washington Herbarium
- 2013 – 2014 Postdoctoral lecturer in Biology, The University of Washington
- 2005 – 2007 Research assistant, Rutgers University

Publications

- O’Leary N, **Lu-Irving P**, Moroni P, Siedo S. 2016. Taxonomic revision of *Aloysia* (Verbenaceae, Lantaneae) in South America. *Annals of the Missouri Botanical Garden* **101**: 568-609.
- Lu-Irving P**, O’Leary N, O’Brien A, Olmstead RG. 2014. Resolving the genera *Aloysia* and *Acantholippia* within tribe Lantaneae (Verbenaceae), using chloroplast and nuclear sequences. *Systematic Botany* **34**: 644-655.
- Lu-Irving P**, Olmstead RG. 2013. Investigating the evolution of Lantaneae (Verbenaceae) using multiple loci. *Botanical Journal of the Linnean Society* **171**: 103-119.
- O’Leary N, Calviño CI, Martinez S, **Lu-Irving P**, Olmstead RG, Múlgura ME. 2012. Evolution of morphological traits in Verbenaceae. *American Journal of Botany* **99**: 1778-1792.
- Wang Y, Boyd E, Crane S, **Lu-Irving P**, Krabbenhoft D, King S, Dighton J, Geesey G, Barkay T. 2011. Environmental conditions constrain the distribution and diversity of archaeal *merA* in Yellowstone National Park, Wyoming, USA. *Microbial Ecology* **62**: 739-752.

Marx HE, O'Leary N, Yuan Y-W, **Lu-Irving P**, Tank DC, Múlgura ME, Olmstead RG. 2010. A molecular phylogeny and classification of Verbenaceae. *American Journal of Botany* **97**: 1647-1663.

Henwood MJ, **Lu-Irving P**, Perkins AJ. 2010. Can molecular systematics provide insights into aspects of the reproductive biology of *Trachymene* Rudge (Araliaceae)? *Plant Diversity and Evolution* **128**: 85-110.

Wang Y, Freedman Z, **Lu-Irving P**, Kaletsky R, Barkay T. 2009. An initial characterization of the mercury resistance (*mer*) system of the thermophilic bacterium *Thermus thermophilus* HB27. *FEMS Microbiology Ecology* **67**: 118-129.

In preparation (manuscripts available on request):

Lu-Irving P, Marx HE, Dlugosch KM. Leveraging species invasions to improve understanding of morphological trait evolution.

Lu-Irving P, Salimena FR, Silva TRS, Viccini LF, Bitencourt C, Olmstead RG. Phylogeny, fruit evolution, and diversification rates in *Lantana* and *Lippia*.

Presentations

- 2016 Evolution Meetings; Austin, TX, USA
- 2015 University of Arizona; Tucson, AZ, USA (informal seminar)
- 2015 Botany Conference; Edmonton, AB, Canada
- 2012 Botany Conference; Columbus, OH, USA (George R. Cooley award session)
- 2011 International Botanical Congress; Melbourne, VIC, Australia
- 2010 Evolution Meetings; Portland, OR, USA
- 2009 Botany Conference; Snowbird, UT, USA
- 2008 Botany Conference; Vancouver, BC, Canada
- 2005 Apiales V, the Fifth International Apiales Symposium; Vienna, Austria

Awards

- 2012 University of Washington: Melinda Denton Writing Fellowship
- 2011 NSF/ASPT: International Botanical Congress Travel Award
- 2010 American Society of Plant Taxonomists: Graduate Research Award
- 2009 Society of Systematic Biologists: Graduate Research Award
- 2009 Botanical Society of America: Graduate Research Award
- 2008 NSF: Graduate Research Fellowship honorable mention
- 2008 University of Washington: Giles Award for Botanical Field Research
- 2008 Virginia Native Plant Society: Delzie Demaree Travel Award
- 2007 NSF: Graduate Research Fellowship honorable mention
- 2007 University of Washington: Plant Systematics Graduate Fellowship

Field experience

South & Central America: Puerto Rico & Dominican Republic, Aug – Sep 2012; Brazil, Nov – Dec 2010; Peru, Mar 2009; **USA:** Florida, Aug 2012; Washington, Jul 2012; Idaho, Jun 2011; Oregon, Jul 2010; Montana, Jul 2008; Texas, Jun 2008; **Australia:** New South Wales, Sep 2004; Western Australia, Oct 2004; **Europe:** France & Spain, Jun – Jul 2015; **South Africa:** Nov 2008.

Service

Manuscript reviews

Reviewer for: Botanical Journal of the Linnean Society (1), Annals of Botany (1), BMC Evolutionary Biology (1), Phytotaxa (1), Willdenowia (1), Journal of Negative Results (1)

Outreach and volunteer activities

2014 – 2015	Instructor, Washington Native Plant Society Stewardship training
2012 – 2014	Population monitor, Washington Rare Plant Care and Conservation
2012 – 2013	Contributor, <i>Science Positive</i> (scipos.blogspot.com)
2008 – 2013	Collections volunteer, University of Washington Herbarium
2008 – 2013	Tour guide, University of Washington Botany Greenhouse

Professional memberships

American Society of Plant Taxonomists, Australasian Systematic Botany Society, Botanical Society of America, Society for the Study of Evolution

Teaching and mentoring

Plant Classification and Identification – University of Washington

INSTRUCTOR OF RECORD: Jun – Aug 2014 (31 students); Apr – Jun 2014 (140 students); Jun – Aug 2013 (26 students)

TEACHING ASSISTANT: Mar – Jun 2013; Jun – Aug 2012; Mar – Jun 2012; Jun – Aug 2011; Jun – Aug 2010; Mar – Jun 2010; Jun – Aug 2009; Jun – Aug 2008; Mar – Jun 2008

Introductory Biology – University of Washington

LAB INSTRUCTOR: Sep – Dec 2014 (37 students)

TEACHING ASSISTANT: Sep – Dec 2011; Jan – Mar 2008

Interdisciplinary Writing – University of Washington

INSTRUCTOR: Sep – Dec 2013 (20 students)

Mentoring – University of Arizona: trained 4 undergraduate students (2015 – 2016); University of Washington: trained 3 undergraduate students (2008 – 2013).