

James N. Zahniser

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Education:

1998 B.S., Pennsylvania State University, Biology (Ecology)
2003 M.S., University of Illinois at Urbana/Champaign, Entomology
2008 Ph.D., University of Illinois at Urbana/Champaign, Entomology

Research Interests:

- Phylogeny, classification, comparative morphology, and descriptive taxonomy of the leafhopper subfamily Deltocephalinae (Insecta: Hemiptera: Cicadellidae) and related leafhopper subfamilies
- Historical biogeography of grass-specializing tribes of Deltocephalinae; historical biogeography of grasses and grassland-associated taxa
- Morphological and molecular systematics

Research Projects:

- Combined morphological (119 characters) and molecular (~2800 bp 28S rDNA, 353 bp Histone H3) phylogenetic analysis of the major lineages of Deltocephalinae and related subfamilies (114 taxa, 33 of 37 tribes represented)
- Higher level classification of Deltocephalinae
- Online interactive key to family group taxa of Deltocephalinae
- Molecular phylogeny (based on ND1, CO2, Histone H3 and 28S rDNA sequences) and historical biogeography of the grassland deltocephaline tribe Chiasmini (73 taxa, representing ~1/5 of the described diversity)
- Classification of Chiasmini and description of new species
- Taxonomy and description of the "*Faltala*-group" and other deltocephaline leafhoppers

Research Positions:

2009 Research assistant, Illinois Natural History Survey, Champaign, IL
2007-2008 Research Fellow, Dissertation Completion Fellowship, Graduate College,
University of Illinois at Urbana/Champaign

- 2004 Research assistant, Illinois Natural History Survey, "Phylogeny and Biogeography of the Grassland Leafhopper Subfamily Deltocephalinae (Insecta: Hemiptera)", PI C.H. Dietrich
- 2003 Research assistant, Illinois Natural History Survey, "Partnership for Monographic and Phylogenetic Research on Leafhoppers and Treehoppers (Insecta: Hemiptera: Membracoidea)", PEET grant, PI C.H. Dietrich and Co-PI L.L. Deitz
- 2001 Research assistant, Illinois Natural History Survey, Survey of the Soybean Aphid, *Aphis glycines*, in Illinois, PIs D. Onstad and D.J. Voegtlin
- 1999-2000 Research assistant, USDA-ARS Ft. Lauderdale, Biological control of the invasive plant species *Melaleuca quinquenervia*, Advisor G.S. Wheeler
- 1997-1998 Research assistant, Penn State University, Quantification of plant secondary compounds in oaks in response to gypsy moth feeding, PI J. Schultz

Teaching and Related Positions:

Supervisory positions

- 2008 Lab coordinator, Biology 104: Animal Biology; University of Illinois at Urbana/Champaign
- 2002 Lab coordinator, Biology 120: Genetics, Evolution, and Biodiversity; University of Illinois at Urbana/Champaign
- 2002 Lab coordinator, Biology 104: Animal Biology; University of Illinois at Urbana/Champaign

Teaching positions

- 2007 Teaching assistant, Integrative Biology 201, Genetics and Evolution, University of Illinois at Urbana/Champaign
- 2006 Teaching assistant, Integrative Biology 270 (Honors): Evolution of Molecules and Cells, University of Illinois at Urbana/Champaign
- 2005 Teaching assistant, Integrative Biology 460: Introduction to Entomology, University of Illinois at Urbana/Champaign
- 2005 Teaching assistant, Integrative Biology 352: Population Biology (Honors Course), University of Illinois at Urbana/Champaign
- 2003 Teaching assistant, Entomology 383: Insect Pathology; University of Illinois at Urbana-Champaign, Spring semester
- 2001 Teaching assistant, Biology 120: Genetics, Evolution, and Biodiversity; University of Illinois at Urbana/Champaign, Spring and Fall semesters
- 2000 Teaching assistant, Biology 104: Animal Biology; University of Illinois at Urbana/Champaign, Fall semester

Grants and Awards:

- 2007 Dissertation Completion Fellowship, Graduate College, University of Illinois at Urbana/Champaign (\$17,000)

- 2007 School of Integrative Biology, University of Illinois at Urbana/Champaign, Francis M. and Harlie M. Clark Research Support Grant for an insect collecting trip to Argentina (\$1700)
- 2007 John G. and Evelyn Hartman Heiligenstein Outstanding Teaching Assistant in Integrative Biology 201
- 2007 Graduate College, University of Illinois at Urbana/Champaign, Dissertation Travel Grant for travel to Guyana (\$1500)
- 2006 Annual Meeting of the Entomological Society of America, Student Competition for the President's Prize, poster session A3, First Prize
- 2006 School of Integrative Biology, University of Illinois at Urbana/Champaign, Francis M. and Harlie M. Clark Research Support Grant for visiting the American Museum of Natural History and the National Museum of Natural History (\$890)
- 2005 Incomplete List of Teachers Rated Excellent by Their Students, Entomology 460
- 2005 Herbert H. Ross Memorial Award, Illinois Natural History Survey, "Molecular systematics of the leafhopper subfamily Deltocephalinae (Insecta: Hemiptera: Cicadellidae) and the evolution and biogeography of grass specialization" (\$1200)
- 2005 School of Integrative Biology, University of Illinois at Urbana/Champaign, Francis M. and Harlie M. Clark Research Support Grant for attendance of the Bodega Bay Marine Biological Station course in applied phylogenetics (\$1000)
- 2004 Graduate College, University of Illinois at Urbana/Champaign, Dissertation Travel Grant for travel to Taiwan (\$2000)
- 2004 School of Integrative Biology, University of Illinois at Urbana/Champaign, Francis M. and Harlie M. Clark Research Support Grant for travel to South Africa (\$1000)
- 2004 UIUC Research Board (with C.H. Dietrich) "Phylogeny and Biogeography of the Grassland Leafhopper Subfamily Deltocephalinae (Insecta: Hemiptera)" (\$21,144)
- 2002 Herbert H. Ross Memorial Award, Illinois Natural History Survey, "Cladistic Analysis of the Leafhopper Subfamily Deltocephalinae" (\$600)
- 2000 Incomplete List of Teachers Rated Excellent by Their Students, Biology 104

Publications

Zahniser, J.N. 2008. Seven new species and new distributions of Old World Chiasmini (Hemiptera: Cicadellidae: Deltocephalinae), with a redescription, key to genera, and species checklist for the tribe. *Zootaxa* 1808: 1-32.

Zahniser, J.N. and C.H. Dietrich. 2008. Phylogeny of Deltocephalinae (Insecta: Auchenorrhyncha: Cicadellidae) and related subfamilies based on morphology. *Systematics and Biodiversity* 6(1):1-24.

Fletcher, M.J. and **J.N. Zahniser**. 2008. The first record of Goniagnathini from Australia with description of four new species of *Goniagnathus* Fieber (Hemiptera: Cicadellidae: Deltocephalinae). *Zootaxa* 1692: 43-54.

Zahniser, J.N. 2007. An Interactive Key to Deltocephalinae and Related Tribes. <http://ctap.inhs.uiuc.edu/Zahniser/>

Zahniser, J.N. and A. Hicks. 2007. Three new species of *Icaia* Linnavuori (Hemiptera: Cicadellidae: Deltocephalinae) from Peru and distinction of the genus from *Athysanella* Baker. *Zootaxa* 1390: 27-39.

Zahniser, J.N. 2005. A new genus of Deltocephalinae (Hemiptera: Cicadellidae) from Ecuador and a new synonym of *Luheria constricta* Osborn with descriptions of the female. *Annals of the Entomological Society of America* 98(5): 653-657.

Zahniser, J.N. and M.D. Webb. 2004. Placement of the *Faltala* Oman leafhopper group (Hemiptera: Cicadellidae: Deltocephalinae) with descriptions of three new species. *Annals of the Entomological Society of America* 97(4): 667-774.

Wheeler, G.S. and **J. Zahniser**. 2001. Artificial Diet and Rearing Methods for the *Melaleuca quinquenervia* (Myrtales: Myrtaceae) Biological Control Agent *Oxyops vitiosa* (Coleoptera: Curculionidae). *Florida Entomologist* 84(3): 439-441.

Scientific Societies

Entomological Society of America, member
Entomological Collections Network, member
Society of Systematic Biologists, member

Manuscript Review for Professional Journals

Systematics and Biodiversity, 2008
Zoological Science, 2008
Systematic Entomology, 2007
Zootaxa, 2006-2008 (11 manuscripts reviewed)
Proceedings of the Hawaiian Entomological Society, 2007
The Canadian Entomologist, 2005

Presentations at Professional Meetings:

Invited Talks

- 2008 Ph.D. thesis seminar, University of Illinois at Urbana-Champaign, "Systematics of the leafhopper subfamily Deltocephalinae: phylogeny, classification, and grassland biogeography"
- 2005 12th International Auchenorrhyncha Congress, Symposium on the Phylogeny and Evolution of Auchenorrhyncha, "Phylogeny of Deltocephalinae (Hemiptera: Cicadomorpha: Cicadellidae) and Related Subfamilies and the Evolution of Grass Specialization"

Submitted Talks and Posters

- 2008 56th Annual Meeting of the Entomological Society of America, "Phylogeny and historical biogeography of the grassland leafhopper tribe Chiasmini (Cicadellidae: Deltocephalinae)
- 2006 54th Annual Meeting of the Entomological Society of America, "Morphology, molecules, and the evolution of grass specialization in the leafhopper subfamily Deltocephalinae (Hemiptera: Auchenorrhyncha: Cicadellidae) and related subfamilies"
- 2005 53rd Annual Meeting of the Entomological Society of America, "Evolution and Dispersal of the Grassland Leafhopper Tribe Chiasmini (Hemiptera: Cicadellidae)", 10-minute paper
- 2005 7th Annual Graduate Student Symposium, "Biogeography and Evolution of Grass Specialization in the Leafhopper Subfamily Deltocephalinae (Insecta: Hemiptera: Cicadellidae)", 10-minute talk
- 2004 PEET meeting, "Phylogeny, host-plant associations, and revised classification of the leafhopper subfamily Pentimiinae (Insecta: Hemiptera: Cicadellidae)", poster
- 2003 51st Annual Meeting of the Entomological Society of America, "Phylogenetic Analysis of the Leafhopper Subfamily Deltocephalinae (Hemiptera: Cicadellidae) and Related Subfamilies", 10-minute paper
- 2002 50th Annual Meeting of the Entomological Society of America, "Cladistic Analysis of the Leafhopper Subfamily Deltocephalinae and Related Subfamilies", poster

Professional Meetings Attended

- 2008 56th Annual Meeting of the Entomological Society of America, Reno, NV
- 2006 54th Annual Meeting of the Entomological Society of America, Indianapolis, IN
- 2006 Entomological Collections Network Meeting, Indianapolis, IN
- 2005 12th International Auchenorrhyncha Congress, Berkeley, CA
- 2005 53rd Annual Meeting of the Entomological Society of America, Ft. Lauderdale, FL
- 2005 Entomological Collections Network Meeting, Ft. Lauderdale, FL
- 2004 Partnerships for Enhancing Expertise in Taxonomy (PEET) meeting, Urbana, IL
- 2003 52nd Annual Meeting of the Entomological Society of America, Cincinnati, OH
- 2003 Entomological Collections Network meeting, Cincinnati, OH
- 2003 The A. Watson Armour III Spring Symposium, Field Museum, Chicago, IL, "Systematics at a Crossroads Again: Biological and Philosophical Arguments in Contemporary Phylogenetics"
- 2002 51st Annual Meeting of the Entomological Society of America, Ft. Lauderdale, FL
- 2002 Entomological Collections Network meeting, Ft. Lauderdale, FL
- 2002 Evolution meeting (joint meeting of the Society of Systematic Biologists, the Society for the Study of Evolution, and the American Society of Naturalists), Champaign, IL
- 2002 Partnerships for Enhancing Expertise in Taxonomy (PEET) meeting, Berkeley, CA

Collecting and Field Experience

- 2007 Zambia, with Jason Cryan and Tim McCabe (New York State Museum) and Kelly Miller (New Mexico State University)
- 2005 Panama, with Stuart McKamey (NMNH) and Andrew Hicks (U. of Colorado)
- 2005 Busey Woods Bioblitz, Urbana, IL
- 2004 South Africa, Western Cape and Kwa-Zulu Natal provinces, with Michael Stiller of the Plant Protection Resource Institute (Pretoria)
- 2004 Taiwan, concentrating in central mountains, with Hsien Tzung Shih, Jing-Fu Tsai, Man-Miao Yang, C.H. Dietrich, D.M. Takiya, G. Balme, D.A. Dmitriev, J. Jones
- 2003 Nachusa Grasslands, Franklin Grove, IL, Biodiversity Blitz survey of insect fauna
- 2002 Western United States, with R. Rakitov
- 2002 Calumet Bioblitz, Calumet, IL
- 2001 Jalisco, Mexico, with C.H. Dietrich, L.L. Deitz, S. McKamey, G. Moya-Raygoza, A. Wallner, and J. Albertson
- 2001 Robert Allerton Park, Monticello, IL, Biodiversity Blitz

Museum Curatorial and Identification Experience

- 2006 Texas A&M University Insect Collection, College Station, TX
- 2006 American Museum of Natural History, New York, NY
- 2006 National Museum of Natural History, Washington, D.C.
- 2004 South African National Collection of Insects
- 2004 National Museum of Natural Science, Taichung, Taiwan
- 2004 Taiwan Agricultural Research Institute, Wufeng, Taiwan
- 2004 National Museum of Natural Science, Taichung, Taiwan
- 2003 Departamento de Zoologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil
- 2003 Museu Nacional do Rio de Janeiro, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil
- 2003 The Ohio State University Insect Collection, Columbus, OH
- 2002 The Carnegie Museum of Natural History, Pittsburgh, PA

External Courses Attended

- 2005 Bodega Marine Laboratory Workshop in Applied Phylogenetics, Bodega Bay, CA
- 2005 Bayesian and Likelihood Inference of Phylogeny: Organisms to Genomes, Urbana, IL

Outreach / Media Coverage

- 2006-2007 President, Entomology Graduate Students Association, UIUC
- 2005-2006 Outreach Coordinator, Entomology Graduate Students Association, UIUC
- Feb 21, 2007 WCIA Channel 3 Morning Show, "The physics of insect silk", Host: Mats Selen, Campaign, IL
- Feb 17, 2006 WILL AM 580, The Environmental Almanac, "Mantids", Host: Rob Kanter

- Feb 15, 2006 WCIA Channel 3 Morning Show, "The physics of insect size", Host: Mats Selen, Champaign, IL
- Feb 17, 2005 WLRW 94.5 Morning Show
- Feb 16, 2005 WCIA Channel 3 Morning Show, "Overwintering Insects", Host: Mats Selen, Champaign, IL
- Feb 25, 2004 WCIA Channel 3 Morning Show, "The physics of insect sound", Host: Mats Selen, Champaign, IL
- Feb. 11, 2003 WCIA Channel 3 Morning Show, "The physics of insect size", Host: Mats Selen, Champaign, IL
- Feb. 17, 2003 Daily Illini; The Insect Fear Film Festival, author: Megan Loiselle, Champaign, IL