

Bugged

FROM
MSU DEPARTMENT
OF ENTOMOLOGY

Summer 2013



Gary Parsons, MSU

FROM THE CHAIR

Welcome to the summer 2013 issue of *Bugged*! As interim chair of the Department since May 1, I can tell you there have been a few changes since our last newsletter, so let me update you. After five years of serving as chair of the Department of Entomology, Dr. Ernest (Del) Delfosse has stepped back into a faculty role. Del will be conducting research on biological control of brown marmorated stinkbug and developing a class on research ethics. Similarly, after serving as the Department's associate chair, and more recently, as acting chair, Dr. Larry Olsen will be returning to his role as Interim IPM Coordinator and continuing as our ambassador to our external partners. Dr. Chris DiFonzo has accepted the role of associate chair, and Drs. Rufus Isaacs, Deb McCullough and Ke Dong round out the Departmental Advisory Committee.

College of Agriculture and Natural Resources Dean Fred Poston has approved a national search for our next department chair and Dr. Isaacs has agreed to chair the committee. We are also in the process of interviewing candidates for our Aquatic Entomology position, so there is a lot of activity in the Department these days. I want to sincerely

thank all of these individuals for their service!

In the following pages you will learn much more about our great faculty, staff and students' activities. Thanks to all of you who support the Department of Entomology in many ways, including our alumni and friends. We appreciate all of your contributions. – **Doug Landis**, professor and interim chair.



A microphone catches the sound of larvae while Brooklyn musician Zach Layton improvises to complete an unusual musical collaboration at MSU's new Eli and Edythe Broad Art Museum.

RESEARCH & PROJECTS

Rufus Isaacs contributed data from his lab's research in blueberries to a synthesis of pollination studies from around the world, published in *Science*. The paper by Garibaldi et al. (2013) explores the relative contributions of wild bees and honey bees for fruit set in vegetable, nut and fruit crops. Fruit set in these farms was universally positively correlated with visitation by wild bees to flowers, in contrast to honey bees where the relationship was positive in only 14% of studies. This research contributes to the justification for conservation efforts for wild bees in farms, currently a focus of research in the Isaacs Lab. More on this study can be found at: <http://bit.ly/beeStudy>

This May, insects had their day at MSU's Broad Art Museum jamming with Brooklyn musician Zach Layton. For the Sunday afternoon event, Layton played an electrical guitar using a bow to gently respond to the amplified live insects. **Deb McCullough** and **Gary Parsons** were invited by the Broad to outfit various insects, including emerald ash borers, pine sawyers, crickets and Madagascar hissing cockroaches with microphones and amplifiers so they could create their musical groove. McCullough described

the effect as “kind of New Age.” Parsons also arranged to setup a mini “Bug House” during the event so that museum visitors could view the displays of spectacular insects and handle some of the live specimens.

Rufus Isaacs and **Julianna Wilson** were co-authors of *A global quantitative synthesis of local and landscape effects on wild bee pollinators in agroecosystems* (C.M. Kennedy et al.) published in *Ecology Letters*. The research was a meta-analysis of bees in 39 different cropping systems from around the world with Isaacs and Wilson sharing data from two different Michigan blueberry studies. The authors’ synthesis indicates that pollinator persistence will rely on both maintaining high-quality habitats around farms and on local management practices that potentially offset impacts of intensive monoculture agriculture.

The second Annual MSU Bee Palooza will be Sunday, June 23, from 1-4 p.m. in the MSU Horticulture Gardens. Visitors will learn why bees are important and what bees are found in Michigan; view the inner workings of honey bee and bumblebee colonies; learn how to build nesting boxes for solitary bees and about bee-friendly garden design. The event also includes a pollinator-themed scavenger hunt and face-painting and is hosted by the Department of Entomology with the MSU Horticulture Gardens.



Grad student Annie Kirk introduces a child to the workings of a bee hive.

AWARD-WINNING DEPARTMENT

Doug Landis has been selected as the recipient of an MSU Distinguished Faculty Award.

This is a highly significant award, acknowledging “outstanding total service to the University.” It is also a rare honor; no more than 10 Distinguished Faculty Awards are made each year. Landis joins former Entomology recipients of this award, Mark Scriber (2009), Jim Miller (2007), Stuart Gage (2005), Rich Merritt (2004), Alex Raikhel (2000), George Bird (1995) and Gordon Guyer (1965). The bios of the recipients can be read online by scrolling at: bit.ly/MSUdistinguished

Chris DiFonzo will be awarded the 2013 ESA North Central Branch Distinguished Achievement Award in Teaching

at the 2013 annual meeting in Rapid City, SD. In addition to responsibilities for field crops research and extension, DiFonzo teaches MSU’s introductory entomology course and an upper level course on “Pesticides in Pest Management,” plus an occasional graduate seminar titled “Insects in the Cinema.” In 2007, DiFonzo became an adviser and coordinator for the MSU Entomology Department’s undergraduate program, which was revived from a single student in the mid-2000s to a healthy



Doug Landis with grad student Mitch Lettow.

crop of 47 majors and minors in 2012. In 2012, she worked with the University of Peradeniya in Sri Lanka to develop a month-long study abroad course on sustainable tropical agriculture. The second offering of that course just ended June 4 with 14 undergraduates.

Lingxin Wang has been selected to receive a College of Natural Science \$6,000 summer dissertation completion fellowship. Wang works in Ke Dong’s lab, which focuses on insect neurophysiology and toxicology. His doctoral thesis is about investigating the molecular mechanism of insect sodium channel resistance to pyrethroid insecticides.

Congratulates to George Bird who is the recipient of a 2012-2013 MSU Faculty Emeriti Associated Award for



Mike Leasia trying a two-wheel tractor to prepare a rice paddy during the 2013 study abroad course in Sri Lanka organized by Chris DiFonzo.



Entomology business office accepts CANR award (left to right): Carolyn Devereaux, Linda Gallagher, Jan Eschbach, Pat Sutherland, CANR Dean Fred Poston, Rhonda Acker, Brooke Gallagher, Courtney Smith and Heather Lenartson-Kluge. Barbara Stinnett (retired) was unable to attend the awards ceremony.

“Outstanding Contributions by an Individual.” Bird was recognized for his continuing efforts on behalf of MSU at a luncheon in April.

Our entomology business office was awarded the 2012 College of Agriculture and Natural Resources Outstanding Team Award. These office professionals provide outstanding service for nearly 300 people including 22 regular faculty, 7 fixed-term faculty, 21 adjunct faculty, 13 academic specialists, 24 technical research staff, 22 undergraduate students, 35 graduate students, 21 post-docs, 6 emeriti, 48 temporary employees and 79 temporary student employees. Thank you!

The 2013 Departmental Spring Picnic will be remembered as one for the dogs! Several students



and staff brought their dogs along for a fun evening in the park and all were well-behaved. More importantly, there was good weather, tasty food and worthy award winners. GUESS, the department’s student organization, graciously hosts this event each year when we present the department’s student awards. Congratulations to the following award recipients:

- **Lingxin Wang** (K. Dong) - Dreisbach Award to an outstanding Ph.D. graduate student
- **Amanda Lorenz** (N. Walker) and **Emily Pochubay** (M.



L. Wang



A. Lorenz



M. Lettow



E. Pochubay



R. Olson



B. Gallagher

- Grieshop) - Paul Wooley Award to an outstanding M.S. graduate student
- **Rachel Olson** (A. Cognato) - Eugenia McDaniel Award to an outstanding graduate student for teaching
- **Mitchell Lettow** (D. Landis) - Gordon Guyer Award to an outstanding graduate student for extension
- **Brooke Gallagher** - James Bath Staff Award for outstanding accomplishment and morale among Entomology Department staff.

PEOPLE

Elvia Gonzalez has joined the department as an outreach academic specialist based at the Trevor Nichols Research Center. She works with socially disadvantaged Latino farmers through several grant projects lead by David Mota-Sanchez. These programs aim to improve IPM and nutrient management practices by the farmers and assist them in accessing USDA programs.

Gordon Guyer, former MSU President and Professor Emeritus from the Department of Entomology, gave an engaging seminar April 26 about his experiences as a leader in various roles

within the university and state government. The packed room heard about interactions throughout Guyer’s career including those with a U.S. president or two. Watch the seminar at: <http://vimeo.com/65320258>

As MSU’s grape and wine integrator,



J. Wise



M. Grieshop

Paul Jenkins has been elected as the regional director for the Grape Community of Practice/eViticul-ture Program for the Midwest and also the board of directors of the American Society of Enology and Viticulture - Eastern Section.

Three were promoted in the department this spring. **John Wise** was promoted to professor, fixed-term. His responsibilities include coordinating the Trevor Nichols Research Complex along with IR-4 residue program field research and reduced-risk pesticide research.

Matt Grieshop was promoted to associate professor with tenure. Grieshop's research and extension addresses organic pest management.

Joy Landis, Integrated Pest Management assistant coordinator and communications manager, was promoted to senior academic specialist.



J. Landis

Save the date! Celebrate Rich Merritt's retirement Saturday, September 21. There will be a golf outing at Forest Akers Golf Course in the morning and reception from 6 to 9 p.m. at the MSU University Club. A block of hotel rooms are available at the Candlewood Suites next to the University Club under "RMR." Call the hotel (877-834-3613) or [book a room online](#). Please send your postal address to Heather Lenartson-

BECOME A FRIEND OF THE BUG HOUSE!



The Bug House has been an amazing outreach tool for entomology and nature in general this spring through three key events. **Courtney Smith** and **Gary Parsons** organized over a dozen student volunteers with additional support from **Keith Mason** and **Barb Stinnett**. In March, nearly 100 children and adults attended the annual Spring Open House to handle insects, ogle the colorful box displays and color their own insect drawings. MSU's first Science Fest was held for 10 days in April and included two Bug House open houses, which brought in almost 300 people.

Our blockbuster event is serving as a stop on "Be a Tourist in Your Own Town" held this year June 1. About 1,100 "tourists" bolstered their knowledge of insects with a walk through the Bug House. Special features of the day were letting children into the butterfly flight room to have a close encounter with painted lady butterflies and monarchs, and the "giant cave cockroach" colony donated to the Bug House by entomology alumni **Trisha Samota** and **Steve Nichols**. Trisha was the first entomology undergraduate who came to the department after attending every one of our summer Bug Camps continuously from the first one! She now works as a technician in Del Delfosse's lab.

Despite the dedicated efforts of staff and student volunteers and donations made by visitors, **funding the Bug House continues to be a challenge**. If you are interested in supporting this worthy cause, please visit <http://bit.ly/BugHouseGift> or mail a check made out to Michigan State University. Please note with your check that the contribution is for the Bug House and send it to: MSU Department of Entomology, 288 Farm Lane Room 243, East Lansing, MI 48824. Thanks for your consideration.

Kluge at lenartso@msu.edu so an invitation can be mailed to you with RSVP information if you wish to attend.

Got news to share? Please send it to entnews@msu.edu or mail to the Department at the address on the back of this newsletter.

Featured students from www.ent.msu.edu



Visit our new website! MSU Entomology's website has received a major redesign and you are invited to check it out at www.ent.msu.edu. It's easy to keep up with the Department's events and news by visiting the homepage. We've also added a section to feature our students -- currently, Ph.D. student Duncan Selby and undergrad Chelsea Rawe. At right, read a condensed version of their interviews and visit the web for the expanded version.

ALUMNI NEWS

Dan Herms (Ph.D. 1991) was appointed chair of the Department of Entomology at Ohio State University in January.

Mark Vander Werp was recently promoted to manager of education and training at Rose Pest Solutions.

Two entomology undergraduates are moving on to graduate school. **Ian Lane** will study in the apiculture program at the University of Minnesota, and **Diana Miller** plans to study horticultural entomology at the University of Kentucky.

Desmi Chandrasena (MS., 2009) completed her Ph.D. in October 2012 in MSU's Plant Breeding, Genetics and Biotechnology Program, and is now a senior biologist for Regulatory Sciences and Government Affairs with Dow AgroSciences in Indianapolis.

We regret to report the deaths of the following former faculty:

- **Art Wells** on January 18
- **Don Newson** on February 7
- **Eileen Vantassell** on April 4

Name: Roger "Duncan" Selby
City of Origin: Oakville, Ontario
Major Professors: Mark Whalon and Stuart Gage



What are you researching? The central theme of my thesis research is to enhance alternative controls of the plum curculio, a pest of many tree fruits. The term "alternative" is used because the methods I work with are designed to replace existing methods that are effective, but controversial enough that their use has recently been curtailed by federal regulation. My research has three aspects: developing automated camera traps that precisely monitor insect activity in field conditions; lab and field observation of plum curculio behavior to improve trap and control efficiency; and extending and improving weather-based models used to predict and control increases in plum curculio populations.

Future career plans: Academic or industry careers attract me.

Why study entomology and what do you wish people understood about entomology? In my experience, people stereotype entomologists as hunters of miniature fauna. We're running around with nets and kill jars looking for rare or beautiful specimens; or we're seeking out a destructive and ugly foe to smother with our arsenal of chemicals. However, I entered entomology because insects offer a vast array of study possibilities. Their impact on our lives and planet is extensive; pollinators, pests and predators influence the plants we depend on for food, bloodsuckers plague us, butterflies entrance us, fruit flies help us understand how genes can work, and ants help us understand how societies works.

Name: Chelsea Rawe
Hometown: Clarkston, MI



Future plans: Maybe something with medical entomology, human health and international development.

What or who inspired your interest in entomology? When I first arrived at MSU I did not even know that entomology was its own field, however, as a freshman I was searching for a field that was both scientific and had reasonably direct, real-world impacts. I happened upon entomology. After a meeting with Walter Pett and Chris DiFonzo, I was hooked. I enjoyed my first summer working in the turfgrass lab with Terry Davis, and then I was set on studying entomology.

What do you wish people understood about entomology?

Many people don't realize that insects impact their daily life. When I tell people I am an entomologist, people often take a few minutes to consider how that might fit into the world as a whole. I think entomology is an important field to study because insects impact food production, human health, economics and they are a beautiful example of diversity in the animal world.

What is your opinion on entomophagy (eating insects) as practiced in other world cultures? I think eating insects makes a lot of sense. They are high in protein and readily available even to people with little economic power. When presented the opportunity, I have eaten several insects - living and cooked - including several species of grubs and ants. The ants tasted much better than I expected them to.

MSU Department of Entomology

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OUR NEW M.S. and Ph.D. ALUMNI

Congratulations to our spring 2013 graduates! They are listed below with their adviser and future plans if known:

- **Brett Blaauw** (Ph.D., R. Isaacs) will be a postdoctoral researcher at Rutgers University.
- **Annie Kirk** (Ph.D., R. Isaacs) will work as a technician in the Isaacs lab this summer.
- **Sarah Smith** (Ph.D., D. McCullough) will be curating the bark and ambrosia beetle collections and imaging the holotypes at the Smithsonian Natural History Museum.
- **David Malakauskas** (Ph.D., S. Thiem)
- **Alexandria Bryant** (M.S., Z. Szendrei) is an Extension agent for 4H/Youth in Breckenridge Co. KY.
- **Meg Chludzinski** (M.S., C. DiFonzo) is a fruit crop scout for Hamilton Farm Bureau in west Michigan.

