



# IOWA STATE UNIVERSITY

## Department of Entomology

# Newsletter

## January-April 2006

### Personnel News

Greg Courtney was elected to serve as the next Chair of the Ecology and Evolutionary Biology Interdepartmental Graduate Program. His appointment is for three years, commencing on 1 July, 2006.

#### INCOMING STUDENTS

Ms. **Grishma Parikh**, Ph.D. candidate (Molecular, Cellular, and Developmental Biology Program), has chosen to study mosquito-borne diseases under the supervision of Lyric Bartholomay.

### Recently Published

**Choi, M.-Y. and R. Jurenka.** 2006. C75, a fatty acid synthase inhibitor, inhibits feeding activity and pheromone production in a moth, *Helicoverpa zea*. *Journal of Asia-Pacific Entomology* 9: 43-48.

**Choi, M.-Y. and R. Jurenka.** 2006. Role of extracellular  $Ca^{2+}$  and Calcium Channel activated by a GPCR regulating pheromone production in *Helicoverpa zea*. *Annals of Entomological Society of America* (in press).

**Courtney, G.W.** 2006. Review of "Yeates, D.K. and B.M. Wiegmann (editors). 2005. *The Evolutionary Biology of Flies*. Columbia University Press, New York. 430 pp." *Annals of the Entomological Society of America* (in press).

**Courtney, G.W. and R.W. Merritt.** 2006. Aquatic Diptera: Part one: Larvae of aquatic Diptera. In R.W. Merritt, K.W. Cummins, & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. Fourth Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa. (in press).

**Courtney, G.W., R.W. Merritt, K.W. Cummins, and D.W. Webb.** 2006. Ecological and distributional data for larval aquatic Diptera. *in* R.W. Merritt, K.W.

### Awards and Honors

**Rebecca Brown** was awarded the 2006 Henry and Sylvia Richardson Research Incentive Grant for her proposal *Net-winged midges (Diptera: Blephariceridae) of Australia, with emphasis on Edwardsininae*.

**Lyric Bartholomay and Brendon Reardon** were accepted as Full Members of Sigma Xi, The Scientific Research Society, Ames, IA chapter.

**Joel Coats** received the International Award for Research in Agrochemicals at the American Chemical Society national meeting held in Atlanta, March 25-29.

**Wendy Sparks** was accepted into the ISU Preparing Future Faculty Program.

Cummins, & M.B. Berg (editors). *An Introduction to the Aquatic Insects of North America. Fourth Edition*. Kendall / Hunt Publishing Co., Dubuque, Iowa. (in press).

**Jacobson, A.J., J. Phasuk, J. Chanpaisaeng, and G.W. Courtney.** 2006. The net-winged midges (Diptera: Blephariceridae) of Khao Yai National Park, Thailand, with description of a new species of *Blepharicera* Macquart. *Aquatic Insects* 28: 67-78.

**Jurenka, R.** 2005. Book Review: Morgan, E. D., 2004. *Biosynthesis in Insects*. RSC Publishing, 199 p. *Eco-science* 12: 584.

**Kim, K.S., P. Cano-Ruís, and T.W. Sappington.** 2006. *Forum*: Using genetic markers and population assignment techniques to infer origin of boll weevils (Coleoptera: Curculionidae) unexpectedly captured near an eradication zone in Mexico. *Environ. Entomol.* (in press)



Krafsur, E.S. and Endsley, M.A. 2006. Shared microsatellite loci in *Glossina morsitans sensu lato* (Diptera: Glossinidae). *Journal of Medical Entomology* 43: 640-642.

Marquez, J.G., Malele, I.I., Ouma, J.O., and Krafsur, E.S. *Glossina swynnertoni* Austen: effective population size and gene flow estimated by mitochondrial diversity. *Bulletin of Entomological Research* 96: (in press).

Ouma, J.O., Marquez, J.G., and Krafsur, E.S. 2006. Microgeographic breeding structure of the tsetse fly, *Glossina pallidipes* (Diptera: Glossinidae) in southwestern Kenya. *Journal of Medical and Veterinary Entomology* 20: 138-149.

Park, Y.-L. and J.J. Tollefson. 2006. Spatial distributions of corn rootworm (Coleoptera: Chrysomelidae) eggs and larvae: Implications for sampling. *J. Kan. Entomol. Soc. In Press*.

Phasuk, J., J. Chanpaisaeng, and G.W. Courtney. 2006. A preliminary report of black flies (Diptera: Simuliidae) of Khao Yai National Park, Thailand. *Thai Journal of Agricultural Science*. (in press).

Reardon, B.J., D.V. Sumerford, and T.W. Sappington. 2006. Dispersal of newly-eclosed European corn borer moths (Lepidoptera: Crambidae) from corn into small-grain aggregation plots. *J. Econ. Entomol.* (in press).

Rozkošný, R. and G.W. Courtney. 2005. New records of *Ptecticus* species from Thailand including description of a new species (Stratiomyidae, Diptera). *Acta Zoologica Academiae Scientiarum Hungaricae* 51: 343-348.

Terblanche, J.S., Kloke, C.J., Krafsur, E.S., and Chown, S.L. 2006. Phenotypic plasticity and geographic variation in thermal tolerance and water loss of the tsetse fly *Glossina pallidipes* (Diptera: Glossinidae): implications for distribution modeling. *American Journal of Tropical Medicine & Hygiene* 74: 786-794.

Zhu, J., A. Zhang, K.-C. Park, T. Baker, B. Lang, R. Jurenka, J.J. Obrycki, W.R. Graves, J.A. Pickett, D. Smiley, K.R. Chauhan, and J.A. Klun. 2006. Sex pheromone of the soybean aphid, *Aphis glycines* Matsumura, and its potential use in semiochemical-based control. *Environmental Entomology* 35: 249-257.

## Out-of-state Travel

Lyric Bartholomay traveled to the laboratory of Dr. Bruce Christensen in Madison, WI, to rendez-vous with a collaborator from the University of Texas Medical Branch in Galveston, TX, for the purpose of conducting experiments related to the West Nile Virus infection in mosquito vectors March 12-14.

Bryony Bonning attended the symposium of the Consortium for Plant Biotechnology Research in Washington, DC, to present a research proposal idea February 28-March 2. She then presented seminars for the Department of Entomology at the University of California - Riverside on March 13 and at the Ohio State University on April 18.

Joel Coats traveled to Washington, DC, January 5-8 to participate in the Long-Range Planning Committee meeting as a part of the Agrochemicals Division of the American Chemical Society. In late January, Coats also took a trip to the Arbor Day Farm in Nebraska City to participate in the Heartland Region Pesticides Best Management Practices Roundtable Workshop. He took a short trip to Kansas City to attend a banquet at the University of Missouri on February 24 and then to present at the Kenneth A. Spencer Award Symposium on February 25.

Joel Coats received the International Award for Research in Agrochemicals at the American Chemical Society national meeting in Atlanta, March 25-29. He was also there to present a lecture and accompany three graduate students, Dingfei Hu, Kelsey Prihoda, and Gretchen Schultz, who were presenting talks in the Young Scientist Symposium in the Agrochemicals Division.

Gregory Courtney traveled to Duke University, Durham, NC, from 10-13 March, where he participated in a National Science Foundation Workshop (Assembling the Tree of Life program). He spent March 22-29 collecting in the Southern Appalachian Mountains and visiting the University of Tennessee where he presented a seminar titled, *Biosystematics of torrenticolous flies, with emphasis on net-winged midges (Diptera: Blephariceridae)*. Amanda Jacobson and alum Greg Curler also participated in the research collection trip.



**Russell Jurenka** traveled to Beltsville, MD, on March 1 to attend a Binational Agriculture Research and Development grant panel meeting.

**Gerardo Marquez** was invited to attend a Stable fly meeting in Amarillo, TX, on January 4-6.

**Beth Minner** and **Laura Jesse** visited St. Louis April 2-7 for the National Integrated Pest Management Symposium. **Mark Shour** also attended and presented posters, while **Matt O'Neal** presented results from Iowa State University sponsored projects. **Carol Pilcher** gave two presentations, presented two posters, and acted as a member of the local arrangements committee.

**Matt O'Neal** gave a seminar on April 17 to the Entomology Department at the University of Nebraska - Lincoln.

**Matt Petersen** left January 19<sup>th</sup> for a two-month research opportunity at North Carolina State University, Raleigh in the lab of Dr. Brian Wiegmann. He presented a talk on March 1 titled, "Community Structure of a Southeastern Montane Crane Fly Population" at the annual conference of the Association of Southeastern Biologists in Gatlinburg, TN.

**Carol Pilcher** traveled to Nebraska City January 23-25 to attend the Heartland Pesticides Best Management Practices Roundtable and interact with individuals from the Water Quality Program. At the end of the month, she attended the National IPM Evaluation Subcommittee Meeting and worked on the national program evaluation in Chicago. Carol also attended PME meetings and worked on future IPM Center Evaluation efforts in Ames from February 7-10. A few days later, she headed to Washington, DC, to attend the National IPM Center Mid-Term Review to present data from a national evaluation survey of these centers.

**Marlin Rice** served as an outside reviewer for a thesis defense at the University of Guelph in Buffalo on January 2-3.

**Wayne Rowley** presented an invited address in San Francisco at the annual Center for Disease Control's West Nile Virus meeting, February 22-25. He also attended the joint meetings of the International Symposium on Emerging Diseases and the International Symposium on Emerging Infectious Diseases in Atlanta, March 18-25.

**Tom Sappington** was invited to discuss possibilities for funding a large coordinated project on *Diabrotica* genetics research with USDA-CSREES and NSF program leaders, in Washington, DC, February 22-23. He visited Pennsylvania State University and ZedX, Inc., in State College, PA, March 2- 21 to plan experiments with collaborating scientists. He also visited Washington, DC, April 3-6 to serve on a USDA NRI grant review panel.

**Mark Shour** was invited by the Kansas Arborist Association to give a presentation on insect pests of trees January 11<sup>th</sup>. He then traveled to Lincoln, NE to present two integrated pest management talks to the Urban Pest Management Conference on January 25-26. April 4-6, Mark attended the National IPM Symposium in St. Louis, MO, where he presented two posters. He was also an invited speaker on school integrated pest management for a regional Tribal meeting in Lawrence, KS, on April 11 and 12.

**Jon Tollefson** went to Orlando from February 3-7 to participate in the annual region departmental administrators' technical meeting.

**John VanDyk** traveled to Washington, DC, March 1-2 to participate in a workshop on the Entomology Digital Library project. The meeting was hosted by the Entomological Foundation.

**Vera Williams** traveled to Vandalia, MO, on March 20 and 21 to meet with the chief water plant operator and city administrator to discuss a watershed project. She met with the watershed group again April 10-12.

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## International Travel

**Richard Hellmich** participated in the NC-205 Regional Committee, "Ecology and Management of European Corn Borer and Other Lepidopteran Pests of Corn," held in Toronto, Ontario, Canada, January, 2006.

**Richard Hellmich** was invited to present a talk titled, "Establishing Genetic Foundations for Managing and Monitoring European Corn Borer Resistance to Transgenic Bt Maize" at the Resistance Management of Bt-Maize in Europe Workshop, which was held in Aachen, Germany, in April. He was also invited to participate in a workshop titled, "Nontarget Risk Assessment and Regulation," held in Engelberg, Swit-



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zerland in May. The workshop was sponsored by the International Organization for Biological Control, West Palearctic Regional Section.

**Elliot Krafur** was invited to Montpellier, France for the first week of February to give talks and conduct aspects of a workshop for trypanosomiasis research workers.

**Tom Sappington** attended and presented research progress at the joint NC-205 (European corn borer) and NCR-46 (corn rootworm) technical committee meetings, held in Toronto, Canada on January 23-27.

**Jon Tollefson** escorted ISU mentors of Borlaug Fellows (young scientists from Serbia and Montenegro and Bulgaria) to their fellows' home institutions in Belgrade and Novi Sad, Serbia; Podgorica, Montenegro; and Sophia and Stara Zagora, Bulgaria to present the Borlaug visiting scientist program. The key-note speakers in both the formal programs in Serbia and Montenegro and Bulgaria were the U.S. Ambassadors to the respective countries. He also acted as an official representative for the Northcentral Corn Rootworm Technical Committee (NCR-46) held in Toronto, Canada January 24-27.

**John VanDyk** traveled to Vancouver, Canada to participate in the Open Source Content Management System Summit February 7-9. John led a workshop on "Actions and Workflows."

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## Other

### *North Central ESA meeting*

**Jeff Bradshaw**, **Ben Kaeb**, and **David Dorhout** presented research findings to a professional audience of the North Central Branch meeting of the Entomological Society of America held March 25-29 in Bloomington, IL. **Tom Sappington** gave an invited talk. **Matt O'Neal**, **Jon Tollefson**, and **Marlin Rice** also attended the meeting.

**Mark Shour** hosted a visit from the US-EPA, Region VII on February 22-23, to view school IPM, landscape IPM, athletic field IPM, and IPM in Tribal Schools.