

ELSA YOUNGSTEADT

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EDUCATION

Ph.D., Entomology, North Carolina State University, Raleigh, NC, 2008

M.S., Biological Sciences, University of Wisconsin-Milwaukee, 2003

B.A., Biology, Truman State University, Kirksville, Missouri, *summa cum laude*, 1999

SCIENCE COMMUNICATION EXPERIENCE

Programs Manager, Sigma Xi, Durham, NC, December, 2008-present

- Collaborate with Public Radio International to produce a weekly science podcast and online discussion forum. Research, script, record, edit, and mix podcast segments.
- Produce, solicit, and edit themed Web content for Sigma Xi's critical issues in science program. Manage review and online publication of white papers related to annual theme. (2009 theme: Energy.)
- Compile, write, and edit science news summaries for *American Scientist* magazine and the Sigma Xi website and newsletters.
- Facilitate public understanding of science programs, such as science cafés, hosted by Sigma Xi chapters.

News Intern, *Science* magazine, Washington, DC, January-June, 2008

- Reported and wrote 25 online news articles for *ScienceNOW*, 5 print news and feature stories for *Science*, and about 30 short news items.
- Researched and recorded portions of 5 *Science* podcasts.
- Collaborated with the Art and News departments to develop an interactive online infographic.
- Topics covered included biology, psychology and medicine.

AAAS Mass Media Fellow, WOSU Public Media, Columbus, OH, June-August, 2007

- Prepared 20 news and feature stories for public radio during nine-week fellowship.
- Found leads, researched, interviewed, collected sounds, wrote and voiced scripts, posted articles and audio files online.
- Topics included physics, engineering, archaeology, biology, chemistry, medicine and other areas of science.

Science Writing Intern, National Evolutionary Synthesis Center, Durham, NC, January 2007-January, 2008

- Created online resource for biology educators by writing 12 "Evolution in the News" articles to summarize and explain current research in evolution, relate it to textbook principles, and provide questions for classroom discussion.
- Interviewed researchers in two video podcasts for classroom use.

Freelance Writer, July, 2006-present

- Contributed news and feature stories to the *News and Observer* (Raleigh, NC), *American Scientist*, *The Scientist*, *Science*, *ScienceNOW*, North Carolina State University News Services, and Howard Hughes Medical Institute.

Staff Writer, Technician, daily student newspaper of North Carolina State University, July, 2005-September, 2006

- Contributed more than 30 articles to the Science and Tech and News sections, generated story and graphic ideas and brainstormed at staff meetings.
- Topics included biology, medicine, engineering, chemistry, physics and computer science.

OTHER PROFESSIONAL EXPERIENCE

Research and Teaching Assistant, North Carolina State University Structural Pest Management Training & Research Center, Raleigh, NC, July-December, 2008.

- Assist with training programs on basic biology and identification of urban pests.

Teaching Assistant, University of Wisconsin-Milwaukee, Milwaukee, WI, August, 2000-May, 2001

- Taught laboratory sections of zoology class for non-majors and tutored students.

Ecologist, The Nature Conservancy, Madison, WI, May, 2001-October, 2001

- Monitored populations of endangered butterflies and moths and recommended habitat management strategies.

Curator, Collection Manager, Educator, and Research Assistant, Milwaukee Public Museum, July, 1999-October, 2002

- Managed research collection of Lepidoptera.
- Maintained and managed butterfly vivarium.
- Educated museum guests about butterfly biology in presentations and one-on-one interaction.
- Collected field data for a sustainable agriculture research program in Costa Rica.

Assistant Supervisor, World Bird Sanctuary Birds of Prey Show, Milwaukee County Zoo, May-August, 1997; May-July, 1999

- Coordinated team of 5 to produce daily bird shows and maintain and train 20 raptors and other birds. Presented one to three shows per day, interacting with audiences of up to 100.
- Was promoted from educator/bird trainer in 1997 to assistant supervisor in 1999.

RESEARCH EXPERIENCE

North Carolina State University

GAANN Biotechnology Fellow, January, 2006-December, 2007

NSF Predoctoral Fellow, August, 2003-December, 2005

Dissertation Neotropical ant-gardens: Behavioral and chemical ecology of an obligate ant-plant mutualism

- Investigated chemical communication between ants and seeds, by conducting behavioral experiments at field sites in Perú and chemical analyses in the lab.
- Analyzed kin recognition and colony boundaries between two co-habiting ant species using behavioral, chemical and genetic methods.

University of Wisconsin-Milwaukee

NSF Predoctoral Fellow, June, 2002-August, 2003

UWM Graduate School Fellow June, 2001-May, 2002

Thesis The effects of ants on the carnivorous butterfly caterpillar *Feniseca tarquinius* and the role of chemical camouflage in the *Feniseca*-ant interaction.

- Collected observational and experimental data in the field to document unexpected interactions in a three-species food web.
- Used analytical chemistry and behavioral assays to explain insect behavior observed in the field.

AWARDS AND FELLOWSHIPS

2009	Graduate School Dissertation Award, North Carolina State University
2009	Kenneth R. Keller Award for Excellence in Doctoral Research, North Carolina State University
2008	Outstanding Ph.D. Student Award, North Carolina Entomological Society
2008	<i>Science</i> magazine news writing internship
2007	First place poster in behavior and ecology, Entomological Society of America annual meeting
2007	AAAS Mass Media Fellowship
2006	First place, Keck Center for Behavioral Biology essay contest
2006	GAANN Biotechnology Fellowship
2005	Amazon Conservation Association Research Fellowship
2004	North Carolina Entomological Society Travel Award
2004	Sigma Xi Grant in Aid of Research
2000	University of Wisconsin-Milwaukee Graduate School Fellowship
2000	National Science Foundation Predoctoral Fellowship
1995	National Merit Scholarship
1995	Truman State University Pershing Scholarship (full ride)

PEER-REVIEWED PUBLICATIONS

- Youngsteadt, E., Alvarez, J., Osborne, J., and Schal, C., 2009. Species specific seed dispersal in an obligate ant-plant mutualism. *PLoS ONE*, 4:e4335.
- Booth, W., Youngsteadt, E., Schal, C. And Vargo, E. 2008. Characterization of 8 polymorphic microsatellite loci in the neotropical ant-garden ant, *Camponotus femoratus*. *Conservation Genetics*, published online 28 August, 2008.
- Booth, W., Youngsteadt, E., Schal, C. And Vargo, E. 2008. Polymorphic microsatellite loci for the ant-garden ant, *Crematogaster levior* (Forel). *Conservation Genetics*, published online 25 April, 2008.
- Youngsteadt, E., Nojima, S., Häberlein, C., Schulz, S. and Schal, C. 2008. Seed odor mediates an obligate ant-plant mutualism in Amazonian rainforest. *Proceedings of the National Academy of Sciences*, 105: 4571-4575.
- Youngsteadt, E., Fan, Y., Stay, B., and Schal, C., 2005. Cuticular hydrocarbon synthesis and its maternal provisioning to embryos in the viviparous cockroach *Diploptera punctata*. *Journal of Insect Physiology*, 51: 803-809.

Youngsteadt, E. and DeVries, P. J. 2005. The effects of ants on the entomophagous butterfly caterpillar *Feniseca tarquinius* and the putative role of chemical camouflage in the *Feniseca*-ant interaction. *Journal of Chemical Ecology*, 31: 2091-2109.

INVITED PRESENTATIONS

Youngsteadt, E., 2008. Ant-gardens: Species-specificity and chemical communication in an obligate ant-plant mutualism. Missouri State University, Department of Biology, Springfield, MO.

Youngsteadt, E., 2008. Picky ants and smelly seeds: Specificity and communication in a tropical ant-plant mutualism. Truman State University, Department of Biology, Kirksville, MO.

Youngsteadt, E., 2006. Ecología química y de comportamiento en los jardines de hormigas. Department of Biology, Universidad de San Antonio Abad de Cusco, Cusco, Perú.

Youngsteadt, E., 2005. Neotropical ant-gardens: Chemical basis of an ant-plant mutualism. Indiana University Animal Behavior Conference, Bloomington, IN.

PRESENTATIONS

Youngsteadt, E., 2007. Neotropical ant-gardens: Species specificity and complex chemical cues in an obligate ant-plant mutualism. Annual meeting of the Entomological Society of America, San Diego, CA.

Youngsteadt, E., 2007. Complex chemical recognition cues in an ant-seed mutualism. Symposium of the Keck Center for Behavioral Biology, Raleigh, NC.

Youngsteadt, E. and Álvarez, J., 2006. Jardines de hormigas: Agricultura y guerra en el mundo pisado. Centro de Investigación y Capacitación Río Los Amigos, Madre de Dios, Perú.

Youngsteadt, E., Nojima, S., and Schal, C., 2006. Divergent chemical cues elicit seed-collecting in Neotropical ant-garden ants. Annual Congress of the International Union for the Study of Social Insects, Washington, DC.

Youngsteadt, E., 2006. Ant-gardens: Divergent chemical cues in an ant-seed mutualism. Symposium of the Keck Center for Behavioral Biology, Raleigh, NC.

Youngsteadt, E., 2005. Neotropical ant-gardens: Chemical basis of an ant-plant mutualism. Symposium of the Keck Center for Behavioral Biology, Raleigh, NC.

Youngsteadt, E. and DeVries, P. J., 2003. The effects of ants on the carnivorous butterfly caterpillar *Feniseca tarquinius* and the role of chemical camouflage in the *Feniseca*-ant interaction. Society for the Study of Evolution national meeting, Chico, CA.

Youngsteadt, E. and DeVries, P. J., 2003. The effects of ants on the carnivorous butterfly caterpillar *Feniseca tarquinius* and the role of chemical camouflage in the *Feniseca*-ant interaction. Ecological Society of America national meeting, Savannah, GA.

OUTREACH AND COMMUNITY SERVICE

Focus on Your Future presenter, NCSU Career Services, 2009. Gave invited talk at professional development day for undergraduates

Nature walks leader, Wake Audubon Society and Shakori Hills Grassroots Festival, NC, 2003-2007. Guided groups of adults and children in observing insects, plants and other wildlife.

SAFE Child bilingual assistant and facilitator, Raleigh, NC, 2006. Led discussions among Spanish-speaking participants in court-ordered course to avert domestic violence. Coordinated child care.

BugFest presenter, NC Museum of Natural Sciences, Raleigh, NC, 2004- 2006. Engaged bugfest visitors at display of various live cockroaches.

Kucinich for President campaign Raleigh coordinator, Raleigh, NC, 2003-2004. Created support network, conducted meetings, organized canvassing events.

Earthwatch program: Tropical Caterpillars guide, La Selva Biological Station, Costa Rica, December, 2002-2003. Led volunteers in collecting, rearing and observing behavior of tropical caterpillars.

Center for the Spanish Speaking English tutor, Milwaukee, WI, 2000-2002. Guided adult ESL students in English exercises to prepare for citizenship and driver license tests.

Jardin Gaia Wildlife Rescue Center volunteer, Quepos, Costa Rica, 1998. Treated and maintained injured wildlife for release, created educational collection of local butterflies, developed butterfly vivarium, led tours of the center.

MULTIMEDIA SKILLS

Multimedia Bootcamp, University of North Carolina, Chapel Hill, May, 2009.

Covered shooting and editing video (Final Cut Pro) and Working with Adobe Flash

Other programs and skills

Adobe Audition, Soundslides, Wordpress, Adobe Photoshop (basic functions),
Adobe InDesign (basic functions)

MEMBERSHIPS

American Association for the Advancement of Science

Sigma Xi

Entomological Society of America

International Union for the Study of Social Insects

National Association of Science Writers

Science Communicators of North Carolina

ADVENTURES AND HOBBIES

Chapel Hill Philharmonia, viola section player, 2009-present

Rock Climbing, traditional lead-climbing, 2008-present

Long distance running, marathons/half-marathons, 2007-present

Motorcycles, riding/ touring, 2007-present

Sustainable agriculture, volunteer farm work, 2006-2008

Raleigh Civic Symphony, viola section, 2003-2005

LANGUAGES

English (fluent)

Spanish (fluent)

French (intermediate)

updated Oct 2009