



Personnel News

Kelsey Pihoda is a new student in the Coats lab.

Wayne Rowley retired from the Entomology Department on the 30th of September, 2004.

Patricia Anderson graduated with honors and received her Ph.D. Patti began an appointment as a post-doctoral research associate with Dr. Jon Tollefson.

Emily Fuerst graduated with an M.S. degree. Emily has taken a position with Kemin Industries in Des Moines.

Johnson Ouma Odera received his Ph.D. and has been appointed Postdoctoral Research Associate with Dr. Elliot Krafur. Johnson will continue to work on the population genetics of tsetse flies.

Bryan Clark graduated with an M.S. degree. Bryan is working in Dr. Joel Coats' lab as a Research Associate I.

Publishing Activity Published/In Press

Coates, B.S., Sumerford, D.V., and Hellmich, R.L. 2004. Geographic and voltinism differentiation among North American *Ostrinia nubilalis* (European corn borer) mitochondrial cytochrome *c* oxidase haplotypes. *J. Insect Sci.*, 4:35, 1-9 (Available online: insectscience.org/4.35)

Coates, B.S., Sumerford, D.V., Hellmich, R.L., and Lewis, L.C. 2004. Partial mitochondrial genome sequences of *Ostrinia nubilalis* and *Ostrinia furnicalis*. *Int. J. Biol. Sci.* 1:13-18.

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Awards and Honors

The 2004 Entomology Student Award for Outstanding Service was awarded to **Dianna Wilkening** for her service to the department and university.

The Herbert Osborn Awards for Professional Performance were awarded to **Betsy Matos** (Ph.D. category) and **Kate Kronback** (M.S. category). The purpose of the *Herbert Osborn Awards for Professional Performance* is to recognize and encourage the development of professional skills beyond academic achievement.

Patricia Anderson won the Entomological Society of America's Student Activity Award. The award is sponsored by Monsanto and recognizes dedicated service to the ESA, the student's academic department, and the community at large while achieving academic excellence. Patti received a \$300 cash prize and plaque recognizing her achievement. She also won the President's Prize 1st place for her ten minute talk, "Effects of Bt-corn anthers on monarch butterfly larvae," at the national ESA meeting in Salt Lake City.

Brian Clark received the Research Excellence Award through the Program in Toxicology.

Greg Courtney was invited to serve on the Editorial Board of *Aquatic Insects: International Journal of Freshwater Entomology*. He was also re-elected Research Associate of the Smithsonian Institution, an appointment that will extend to 2009.

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Awards and honors, continued

Keri Henderson is a Preparing Future Faculty Fellow.

Marlin Rice and colleagues received the American Society of Agronomy Educational Materials Program's Award of Excellence (Computer Software Category) for software on the Soybean Aphid.

Marlin Rice and **Jeffrey Bradshaw** won the Outstanding Extension Display award at the Entomological Society of America's Annual Meeting for "A decision guide for managing bean leaf beetles (Coleoptera: Chrysomelidae) and bean pod mottle virus (Comoviridae: Comovirus)."

Marlin Rice received an Educational Program Award from the American Distance Education Consortium for a Soybean Aphid Management Workshop. The workshop was organized in cooperation with the University of Illinois.

Johnson Odera Ouma won a Research Excellence Award in December 2004 for his research on the population genetics of *Glossina pallidipes*.

Tom Sappington received an ESA Service Recognition award for his work as the Section C Representative on the *Journal of Medical Entomology* Editorial Board, 2000-2004.

Publications, continued

Coates, B.S., Sumerford, D.V., Hellmich, R.L., and Lewis, L.C. (2004) Sequence variation in the cadherin gene of *Ostrinia nubilalis*: A tool for field monitoring. *Insect Biochem Mol Biol* (In Press)

Coates, B.S., Hellmich, R.L., and Lewis, L.C. (2004) Polymorphic CA/GT and GA/CT microsatellite loci for *Ostrinia nubilalis* (Lepidoptera: Crambidae). *Mol Ecol Notes* (In Press)

Gill, J.S., Rowley, W.A., Bush, P.J., Viner, P.J., and Gilchrist, M.J.R. 2004. Detection of human blood in the bat tick *Carios (Ornithodoros) kelli* (Acari: Argasidae) in Iowa. *J. Medical Entomology*. (6):

Jurenka, R.A. (2004). Insect pheromone biosynthesis. *Topics in Current Chemistry* 239, 97-132.

Blomquist, G.J., Jurenka, R.A., Schal, C., and Tittiger, C. 2004. Biochemistry and molecular

biology of pheromone production. In: **Gilbert, L.I., Iatrou, K., Gill, S., (Eds.)**, *Comprehensive Molecular Insect Science*. Elsevier, Oxford, pp 705-752.

Tiawsirisup, S., Platt, K.B., Evans, R., and Rowley, W.A. Susceptibility of *Ochlerotatus trivittatus* (Coq.), *Aedes albopictus* (Skuse), and *Culex pipiens* (L.) to West Nile virus infection. *J Vector-Borne and Zoonotic Diseases*. Sep 2004, Vol. 4, No. 3: 190-197.

Tiawsirisup, S., Platt, K.B., Evans, R.A., and Rowley, W.A. A comparison of West Nile virus transmission by *Ochlerotatus trivittatus* (Coq.), *Culex pipiens* (L.) and *Aedes albopictus* (Skuse). *J Vector-Borne and Zoonotic Diseases* 2005 (In press)

Tiawsirisup, S., Platt, K.B., Tucker, B.J., Evans, R.A., and Rowley, W.A. The potential role of the eastern cottontail rabbit (*Sylvilagus floridanus*) in enzootic West Nile virus cycles. *J Vector-*



Borne and Zoonotic Diseases (Accepted pending minor revision)

Gooding, R.H. and **Krafsur, E.S.** 2005. Tsetse genetics. *Annual Review of Entomology* 50: 101-123.

J.D. Oleson, Y-L. Park, T.M. Nowatzki, and J.J. Tollefson. Node-Injury Scale to Evaluate Root Injury by Corn Rootworms (Coleoptera: Chrysomelidae). *Journal of Economic Entomology* (in press).

J. Zhu and K. Park. 2004. Methyl salicylate, a soybean aphid induced plant volatile, attractive to its predatory insect, *Coccinella septempunctata*. *Journal of Chemical Ecology* (in press)

Kim, K.S. and T.W. Sappington. 2005. Polymorphic microsatellite loci from the western corn rootworm (Insecta: Coleoptera: Chrysomelidae) and cross-amplification with other *Diabrotica* spp. *Mol. Ecol. Notes* (In Press).

G. Schultz, E. Simbro, J. Belden, J. Zhu, and J. Coats. 2004. Catnip, *Nepeta cataria* (Lamiaceae) - A Closer Look: Seasonal Occurrence of Nepetalactone Isomers and Comparative Repellency of Three Terpenoids to Insects. *Environmental Entomology*, v.33(6), 1562-9.

Swevers, L., A.S. Raikhel, **T.W. Sappington**, P. Shirk, and K. Iatrou. 2004. Vitellogenesis and post-vitellogenic maturation of the insect ovarian follicle. In: L.I. Gilbert, S. Gill, and K. Iatrou (eds.), *Comprehensive Insect Molecular Biology*, Vol. 1. Elsevier, NY.

EXTENSION, EDUCATIONAL, TECHNICAL PUBLICATIONS

Baute, T., A. Tenuta, A. Schaafsma, F. Meloche, **M.E. Rice**, M. Roy, and M. Sears. 2004. A growers handbook: controlling corn insect pests with Bt corn technology. Second Edition. Canadian Corn Pest Coalition. Ridgeway, Ontario. 24 pg.

Undersander, D., F.A. Gray, K. Kelling, and M.E. Rice. 2004. Alfalfa analyst, 3rd edition. National Alfalfa Alliance, Kennewick, WA.

Grants Awarded

Carol Pilcher received \$26,233 from the North Central Region IPM Center for “Developing Standardized Measurement Tools for Program Evaluation.”

Wayne Rowley and **Kenneth Platt** received a 3-year grant (\$750,000) from the Centers for Disease Control and Prevention (CDC) to study the role of *Ochlerotatus triseriatus* and *Aedes vexans* in the Ecology of West Nile Virus.

Junwei Zhu received a 2-year award for \$499,223 from NSF for the study on Implementation of Sex-Pheromone based system to suppress soybean aphid population (expected starting date March 2005).

Bryony Bonning received \$102,476 from the Environmental Protection Agency to conduct research on Cost-Effective Production of Baculovirus Insecticides.

Greg Courtney received \$54,402 from North Carolina State University for research on Building the Dipteran Tree: Cooperative Research in Phylogenetics and Bioinformatics of True Flies (Insecta: Diptera).

W. Allen Miller and **Bryony Bonning** received \$350,000 from the Department of Agriculture to conduct research on Aphid Resistance in Plants Mediated by Luteovirus Structural Proteins and Intrahemocoelic Toxin.

Jon Tollefson and **Jim Oleson** received \$12,000 from Agriliance, L.L.C., \$2,000 from Helena Chemical Company, \$4,000 from Trace Chemicals, INC, and \$27,000 from Amvac Chemical Corporation to conduct Corn Insect research.



John Hill and Marlin Rice were awarded \$51,248 from the Iowa Soybean Promotion Board for research on the Integrated Control of Bean Leaf Beetles and Bean Pod Mottle Virus in Soybeans.

Palle Pedersen, Richard Cruse, Michael Owen, Jerry DeWitt, Greg Tylka, and John Sawyer received \$30,403 from the Iowa Department of Agriculture and Land Stewardship for Educating Growers About Living Mulch Systems for Grain Crop Protection.

Ken Platt and Wayne Rowley were awarded \$250,000 from the Department of Health and Human Services to conduct research on *Aedes vexans*, *Oc. Trivittatus* and the Ecology of WNV.

Bryony Bonning received \$85,000 from the Department of Agriculture for research on Basement Membranes, Baculovirus Dissemination and the Insect Immune Response.

Mark Shour was awarded \$22,000 from the Iowa Department of Natural Resources for the Study of Invasive Pest Emerald Ash Borer in the State of Iowa.

Jon Tollefson received \$4,400 from the Department of Agriculture for the Development of a Corn Rootworm Areawide Management Program in Iowa.

Jon Tollefson received \$115,097 from the Department of Agriculture for United States, Serbia and Montenegro Dialogue on *Diabrotica* Research and Management.

Matt O'Neal, Marlin Rice, and Palle Pedersen were awarded \$70,000 from the Iowa Soybean Promotion Board to conduct research on Combining Soybean Aphid and Bean Leaf Beetle Management for Iowan Soybean Production.

Jon Tollefson was awarded \$59,400 from the Department of Agriculture for the Young Scientist to Scientist Program.

Jon Tollefson received \$15,000 from the Department of Agriculture in a research support agreement.

Mark Shour received \$10,000 from the Iowa Department of Natural Resources for Supporting and Expanding Forestry Entomology Education and Technical Assistance in the State of Iowa.

Stanley Johnson and Jerry DeWitt received \$35,000 from the Department of Agriculture for a National Program to Mainstream Sustainable Agriculture Information.

Jon Tollefson was awarded \$67,000 in a research support agreement from the Department of Agriculture.

Grant Proposals Submitted

Junwei Zhu and Gail Nonnecke submitted a proposal to USDA for research on reducing damages by Asian lady beetles in vineyards, orchards and urban residential areas via environment-friendly methods (\$194,146).

Junwei Zhu and Wayne Rowley submitted two proposals (concept letters) to KECK Foundation on the development of attractant lures for more efficient arbovirus surveillance and control of mosquito species in Iowa (\$176,426) and R.J. Carver Trust on the development of a semiochemical-based system for tick control using push and pull strategies (\$175,826).

Sappington, T.W., U. Stolz, M.J. Bagley, and R.L. Hellmich. "Spatial and Temporal Characterization of Gene Flow Among European Corn Borer Populations Using Microsatellite Markers." \$398,636/3yr, NRI, Integrative Biology of Arthropods and Nematodes program.

Mark Gleason, Gail Nonnecke, Joe Colletti, Donald Lewis, and William Edwards submitted a proposal to the Department of Agriculture for



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\$99,951 for the project, Widening the Road: Building Our Global Awareness and Agricultural Competitiveness by Partnering with Costa Rican Educators and Entrepreneurs.

Bryony Bonning submitted a proposal to the North Central Soybean Research Program for research on Soybean Resistance to Aphids and Other Insect Pests for the amount of \$348,236.

Jerry DeWitt submitted a proposal to the University of Nebraska for \$50,000 for the Iowa 2005 State Sustainable Agriculture Plan of Work.

Forrest Nutter, Mark Gleason, Alison Robertson, Elwynn Taylor, and Matt O'Neal submitted a proposal to the University of Illinois for \$127,500 for Integrated Management of the Stewart's Disease - Corn Flea Beetle Pathosystem.

Matt O'Neal submitted a proposal to Michigan State University for \$50,980 for his research project, "Are the Benefits of Reduced-Risk Insecticide Limited by the Current Agroecosystem?"

Joel Coats submitted a proposal to the University of Iowa to conduct research on the Role of Antibiotic Residues in Promotion and Maintenance of Antibiotic Resistance in the Environment for \$24,479.

Heidi Asbjornsen, Richard Cruse, Matthew Helmers, Catherine King, Matthew Liebman, Jean Opsomer, Lisa Schulte, Matt O'Neal, and Silvia Secchi submitted a proposal to the National Science Foundation for research on the Biocomplexity of Integrated Perennial-Annual Systems for \$99,998.

John Hill and Marlin Rice submitted a proposal to the North Central Soybean Research Program for \$22,500 to conduct research on the Development of Management Strategy to Control Major Soybean Virus Diseases in North Central States.

Out-of-state Travel

ESA MEETING

The annual meeting of the Entomological Society was held in Salt Lake City, UT, November 13-18. The department was well represented. Attendees included: **Jeff Bradshaw, Joel Coats, Greg Courtney, Matt O'Neal, Carol Pilcher, Tom Sappington, Nick Schmidt, and Jon Tollefson.** Presenters included: **Patti Anderson, Richard Hellmich, Kevin Johnson, Betsy Matos, Megan O'Rourke, and Gretchen Schultz.** **Marlin Rice** served on the Governing Board of the Society.

Greg Courtney, Vladimir Blagoderov, and Matt Petersen visited the southern Appalachians from 3-7 December. The trip was to meet with colleagues from North Carolina State University and to collect specimens for a National Science Foundation (Assembling the Tree of Life) project.

Richard Hellmich participated on a Peer Review Panel for "Tier-Based Testing for Potential Effects of Introduced Traits on Non-Target Invertebrates in the Context of Regulatory Risk Assessments" sponsored by USDA, APHIS, Biotechnology Regulatory Services and EPA, OPP, Biopesticides and Pollution Prevention Division.

Russell Jurenka traveled to Beltsville, MD, in September for a meeting with the BARD grant panel managers.

Wayne Rowley and Sara Erickson attended the Annual Meetings of the American Society of Tropical Medicine and Hygiene in Miami, FL, November 6-11. Sara presented a paper on *Oc. triseriatus* and West Nile virus.

Richard Hellmich and Tom Sappington represented Iowa at the annual NCR-148 Technical Committee (Migration and Dispersal of Agriculturally Important Biotic Agents) meeting in Tuscon, AZ, October 17-19.



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Tom Sappington presented a seminar to the Department of Entomology, University of Missouri, Columbia, MO, December 2-3.

Tom Sappington co-organized and moderated the International Conference on *Diabrotica* Genetics in Kansas City, MO, December 12-15.

Mark Shour traveled to Kansas City, KS, as an invited speaker for the U.S. Environmental Protection Agency's Healthy Indoor Environments Conference, September 23.

Mark Shour traveled to Novi, MI, to attend the Emerald Ash Borer Symposium, October 13-15.

Mark Shour traveled to Orlando, FL, to attend the Insect Borer Conference, November 3-5.

Mark Shour traveled to Omaha, NE, as an invited speaker for the Nebraska State Pest Control Association, December 10.

Junwei Zhu participated in the annual meeting of Florida mosquito control Association in Orlando, FL, November 13-17.

Jerry DeWitt traveled to Washington, DC, for the National IPM Council Meeting, September 11-18.

Joyce Hornstein attended the Pesticide Safety Educators training in Raleigh, NC, September 19-22.

Vladimir Blagoderov worked in the collection of Natural History Museum at the University of Kansas in Lawrence, September 30-October 2.

Jeff Bradshaw traveled to Carbondale, IL, October 2-5, to meet with a specialist on the assassin bug to discuss a new species of this insect.

Jerry DeWitt traveled to Washington, DC, to work on the National Sustainable Agriculture Program at the USDA, September 30-October 11.

Huarong Li took a professional business trip to the University of California, Berkeley, October 11-17.

Bryony Bonning presented a seminar and met with faculty at the University of Nebraska, Lincoln, October 12-13.

Matt O'Neal traveled to East Lansing, MI, to attend the NCR-125 Meeting at Michigan State University, October 13-16.

Bryan Clark, Joel Coats, and Keri Henderson presented a research platform and poster at the 4th World Congress of the Society of Environmental Toxicology and Chemistry in Portland, OR, November 13-19.

Jerry DeWitt presented a paper at the American Society of Agronomy Meeting in Denver, CO, and then traveled to Grand Junction, CO, to attend the Board Meeting of the Organic Farming Research Foundation, November 3-9.

Jerry DeWitt worked on the USDA Plant Protection Portfolio in Washington, DC, November 14-18.

Jerry DeWitt traveled to Kirksville, MO, to present a seminar on Sustainable Agriculture at Truman State University, November 19.

Donald Lewis and Laura Jesse were presenters at the Annual South Dakota State University Pest Control Operators Shortcourse in Brookings, SD, November 3-4.

Joel Coats served as an external consultant for an NIH-USDA research project in Washington, DC, November 2-4.

Greg Courtney, Vladimir Blagoderov, and Matt Petersen traveled to Franklin, TN, to conduct fieldwork at Coweeta Hydrological Laboratory, December 3-7.

Jerry DeWitt met with a Sustainable Dairy Farmer in Missouri and then traveled to Grand Island, NE, to give a presentation to the Nebraska Farmers Union at their Annual Meeting, December 1-5.



Marlin Rice attended the Soybean Aphid Research and Extension Meeting with the North Central States Entomologists in Chicago, IL, December 2.

Matt O'Neal traveled to Chicago, IL, for a meeting to develop a regional recommendation for soybean aphid management, December 2.

Marlin Rice traveled to West Lafayette, IN, as an invited speaker at Crop Production and Protection Conference at Purdue University, December 13-14.

Jon Tollefson participated in the International Conference of Diabrotica Genetics in Kansas City, MO, December 11-14.

Joel Coats participated in a USDA-APHIS non-target organism risk assessment Review Panel in Washington, DC, December 15, and then traveled to Nashville, TN, to serve on the Scientific Advisory Panel of EcoSmart Technologies, Inc., December 16-17.

International Travel

Jon Tollefson was the keynote speaker at the Plant Protection Society of Serbia's 5th International Congress of Plant Protection celebrating the Society's 50th Anniversary in Zlatibor, Serbia, November 19-25.

Junwei Zhu traveled to Beijing, China, October 13-21, to collaborate on a biological control project.

Rebecca Brown took a collection trip to Madagascar, October 5-19.

Joel Coats traveled to Budapest, Hungary, September 8-13, to give an invited talk and to participate in a workshop on Phytoremediation: Environmental and Molecular Biological Aspects.

Richard Hellmich was invited to present a talk at the 8th International Symposium on the Biosafety of Genetically Modified Organisms in Montpellier, France, September, 2004.

Richard Hellmich was invited to present a talk, "Bioseguridad y Plantas Transg_cas," at the Expo AgroAlimentaria Guanajuato 2004 in Irapuato, Mexico, in November.

Jon Tollefson traveled to Belgrade, Serbia, September 17-24, to participate in the University of Novi Sad Sustainable Ag Conference and met with the Plant Protection Council of Serbian Ministry of Agriculture.

Greg Courtney was in Canberra, Australia, in early September, where he worked with colleagues from the Australian National Insect Collection and collected flies in adjacent parts of New South Wales. He then traveled to New Zealand on 8 September, where he visited until 30 September. The New Zealand visit included work with colleagues from the University of Canterbury, the Otago Museum, and the National Institute of Water and Atmospheric Research, and field work on both South- and North Islands. The Australia / New Zealand trip was part of a National Science Foundation (Assembling the Tree of Life) project.

Junwei Zhu presented a talk on the advancement of urban pest control in Beijing CDC, China (Oct. 22-26).

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