

R Matthew Ogburn

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EDUCATION

PhD candidate in Ecology and Evolutionary Biology, Brown University, Providence, RI.
Dissertation topic: “Drivers and consequences of the evolution of succulence in the plant clade Portulacineae”. Projected completion summer 2012.
Dr. Erika Edwards, adviser.

M.Sc. in Ecology, Evolution, and Systematics, University of Missouri – St. Louis, St. Louis, MO. Thesis title: “Anatomical variation in Cactaceae sensu lato”. 2004-2007.
Dr. Peter Stevens, adviser.

B.A. in Cellular and Molecular Biology, Macalester College, St. Paul, MN.
Thesis title: “Upregulation of substance P receptors in murine macrophages in response to chronic inflammation”. 1990-1994. Dr. Lin Aanonsen, adviser.

Rotary exchange student, Karyo High School, Kudamatsu, Japan. 1989-1990.

PUBLICATIONS

R.M. Ogburn and E.J. Edwards. In preparation. Quantifying succulence: a rapid, physiologically meaningful metric of plant water storage capacity. For submission to Plant, Cell & Environment.

Edwards, E.J. and **R.M. Ogburn**. In review. Angiosperm responses to a low CO₂ world: CAM and C₄ photosynthesis as parallel evolutionary trajectories. International Journal of Plant Sciences.

Arakaki, M., P.-A. Christin, R. Nyffeler, A. Lendel, U. Eggli, **R.M. Ogburn**, E. Spriggs, M.J. Moore, and E.J. Edwards. 2011. Contemporaneous and recent radiation of the world’s major succulent plant lineages. PNAS 108: 8379-8384.

Christin, P.-A., T.L. Sage, E.J. Edwards, **R.M. Ogburn**, R. Koshraivesh, and R.F. Sage. 2010. Complex evolutionary transitions and the significance of C₃-C₄ intermediate forms of photosynthesis in Molluginaceae. Evolution 65: 643-660.

R.M. Ogburn and E.J. Edwards. 2010. The ecological water-use strategies of succulent plants. Advances in Botanical Research 55: 179-225.

R.M. Ogburn and E.J. Edwards. 2009. Anatomical variation in Cactaceae and relatives: trait lability and evolutionary innovation. American Journal of Botany 96: 391-408.

Nyffeler, R., U. Eggli, **R.M. Ogburn**, and E.J. Edwards. 2008. Variations on a theme: repeated evolution of unusual life forms in the Portulacineae (Caryophyllales). Haseltonia 14: 26-36.

FUNDING AND AWARDS

Ernst Mayr Award, Society of Systematic Biologists. Evolution conference, Norman, OK, 2011.

Sidney Frank Fellowship, Brown University Division of Biology and Medicine, 2008.

Distinguished Master’s thesis award, Midwestern Association of Graduate Schools, 2008.

NSF Missouri Science Teaching and Education Partnerships (MO-STEP) Fellowship, 2004-2005 and 2006-2007.

Undergraduate Research Fellowship, Pew Midstates Science Consortium, 1993.

O.T. Walters Award, Macalester College, 1994.

Rotary Exchange Scholarship, Wenatchee Valley Rotary Club, 1989-1990.

TEACHING

Plant ecophysiology, Brown University, Spring 2009 & Spring 2011, teaching assistant.

Diversity and adaptation of seed plants, Brown University, Fall 2008, teaching assistant.

Organization for Tropical Studies Tropical Plant Systematics, Costa Rica, Summer 2008, teaching assistant.

Introductory genetics, Brown University, Fall 2007, teaching assistant.

NSF GK-12 Missouri Science Teaching and Education Partnerships (MO-STEP) Fellow, 2004 - 2005 and 2006 - 2007.

Introductory biology, University of Missouri – St. Louis, Spring 2006, teaching assistant.

Ecology, University of Missouri – St. Louis, Fall 2005, teaching assistant.

FIELD EXPERIENCE

Plant collecting and ecophysiology field work:

Northern and Central Chile, Fall 2010

Western Argentina and Central Chile, Spring 2010

Western U.S., Summer 2009 and 2010

Western Cape, South Africa, Fall 2009

Southeastern U.S., Summer 2006

Other field work:

Yasuní National Park, Ecuador, Tiputini Biodiversity Station. Research assistant, Toucan seed dispersal project, October 2003 to February 2004. PI: Dr. Kimberly Holbrook.

Mt. St. Helens, WA. Research assistant, Plant primary succession project. May 2003 to September 2003. PI: Dr. John Bishop.

PROFESSIONAL DEVELOPMENT COURSES

MORPH Network Minicourse: “Investigating the evolution of plant form: Conceptual integration from the molecular to the ecological”, Boulder, CO, December 2007.

OTS Tropical Plant Systematics, Costa Rica, Summer 2006.

INVITED PRESENTATIONS AND PANELS

“Repeated evolution of three-dimensional leaf venation unlocks phenotypic space for the exploration of succulence”, Ernst Mayr systematics symposium, Evolution Meeting, Norman, OK, June 2011.

“What graduate students and faculty want from a graduate school”, panel member, Midwestern Association of Graduate Schools conference, St. Louis, MO, April 2008.

“Anatomical variation in Cactaceae *sensu lato*”, ASPB and BSA Joint Congress, Chicago, IL, July 2007; Harvard University Herbarium Seminar, February 2008.

“What’s in a name? Nomenclature, taxonomy, and systematics”, Henry Shaw Cactus Society, St. Louis, MO, February 2006.
