

## CURRICULUM VITAE

### 1. Erika Jeannine Edwards

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Dept of Ecology and Evolutionary Biology  
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### 2. Home address

Providence, RI 02906

### 3. Education

2000-2005 PhD in Ecology and Evolutionary Biology, Yale University, Dissertation title: *Pereskia (Cactaceae) and the origin of the cactus life form.*  
1993-1998 B.S. in Earth Systems, Stanford University

### 4. Professional appointments

2008 to present Curator, Brown University Herbarium  
2007 to present Assistant Professor of Biology, Brown University  
2005-2007 Post-doctoral research associate, Geography Department, University of California at Santa Barbara

### 5. Completed publications

#### *Peer-reviewed publications*

Ogburn, MO, and **EJ Edwards**. Anatomical variation in the closest relatives of cacti: trait lability and evolutionary innovation. *American Journal of Botany*, in press.

Cellinese, N, SA Smith, **EJ Edwards**, ST Kim, RC Haberle, and MJ Donoghue. Historical biogeography of the endemic Campanulaceae of Crete. *Journal of Biogeography*, in press.

Haberle RC, A Dang, T Lee, C Penafior, H Cortes-Burns, A Oestreich, L Raubeson, N Cellinese, **EJ Edwards**, ST Kim, WMM Eddie, and RK Jansen. Taxonomic and biogeographic implications of a phylogenetic analysis of the Campanulaceae based on three chloroplast genes. *Taxon*, in press.

Butterworth, CA and **EJ Edwards**. 2008. Investigating *Pereskia* and the earliest divergences in Cactaceae. Invited paper, *Haseltonia* 14: 46-53.

Nyffeler, R, U Eggli, MO Ogburn, and **EJ Edwards**. 2008. Variations on a theme: repeated evolution of succulent life forms in the Portulacineae. Invited paper, *Haseltonia* 14: 26-36.

**Edwards EJ** and CJ Still. 2008. Climate, phylogeny, and the ecological distribution of C4 grasses. *Ecology Letters* 11: 266-276.

**Edwards EJ**, CJ Still and MJ Donoghue. 2007. The relevance of phylogeny to studies of global climate change. *Trends in Ecology and Evolution* 22: 243-249.

**Edwards EJ**. 2006. The correlated evolution of stem and leaf hydraulic traits in *Pereskia* (Cactaceae). *New Phytologist* 172: 479-489.

**Edwards EJ** and MJ Donoghue. 2006. *Pereskia* and the origin of the cactus life form. *American Naturalist* 167: 777-793.

**Edwards EJ** and M Diaz. 2006. Ecological physiology of *Pereskia guamacho*, a cactus with leaves. *Plant Cell and Environment* 29: 247-256 (Cover Article).

**Edwards EJ**, R Nyffeler, and MJ Donoghue. 2005. Basal cactus phylogeny: implications of *Pereskia* paraphyly for the transition to the cactus life form. *American Journal of Botany* 92: 1177-1188.

Riedel SM, HE Epstein, DA Walker, DL Richardson, MP Calef, **EJ Edwards**, and A Moody. 2005. Spatial and temporal heterogeneity of vegetation properties among four tundra plant communities at Ivotuk, Alaska, USA. *Arctic, Antarctic, and Alpine Research* 37: 25-33.

Brodribb TJ, NM Holbrook, **EJ Edwards**, and MV Gutierrez. 2003. Relations between stomatal closure, leaf turgor and xylem vulnerability in eight tropical dry forest trees. *Plant Cell and Environment* 26: 443-450.

Walker DA, HE Epstein, JG Jia, A Balsar, CD Copass, **EJ Edwards**, WA Gould, J Hollingsworth, J Knudson, HA Maier, A Moody, and MK Reynolds. 2003. Phytomass, LAI and NDVI in northern Alaska: relationships to summer warmth, soil pH, plant functional types, and extrapolation to the circumpolar Arctic. *Journal of Geophysical Research* 108 (D2): 8169 doi:10.1029/2001JD000986.

Bell CD, **EJ Edwards**, ST Kim, and MJ Donoghue. 2001. Dipsacales phylogeny based on chloroplast DNA sequences. *Harvard Papers in Botany* 6: 481-499.

#### *Book Reviews*

**Edwards, EJ**. 2008. The Great Cacti: Ethnobotany and Biogeography, by David Yetman. *Quarterly Review of Biology* 83: 00-00.

### *Selected contributed abstracts*

- 2005 “How the cactus lost its leaves: studies of character evolution can reveal the origins of biological diversity” Diversitas Open Science Conference, Oaxaca, Mexico
- 2004 “Basal phylogenetic relationships in Cactaceae, and implications for early cactus evolution” Botanical Society of America, Snowbird UT
- 2004 “Water relations of *Pereskia guamacho*, a cactus with leaves” Botanical Society of America conference, Snowbird UT
- 2003 “What can *Pereskia* really tell us about early cactus evolution?” Botanical Society of America conference, Mobile AL
- 2000 “Climate, Vegetation, Soil, and Spectral Reflectance Patterns Across Zonal Vegetation Boundaries in Arctic Alaska” AGU Meetings, San Francisco, CA

### *Manuscripts submitted or in preparation:*

**Edwards, EJ**, L Sack, M Spork, A McKeown, and CJ Still. Leaf hydraulic and photosynthetic capacities are unlinked in a clade of C4 grasses. In prep., *Plant Cell and Environment*.

**Edwards, EJ** and CJ Still. Building better global distribution maps of C4 vegetation: a comparison of top-down and bottom-up approaches. In prep., *Oecologia*.

## **6. Research Grants**

### *Current grants*

- 2008-2009 NESCent Catalysis Meeting: Toward a New Synthesis of the Evolutionary History and Ecology of C4 Grasses. Funded by NSF NESCent Evolutionary Synthesis Center (Lead PI, with two co-PI).
- (pending) Collaborative Research: The Evolution of Leaf Form in *Viburnum* (Adoxaceae). NSF IB: Organism-Environment. Lead PI (with two co-PI). \$544,528.

## **7. Service**

### *To the Profession*

#### Invited Workshop Participant

- 2008 NCEAS Eco-phylogenetics Working Group
- 2002 Integration of Long Distance Transport Processes in Plants, Harvard Forest

#### Invited Symposium Speaker

- 2008 Systematics and Evolution of Cactaceae, IOS-SLCCS-Brazilian Botanical Congress, Natal, Brazil
- 2008 Harvard Plant Biology Initiative Annual Symposium
- 2007 Impact of Plant Phylogenies on Tropical Ecology and Evolutionary Studies, Association of Tropical Biology and Conservation conference, Morelia, Mexico
- 2007 Integration of Spatial and Ecological Data in Evolutionary Studies, Botanical Society of America conference, Chicago, IL
- 2005 Biology of Dryland Plants, Botanical Society of America conference, Austin, TX

#### Invited Seminar Speaker

2009 Dept Ecology and Evolutionary Biology, Western Washington University, Pullman, WA  
2009 Dept Ecology and Evolutionary Biology, SUNY at Stony Brook, NY  
2009 Dept Biology, St. Marys University, Halifax, Nova Scotia  
2008 Dept Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT  
2008 Dept Botany, University of Capetown, South Africa  
2006 Dept Ecology and Evolutionary Biology, Brown University, Providence RI  
2006 Dept Ecology and Evolutionary Biology, Brown University, Providence RI  
2006 Dept Botany, University of Hawaii, Honolulu HI  
2005 Noel Kempff Mercado Museum of Natural History, Santa Cruz, Bolivia, (in Spanish)  
2005 National Herbarium of Bolivia, La Paz, Bolivia (in Spanish)  
2004 Jardin Botanico Nacional, Santo Domingo, Dominican Republic (in Spanish)  
2002 Universidad Exerimental Francisco de Miranda, Coro, Venezuela (in Spanish)

Ad-hoc Reviewer for

National Science Foundation (IB: Organism-Environment Interactions)

*American Journal of Botany*

*Bradleya*

*Ecology Letters*

*Haseltonia*

*International Journal of Plant Sciences*

*Nature-Geosciences*

*New Phytologist*

*Plant Cell and Environment*

*Proceedings of the National Academy of Sciences*  
*Science*

*Tree Physiology*

**8. Awards and Media Coverage**

2008 NSF ADVANCE Career Development Award, Brown University, \$17,506.  
2006 John Spangler Nicholas Prize, Yale University, \$500.  
2005 Ph.D. Awarded with Distinction, Yale University  
2005 Maynard Moseley Award, Botanical Society of America  
2005 Vernon I. Cheadle Student Travel Grant, Botanical Society of America, \$500.  
2004 MORPH Graduate Student Travel Grant, \$300.  
2003 EEB Department Chair Award, Yale University, \$1500.  
2002 YIBS Center for Field Ecology Graduate Research Award, Yale University, \$2925.  
2002 Deland Award for Student Research, Harvard University, \$4250.  
2000-2005 National Science Foundation Graduate Research Fellowship

Curtis and Ackerly 2008. Introduction to a virtual special issue on ecological strategy axes in leaf and wood traits. *New Phytologist* 179: 901-903. (highlights **Edwards 2006**)

Mott, K. 2007. Virtual special issue on the role of xylem water transport in plant water balance, *Plant Cell and Environment* (highlights **Edwards** and Diaz 2006)

Balter, M. 2006. Some like it hot. *ScienceNOW Daily News* (highlights **Edwards** and Donoghue 2006)

**Edwards** and Donoghue 2006 ‘hidden jewel’ and ‘must read’ on Faculty of 1000 Biology, impact factor 6.0

## 9. Teaching

### *Courses*

Biology 0430: Diversity and Adaptation of Land Plants (sole instructor; offered every fall)

Biology 1500: Plant Ecology (sole instructor; offered every other spring)

### *Advising*

Advised graduate students: R. Matthew Ogburn, 2007- present

Advised undergraduate students: Cassidy Metcalf, 2007-2008; Elizabeth Spriggs, 2008 – present;

Thesis Reader: Adisorn Chang, 2008; Kaya Schmandt 2008; Emily Josephs 2008;