

## EMMA E. GOLDBERG

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### EDUCATION

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<i>University of California, San Diego</i>	2002 – 2007
Ph.D., Division of Biological Sciences advisor: Russ Lande	
<i>University of California, Berkeley</i>	2000 – 2002
Graduate courses in physics and biology	
<i>California Institute of Technology</i>	1995 – 1999
Bachelor of Science in physics, with honors	

### EMPLOYMENT

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<i>University of Minnesota</i>	2014 – present
Assistant Professor	
<i>University of Illinois at Chicago</i>	
Visiting research assistant professor	2010 – 2013
Postdoctoral research associate	2008 – 2010
sponsor/supervisor: Boris Igić	
<i>University of Maryland at College Park</i>	2007 – 2009
Postdoctoral research associate	
supervisor: Bill Fagan	
<i>United States Forest Service</i>	2002
Biological science technician, amphibian surveys	

### FUNDING AWARDS

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<i>Binational Science Foundation, 2013286</i>	2014 – 2016
“Interacting Effects of Polyploidy and Breeding Systems on Rates of Evolution” Itay Mayrose and I are P.I.s	
<i>National Science Foundation, DEB-1120279</i>	2011 – 2014
“Phylogenetic Models of Macroevolution” I was P.I.; Boris Igić is co-P.I.	
<i>National Science Foundation, DEB-0919089</i>	2009 – 2013
“The History and Consequences of Self-Incompatibility” Boris Igić was P.I.; I co-wrote the sections supporting my research	
<i>National Science Foundation, Graduate Research Fellowship</i>	2003 – 2006
Support for graduate work	
<i>Dept. of Education Fellowship</i>	2000 – 2001
Support for graduate work	

*Peer-reviewed articles*

- Sabath, N., E.E. Goldberg, L. Glick, M. Einhorn, T.-L. Ashman, R. Ming, S.P. Otto, J.C. Vamosi, and I. Mayrose. (in press). Dioecy does not consistently accelerate or slow lineage diversification across multiple genera of angiosperms. *New Phytologist*.
- Grossenbacher, D., R. Briscoe Runquist, E.E. Goldberg, and Y. Brandvain. (in press). No association between plant mating system and geographic range overlap. *American Journal of Botany*.
- Pannell, J.R., J.R. Auld, Y. Brandvain, M. Burd, J.W. Busch, P.-O. Cheptou, J. K. Conner, E.E. Goldberg, A.-G. Grant, D.L. Grossenbacher, S.M. Hovick, B. Igić, S. Kalisz, T. Petanidou, A.M. Randle, R. Rubio de Casas, C.A. Pauw, J.C. Vamosi, and A.A. Winn. 2015. The scope of Baker's law. *New Phytologist* 208:656–667.
- Smith, S.D. and E.E. Goldberg. 2015. Tempo and mode of flower color evolution. *American Journal of Botany* 102:1014–1025.
- Grossenbacher, D., R. Briscoe Runquist, E.E. Goldberg, and Y. Brandvain. 2015. Geographic range size is predicted by plant mating system. *Ecology Letters* 18:706–713.
- Huang, D., E.E. Goldberg, and K. Roy. 2015. Fossils, phylogenies, and the challenge of preserving evolutionary history in the face of anthropogenic extinctions. *Proceedings of the National Academy of Sciences USA* 112:4909–4914.
- Rabosky, D.L.\* and E.E. Goldberg\*. 2015. Model inadequacy and mistaken inferences of trait-dependent speciation. *Systematic Biology* 64:340–355.
- Servedio, M.R., Y. Brandvain, S. Dhole, C.L. Fitzpatrick, E.E. Goldberg, C.A. Stern, J. Van Cleve, D.J. Yeh. 2014. Not just a theory: The utility of mathematical models in evolutionary biology. *PLOS Biology* 12:e1002017.
- The Tree of Sex Consortium: T.-L. Ashman, D. Bachtrog, H. Blackmon, E.E. Goldberg, M.W. Hahn, M. Kirkpatrick, J. Kitano, J.E. Mank, I. Mayrose, R. Ming, S.P. Otto, C.L. Peichel, M.W. Pennell, N. Perrin, L. Ross, N. Valenzuela, J.C. Vamosi. 2014. Tree of sex: A database of sexual systems. *Scientific Data* 1:140015.
- Fagan, W.F., Y.E. Pearson, E.A. Larsen, H.J. Lynch, J.B. Turner, H. Staver, A.E. Noble, S. Bewick, and E.E. Goldberg. 2013. Phylogenetic prediction of the maximum per capita rate of population growth. *Proceedings of the Royal Society B* 280:20130523.
- Goldberg, E.E. and B. Igić. 2012. Tempo and mode in plant breeding system evolution. *Evolution* 66:3701–3709.
- Goldberg, E.E., R. Lande, and T.D. Price. 2012. Population regulation and character displacement in a seasonal environment. *The American Naturalist* 179:693–705.
- Goldberg, E.E., L.T. Lancaster, and R.H. Ree. 2011. Phylogenetic inference of reciprocal effects between geographic range evolution and diversification. *Systematic Biology* 60:451–465.
- Anacker, B.L.\*, J.B. Whittall\*, E.E. Goldberg, and S.P. Harrison. 2011. Origins and consequences of serpentine endemism in the California flora. *Evolution* 65:365–376.
- Robertson, K.A., E.E. Goldberg, and B. Igić. 2011. Comparative evidence for the correlated evolution of polyploidy and self-compatibility in Solanaceae. *Evolution* 65:139–155.

- Goldberg, E.E., J.R. Kohn, R. Lande, K.A. Robertson, S.A. Smith, and B. Igić. 2010. Species selection maintains self-incompatibility. *Science* 330: 493–495.
- Goldberg, E.E., H.J. Lynch, M.G. Neubert, and W.F. Fagan. 2010. Effects of branching spatial structure and life history on the asymptotic growth rate of a population. *Theoretical Ecology* 3: 137–152.
- Goldberg, E.E.\* and B. Igić\*. 2008. On phylogenetic tests of irreversible evolution. *Evolution* 62: 2727–2741.
- Goldberg, E.E. and R. Lande. 2007. Species' borders and dispersal barriers. *The American Naturalist* 170: 297–304.
- Roy, K.\* and E.E. Goldberg\*. 2007. Origination, extinction and dispersal: integrative models for understanding present-day diversity gradients. *The American Naturalist* 170: S71–S85.
- Goldberg, E.E. and R. Lande. 2006. Ecological and reproductive character displacement on an environmental gradient. *Evolution* 60: 1344–1357.
- Goldberg, E.E., K. Roy, R. Lande, and D. Jablonski. 2005. Diversity, endemism, and age distributions in macroevolutionary sources and sinks. *The American Naturalist* 165: 623–633.

### **Book chapter**

- Goldberg, E.E. 2013. Species selection. In J. Losos, ed. *The Princeton Guide to Evolution*. Princeton University Press.

\* *equal contributions*

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### **PEER REVIEWING**

Manuscript review for: *The American Naturalist*, *Biological Journal of the Linnean Society*, *Ecography*, *Ecological Modelling*, *Ecology and Evolution*, *Ecology Letters*, *Evolution*, *Evolutionary Biology*, *Global Ecology and Biogeography*, *International Journal of Plant Sciences*, *Journal of Biogeography*, *Journal of Evolutionary Biology*, *Journal of the Royal Society Interface*, *Methods in Ecology and Evolution*, *Molecular Biology and Evolution*, *Nature*, *Nature Communications*, *New Phytologist*, *PLoS Biology*, *PLoS ONE*, *Proceedings of the National Academy of Sciences USA*, *Proceedings of the Royal Society of London Series B*, *Systematic Biology*

Grant proposal review for the National Science Foundation: Evolutionary Genetics, Phylogenetic Systematics, Population & Community Ecology, Dimensions of Biodiversity

Associate editor for *Systematic Biology* 2015 – present

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### **TEACHING**

*Professor, Univ. Minnesota* spring 2015

Evolution.

*Instructor, Nature of Life* summer 2014

Spatial ecology module at the UMN freshman retreat.

*Graduate Teaching Assistant, UC San Diego* 2004 – 2005

Quantitative Ecology and Conservation. Biometry. Introductory Ecology.

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## INVITED PARTICIPATION

### Conference talks

*Society for the Study of Evolution / American Society of Naturalists / Society of Systematic Biologists*

- “Reuniting fossil and extant approaches to macroevolution” SSE symposium (Raleigh, North Carolina) 2014
- “Unified approaches for understanding patterns of character evolution and diversification” SSB symposium (Norman, Oklahoma) 2011
- “The future of historical biogeography: conceptual and methodological challenges” SSB symposium (Portland, Oregon) 2010

*European Society for Evolutionary Biology*

- “Predicting macroevolution from microevolution” symposium (Tübingen, Germany) 2011

*Okazaki Biology Conference*

- “The Biology of Extinction 2” (Okazaki, Japan) 2006

### Workshops

*National Evolutionary Synthesis Center*

- “Linking self-fertilization, dispersal and distribution traits of species: Is Baker’s law an exception to the rule?” 2013 – 2015
- “Integrating approaches to macroevolution: combining fossils and phylogenies” 2013
- “The tree of sex: A comprehensive synthesis of sex determination systems in eukaryotes” 2012 – 2014

*National Socio-Environmental Synthesis Center*

- “Macroevolution of ecosystem services” 2012

*Silwood Park, Imperial College, London*

- “Evolution, ecology and spatial biology” 2008

*National Center for Ecological Analysis and Synthesis*

- “Conservation priorities: can we have our biodiversity and ecosystem services too?” 2006

### Departmental seminars

Indiana Univ. (2015). Univ. Toronto (2015). Univ. Oxford (2013). Univ. Edinburgh (2013). Univ. North Carolina (2013). Univ. Idaho (2013). Univ. Minnesota (2012). Univ. California, San Diego (2012). Univ. Chicago (2012). Univ. Oregon (2012). Stanford University (2012). Univ. New Mexico (2011). Univ. Illinois at Chicago (2011). Univ. British Columbia (2009). New Mexico Institute of Mining and Technology (2009). Univ. Western Australia (2008). Univ. Virginia (2008).