

JOHN K. MOULTON

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EDUCATION

Ph.D., Entomology, The University of Arizona, 1997. "Molecular Systematics of the Simuliidae (Diptera: Culicomorpha)." Advisor: D. R. Maddison.

M.S., Entomology, Clemson University, 1992. "Revision of the *Simulium jenningsi* group (Diptera: Simuliidae)." Advisor: P. H. Adler.

B.S., Entomology, Clemson University, 1989 (*Magna Cum Laude*).

RESEARCH EXPERIENCE

Assistant Professor, The University of Tennessee, 01/2003 - present.
Postdoctoral Research Associate, North Carolina State University, 08/2001-12/2002.
Research/Extension Associate, The University of Arizona, 08/1997-7/2001.
Graduate Research Assistant, The University of Arizona, 08/1992-08/1996.
Graduate Research Assistant, Clemson University, 01/1990-08/1992.

TEACHING EXPERIENCE

Instructor, EPP 448/548, Taxonomy of Adult Insects, The University of Tennessee. Fall 2006.
Instructor, EPP 531, Insect Molecular Systematics, The University of Tennessee. Fall 2006.
Guest Lecturer, EPP 201, Impact of Insects and Plant Diseases on Human Societies. Fall 2006.
Guest Lecturer, EPP 201, Impact of Insects and Plant Diseases on Human Societies. Fall 2005.
Instructor, EPP 531, Taxonomy of Adult Insects, The University of Tennessee. Fall 2004.
Instructor, EPP 531, Special Problem in Insect Physiology, The University of Tennessee. Fall 2004.
Instructor, EPP 531, Taxonomy of Adult Insects, The University of Tennessee, Fall 2004.
Guest Lecturer, EPP 201, Impact of Insects and Plant Diseases on Human Societies. Fall 2004.
Instructor, EPP 531, Special Problem in Molecular Medical Entomology, The University of Tennessee, Spring 2003.
Teaching Assistant, Insect Biology, The University of Arizona, Fall 1995.
Teaching Assistant, Aquatic Insects, The University of Arizona, Spring 1993.
Teaching Assistant, Introductory Entomology, Clemson University, Fall 1991.
Teaching Assistant, Introductory Entomology, Clemson University, Fall 1990.
Teaching Assistant, Insect Taxonomy, Clemson University, Fall 1990.

PROFESSIONAL SERVICE

Scientific:

- 2006 Associate Editor of *Zootaxa* (papers treating non-culicid Nematocera).
2006 Adhoc reviewer for *Molecular Phylogenetics and Evolution* and *Zootaxa*.
2005 Adhoc reviewer for Armenian-U.S. Bilateral Grants Program, *Zootaxa*, and *Genetica*.
2004 Adhoc reviewer for *Entomological Science*.
2003 Adhoc reviewer for *Molecular Phylogenetics and Evolution* and NSF-DEB-Biotic Inventories Grants Program.
2002 Adhoc reviewer for *Proceedings of the Entomological Society of Washington*, *Molecular Phylogenetics and Evolution*, and the Armenian-U.S. Bilateral Grants Program.
2001 Adhoc reviewer for the *Journal of Economic Entomology*.
2000 Adhoc reviewer for the S. Carolina Agric. & Forestry Research System, *Florida Entomologist*, *Annals of the Entomological Society of America*, and *Proceedings of the Entomological Society of Washington*.

COMMITTEES

College/Institute:

Ag-Day Organizing Committee 2005 (co-chair) and 2006 (chair).

Departmental:

Service.

- 2005 Arthropod Physiologist Search Committee.
2004-05 Ag Open House Representative.
2004-present Graduate Student Acceptance Committee.
1999-00 Chair, Poster Committee, CASNR Annual Faculty Conference, The University of Arizona.
1995-96 Co-chair, Seminar Committee, Department of Entomology, The University of Arizona.
1993-94 Curriculum Committee, Department of Entomology, The University of Arizona.

Graduate Student Mentoring.

Student	Degree Program	Mentor	Department	Graduated
Naomi Smith	MS	Robert Trigiano	EPP	2005
Christine Lynch	MS	Paris Lambdin	EPP	2006
Sabra Scheffel	MS	Reid Gerhardt	EPP	2006
Beth Alexander	MS	<u>Kevin Moulton</u>	EPP	
Kelly Felderhoff	MS	Ernest Bernard	EPP	
John Beck	PhD	Randy Small	EEB	
Greg Curler	PhD	<u>Kevin Moulton</u>	EPP	
Ryan Donahoo	PhD	Kurt Lamour	EPP	
Andrew Haddow	PhD	Carl Jones	EPP	
Hansen, Jason	PhD	<u>Kevin Moulton</u>	EPP	
Oscar Hurtado-Gonzales	PhD	Kurt Lamour	EPP	
Amanda Jacobson	PhD	<u>Kevin Moulton</u>	EPP	

RESEARCH GRANTS and AWARDS

- The Greenbrier Valley/Greater Newport black fly suppression program”. State of Tennessee Legislature. \$178,400. 2006-08.
- Insect pests of woody ornamentals. United States Department of Agriculture (subcontract from UDA Plant Genomics MOA awarded to MT Windham and RN Trigiano). \$50,000. 2006-2008.
- Faunal survey of the moth flies of the Great Smoky Mountains National Park. Discover Life in America, Inc. \$6,000. 2005-06.
- Molecular characterization and phylogeography of phlebotomine sand flies and *Leishmania* spp. in Iraq and Afghanistan. United States Army. \$103,500. 2006-08.
- Apple computers for genomics instruction. The University of Tennessee Office of Information Technology, Technology Fee Request. \$12,190. 2007.
- A cytological investigation of the black flies in the subgenus *Simulium* (*Parabyssodon*) (Diptera: Simuliidae). Sigma Xi, Grant-in-Aid-of Research, \$750. 1989.
- Phylogenetic relationships among black fly (Diptera: Simuliidae) genera inferred from molecular data, Research Training Group (RTG) in Biological Diversification, \$1,800. 1993.
- Phylogenetic relationships among black fly (Diptera: Simuliidae) genera inferred from molecular data. The University of Arizona Graduate Student Research Fund, \$616. 1994.
- Evolution of the larval simuliid hypostoma and new ideas about intergeneric homologies. The University of Arizona Graduate and Professional Student Travel Grant, \$325. 1994.
- Molecular phylogenetic reconstruction of black flies (Diptera: Simuliidae) using mtDNA sequences. Robert S. Flinn Foundation, \$2,500. 1995.
- Molecular phylogenetic reconstruction of black flies (Diptera: Simuliidae) using mtDNA sequences. United States National Science Foundation Doctoral Dissertation Improvement Grant (DEB-9520613), \$10,000. 1995-97.
- Baseline susceptibility of beet armyworm (*Spodoptera exigua*) to spinosad (Tracer®). Dow AgroSciences, \$6,000. 1998-99.
- Susceptibility of beet armyworm, *Spodoptera exigua*, to the ecdysone agonists tebufenozide (Confirm®) and methoxyfenozide (Intrepid®). Rohm and Haas Company, \$180,000. 1998-2000.

PRESENTATIONS

- Wiegmann, BW & JK Moulton. 2006. New molecular evidence on relationships among the “true” Empididae (Diptera). 54th Annual Meeting of the Entomological Society of America, December 10-13, Indianapolis, IN.
- Felderhoff, KL, EC Bernard, & JK Moulton. 2006. Diversity of Tomoceridae (Collembola) in Great Smoky Mountains National Park. 54th Annual Meeting of the Entomological Society of America, December 10-13, Indianapolis, IN.

- Curler, GR & JK Moulton. 2006. Moth flies of the Great Smoky Mountains National Park. Discover Life in America – All Taxa Biodiversity Inventory, Annual Conference, December 6-8, Gatlinburg, TN.
- Courtney, GW & JK Moulton. 2006. Phylogenetic relationships of the Blephariceridae (Diptera) inferred from morphological and molecular characters. 6th International Congress of Dipterology, September 23-28, Fukuoka, Japan.
- Moulton, JK, GW Courtney, & BJ Sinclair. 2005. New nuclear genes for reconstructing late Mesozoic hexapod divergences. 2005. 53rd Annual Meeting of the Entomological Society of America, December 15-18, Fort Lauderdale, FL.
- Kim, JW, N Barr, JK Moulton, & BM Wiegmann. 2005. Investigating the higher-level phylogeny of flies (Diptera) based on multiple nuclear gene regions. 53rd Annual Meeting of the Entomological Society of America, December 15-18, Fort Lauderdale, FL.
- Moulton, JK. 2004. Augmenting the molecular systematics toolbox using output from genome sequencing projects. Auburn University Department of Entomology and Plant Pathology Seminar Series, October 25. Auburn, Alabama. (Invited).
- Moulton, JK. 2004. Filling the molecular systematics toolbox: from sequencing projects to phylogenies. Southern Appalachian Conference on Arthropod Biology. October 9. Knoxville, TN.
- Moulton, JK. 2004. Augmenting the molecular systematics toolbox using output from genome sequencing projects. University of Illinois Department of Entomology Seminar Series, February 16. Champaign, Illinois. (Invited).
- Moulton, JK & TJ Dennehy. 2001. Pro-active management of beet armyworm resistance to spinosad and tebufenozide/methoxyfenozide. Southwest Resistance Management Group, Annual Meeting, Tucson, AZ.
- Moulton, JK & TJ Dennehy. 2001. Beet armyworm resistance to Cry1Ac. Southwest Resistance Management Group, Annual Meeting, Tucson, AZ.
- Moulton, JK. 2001. Inferring intra-tribal relationships within Simuliidae using molecular sequences: How best to address rapid divergences. Walter Reed Biosystematics Unit, Smithsonian Support Center, Suitland, MD.
- Moulton, JK. 2001. Bringing morphological, ecological, cytological, and molecular evidence to bear on taxonomic problems. Walter Reed Army Institute of Research (WRAIR). Silver Spring, MD.
- Moulton, JK & TJ Dennehy. 2001. Beet armyworm resistance to Cry1Ac. Beltwide Cotton Conference, Anaheim, CA.
- Moulton, JK. 2000. Inferring intra-tribal relationships within Simuliidae using molecular sequences: How best to address rapid divergences. Black flies in the New Millennium Conference, Brock University, St. Catharines, ON, Canada.
- Moulton, JK, DA Pepper, & TJ Dennehy. 2000. Pro-active management of beet armyworm resistance to the IGRs tebufenozide and methoxyfenozide. XXI International Congress of Entomology, Iguazoo Falls, Brazil.
- Moulton, JK, DA Pepper, & TJ Dennehy. 2000. Pro-active management of beet armyworm resistance to the IGRs tebufenozide and methoxyfenozide. Beltwide Cotton Conference, San Antonio, TX.

- Moulton, JK, DA Pepper, & TJ Dennehy. 1999. Beet armyworm (*Spodoptera exigua*) resistance to spinosad. Beltwide Cotton Conference, Orlando, FL.
- Moulton, JK. 1997. Molecular systematics of black flies (Diptera: Simuliidae): rapid divergence, short nodes, and ~~marginal~~ shoddy genes. University of Arizona, Department of Entomology - Fall seminar series, Tucson, AZ.
- Moulton, JK. 1997. Molecular systematics of black flies (Diptera: Simuliidae): rapid divergence, short nodes, and marginal genes. North Carolina State University, Department of Entomology - Fall seminar series, Raleigh, NC (Invited).
- Moulton, JK. 1994. Molecular systematics of the Simuliidae. Northeast Regional Black Fly Technical Committee (NE-118), Annual Meeting, Tucson, AZ.
- Moulton, JK. 1993. Evolution of the larval simuliid hypostoma and new ideas about intergeneric homologies. Northeast Regional Black Fly Technical Committee (NE-118), Annual Meeting, Lake Placid, FL.
- Adler, PH & JK Moulton. 1992. Polytene chromosomes of the *Simulium jenningsi* group (Diptera: Simuliidae): species recognition and phylogeny. Entomological Society of America, Annual Meeting, Baltimore, MD.
- Moulton, JK & PH Adler. 1992. Systematics of the *Simulium jenningsi* group (Diptera: Simuliidae). Entomological Society of America - Southeastern Branch, Annual Meeting, Savannah, GA.
- Moulton, JK & PH Adler. 1992. Revision of the *Simulium jenningsi* group (Diptera: Simuliidae). Northeast Regional Black Fly Technical Committee (NE-118), Annual Meeting, Amherst, ME.
- Moulton, JK & PH Adler. 1991. Distribution and habitat characterization of the immature forms of species in the *Simulium jenningsi* group (Diptera: Simuliidae) in South Carolina. South Carolina Entomological Society, Annual Meeting, Florence, SC.
- Moulton, JK & PH Adler. 1990. A new species in the *Simulium jenningsi* group from the Carolinas and an introduction to new taxonomic characters in the group. South Carolina Entomological Society, Annual Meeting, Greenville, SC.

PUBLICATIONS

Abstracts/Nonrefereed articles

- Courtney, GW & JK Moulton. 2006. Phylogenetic relationships of the Blephariceridae (Diptera) inferred from morphological and molecular characters. 2006. 6th International Congress of Dipterology, Fukuoka, Japan.
- Floyd, MA, JK Moulton, & GA Schuster. 2006. A revised and annotated checklist of the caddisflies (Trichoptera) of Kentucky. North American Benthological Society, Annual Meeting, Anchorage, AK.

- Skevington, JH, JM Cumming, JK Moulton, BM Wiegmann, BJ Sinclair, & B Cassel. 2004. Unravelling the Relationships of Higher Flies, the Cyclorrhapha branch of the Diptera Tree of Life. XXII International Congress of Entomology. Brisbane, Australia.
- Wiegmann, BM & JK Moulton. 2004. Comparative Genomics of Diptera: Mining Data Resources from GenBank to FlyBase. XXII International Congress of Entomology. Brisbane, Australia.
- Wiegmann, BM, DK Yeates, JK Moulton, & JL Thorne. 2002. Genes, fossils and morphology: combined data analysis and a revised time scale for higher-level phylogeny of the Brachycera. 5th International Congress of Dipterology. Brisbane, Australia.
- Skevington, JH, JM Cumming, BJ Sinclair, BM Wiegmann, & JK Moulton. 2002. Molecular and morphological evidence supporting relationships within Eremoneura: focus on Cyclorrhapha. 5th International Congress of Dipterology. Brisbane, Australia.
- Coscaron, S, DR Miranda Esquivel, JK Moulton, C Coscaron-Arias, & S Ibanez Bernal. 2002. Taxonomic revision and cladistic analysis of *Simulium* (*Hearlea*) Vargas, Palacios & Diaz Najera (Diptera: Simuliidae. 5th International Congress of Dipterology. Brisbane, Australia.
- Moulton, JK & BM Wiegmann. 2002. Multiple data sets in addressing complex evolutionary questions within Diptera: case studies within Empidoidea and Simuliidae. 5th International Congress of Dipterology. Brisbane, Australia.
- Moulton, JK & BM Wiegmann. 2002. Mining the Dipteran genome: tools and resources from GenBank/EMBL and NCBI. 5th International Congress of Dipterology. Brisbane, Australia.
- Moulton, JK & TJ Dennehy. 2001. Beet armyworm resistance to Cry1Ac. Beltwide Cotton Conference, Anaheim, CA (also published as a University of Arizona Extension Bulletin).
- Moulton, JK. 2000. Inferring intra-tribal relationships within Simuliidae using molecular sequences: How best to address rapid divergences. "Black flies in the New Millenium" Conference, Brock University, St. Catharines, ON, Canada.
- Moulton, JK, DA Pepper, & TJ Dennehy. 2000. Pro-active management of beet armyworm resistance to the IGRs tebufenozide and methoxyfenozide. XXI International Congress of Entomology, Iguazoo Falls, Brazil.
- Moulton, JK, DA Pepper, & TJ Dennehy. 2000. Pro-active management of beet armyworm resistance to the IGRs tebufenozide and methoxyfenozide. Beltwide Cotton Conference, San Antonio, TX (also published as a University of Arizona Extension Bulletin).
- Moulton, JK, DA Pepper, & TJ Dennehy. 1999. Beet armyworm (*Spodoptera exigua*) resistance to spinosad. Beltwide Cotton Conference, Orlando, FL (also published as a University of Arizona Extension Bulletin).

Journal articles (refereed)

- Donahoo, R, CL Blomquist, SL Thomas, JK Moulton, DEL Cooke, & KH Lamour. 2006. *Phytophthora foliorum* sp. nov., a new species causing leaf blight of azalea. *Mycological Research* 110: 1309-1322.

- Gibbs, SEJ, AE Ellis, DG Mead, AB Allison, JK Moulton, EW Howerth, & DE Stallknecht. 2005. West Nile virus detection in the organs of naturally infected blue jays (*Cyanocitta cristata*). *J. Wildl. Dis.* 41: 354-362.
- Trigiano, RN, MH Ament, MT Windham & JK Moulton. 2004. Genetic profiling of red-bracted *Cornus kousa* cultivars indicates significant cultivar synonymy. *HortScience* 39: 489-492.
- Moulton JK, PH Adler & J Prince. 2004. An unusual new species of *Paracnephia* Rubtsov (Diptera: Simuliidae) from Western Australia. *Zootaxa* 409: 1-12.
- Moulton, JK & BM Wiegmann. 2004. Evolution and phylogenetic utility of CAD (rudimentary) among Mesozoic-aged eremoneuran Diptera (Insecta). *Mol. Phylog. Evol.* 31: 363-378.
- Coscarón, S, DR Miranda Esquivel, JK Moulton, C Coscarón-Arias, & S Ibáñez Bernal. 2004. Taxonomic revision and cladistic analysis of *Simulium* (*Hearlea*) Vargas, Martínez Palacios & Díaz Nájera (Diptera: Simuliidae). *Zootaxa* 396: 1-52.
- Moulton, JK. 2003. Can the current molecular arsenal adequately track rapid divergence events within Simuliidae (Diptera)? *Mol. Phylog. Evol.* 27: 45-57.
- Moulton, JK & PH Adler. 2002. A new species of *Simulium* (*Psilopelmia*) (Diptera: Simuliidae) from New Mexico. *Studia Dipterol.* 9: 213-218.
- Moulton, JK & PH Adler. 2002. Taxonomy and biology of *Simulium clarkei* Stone & Snoddy (Diptera: Simuliidae), a poorly known black fly of the southeastern United States. *Zootaxa* 31: 1-8.
- Moulton, JK, DA Pepper, RK Jansson, & TJ Dennehy. 2002. Proactive management of beet armyworm (Lepidoptera: Noctuidae) resistance to tebufenozide and methoxyfenozide: baseline monitoring, risk assessment, and isolation of resistance. *J. Econ. Entomol.* 95: 414-424.
- Moulton, JK, DA Pepper, & TJ Dennehy. 2000. Beet armyworm (*Spodoptera exigua*) resistance to spinosad. *Pest Manag. Sci.* 56: 842-848.
- Moulton, JK. 2000. Molecular sequence data resolves basal divergences within Simuliidae (Diptera). *Syst. Entomol.* 25: 95-113.
- Tang, J, JK Moulton, K Pruess, EW Cupp, & J Unnasch. 1998. Genetic variation in North American black flies in the subgenera *Psilopelmia* and *Psilozia* (Diptera: Simuliidae). *Can. J. Zool.* 76: 440-447.
- Moulton, JK. 1998. Re-evaluation of *Simulium* (*Psilopelmia*) Enderlein (Diptera: Simuliidae) of America North of Mexico. *Proc. Entomol. Soc. Wash.* 100: 50-71.
- Moulton, JK & PH Adler. 1997. The genus *Ectemnia* (Diptera: Simuliidae): taxonomy, polytene chromosomes, new species, and phylogeny. *Can. J. Zool.* 75: 1896-1915.
- Moulton, JK. 1996. A new species of *Gigantodax* Enderlein (Diptera: Simuliidae) from the United States. *Proc. Entomol. Soc. Wash.* 98: 741-751.
- Moulton, JK & PH Adler. 1995. Revision of the *Simulium jenningsi* group (Diptera: Simuliidae). *Trans. Am. Entomol. Soc.* 121: 1-55.

Cupp, MS, EW Cupp, JO Ochoa, & JK Moulton. 1994. Salivary apyrase in New World blackflies (Diptera: Simuliidae) and its relationship to onchocerciasis vector status. *Med. Vet. Entomol.* 9: 325-330.

Moulton, JK & PH Adler. 1992. New species in the *Simulium jenningsi* group (Diptera: Simuliidae) from the southeastern United States. *Ann. Entomol. Soc. Am.* 85: 393-399.

HONORS and AWARDS

Alumni Fellowship
Gamma Sigma Delta
Golden Key National Honor Society
J. Milbank Scholarship
J.H. Cochran Memorial Scholarship
K.L. Hays Award
Terminix Scholarship
The Honor Society of Phi Kappa Phi
The National Dean's List
Wade Stackhouse Fellowship

PROFESSIONAL MEMBERSHIPS (Active)

Entomological Society of America
Tennessee Entomological Society
Entomological Society of Washington
Society of Systematic Biologists