

# CURRICULUM VITAE

## NEIL A. SPOMER, BCE Intern

### Graduate Research Assistant

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### GOALS

- To serve as a research and development scientist in Urban Pest Management sectors.
- To develop a strong background in insect toxicology, biochemistry, insect physiology, and soil chemistry that will enable me to conduct research and deliver useful information and products to clientele.
- Use expertise to improve existing control technologies and develop novel options and methods for pest management.

### EDUCATION (3.93 Graduate GPA)

- **Ph.D. Entomology. June 2005-Present. University of Nebraska, Lincoln, NE**  
*Pertinent Courses:* Medical and Veterinary Entomology, Biomolecules and Metabolism, Gene Expression and Replication, Biochemistry Laboratory, Experimental Design, Soil Chemistry and Mineralogy, Soil Environmental Chemistry
- **M.S. Entomology. May 2005. University of Nebraska, Lincoln, NE**  
*Pertinent Courses:* Insect Physiology, Insect Ecology, Insect Genetics, Urban and Industrial Entomology, Statistical Methods in Research, Biology and Classification of Insects, Biological Control of Pests, Pest Management Systems, Insect Toxicology
- **B.S. Business Administration-Marketing. May 1999. University of Nebraska, Lincoln, NE**  
*Pertinent Courses:* Business and Professional Communication, Principles of Micro/Macro Economics, Accounting, Public Relations, Marketing Communication Strategies, Sales Force Management, International Economics, International Marketing, Operations and Resource Management, Market Research, Marketing Management, Business Law

### ACADEMIC HONORS/ AWARDS/ SCHOLARSHIP

- Myron H. Swenk Travel Award. University of Nebraska. March 2003
- First Place. Masters Student Poster Competition. ESA-North Central Branch Annual Meeting. Kansas City, MO. March 2004
- Myron H. Swenk Travel Award. University of Nebraska. March 2004
- Fred Clute Memorial Scholarship, Rhodes Chemical Company. May 2004
- Elvis Dickason Memorial Fund Grant-In-Aid, University of Nebraska. March 2005
- Ward A. and Helen W. Combs Scholarship, Presto-X-Company. June 2005
- Elvis Dickason Memorial Fund Grant-In-Aid, University of Nebraska. December 2005
- Student Certification Award, Entomological Society of America. December 2005

- Milton E. Mohr Fellowship. UNL Center for Biotechnology. May 2006
- Ward A. and Helen W. Combs Scholarship. Presto-X-Company. June 2006
- Scholarship in Urban Pest Control, Pi Chi Omega. August 2006
- Myron H. Swenk Travel Award. University of Nebraska. December 2006
- Ward A. and Helen W. Combs Scholarship. Presto-X-Company. May 2007
- Myron H. Swenk Travel Award. University of Nebraska. December 2007

## EMPLOYMENT

- **Graduate Research Assistant** (June 2002 - Present). Department of Entomology, University of Nebraska - Lincoln.  
*Duties:* Radiation Lab Supervisor, Radiation Safety Officer, Preparing purchase orders, Insect rearing and colony maintenance, Field and laboratory research, Data analysis with various statistical techniques, Report preparation
- **Bank Manager** (1999-2002). US Bank N.A., Lincoln, Nebraska  
*Duties:* Interviewing and hiring employees, New-banker training, Scheduling, Payroll, Vault management, Loan origination, Licensed to sell investments and insurance, Promotions director, Coordination with legal department and bank headquarters to resolve customer complaints

## RESEARCH EXPERIENCE

### Ph.D. Research Areas:

- Bioavailability of new termiticides to *R. flavipes* in soils with varying characteristics, organic matter, pH and microbial content.
- Sorption/desorption characteristics of novel termiticides in various soils.
- The effect of varying soil characteristics on spatial foraging territory and patterns.
- Investigation of uptake, transfer, secondary treatment, and internalization of [<sup>14</sup>C] fipronil in *R. flavipes*.
- Aerobic and anaerobic microbial degradation of soil termiticides.

### M.S. Research Project:

*Objectives:* (1) Determine consumption rate of noviflumuron bait and termite mortality at two different temperatures. (2) Evaluate noviflumuron-induced termite mortality associated with trophallaxis utilizing [<sup>14</sup>C] radiolabeled materials.

### Field Projects:

- Efficacy of DeltaGard<sup>®</sup> G, Talstar<sup>®</sup> EZ G, and Viper<sup>®</sup> G against selected nuisance ants in Nebraska when applied as a perimeter treatment. Supported by Bayer Environmental Sciences Inc. Pflugerville, TX 78660
- Performance of Premise<sup>®</sup> termiticide as a perimeter only treatment against the Eastern Subterranean termite, *Reticulitermes flavipes* (Kollar). Supported by Bayer Environmental Sciences Inc. Placentia, CA.
- A multi-year study of thiomethoxam degradation in the sandy loam soils of Nebraska. Supported by Syngenta. Modera, CA.
- Performance of noviflumuron used in the Sentricon<sup>®</sup> Colony Elimination System for structural protection. Supported by Dow AgroSciences. Indianapolis, IN.
- Performance of thiomethoxam against *Reticulitermes flavipes* (Kollar) for structural protection. Supported by Syngenta. Modera, CA.
- Efficacy of fipronil, chlorfenapyr, and Bifenthrin Pro<sup>®</sup> against thief ants in Nebraska when applied as a liquid perimeter treatment. Supported by BASF Corp. Pflugerville, TX 78660

- Degradation of imidacloprid and fipronil in polyethylene tanks in sunlight and shade conditions, analyzed through HPLC. University of Nebraska, Lincoln, NE 68583.
- Performance of acetamiprid as a perimeter only treatment for structural protection. Supported by FMC Corp. Philadelphia, PA.
- A multiyear study evaluating the soil degradation of indoxacarb and an experimental compound in Nebraska. Supported by Dupont Wilmington, DE. (2005)
- Daily emergence patterns of observations on the biology and seasonal abundance of the itch mite, *Pyemotes herfsi* (Oudemans, 1936) in Lincoln, Nebraska in 2005. University of Nebraska, Lincoln, NE. (2005)
- Field performance of the Hex-Pro<sup>®</sup> system with Shatter<sup>™</sup> termite bait. Supported by Dow AgroSciences. Indianapolis, IN. (2006)
- Field evaluation of cypermethrin and pyriproxyfen used as a perimeter treatment to reduce foraging populations of nuisance ant species around structures in Nebraska. Supported by Syngenta. Modera, CA. (2006)
- Efficacy of Indoxacarb applied as a complete perimeter termite treatment with indoor spot application at structures located in Nebraska. Supported by Dupont. Wilmington, DE. (2006)
- Evaluation of Demand EZ (Lambda-cyhalothrin) and Cy-Kick CS (cyfluthrin) used as a perimeter treatment to reduce foraging populations of nuisance urban ant species in Nebraska. Supported by Syngenta. Modera, CA. (2007)
- Effect of temperature on IGR-bait consumption and mortality in subterranean termites. Supported by Whitmire Micro-Gen. St. Louis, MO. (2007)
- Evaluation of a durable bait tube system for control of subterranean termites in the United States. Supported by DOW AgroSciences. Indianapolis, IN. (2007)

#### **Lab Projects:**

- Impact of thiomethoxam on *Reticulitermes flavipes* (Kollar) tunneling and mortality rates. Supported by Syngenta. Modera, CA.
- Degradation of imidacloprid and fipronil in polyethylene tanks in sunlight and shade conditions, analyzed through HPLC. University of Nebraska, Lincoln, NE 68583.
- Evaluated efficacy of chlorfenapyr and metaflumizone gel bait against nuisance ants. Supported by BASF Corp. Pflugerville, TX
- Toxicity of Indoxacarb, Fipronil, Imidacloprid, and chlorantraniliprole at 6, 12, and 24 months post soil treatment. Supported by Dupont Wilmington, DE. (2005)
- Evaluation of the efficacy of chlorfenapyr and metaflumizone gel baits against nuisance ants. Supported by BASF Corp. Pflugerville, TX 78660. (2005)
- Use of radiolabeled termiticides to evaluate direct and passive transfer, uptake, clearance, excretion and uptake from a secondary treatment effect in an experimental foraging arena. (2006)
- Efficacy of FC 222-025 & 224-091 bait on termites under varying temperature regimes and exposure time. Whitmire Micro-Gen Research Laboratories, Inc. (2007)

### **EXTENSION AND OUTREACH**

#### **Public Programs**

- 2002-2006 Presenter, Bug Bash, Folsom Children's Zoo, Lincoln, NE
- 2005, 2007 Termite School, Lancaster Co. Extension, Lincoln, NE
- 2007 The Power of Bugs, Entomology Extension Event, Lincoln, NE

### **Conference/Meeting Participation**

- 2002-2007 Annual Urban Pest Management Conference, Lincoln, NE
- 2002 Entomological Society of America North Central Branch Meeting, East Lansing, MI
- 2003 Entomological Society of America North Central Branch Meeting, Madison, WI
- 2004 Entomological Society of America North Central Branch Meeting, Kansas City, MO
- 2005 Entomological Society of America North Central Branch Meeting, West Lafayette, IN
- 2005 Entomological Society of America Annual Meeting, Fort Lauderdale, FL
- 2006 Entomological Society of America Annual Meeting, Indianapolis, IN.
- 2007 Arthropod Genomics Symposium, Manhattan, KS
- 2007 Entomological Society of America Annual Meeting, San Diego, CA

### **SCIENTIFIC SKILLS AND TECHNIQUES**

- Bioassay design, pesticide residue extraction, gas chromatography, HPLC analysis, scintillation counting, familiarity with DNA extraction, amplification, and gel electrophoresis, radiation training, rearing termite colonies, experimental design, statistical data analysis using SAS programming, CXTFIT, LEACHM

### **PRESENTATIONS**

#### **Professional Meetings:**

- 2003 - ESA North-Central branch oral paper presentation: Efficacy of DeltaGard<sup>®</sup> G, Talstar<sup>®</sup> EZ G and Viper<sup>®</sup> G, Against Selected Nuisance Ants in Nebraska When Applied as a Perimeter Treatment.
- 2004 - ESA North-Central branch poster paper presentation: Effect of Temperature on the Performance of Noviflumuron Against the Subterranean Termite *Reticulitermes flavipes* (Kollar).
- 2005 - ESA North-Central branch oral paper presentation: Temperature Variation Affecting Consumption, Transfer, and Resulting Mortality of Noviflumuron Fed *Reticulitermes flavipes* (Kollar).
- 2005 - ESA North-Central branch oral paper presentation: Controlling Thief and Nuisance Ants with Bifenthrin, Fipronil and Phantom in Urban Settings.
- 2005 - National Pest Management Conference in Nashville, TN: Temperature Enhanced Performance of Noviflumuron Bait Against Subterranean Termites. The paper was authored by Neil Spomer and presented by Dr. Shripat T. Kamble.
- 2005 - ESA Annual Meeting poster presentation: Temperature Effect on Kinetics of [<sup>14</sup>C] Noviflumuron in Eastern Subterranean Termites (Isoptera: Rhinotermitidae).
- 2006 - Nebraska Urban Pest Management Conference. The Effect of Seasonal Temperature Fluctuations on the Efficacy of Termite Baiting.
- 2006 - ESA North-Central branch poster presentation: Daily Emergence Patterns of Observations on the Biology and Seasonal Abundance of the Itch Mite, *Pyemotes herfsi* (Oudemans, 1936) in Lincoln, Nebraska in 2005. (secondary author)
- 2006 - ESA Annual Meeting poster presentation: The Influence of Temperature the Rate of Uptake and Subsequent Horizontal Transfer of [<sup>14</sup>C] Fipronil in Eastern Subterranean Termites (Isoptera: Rhinotermitidae).

- 2007 – Nebraska Urban Pest Management Conference. The Effect of Temperature on Biological Movement of [<sup>14</sup>C] Fipronil in *R. flavipes*.
- 2007 - ESA Annual Meeting poster presentation: Translocation of [<sup>14</sup>C] fipronil from a treated zone into artificial foraging galleries by *Reticulitermes flavipes* (Kollar).

### Departmental Seminars

- 2003 - Acceptance of Plant Biotechnology Products with Direct Consumer Benefits.
- 2004 - Communication and its Expression in a Queenless Ant Species, *Dinoponera quadriceps*.
- 2006 - Bed Bugs: Coming Soon to a Motel Near You.
- 2008 – From Boxcar to Basement: Hobo Spiders, an Emerging Issue?

### **PUBLICATIONS**

- **N.A. Spomer** and S.T. Kamble. 2005. Effect of Temperature on Noviflumuron Performance Against the Eastern Subterranean Termite (Isoptera: Rhinotermitidae). *Sociobiology* 46 (2): 335-348.
- **N.A. Spomer** and S.T. Kamble. 2006. Temperature Effect on Kinetics of Uptake, Transfer, and Clearance of <sup>14</sup>C-Noviflumuron in Eastern Subterranean Termites (Isoptera: Rhinotermitidae). *J. Econ. Entomol.* 99(1): 134-140.
- Husen, T.J., **N.A. Spomer** and S.T. Kamble. 2006. Efficacy of Termidor<sup>®</sup> SC, Phantom<sup>®</sup>, and Bifenthrin<sup>®</sup> Pro Against Thief Ants. *Arthropod Management Tests* v. 31.
- Kamble, S. T., **N. A. Spomer** and T. J. Husen. 2006. Crickets and Their Management. NebGuide G-486. University of Nebraska-Lincoln Extension, Institute of Agriculture and Natural Resources.
- Husen, T. J., S. T. Kamble, **N. A. Spomer**, C. J. DeHeer, D. Branscome and B. Cartwright. 2007. Efficacy of Archer Insect Growth Regulator and Demon<sup>®</sup> WP Against Nuisance (Odorous House, Pavement, and Thief) Ants, 2006. *Arthropod Management Tests* v. 32.
- **Spomer, N. A.**, S. T. Kamble, R. Warriner and R. W. Davis. The Influence of Temperature on the Rate of Uptake and Subsequent Horizontal Transfer of [<sup>14</sup>C] Fipronil in Eastern Subterranean Termites (Isoptera: Rhinotermitidae). (Submitted).
- **Spomer, N. A.**, and S. T. Kamble. Translocation of [<sup>14</sup>C] Fipronil from a Treated Zone into Artificial Foraging Galleries by *Reticulitermes flavipes* (Isoptera: Rhinotermitidae) (Submitted).
- Husen, T. J., **N. A. Spomer**, S. T. Kamble, D. Branscome and B. Cartwright. Efficacy of Demand<sup>®</sup> EZ and Cy-Kick<sup>®</sup> CS Perimeter Treatments Against Selected Nuisance (Odorous House, Pavement, and Thief) Ants, 2007. *Arthropod Management Tests* (Submitted).

### **PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS**

- 2005-Present Board Certified Entomologist Intern, ESA
- 2006-Present Board Certified Entomologist of Mid America
- 2004-Present Pi Chi Omega, National Professional Pest Control Fraternity
- 2002-Present Member Entomological Society of America
- 2004-Present Sigma Xi, The Scientific Research Society
- 2002-Present Member, Bruner Club, Department of Entomology, Univ. of Nebraska.

- 2002-Present Certified Pesticide Applicator, Nebraska

#### **LEADERSHIP AND SERVICE**

- 1999-2002 Bank Manager, US Bank, Lincoln, NE
- 2005-2008 Student Advisory Committee, NCB-Entomological Society of America
- 2005-2008 National Awards Committee, NCB-Entomological Society of America
- 2006-2007 Student Liaison to the Rules Committee , Entomological Society of America
- 2006-2007 National Linnaean Games Committee, Entomological Society of America
- 2005-2006 Graduate Student Representative to the Faculty, Bruner Club, UNL
- 2004-2005 President, Bruner Club, University of Nebraska, Lincoln, NE
- 2003-2004 Treasurer, Bruner Club, University of Nebraska, Lincoln, NE
- 2003-2007 Session Moderator, Urban Pest Management Conference, Lincoln, NE
- 2002-2007 Audio/Visual Coordinator, Urban Pest Management Conf., Lincoln, NE
- 2006-present Radiation Lab Supervisor (RSL), University of Nebraska, Lincoln, NE

#### **REFERENCES**

##### **Dr. Shripat T. Kamble**

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