



## Awards and Honors

**Jason Belden** was awarded second place in the 2000 Society of Environmental Toxicology and Chemistry best Student Poster Presentation Competition for his paper "Comparison of Biological and Chemical Endpoints for Evaluating the Success of Phytoremediation of Pesticide-Contaminated Soil" with co-authors J.R. Coats and T.A. Phillips.

**Bryony Bonning** was elected to the faculty of the Iowa State University Interdepartmental Program in Toxicology.

**Susan Chapman** was awarded a Caine Bogle Family Graduate Fellowship from the College of Agriculture for the 2001-02 academic year.

**Joel Gibson** was awarded the 2001 Department of Entomology Henry and Sylvia Richardson Research Incentive Grant. The award of \$1000 will help support field research in Thailand.

**Rick Hellmich** was re-elected chair of the regional research committee on Ecology and Management of European Corn Borer and Other Stalk-Boring Lepidoptera (NC205).

**Tim Nowatzki** was awarded first place prize in the North Central Branch Entomological Society of America 2001 student oral presentation competition (Ph.D. category). Tim presented "The Ultimate Model for Predicting Corn Rootworm Emergence in Iowa" with co-author **Jon Tollefson**.

**Yong-Lak Park** was awarded first place prize in the Student Poster Presentation Competition (Ph.D. category) at the North Central Branch Entomological Society of America meeting for his poster, "Spatial and Temporal Distribution of Corn Rootworm Beetles and Correlations with Biotic and Abiotic Factors" with co-author **Jon Tollefson**.

**Marlin Rice** received the 2001 Outstanding Achievement in Extension Award from the Iowa State University College of Agriculture.

## New Arrivals

**Leona Brown** will be working as a part time accountant with Julie McKay and Julie Burzon during the next five months. Leona worked previously in Animal Science and at the University Bookstore.

**Susan Chapman** joined the Obrycki lab as an MS student in January. She will be working on investigation of interspecific interactions among native and invasive coccinellid species.

## Publishing Activity

**Baker, M.D. and E.S. Krafur.** 2001. Identification and properties of microsatellite markers in tsetse flies *Glossina morsitans sensu lato* (Diptera:Glossinidae). *Molec. Ecol.* (in press).

**Bruck, D.J. and L.C. Lewis.** Adult *Diabrotica* spp. (Coleoptera:Chrysomelidae) Infection at emergence with indigenous *Beauveria bassiana* (Deuteromycotina:Hyphomycetes). *J. Invertebr. Pathol.* (in press).

**Courtney, G.W.** 2002. Blephariceridae. In Goodman, S.M. & J.P. Benstead (editors). *The Natural History of Madagascar*. University of Chicago Press.

**Courtney, G.W.** 2002. Blephariceridae. In Springer, M., P. Hanson, & A. Ramírez (editors). *Los Artrópodos y Moluscos de Agua Dulce de Costa Rica*. University of Costa Rica.

**Grodnitzky, J.A. and J.R. Coats.** 2001. Using classic and quantum parameters to determine monoterpenoids' insecticidal QSARs. In *Synthesis and Chemistry of New Agrochemicals*, D.R. Baker, G.P. Lahm, G. Basarab, and J.G. Fenyves, eds., Oxford Press (in press).



- Harrison, R.L.** and **B.C. Bonning**. 2001. Use of proteases to improve the insecticidal activity of baculoviruses. *Biol. Control* 20:199-209.
- Krafsur, E.S.**, M.A. Endsley, D.L. Wohlford, N.T. Griffiths, and R. Allsopp. 2001. Genetic differentiation of *Glossina morsitans centralis* populations. *Insect Molec. Biol.* (in press).
- Lam, W.F.**, **L.P. Pedigo**, and P.N. Hinz. 2001. Population dynamics of bean leaf beetles (Coleoptera:Chrysomelidae) in central Iowa. *Environ. Entomol.* (in press).
- Lewis, L.C.**, **D.J. Bruck**, and **R.D. Gunnarson**. On-farm evaluation of *Beauveria bassiana* for control of *Ostrinia nubilalis* (Lepidoptera:Crambidae) in Iowa (U.S.A.). *BioControl* (in press).
- Lewis, L.C.**, **D.J. Bruck**, **R.D. Gunnarson**, and **K.G. Bidne**. Assessment of plant pathogenicity of endophytic *Beauveria bassiana* in Bt transgenic and non-transgenic corn. *Crop Science* (in press).
- Lewis, R.E.** 2001. A taxonomic review of the North American genus *Orchopeas* Jordan, 1933, (Siphonaptera:Ceratophyllidae:Ceratophyllinae). *J. Vector Ecol.* 25(2):164-189.
- Lewis, R.E.** and G.E. Haas. A review of the North American *Catallagia* Rothschild, 1915, with the description of a new species (Siphonaptera: Ctenophthalmidae:Neopsyllinae:Phalacroscyllini). *J. Vector Ecol.* 26(1): (in press).
- Lewis, R.E.** and G.E. Haas. On the subgenus *Ceratophyllus* (*Celeophilus*) Smit, 1983, with a redescription of its two species (Siphonaptera:Ceratophyllidae:Ceratophyllinae) *Proc. Entomol. Soc. Washington* (in press).
- Lewis, R.E.** and T.D. Galloway. A taxonomic review of the North American genus *Ceratophyllus* Curtis, 1832 (Siphonaptera:Ceratophyllidae:Ceratophyllinae). *J. Vector Ecol.* (in press).
- Marquez, J.G.**, R.D. Moon, and **E.S. Krafsur**. 2001. Genetic differentiation among populations of house flies (Diptera:Muscidae) breeding at a multiple-barn, egg-layer facility in central Minnesota. *J. Med. Entomol.* 38:218-222.
- Moorman, T.B., J.K. Cowan, E.A. Arthur, and **J.R. Coats**. 2001. Organic amendments to enhance herbicide biodegradation in contaminated soils. *Biology and Fertility of Soils* (in press).
- Obrycki, J.J.**, N.C. Elliott, and K.L. Giles. 2000. Coccinellid introductions: potential for and evaluation of non-target effects. pp. 127-145. In: Follett & Duan (eds) Nontarget effects of biological control. Kluwer Academic Publ.
- Obrycki, J.J.**, **E.S. Krafsur**, C.E. Bogran, L.E. Gomez, & R.E. Cave. 2001. Comparative studies of three populations of the lady beetle predator *Hippodamia convergens* (Coleoptera:Coccinellidae). *Fla. Entomol.* 84:55-62.
- Obrycki, J.J.**, J.E. Losey, O.R. Taylor, and **L.C. Hansen**. 2001. Transgenic insecticidal corn: Beyond insecticidal toxicity to ecological complexity. *Bio-science* (in press).
- Peterson, C.J.**, B.F. Binder, and **J.R. Coats**. 2001. Investigation of two isoflavanoids, osajin and pomiferin, from *Maclura pomifera* for growth and feeding disruption in *Ostrinia nubilalis*. *J. Pestic. Sci.* (in press).
- Peterson, C.J.**, **J. Zhu**, and **J.R. Coats**. 2001. Identification of components of Osage orange fruit (*Maclura pomifera*) and their repellency to German cockroaches. *J. Essential Oil Research* (in press).
- Phoofolo, M., **J.J. Obrycki**, and **L.C. Lewis**. 2001. Quantitative assessment of biotic mortality factors of the European corn borer, *Ostrinia nubilalis* (Lepidoptera:Crambidae) in field corn. *J. Econ. Entomol.* 94(3): (in press).
- Showers, W.B., **R.L. Hellmich**, M.E. Derrick-Robinson, and W.H. Hendrix, III. Aggregation and dispersal behavior of marked and released European corn borer (Lepidoptera:Crambidae) adults. *J. Econ. Entomol.* (in press).
- Subchev, M. and **R.A. Jurenka**. 2001. Identification of the pheromone in the hemolymph and cuticular hydrocarbons from the moth *Scoliopteryx libatrix*. *Arch. Insect Biochem. Physiol.* (in press).
- Tschenni, J., J.E. Losey, **L. Hansen**, **J.J. Obrycki**, and R. Hufbauer. 2001. Effects of corn plants and corn



pollen on monarch butterfly oviposition behavior. *Environ. Entomol.* 30: (in press).

Vickers, N.J., T.A. Christensen, T.C. Baker, and J.G. Hildebrand. 2001. How do odour plume dynamics influence the brain's olfactory code? *Nature (London)* 410:466-470.

Wiebe, A., A.B. Cortilet, J.J. Obrycki, and M.D.K. Owen. 2001. Releases of natural enemies of purple loosestrife *Lythrum salicaria* L., in Iowa wetlands. *J. Kans. Entomol. Soc.* 73:247-250.

Wiebe, A.P. and J.J. Obrycki. Purple loosestrife: History, management, and biological control in Iowa. *J. Iowa Acad. Sci.* (in press).

### Extension, Educational, Technical Publications

New training videos for Private Pesticide Applicators were produced and distributed to Iowa counties. Six hours of instruction serves as a new exam study tool based on the Private Pesticide Applicator Study Guide, PAT 1. Iowa State University faculty, staff and field specialists, including Larry Pedigo and Rich Pope, were coordinated in this effort by Mark Shour.

Rich Pope produced IPM 67 and IPM 67A in both poster and flyer format: Nitrogen Options - Get the Most from Each Pound of Nitrogen!

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### Patents/Intellectual property

Biopesticides Related to Natural Sources. U.S. Patent No. 6,207,705, March 27, 2001. J.R. Coats, C.J. Peterson, R. Tsao, A.L. Egger, and G.L. Tylka.

Attractants of Beneficial Insects. T.C. Baker, J.J. Obrycki, and J. Zhu, submitted.

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### Out-of-state Travel

Tom Baker traveled to Stephens Point, WI, January 8–10, to attend the Wisconsin Cranberry Growers Annual Meeting and present results of his research on moth pheromone mating disruption of cranberry pests. Tom traveled to Catalina Island, CA, March 11–14 to attend the 29th Annual Chemoreception Workshop on Insects and present an invited paper on his work on sensory physiological aspects of moth

olfaction. Finally, Tom traveled to Breckenridge, CO, March 18–21 to attend the annual meeting of DARPA P.I.s involved in the Controlled Biological Systems Program to present an invited talk as well as a technical demonstration of his antennal biosensor.

Thomas Baker and Kye Chung Park traveled to Tifton, GA, March 7–9 to attend a P.I.s' meeting of the Parasitic Wasp Biosensors Project funded by the Controlled Biological Systems Program of DARPA.

Edwin Berry and Royce Bitzer traveled to St Louis, MO, on January 26 to attend a research meeting with industrial collaborators on non-target insects.

Joel Coats traveled to McAllen, TX, January 8–11 to present an invited paper at the annual convention of the American Honey Producers Association Inc.

Joel Coats and Chris Peterson traveled to San Diego, CA, March 31 to April 4 to attend the national meeting of the American Chemical Society.

Greg Courtney visited Columbia, MO, on February 1–3 to present an invited seminar in the Department of Entomology, University of Missouri, and to work with students and staff in the Enns Entomology Museum. He was then in Washington, DC, from February 3–7 to serve on a National Science Foundation Panel (Graduate Research Fellowships) and visit the Department of Entomology, Smithsonian Institution.

Greg Courtney and six ISU students including Elsie Burbano and Joel Gibson traveled to the southern Appalachian over Spring Break, March 10–17 as part of the Aquatic Insects course (Ent/A Ecl 425/525).

Jerald DeWitt traveled to Albuquerque, NM, on January 18–21 to present on Sustainable Agriculture at the Annual Convention of the National Farmers Organization. He traveled to Washington, DC, January 21–28 to work with USDA on Sustainable Agriculture projects. He traveled to Washington, DC, February 5–8 to meet with USDA Sustainable Agriculture Research and Education personnel and Kellogg-funded Fires of Hope staff. He then traveled on March 15–16 to the University of Wisconsin, LaCrosse, WI, to attend the Upper Midwest Organic Farming Conference.



**Rick Hellmich** co-organized an NC205 (Ecology and Management of European Corn Borer and Other Stalk-Boring Lepidoptera Regional Research Committee)/NCR46 (North Central Rootworm Research Committee) –sponsored Insect Resistance Management Meeting to address corn insect resistance to transgenic corn hybrids, held in East Lansing, MI, in January. Representatives from the EPA, USDA, growers, and industry participated in the meeting.

**Elliot Krafsur** traveled to Kansas City February 1–3 to attend the regional research meeting on Integrated Management of Arthropod Pests of Livestock and Poultry (S-274), to present data for the year 2000 and to plan research for 2001.

**Wai-Ki Frankie Lam** traveled to Purdue University, IN, February 4–7 to present a seminar.

**Wai-Ki Frankie Lam** and John Pleasants traveled to Chicago, IL, January 3–4 to attend a workshop with other scientists working on the biology of the monarch butterfly.

**Donald Lewis** traveled to Lincoln, NE, as invited speaker for the Nebraska Pest Management Conference, on January 11. He also traveled to Omaha, NE, as an invited Speaker for the Presto-X-Company Technical conference, held on March 2.

**Jim Oleson** and **Jon Tollefson** traveled to Dallas, TX, February 13–16 to discuss clothianidin as a corn seed treatment for control of corn rootworm, black cutworm and secondary corn pests with university peers and industry collaborators.

**Marlin Rice** traveled to St Louis, MO, on January 26 to discuss research with industry collaborators. He gave invited presentations on, “New strategies for an old pest: rethinking bean leaf beetle management” at the Illinois Crop Protection Conference, University of Illinois, Champaign-Urbana, and “From ants to elephants: reflections of an entomologist in Zimbabwe” at the Department of Entomology, Texas A&M University, College Station, TX, March 7–9.

**Mark Shour** traveled to Kansas City, MO on January 8 to attend the Western Nursery and Landscape Association meeting and trade show. Mark was an invited speaker for the 46th Annual Shade Tree Conference held in Manhattan, KS, and hosted by the Kansas Arborist Association on January 11. He also gave two presentations for the Urban Pest

Management Conference in Lincoln, NE, January 12, hosted by the Nebraska Pest Control Association and the University of Nebraska Extension.

**Jon Tollefson** traveled to Washington, DC, January 8–10 to represent the Department of Entomology at the annual meeting of the North Central Administrators’ Committee meeting (NCA-15). He traveled to East Lansing, MI, January 28 to February 1 to participate in the annual meeting of the North Central Rootworm Research Committee (NCR-46). He also traveled to Indianapolis, IN, March 16 to April 5 to participate in the annual meeting of the North Central Integrated Pest Management Research Technical Committee (NCS-3).

The North Central Branch meeting of the ESA held March 25–28 in Ft. Collins, CO, was well attended by members of the department. Research papers were presented by **Joel Gibson**, **Rick Hellmich**, **Rayda Krell**, **Kate Kronback** (undergraduate assistant in Hellmich lab), **Tim Nowatzki**, **Colothdian Tate**, **Laura Weiser**, and **Ted Wilson**. Posters were presented by **Patricia Anderson**, **Yong-Lak Park**, **Marlin Rice**, and **Erica Simbro**. **Rayda Krell** also served as moderator for a session. **Joel Coats**, **Donald Lewis**, **Dong-Sik Park**, **Chris Peterson**, and **John VanDyk** also attended the meeting. **Tim Nowatzki** and **Yong-Lak Park** received first place prizes in the student oral presentation and poster competitions respectively (see Awards and Honors above). The department had two teams that participated in the Linnaean Games this year. ISU Entomology Team 1 was composed of **Patti Anderson**, **Cloti Tate**, **Tim Nowatzki**, and **Yong-Lak Park**, while Team 2 was composed of **Ted Wilson**, **Joel Gibson**, **Chris Peterson**, and **Rayda Krell**. **Marlin Rice** acted as Linnaean Gamesmaster.

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## International Travel

**Elliot Krafsur** traveled to Rome, Italy, March 17–29 to present data on molecular genetics to a research coordination meeting of the Joint Food and Agriculture Organization of the United Nations/International Atomic Energy Agency and to participate in reviewing progress and planning further research.

**Donald Lewis** traveled to Costa Rica, March 8–18 to teach Tropical Crops Pest Management, an ISU interdisciplinary course in International Agriculture.



**Jon Tollefson** traveled to Croatia, February 19–23 to present an oral presentation on the western corn rootworm at the 37<sup>th</sup> Croatian Symposium on Agriculture, and to collaborate with Croatian entomologists and plant breeders on the experimental design for the summer's research to screen Croatian corn varieties for resistance to corn rootworms.

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## Other

**Donald Lewis** served as volunteer at the Iowa State Science Bowl competition, January 27, and as a volunteer judge, at the Iowa State Science Fair, held on March 30.

**Marlin Rice** completed his three-year term as Executive Member-at-Large, for the North Central Branch of the Entomological Society of America.

The **Entomology Department's Website**, (<http://www.ent.iastate.edu>), maintained by **John VanDyk**, was selected for inclusion in *Natural Selection* (<http://nature.ac.uk>), a gateway to quality evaluated Internet resources in the natural world, coordinated by The Natural History Museum, London. *Natural Selection* is part of *BIOME* (<http://biome.ac.uk/biome.html>), an integrated collection of Internet gateways covering the health and life sciences.

From January 1 through March 31, 2001, the **ISU Insect Zoo** performed a total of 26 programs. Most were to school groups (8 college-level programs and 16 programs to pre-K through high school groups). Some of these groups visited ISU, while others met with our "road show." Additional public outreach programs included the Botanical Center in Des Moines and the Cass County Conservation Center in Atlantic. For all programs during the past three months, the Insect Zoo reached a total of 3,312 participants and earned \$778 in fees.

Professor **Marija Ivezic** from Croatia visited the department from March 28-31 to coordinate research with **Jon Tollefson**.