

CURRICULUM VITAE
EMILIE C. SNELL-ROOD

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EDUCATIONAL BACKGROUND

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|---|---|---------------------------|
| Indiana University Bloomington, IN | Biology 2007-present NIH-NRSA postdoctoral fellow | Mentor: Armin P. Moczek |
| University of Arizona Tucson, AZ | Ecology and Evol. Biology 2002-2007: MS, PhD | Mentor: Daniel R. Papaj |
| College of William and Mary Williamsburg, VA | Biology 1998-2002: BS with honors | Mentor: Daniel A. Cristol |

GRANTS

- Society for the Study of Evolution, International Travel Award, 2008
- Animal Behavior Society Student Research Award, 2005
- Center of Insect Science, Univ. Ariz., Student Research Award, 2005
- Center of Insect Science, Univ. Arizona, travel award, 2006
- Sigma Xi grant-in-aid of Research, 2000, 2005
- GPSC, University of Arizona, travel award, 2005
- Women in Science and Engineering, Univ. of Arizona, travel grant, 2005
- University of Arizona Foundation Grant in support of SIAC (see below) 2006
- Wilson Ornithological Society George Hall/Harold May award, 2000
- Association of Field Ornithologists, Alexander Bergstrom Award, 2000
- American Ornithologists Union Marcia Brady Tucker Travel Award, 2001 & 2003

FELLOWSHIPS

- NIH Ruth L. Kirschstein National Research Service Award (postdoctoral fellowship) 2008-2009
- PEO (Providing Educational Opportunities for Women) fellowship, 2006
- NSF predoctoral fellowship, 2003
- National Goldwater Scholar, 2000
- Monroe Scholar, College of William and Mary, 1998

AWARDS

- Botetourt Medal of Academic Excellence, Class of 2002, College of William and Mary
- Lucretia Hamilton Memorial Award, Dept. EEB, Univ. Arizona, 2006
- Best Student talk, Society for Integrative and Comparative Biology: Div. SEB 2007
- Chapman Award for Excellence in Insect Science, University of Arizona, 2007

PUBLICATIONS

In press

Snell-Rood, E. C., and D. R. Papaj. Patterns of phenotypic plasticity in common and rare environments: a study of host use and color learning in the cabbage white butterfly, *Pieris rapae*. In press, **American Naturalist**.

Snell-Rood, E. C., D. R. Papaj, and W. Gronenberg. Brain size: a global or induced cost of learning? In press, **Brain, Behavior and Evolution**.

In print:

Snell-Rood, E. C., and A. V. Badyaev. 2008. Ecological gradient of sexual selection: Elevation and song complexity in finches. **Oecologia** 157: 545-551.

Snell-Rood, E. C., and D. R. Papaj. 2006. Learning signals within sensory environments: does host cue learning in butterflies depend on background? **Animal Biology** 56: 173-192.

Snell-Rood, E. C., and D. A. Cristol. 2005. Prior residence, per se, increases social status in wintering flocks of White-throated Sparrows. **Ethology** 111:441-454.

Badyaev, A. V., and E. C. Snell-Rood. 2003. Rapid evolutionary divergence of environment-dependent sexual traits in speciation: a paradox? Pp. 315-319 in W. J. Bock and R. Schodde, eds. Proceedings of XXIII International Ornithological Congress. Beijing. **Acta Zoologica Sinica** 52 (Supplement). Beijing.

Snell-Rood, E. C., and D. A. Cristol. 2003. Avian communities of created and natural wetlands: bottomland forests in Virginia. **Condor** 105: 303-315.

Commentaries

Moczek, A. P., and E. C. Snell-Rood. The basis of bee-ing different: the role of gene silencing in plasticity. (commentary) **Evolution and Development** 10: 511-513.

Papaj, D. R., and E. C. Snell-Rood. 2007. Memory flies sooner from flies that learn faster (commentary). **PNAS** 104: 13539-13540.

Book Chapters

Papaj, D. R., E. C. Snell-Rood, and J. M. Davis. 2008. Learning. Pp 2154-2160 In S. E. Jørgensen and B. D. Fath (Eds), Behavioral Ecology. Vol [3] of Encyclopedia of Ecology, 5 vols. Oxford: Elsevier.

Snell-Rood, E. C., and A. P. Moczek. In press. Horns, hormones and host genes: the role of development in the evolution of beetle contests. In: Animal Contests. Ed. By: ICW Hardy and M Briffa. Cambridge University Press, UK.

Snell-Rood, E. C. Learning and development: Cost of learning. MS 148 In M Breed and J Moore. The Encyclopedia of Animal Behavior. Oxford: Elsevier.

In preparation:

Snell-Rood, E. C., G. Davidowitz, and D. R. Papaj. Variation in life history traits with learning ability and leaning experience.

Snell-Rood, E. C., and R. L. Young. Life history constrains the evolution of plasticity through shifts in developmental timing.

INVITED SCIENTIFIC PRESENTATIONS

Snell-Rood EC, A Cash, T Kijimoto, J Andrews, & AP Moczek. 2008. Genes, networks, and the evolution of phenotypic plasticity: first insights from genomic approaches in horned beetles. In Symposium 10.6: Evolution and development of integrated phenotypes. International Congress of Entomology, Durban, South Africa.

Snell-Rood EC, W Gronenberg, G Davidowitz, & DR Papaj. 2008. The butterfly bell curve: linking behavior, brains and life history in the study of host learning. In Symposium 6.9: The ecology, evolution and application of learning in insects. International Congress of Entomology, Durban, SA.

Snell-Rood, EC, DR Papaj, G Davidowitz, W Gronenberg, & AP Moczek. 2008. Juvenile hormone as a regulator of plasticity in adulthood: from butterflies to beetles. In Symposium 11.8: Juvenile hormone in adult physiology and behavior: the roads less traveled. Int. Congress of Entomology, Durban, SA.

Snell-Rood EC. 2007. Costs and tradeoffs in the evolution of plasticity: a case study using host learning in butterflies. Hexapodium, Center for Insect Science Symposium, ASU and UA.

CONTRIBUTED SCIENTIFIC PRESENTATIONS

Snell-Rood EC & RL Young. 2008. Evolution of plasticity: causes and consequences of developmental timing. Animal Behavior Society (talk), Snowbird, UT.

Snell-Rood EC, A Cash, T Kijimoto, J Andrews, & AP Moczek. 2008. Genes, networks, and the evolution of phenotypic plasticity: first insights from genomic approaches in horned beetles. Society for the Study of Evolution (talk), Minneapolis, MN.

Snell-Rood EC 2006-07. The use of novel resources: the role of development and plasticity. The Origin of Novel Features: IGERT Minisymposium (poster, 2006), Bloomington, IN; Society for Integrative and Comparative Biology (talk, Jan. 2007), Tempe, AZ.

Snell-Rood EC 2005-06. Developmental costs of behavioral plasticity in a butterfly. Entomological Society of America (talk, 2005), Ft. Lauderdale, FL; Society for the Study of Integrative and Comp. Biol (talk, 2006), Orlando, FL; Society for the Study of Evolution (talk, 2006), Stony Brook, NY.

Snell-Rood EC & DR Papaj. 2005. Learning signals within sensory environments: does host cue learning in butterflies depend on background? Society for Integrative and Comparative Biology (poster), San Diego, CA; Lepidopterist's Society (talk), Sierra Vista, AZ.

Snell-Rood EC & DR Papaj. 2004, 05. Signal variation with climate: bat echolocation along gradients of sound absorption. Society for the Study of Evolution (poster), Ft. Collins, CO; North American Symposium of Bat Research (talk), Sacramento, CA.

Snell-Rood EC and AV Badyaev. 2003. Ecological gradient of sexual selection: elevation and song complexity in finches, Am. Ornithologists Union & Society for the Study of Evol. (poster), Chico, CA.

Snell-Rood EC & DA Cristol. 2002. The effects of prior residence on social rank and contest outcome in wintering flocks of white-throated sparrows. Animal Behavior Society (talk), Bloomington, IN.

Snell-Rood, E. C., and D. A. Cristol. 2001. Avian communities of created wetlands are not the same as those of natural wetlands. American Ornithologist's Union (talk), Seattle, WA.

TEACHING EXPERIENCE

- University of Arizona: Teaching Assistant, Animal Behavior (ECOL 487), fall 2006
 - Duties: run labs, write handouts, exam grading, review sessions, webmaster
- University of Arizona: Teaching Assistant, Ornithology (ECOL 484), spring 2007
 - Duties: design and teach labs, lead birding field trips, guest lecture, lab exams
- University of Arizona: Guest lecturer, Animal Form and Function, Fall 2003 (2 lectures), Ornithology (1 lecture)
- College of William and Mary: Biology tutor, 2000-2001

OUTREACH AND SERVICE

Student Volunteer Conservation (2005-2007): “SIAC” was a group of over 60 students at the University of Arizona, that volunteered for the Nature Conservancy, and two Mexican conservation groups, to survey the flora and fauna of nature preserves. We received over \$8000 in support, and helped to foster links within and between conservation groups and students. I founded this group in 2005, and passed the organization on to other students when leaving Arizona in 2007; for more info, see: <http://eebweb.arizona.edu/SIAC/>

Insect Tutoring: Lessons on insect identification for a group of middle school children training for the “Science Olympiad;” preparation and administration of insect identification tests, and ecology tests, for Southern Arizona middle school students (3-06 and 3-07, respectively).

Mentoring: I have mentored 10 undergraduate and high school students that have worked in the Papaj lab at the University of Arizona. At Indiana University (to date), I have mentored one high school and one undergraduate student. I have also participated in high school and undergraduate mentoring programs to encourage the success of women in science.

Department service. I have been an organizer for a journal discussion group across departments at the University of Arizona – Themes of behavior (2002-2003), somatic selection (summer 2005), recent papers (fall – spring 2005). I have also served as the representative for graduate students to the department faculty and campus-wide graduate organizations, mediating concerns between faculty and students, presenting opinions for promotion/tenure cases, and generally helping students stay well-advised (2006-07).

Public seminars, demonstrations. Butterfly learning: 2nd grade class, Borman Elementary School (Sept. 2007); Butterfly learning, Community Day, Sonoran Arthropod Studies Institute (Apr. 2007); monthly speaker, Southeast Arizona Butterfly Association (Oct. 2006); monthly speaker, PEO women’s group (May 2006); Importance of Entomology: Science Olympiad Day at University of Arizona (March 2006); Bird conservation/identification: 6th grade nature day, Bloomington, IN (March 2008); monthly speaker, Williamsburg Bird Club (2001)

PROFESSIONAL SERVICE:

Reviewer for:

Animal Behaviour; Evolution; Ethology; Journal of Avian Biology; Journal of Arid Environments; Behavioral Ecology & Sociobiology; National Science Foundation

MEMBERSHIP IN PROFESSIONAL SOCIETIES: Society for the Study of Evol.; Animal Behavior Society; Soc. for the Study of Integrative and Comparative Biology; Phi Beta Kappa; Sigma Xi Research Society