

Kasey E. Barton

CURRENT POSITION

Ph. D. candidate in Ecology and Evolutionary Biology, University of Colorado

RESEARCH INTERESTS

Evolutionary ecology, plant-animal interactions, chemical ecology, philosophy and history of science, plant population biology, plant ecology, insect biology, biostatistics

EDUCATION

University of Colorado at Boulder, Ecology and Evolutionary Biology, 2000-present

Thesis: "Seedling defense strategies: Effects of plant age, herbivory, and competition." Ph.D. Defense scheduled for December 2006

Organization for Tropical Studies, University of Costa Rica, Summer 2001

Introduction to Tropical Biology (OTS 99-1) participant

Stanford University, Palo Alto, CA, 1995-1999

B.S., Biological Sciences, with Honors

Thesis: "Niche partitioning and interference competition in two ant communities."

Hopkins Marine Station, Stanford University, Winter 1998

One of 20 students accepted to marine biology program.

PUBLICATIONS

Barton, K. E. (2006) Early ontogenetic patterns in chemical defense in *Plantago*: Genetic variation and trade-offs. In press, **American Journal of Botany**.

Barton, K. E. and M. D. Bowers (2006) Neighbor species differentially alter resistance phenotypes in *Plantago*. **Oecologia**, available at OnlineFirst.

Barton, K. E., N. J. Sanders, and D. M. Gordon (2002) The effects of proximity and colony age on interspecific interference competition between the desert ants *Pogonomyrmex barbatus* and *Aphaenogaster cockerelli*. **American Midland Naturalist** 148: 376-382.

Ackerly, D. D., C. A. Knight, S. B. Weiss, **K. Barton** and K. P. Starmer (2002) Leaf size, specific leaf area and microhabitat distribution of chaparral woody plants: contrasting patterns in species level and community level analyses. **Oecologia** 130: 449-457.

Sanders, N. J., **K. E. Barton**, and D. M. Gordon (2001) Long-term dynamics of the distribution of the invasive Argentine ant, *Linepithema humile*, and native ant taxa in northern California. **Oecologia** 127: 123-130.

MANUSCRIPTS IN PREPARATION

Barton, K. E. Phenotypic plasticity in seedling defense strategies: Induction and compensation. For submission to: **American Naturalist**

Barton, K.E. Seedling herbivory and competition: contrasting effects in the greenhouse versus common garden. For submission to: **Oikos**

Barton, K. E. Reproductive costs of seedling herbivory and competition in *Plantago major*. For submission to: **American Journal of Botany**

Barton, K. E. Spatial variation in seedling growth and mortality in *Pentaclethra maculosa*. For submission to: **Biotropica**

Barton, K. E. Distribution patterns of exotic *Plantago* in a Colorado State Natural Area.

Sultan, S. E., **K. Barton** and A. M. Wilczek. Trans-generational plasticity and ecological breadth: contrasting responses to parental moisture environment in congeneric plant species.

AWARDS and HONORS

- Graduate Fellowship, Dept. E. E. Biology, CU 2005
One of four recipients in department
- Graduate Student Research and Creative Work Awards, CU 2005
One of three recipients across all departments
- Graduate Fellowship, Dept. E. E. Biology, CU 2004
One of four recipients in department
- Edna Bailey Sussman Environmental Internship 2004
- Invitation to Gordon Conference on Plant-Animal Interactions 2004
- Excellence in Teaching Award, Dept. E. E. Biology, CU 2003
- Achievement Rewards for College Scientists Scholarship 2002, 2003, 2004
- Philanthropic Educational Opportunities Scholars Award 2002
- NSF Graduate Research Fellowship, Honorable Mention 2002
- Invitation to Gordon Conference on Plant-Animal Interactions 2001
- Firestone Medal for Undergraduate Research, Stanford University 1999

TOTAL AWARDS: 11

TOTAL AMOUNT: \$48,650

RESEARCH GRANTS RECEIVED

- EEB Graduate Research Grant, CU \$1000 2005
- Graduate Student Summer Research Award, CU \$1000 2004
One of two recipients across all departments
- EEB Graduate Research Grant, CU \$1300 2004

• Beverly Sears Graduate Student Grant, CU	\$1000	2004
• EEB Graduate Research Grant, CU	\$2100	2003
• EEB Graduate Research Grant, CU	\$2124	2002
• Organization for Tropical Studies, Pilot Grant	\$1172	2002
• Beverly Sears Graduate Student Grant, CU	\$500	2002
• Organization for Tropical Studies, Post-Course Grant	\$500	2002
• EEB Graduate Research Grant, CU	\$500	2001
• John W. Marr Ecology Fund	\$200	2001
• Walker Van Riper Grant, CU Museum	\$786	2001
• Undergraduate Research Opportunities, Stanford U.	\$2500	1998

TOTAL GRANTS: 13

TOTAL AMOUNT: \$14,682

TEACHING EXPERIENCE

• Non-majors General Biology	<i>Fall 2006</i>
• Insect Biology	<i>Spring 2006</i>
• Insect Biology	<i>Fall 2003</i>
• Plants and Society	<i>Fall 2003</i>
• Genetics and Development	<i>Fall 2002</i>
• Evolutionary Biology	<i>Spring 2002</i>
• Genetics	<i>Fall 2001</i>
• Majors General Biology I and II	<i>Fall 2000 / Spring 2001</i>

Invited Lectures at the University of Colorado:

Insect Biology:	“Anti-insect defenses of plants”	2006, 2005, 2003
	“Beneficial insects”	2006, 2005, 2003
General Biology:	“Prokaryotes: diversity and biology”	2006
Plants and Society:	“Beneficial insects and their associated plants”	2004, 2003
	“Spices: An evolutionary explanation for their use”	2003
	“Laboratory: Valerian root analyses	2003
Evolutionary Biology:	“Coevolution”	2002

ADDITIONAL PROFESSIONAL EXPERIENCE

• Research Intern, Boulder Open Space and Mountain Parks	<i>Summer 2004</i>
<i>Conduct surveys of exotic weeds in State Natural Areas.</i>	
• Graduate Assistant, University of Colorado Natural History Museum	2002 - 2005
<i>Assisted with curatorial tasks in the entomology collection.</i>	
• Research Assistant, Sultan Lab, Wesleyan University	1999 – 2000
<i>Led large greenhouse experiment to study plant growth patterns, mentored several undergraduate assistants, collected and analyzed data.</i>	
• Research Assistant, Ackerly Lab, Stanford University	1998-1999
<i>Conducted field and lab measurements of plant traits.</i>	

- Research Assistant, Gordon Lab, Stanford University 1996-1999
Provided animal care for several laboratory ant colonies; collected data.

PROFESSIONAL PRESENTATIONS

- Ecological Society of America Annual Conference 2006
*Talk: "Induction and compensation for seedling herbivory in *Plantago lanceolata*"*
- Ecology and Evolutionary Biology Dept., CU 2006
Invited Seminar: "Seedling defense strategies: Effects of plant age, herbivory, and competition"
- Biology Dept., Western State College, Gunnison, CO 2006
Invited Seminar: "Plant-Animal Interactions: Seedling defense strategies"
- Guild of Rocky Mountain Population Biologists (GRMPS) Annual Mtg. 2005
*Talk: "Short- and long-term induction in *Plantago* seedlings"*
- Ecology and Evolutionary Biology Annual Symposium, CU 2005
*Talk: "Genetic variation in seedling induction in *Plantago*"*
- Gordon Conference on Plant-Animal Interactions 2004
Poster: "Seedling secondary chemistry"
- Ecological Society of America Annual Conference 2003
*Poster: "Competition increases defensive chemistry in *Plantago*"*
- High Country Lepidopterists Society Annual Meeting 2002
Talk: "Biology of a tropical tree and its seed parasite, a sessiid moth"

SERVICE and OUTREACH

- Mentor undergraduate students: 5 (CU), 4 (Wesleyan) 1999 - 2005
- Volunteer, Intercambio de Comunidades 2004 - present
Tutor English as a Second Language to Latino immigrants in Boulder, CO.
- Volunteer, Teaching Evolution Symposium, Dept. EEB, CU 2005
- Volunteer Judge, Boulder Public School Science Fair 2004
- Volunteer, Boulder County BioBlitz 2004
Assisted with insect survey of Boulder Open Space for biodiversity estimates.
- Achievement Rewards for College Scientists Annual Meeting, CO 2003
Poster: "The ecology and evolution of seedling defense strategies"
- Coordinator, EEB Colloquium Series 2002-2003
Planned, scheduled, organized weekly colloquia with visiting scientists.
- Philanthropic Educational Opportunities, Invited Talks
 - Boulder Chapter: "Plant defense chemistry and its applications" 2002
 - Summit Chapter: "Plant defense chemistry and its applications" 2003
 - Colorado Annual Meeting: "Graduate school in biology" 2003
- Volunteer, CU Museum of Natural History 2002-2004
Represented entomology section for after-school science program for elementary-age girls.

PROFESSIONAL SOCIETIES

The Ecological Society of America, 2000-present
Sigma Xi, Full Membership, 2004-present
Botanical Society of America, 2005-present

REFERENCES

M. Deane Bowers

Ecology and Evolutionary Biology, University of Colorado
deane.bowers@colorado.edu

Yan Linhart

Ecology and Evolutionary Biology, University of Colorado
yan.linhart@colorado.edu

William Bowman

Ecology and Evolutionary Biology, University of Colorado
william.bowman@colorado.edu

Sonia Sultan

Biology, Wesleyan University
sesultan@wesleyan.edu

Teaching Reference:

César Nufio

Museum of Natural History, University of Colorado
cesar.nufio@colorado.edu