

Matthew Alan Bertone

HOME: 109 Dunnsbee Drive - Garner, NC 27529 - phone: 919.210.9857

OFFICE: North Carolina State University - Campus Box 7613 - Raleigh, NC 27695
phone: 919.515.3429 - fax: 919.515.7746 - email: matt_bertone@ncsu.edu

EDUCATION

Ph.D. candidate, ENTOMOLOGY (2004 - Present)

North Carolina State University, Raleigh, NC

Advisor - Brian M. Wiegmann, Ph.D.

M.S., ENTOMOLOGY (2001 - 2004)

North Carolina State University, Raleigh, NC

Advisor - D. Wes Watson, Ph.D.

Thesis: Dung beetles (Coleoptera: Scarabaeidae and Geotrupidae) of North Carolina cattle pastures and their implications for pasture improvement

B.S., BIOLOGY (Zoology focus; 1997 - 2001)

Salisbury University, Salisbury, MD

TEACHING EXPERIENCE

Fall 2006 - Entomology 502: Insect Systematics (Graduate Level)

Instructor - organized, created and taught lectures; developed class project and examination questions

Fall 2003 - Entomology 502: Insect Systematics (Graduate Level)

Teaching Assistant - digitized portions of previous years' lectures, taught laboratories and created and graded laboratory practicals

Fall 2002 - Crop Science 051: Forage Production (Undergraduate Level)

Teaching Assistant - aided in teaching (both lectures and laboratories), creating laboratory practicals, and grading

PROFESSIONAL EXPERIENCE

2001 - present: Graduate Research Assistant, NC State University, Raleigh, NC

2000 (summer): Mosquito Control Technician, Maryland Department of Agriculture, Office of Plant Industries and Pest Management, Salisbury, MD

[Involved in a mosquito monitoring and abatement program for the eastern shore of Maryland; also monitored sentinel chicken flocks for the detection of West Nile Virus]

1999 (summer): Nature Director & Counselor, Camp Wright, Stevensville, MD

[Instructed adolescent boys and girls (ages 7 - 14) about nature appreciation; provided hands-on learning experiences with plants and wildlife]

PUBLICATIONS

Refereed Journals:

Bertone, M., J. Green, S. Washburn, M. Poore, C. Sorenson and D. W. Watson. 2005. Seasonal activity and species composition of dung beetles (Coleoptera: Scarabaeidae and Geotrupidae) inhabiting cattle pastures in North Carolina (USA). *Annals of the Entomological Society of America* 98: 309-321.

Bertone, M. A., J. T. Green, S. P. Washburn, M. H. Poore, and D. W. Watson. 2006. The contribution of tunneling dung beetles to pasture soil nutrition. *Plant Management Network International: Forage and Grazinglands*. (<http://www.plantmanagementnetwork.org/fg/>)

Extension:

Dung Beetles of Central and Eastern North Carolina Cattle Pastures
Matt Bertone, Wes Watson, Mike Stringham, Jim Green, Steve Washburn, Matt Poore and Mark Hucks (<http://www.cals.ncsu.edu/entomology/guidetoncdungbeetles.pdf>)

Published Meeting Abstracts:

Bertone, M. A., G. W. Courtney, and B. M. Wiegmann. 2006. Phylogenetic relationships of the nematoceros Diptera inferred from molecular and morphological characters. *6th International Congress of Dipterology*. Fukuoka, Japan.

POPULAR PRESS

Spring 2004. "Linnaean Games Champions", Perspectives: the Magazine of the College of Agriculture and Life Sciences, NC State University, Raleigh, NC.

Summer 2003. "Entomological Champions", Perspectives: the Magazine of the College of Agriculture and Life Sciences, NC State University, Raleigh, NC.

December 2002. "In Search of Beef the Best Way", Senepol World.

PRESENTATIONS

Invited Speaker:

Bertone, M. A. 2005. Dung beetles: What are they and why are they important to cattle pastures? Madison County Cattleman's Association. June 12-15. Madison, FL.

Watson, D. W., and **M. A. Bertone**. 2005. Dung beetle activities and implications for grassland ecology and grazing animal management. NRCS Pastureland Ecology Workshop. Center for Environmental Farming Systems. May 25. Goldsboro, NC.

Watson, D. W., and **M. A. Bertone**. 2004. Dung beetle activities and implications for grassland ecology and grazing animal management. NRCS Pastureland Ecology Workshop. Center for Environmental Farming Systems. May 13-22. Goldsboro, NC.

Watson, D. W., and **M. A. Bertone**. 2003. Dung beetle activities and implications for grassland ecology and grazing animal management. NRCS Pastureland Ecology Workshop. Center for Environmental Farming Systems. May 13-22. Goldsboro, NC.

Bertone, M. A., and D. W. Watson. 2002. Dung beetles and their role in North Carolina cattle pastures. Center for Environmental Farming Systems Intern Program. July 15. Goldsboro, NC.

Bertone, M. A. 2002. Dung beetles in the pasture ecosystem. Ecology (BOT 365). Lori Unruh-Snyder, Instructor. May 30. North Carolina State University, NC.

Watson, D. W., and **M. A. Bertone**. 2002. Dung beetle activity and implications for grassland ecology and grazing animal management. NRCS Pastureland Ecology Workshop. Center for Environmental Farming Systems. May 13-17. Goldsboro, NC.

Papers/Displays Presented:

Bertone, M. A., and B. M. Wiegmann. 2007. Estimating a Timescale of Diversification for the Earliest True Flies (Diptera: 'Nematocera'). North Carolina State University Department of Entomology Student Symposium. March 16. Raleigh, NC. [Paper Talk]

Bertone, M. A., B. M. Wiegmann, G. W. Courtney and M. Petersen. 2007. Higher-level Relationships of the Crane Flies (Diptera: Tipulidae sensu lato) Inferred Using Molecular Data. Southeastern Branch Meeting of the Entomological Society of America. March 4-7. Knoxville, TN. [Display]

Bertone, M. A., G. W. Courtney, and B. M. Wiegmann. 2006. Phylogenetic relationships of the nematocerous Diptera inferred from molecular and morphological characters. Annual Meeting of the Entomological Society of America. December 10-13. Indianapolis, IN. [Paper Talk]

Bertone, M. A., B. M. Wiegmann, G. W. Courtney and M. Petersen. 2006. Higher-level Relationships of the Crane Flies (Diptera: Tipulidae sensu lato) Inferred Using Molecular Data. Annual Meeting & Banquet of the North Carolina Entomological Society. Friday, November 17, 2006 [Display]

Bertone, M. A., and B. M. Wiegmann. 2006. Phylogenetic relationships of early fly lineages (Dipter: 'Nematocera') inferred from 28S gene sequences. Southeastern Branch Meeting of the Entomological Society of America. March 5-8. Wilmington, NC. [Display]

Bertone, M. A., and B. M. Wiegmann. 2005. Molecular phylogenetics of the nematocerous Diptera: The earliest diversification of true flies. Annual Meeting of the Entomological Society of America. December 15-18. Fort Lauderdale, FL. [Paper Talk]

Bertone, M. A., and B. M. Wiegmann. 2005. Phylogenetic relationships of early fly lineages (Dipter: 'Nematocera') inferred from 28S gene sequences. North Carolina Entomological Society Annual Meeting. November 18. Raleigh, NC. [Display]

Bertone, M. A., and B. M. Wiegmann. 2005. Molecular phylogenetics of the lower ("nematocerous") Diptera with special reference to the Tipuloidea. North American Dipterists Society Field Meeting. August 5-9. Malheur Field Station, Harney Co., OR. [Paper Talk]

Bertone, M. A., and B. M. Wiegmann. 2005. Molecular phylogeny of the nematoceran Diptera: The earliest diversification of flies. Southeastern Branch Meeting of the Entomological Society of America. March 6-9. Tunica, MS. [Display]

Bertone, M. A., D. W. Watson, and J. T. Green. 2004. Dung beetles (Coleoptera: Scarabaeidae and Geotrupidae) of North Carolina cattle pastures and their seasonal distribution. Southeastern Branch Meeting of the Entomological Society of America. February 15-18. Charleston, SC. [Display]

Bertone, M. A., D. W. Watson, and J. T. Green. 2003. Dung beetles (Coleoptera: Scarabaeidae and Geotrupidae) of North Carolina cattle pastures and their seasonal distribution. Annual Meeting of the Entomological Society of America. October 26-29. Cincinnati, OH. [Paper Talk]

Bertone, M. A., and D. W. Watson. 2003. Dung beetles (Coleoptera: Scarabaeidae and Geotrupidae) in North Carolina cattle pastures: species composition and seasonal distribution. Livestock Insect Workers Conference. June 22-25. Atlantic Beach, NC. [Paper Talk]

Bertone, M. A., D. W. Watson, and J. T. Green. 2003. The role of dung beetles (Coleoptera: Scarabaeidae) in pasture nutrient cycling. NC Cooperative Extension Service, Sustainable Soils Conference. February, 27. Pittsboro, NC. [Display]

Bertone, M. A., D. W. Watson, and J. T. Green. 2002. The role of dung beetles (Coleoptera: Scarabaeidae) in pasture nutrient cycling. NC Crop Protection School. December 9-10. Raleigh, NC. [Display]

Bertone, M. A., D. W. Watson, and J. T. Green. 2002. Dung beetles (Coleoptera: Scarabaeidae and Geotrupidae) in North Carolina cattle pastures: species and seasonality. NC Crop Protection School. December 9-10. Raleigh, NC. [Display]

Bertone, M. A., D. W. Watson, and J. T. Green. 2002. The role of dung beetles (Coleoptera: Scarabaeidae) in pasture nutrient cycling. Annual Meeting of the Entomological Society of America. November 17-20. Fort Lauderdale, FL. [Display]

Bertone, M. A., D. W. Watson, and J. T. Green. 2002. Dung beetles (Coleoptera: Scarabaeidae and Geotrupidae) in North Carolina cattle pastures: species and seasonality. SARE National Conference. Center for Environmental Farming Systems. October 23. Goldsboro, NC. [Display]

Bertone, M. A., J. T. Green and D. W. Watson. 2002. Role of dung beetles in pasture nutrient cycling. Mid-Atlantic Dairy Grazing Conference. July 30-31. Hickory, NC. [Paper Talk]

Watson, D. W., S. Washburn, M. H. Poore, J. T. Green, A. Meier, M. Stringham, and **M. Bertone**. 2002. Use of the electronic fly trap to control horn flies. Mid-Atlantic Dairy Grazing Conference. July 30-31. Hickory, NC. [Display]

HONORS & AWARDS

2007 - Outstanding Student Display Presentation Award (Ph.D. student category), Meeting of the Southeastern Branch Entomological Society of America, Knoxville, TN.

2006 - Student Competition for the President's Prize Honorable Mention (10-Minute Oral Presentation, Session A4), Annual Meeting of the Entomological Society of America, Indianapolis, IN.

2006 - Linnaean Games Branch Champions (Team Captain), Meeting of the Southeastern Branch Entomological Society of America, Wilmington, NC.

2005 - 2nd Place Poster Display Competition, presented by the North Carolina Entomological Society, Raleigh, NC.

2004 - Best Photograph of Insect or Related Arthropod (Immature Insect Category), presented by the North Carolina Entomological Society, Raleigh, NC.

2004 - University Outstanding Teaching Assistant Award (for Entomology 502: Insect Taxonomy and Systematics), presented by the University Graduate Student Association, NC State University, Raleigh, NC.

2004 - Outstanding Student Display Presentation Award (Master's student category), Meeting of the Southeastern Branch Entomological Society of America, Charleston, SC.

2003 - Linnaean Games National Champions (Team Captain), Annual Meeting of the Entomological Society of America, Cincinnati, OH.

2003 - Linnaean Games Branch Champions (Team Captain), Meeting of the Southeastern Branch Entomological Society of America, Baton Rouge, LA.

2002 - Second Place National Linnaean Games, Annual Meeting of the Entomological Society of America, Fort Lauderdale, FL.

2002 - President's Prize, First Place Display Presentation Section D, Annual Meeting of the Entomological Society of America, Fort Lauderdale, FL.

2002 - Linnaean Games Branch Champions, Meeting of the Southeastern Branch Entomological Society of America, Little Rock, AR.

1997 - Eagle Scout Award, Boy Scouts of America

PROFESSIONAL ACTIVITIES & COMMITTEES

Student Affairs Committee (Photo Salon Organizer) 2006-2007. Southeastern Branch of the Entomological Society of America.

Student Affairs Committee (Chair) 2005-2006. Southeastern Branch of the Entomological Society of America.

Museum Committee 2005-2006; **Awards Committee** 2005-2006. NC State Department of Entomology.

Social Committee 2005-2006. Entomology Graduate Student Association (EGSA), NC State Department of Entomology.

NC State University College of Agriculture and Life Sciences **Graduate Student Professional Development Workshop** 2005.

Fund-raising Committee 2004-2005. Entomology Graduate Student Association (EGSA), NC State Department of Entomology.

Vice-President 2002-2003. Entomology Graduate Student Association (EGSA), NC State Department of Entomology.

Fund-raising Committee 2001-2002. Entomology Graduate Student Association (EGSA), NC State Department of Entomology.

SKILLS

Molecular techniques including extracting (phenol/chloroform; Qiagen DNeasy), amplifying (PCR), purifying (Qiagen QIAquick) and sequencing (BigDye terminator) DNA from insects

Proficient in sequence editing (Sequencher), aligning (MacGDE: Genetic Data Environment; Se-Align) and analysis (PAUP*; MrBayes) programs

Proficient in Microsoft applications including Excel, Power Point and Word

Scientific drawing and computer generated illustrating (graphical design)

PROFESSIONAL MEMBERSHIPS

Entomological Society of America

North Carolina Entomological Society

North American Dipterists Society