Jocelyn Millar has been awarded the Silver Medal for career achievement by the International Society of Chemical Ecology (ISCE). Awarded first in 1986, the ISCE Silver Medal is the society’s highest honor. It is awarded annually to scientists who have made outstanding contributions to chemical ecology, the study of chemicals that mediate interactions between living organisms.

“This is fantastic news and very well-deserved recognition for Dr. Millar,” said Rick Redak, chair of the Department of Entomology. “The Silver Medal award is testimony to his outstanding competence and a lifetime of accomplishment within the area of chemical ecology. This award not only honors Jocelyn but also is a testament to the department’s strength in chemical ecology and behavior. We are privileged and lucky to have Dr. Millar as part of our team.”

Millar’s research primarily focuses on how insects use odors and tastes for communication. Nearly all types of insects use chemical signals for a wide variety of functions such as communicating location, species, sex, reproductive status, and alarm. Millar’s research group identifies these signals and determines their functional roles. His research team then exploits this information to develop practical applications for detecting and managing insect populations.

“I was tremendously honored and pleased to have my group’s research selected for this award by the members of the professional association that has the best understanding of the work that we do and its implications,” Millar said.

Grant Advances Research on African Malaria Mosquito

Bradley White has received a five-year grant of more than $1.8 million from the National Institute of Allergy and Infectious Diseases. The grant will allow his lab to produce fine-scale recombination rate maps for the African malaria mosquito, *Anopheles gambiae*.

Malaria, the most deadly mosquito-borne disease, kills more than 500,000 people each year. While poverty and poor medical care contribute to the African malaria burden, the importance of the uniquely efficient mosquito vectors present in Africa cannot be overlooked. One particularly promising area of research involves genetic engineering of mosquitoes to prevent transmission.

“By the end of the project, we will have produced these recombination rate maps that can be used to model and predict the efficacy of various novel vector control strategies,” said White, who joined UC Riverside in 2011. “Ultimately, this project will provide a critical tool in the ongoing fight against one of humanity’s ancient foes.”

White, who is also a member of UCR’s Center for Disease Vector Research, said his lab has already developed a high-throughput protocol using cutting-edge genomics and bioinformatic techniques to map recombination “breakpoints” in *Anopheles gambiae*.

The grant will help support two postdoctoral researchers, three graduate students, and two undergraduates in his lab.

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Letter from the Chair

Alumni and Friends of UCR Entomology,

Once again, it is that time to welcome spring into the world! I hope this newsletter finds you and yours well. And for those of you in the northeastern portions of the country, I hope you will soon be seeing the last of sub-zero weather and mountains of snow. Since our last newsletter, the Department continues to be at the forefront of science with many new and exciting discoveries as well as important changes and additions to the Department. The UCR campus continues to grow; growth in undergraduate numbers is continuing but at a slower pace as we edge closer to our build out number of 25,000 students (with a minimum of 5,000 graduate students). The new School of Medicine (located where the Entomology building used to be) has survived its first year, as has the new School for Public Policy. At the Department level, our new Environmental Chamber Facility (a.k.a. the “Blockhouse” replacement) is finally complete, and as of this writing we are moving 40 growth chambers into place for immediate use.

From a personnel perspective, the Department continues to have a rapid turnover in faculty. Both Greg Walker and Kirk Visscher will retire in 2015 after decades of research and teaching. With all of the retirements you would think this place would be pretty quiet, which is certainly not the case! We were fortunate to hire Erin Wilson-Rankin (Invasion Biology) and Naoki Yamanaka (insect molecular physiology) within the last couple of years. And just this year alone, we have welcomed, or will be welcoming soon, four new faculty members: Quinn McFrederick (insect symbionts), Omar Akbari (infectious diseases transmitted by arthropods), Jessica Purcell (evolutionary genomics), and Hollis Woodard (molecular biology of social insects). And there will be no resting on our laurels as significant recruitment of new faculty is continuing in all areas. As Chair, I continue my commitment to maintain both the breadth and the depth of scientific expertise across the biological disciplines that are represented by Entomology; so far, so good. UCR Entomology continues to be one of the best entomology programs in the country, and with these recent hires of outstanding scientists we will continue with this tradition. Our graduate program remains strong with our faculty supporting over 45 Entomology students and an additional 40+ students enrolled in interdepartmental degree programs. The undergraduate Entomology program also remains strong with slightly over 40 students in the program, and with many former undergraduates pursuing graduate education now at schools across the United States. Feedback from the current and past undergraduates indicates they absolutely love the program; all of them are performing independent research projects in faculty labs. This is something that is simply not possible with the larger life science majors.

The University of California is slowly but surely recovering from the Great Recession. State support for higher education appears to have truly stabilized. It is not growing significantly, but thankfully, it has stopped declining! Again I thank all you who spoke up on the University’s behalf. It is truly appreciated! The campus is now facing a challenge of a different sort. Chancellor Kim Wilcox has indicated that the campus will be undergoing a significant period of growth. UCR intends to hire 300 new faculty members over the next five years: 100 next year alone. Entomology will be well positioned to take advantage of this growth, but at a campus level the available research and teaching space will become an issue. If anybody wants to donate the funding for a new 100,000 ft² science building, please get in touch with me right away! Speaking of donations, I continue to be amazed at the generosity of our alumni and friends. Thank you for generously supporting our programs. Your donations have been important to support our Entomology graduates and undergraduates in pursuing their research activities and allowing them to travel to meetings and conferences to present their exciting results. Additionally, these donations have allowed the Department to continue recruiting the very best students into our programs. If you would like to make a donation to support our programs, please visit http://www.entomology.ucr.edu/supporting_entomology/ and choose among the many Entomology funds that support our students. As Chair, I am biased and have my favorite fund: the Entomology Fund for Excellence. This fund is used to support our seminar program and to assist our graduate students with their research and research related travel needs. And of course, there are several other targeted endowments; please take a look at the endowments on page 6 for a complete listing of opportunities to assist the Department and its programs. THANK YOU in advance!!

So grab a cup of coffee or tea, go find a warm and sunny spot to enjoy the spring weather and peruse your newsletter. You will find articles highlighting some of the recent activities and achievements of our Department members. From cutting edge research to student-organized community outreach, UCR Entomology continues to have a world-wide impact! Please join me in celebrating the successes achieved by our faculty, students, and staff as the Department continues on its path of excellence in research, teaching, and community engagement.

And don’t forget, I would like to hear from you, our alumni and friends. Please share with me your own story of success, and the role that UCR had in your achievements by emailing me at richard.redak@ucr.edu - perhaps you will be our next featured alumni in the “where are they now” section of the newsletter!

Dr. Rick Redak
Chair of the Department
The UCR Entomology Department would like to thank the many supporters of our students and departmental programs. The number of individuals and companies that have provided financial gifts is remarkable, and the funds provided are used to keep the Entomology Department one of the best in the world! If you would like to give a tax deductible donation to UCR Entomology, please visit our website at http://www.entomology.ucr.edu/supporting_entomology/ and then choose among the many Entomology funds that support our students and programs.

URBAN ENTOMOLOGY CHAIR FUND
FOUNDERS CIRCLE ($25,000)
Univar
Clark Pest Control, Joe Clark
Corkys Pest Control, Corky Mizer
Dewey Pest Control, Brock and Chip Dewey
Lloyd Pest Control, Jim and Jamie Ogle
Mega Fume, Inc., David Wadleigh
Orkin Pest Control
PAPA (Pesticide Applicators Professional Association)
Payne Pest Management, Willie & Kathleen Payne
Pestgon, David Baro
Statewide Fumigation, William Lawson
Western Exterminator Company, Michael Katz

MONARCH LEVEL ($1000 and above):
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Beneficial Insectary
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Target Specialty Products
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QUEEN LEVEL ($500 - $999):
Association of Natural Bio-Control Producers
Elizabeth Boyd
J.K. Thille Ranches
James Lloyd-Butler Family LLC

QUEEN LEVEL (continued):
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Dr. & Mrs. E. Fred Legner
Limoneira Company
PL-B Ranch LLC
Shane L. Butler Family Growers, LLC
Dr. Daniel A. Strickman
& Mrs. Linda J. Strickman

VICEROY LEVEL ($100 - $499):
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Leland Brown
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Wollam Grove Management, Inc.
Dr. & Mrs. Robert L. Zuparko

DEPARTMENT SUPPORTERS:
John Attaway
Stephen Bailey
Marian Bailey
Stephen Drummy
Jeannette Dube
Carol Englehardt

(Continued on page 4)
Asian citrus psyllid (ACP) is a serious threat to California’s $3 billion citrus industry because this small insect spreads a bacterium that causes the lethal citrus disease huanglongbing (HLB). The ACP-HLB combination has had a devastating impact on Florida’s citrus industry, causing production costs to increase by around 20%, the loss of more than 6,000 jobs, and fruit production to be at its lowest levels since 1960. Some industry insiders have suggested Florida’s citrus industry may be economically inviable within the next 5-10 years. ACP was first discovered in California in 2008 and HLB was first detected in 2012. Researchers at UCR are aggressively tackling ACP-HLB in the hopes of avoiding the situation that has unfolded in Florida.

One approach to suppressing ACP populations is classical biological control, the use of coevolved natural enemies from the home range of ACP to suppress pest populations to less damaging levels. Two parasitoids from Pakistan that attack ACP nymphs, *Tamarixia radiata* and *Diaphorencyrtus aligarhensis* (Fig. 1) have been imported, screened in quarantine for safety, and approved by the USDA for release. These two parasitoids have different host preferences; *Tamarixia* prefers to parasitize fourth and fifth instar ACP nymphs, while *Diaphorencyrtus* performs better on second and third instars.

*Tamarixia* was first released in California in December 2011. More than 1,000,000 parasitoids have been reared and released through the combined efforts of UCR, CDFA, and USDA. This parasitoid has established and is spreading. Long-term phenology studies and life table analyses documenting the impact by *Tamarixia* on ACP populations in urban citrus are underway. *Diaphorencyrtus* was approved for release in December 2014, and Chancellor Wilcox made the first release of this parasitoid at the UCR Biocontrol Grove. This phase of the ACP biocontrol program is in its infancy and around 2,000 *Diaphorencyrtus* have been released in pre-selected areas in southern California. It is anticipated that should *Diaphorencyrtus* establish it will complement *Tamarixia* as each parasitoid prefers to attack different ACP instars. There are several examples of successful biocontrol in California citrus requiring more than one natural enemy species to achieve pest suppression. One well known case is the biological control of cottony cushionscale with the predatory coccinellid, *Rodolia cardinalis* and the parasitic fly, *Cryptochaetum iceryae*.

By Mark S. Hoddle
Director, Center for Invasive Species Research

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**Continued: A Special Thank you to all of our Contributors in 2014!**

**DEPARTMENT SUPPORTERS (continued):**

Mr. Glen W. Forister and Mrs. Ann C. Forister
Mr. Saul I. Frommer and Mrs. Susan L. Frommer
Mr. & Mrs. Terry Furukawa
Dr. & Mrs. John A. Immaraju
Dr. & Mrs. Robert I. Krieger
Mr. Kuanwen Wang & Mrs. Ya-yen Lee
Mr. Michael T. Umeda and Ms. Deborah J. Louie
Mariposa Landscape & Tree Service Inc.

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Sempra Energy Foundation
Stotelmyre Pest Control
Raymond Fowler
Beatriz Gonzalez
Mazin Kashou
Vladimir Kokoz
Mark Lawless
McEwen Nursery
Michael Orr

Dana Risch
Landon Stableford
Colin Umeda
Angela Vasquez
Adena Why
Norma Yarbrough
Recent Honors and Awards

**FACULTY**

**Alexander S. Raikhel:** UCR Academic Senate Award for Research

**Gregory Walker:** 2014 UCR Entomology Graduate Student Association Outstanding Faculty Award

**John T. Trumble:** 2014 National Institute of Food and Agriculture Partnership Award for Mission Integration of Research, Education and Extension (collaborative award)

**Alec Gerry:** Vice President-Elect of the Medical/Urban/Veterinary Entomology Section of the Entomological Society of America.

**Jocelyn Millar:** Silver Medal, International Society of Chemical Ecology

**Sarjeet Gill:** ESA National Award, Recognition Award in Insect Physiology, Biochemistry, Toxicology

**Christiane Weirauch:** promoted to Full Professor

**Anandasankar Ray:** promoted to Associate Professor

**J. Daniel Hare:** elected 2014-15 UC Systemwide Academic Senate vice chair

**STAFF SERVICE AWARDS**

- Stephanie Russell (10 yr)
- Lindsay Robinson (30 yr)

**2014 NATIONAL ACADEMY OF EDUCATION FELLOWS**

- Erin Wilson-Rankin
- Brad White
- Sheena Sidhu
- Rebeccah Waterworth

**STUDENTS**

**Amy C. Murillo:** ESA National meeting, 1st place President’s Prize recipient for presentation, MUVE.

March 2014 Pacific Egg & Poultry's Joe Haddy and Jim Eastman Memorial Scholarship recipient

March 2014 Carl Strom/Western Exterminator Company Scholarship in Urban Entomology Grand Prize Winner

**Amelia Lindsey:** ESA National meeting, ESA, 1st Place President’s Prize recipient for presentation, SysEB

ESA Pacific Branch, Honorable Mention Ph.D. Student Paper Presentation, April 2014

International Wolbachia Conference, 3rd Place Student Paper Presentation, June 2014

2014 UCR Outstanding Teaching Assistant, May 2014

**Aviva Goldmann:** 2014 campus-wide winner in the annual Grad Slam competition.

**Kevin Welzel:** Carl Strom / Western Exterminator Company Scholarship 2014

NSF Predoctoral fellowship.

**Genevieve Tauxe:** ESA National meeting, 1st place President’s Prize recipient for presentation, PBT

**Eric Gordon:** NSF Graduate Research fellowship

**Michael Forthman:** ESA National meeting, 1st place President’s Prize recipient for poster, SysEB

**John Hash:** Best student paper of the year, Entomological Society of Washington

**UNDERGRADUATE STUDENTS**

**Scott Heacox and Krissy Dominguez:** ESA National meeting, 1st place, Undergraduate Student Poster Competition: SysEB.
The past year has been busy in the Museum, though not as busy as most years. We did, however, complete a major overhaul of the accumulated pinned backlog early in 2014, getting things sorted into different curatorial categories to facilitate processing and prioritization.

There has been a large amount of assistant activity over the past year. Cole Watson (though no longer a student) still comes in once a week, sometimes to sort our miscellaneous backlog to Order, but also has a small project to curate our collection of syrphid flies (“hover flies”), and has been making good progress. Andy Duong, who had been dehydrating ethanol samples using HMDS, and then point-mounting the resulting specimens, has been succeeded by Mariana Romo. The specimens she and Andy mounted are being labeled by Amit Tsanhani, so the specimen-processing pipeline is in steady operation. A fair bit of this is older backlogged material, but also includes newer donations from Greg Ballmer, John Pinto, Gevin Kenney, and Saul Frommer. Eric Gordon, a student in Christiane Weirauch’s lab, worked in the Museum for a quarter, and used that time to reorganize our mirid (leaf bug) collection to subfamily, which should be helpful, as ours is one of the largest collections in the country.

Adriean Mayor, a retired former UCR grad student, is back again in SoCal, and has been coming in almost every day and plowing through our melyrid collection. As things are progressing, he’s matching up morphospecies to published names, and finding a lot of things that don’t appear to have names – in other words, discovering a rather large number of new undescribed species (though many were collected decades ago), which he will name as part of his revisionary work.

The Museum’s regular database has grown to roughly 480,000 records, with an impressive 168,000 that are IDed to genus-level or better, georeferenced, and available online as part of the Discover Life website dataset. The coming field season promises to be better than we’ve seen in a while, given some decent winter rains that should offset the ongoing drought.

By Serguei Triapitsyn & Doug Yanega
Congratulations to our recent graduates! We wish you the best as you pursue new opportunities!

**Graduate Students:**
- Dagne Demisse, PhD, Fall 2013
- Ricky Lara Artiga, PhD, Spring 2014
- Elizabeth Murray, PhD, Fall 2014
- Lucy Abubekerov, MS, Fall 2014

**Undergraduate Students:**
- Carlos Aguero
- Jonathan Estrada
- Fallon Fowler
- Sarah Frankenberg
- Bridget Gonzalez
- Michael Jones
- Christopher Nguyen
- Amy Michael
- Omar Shahin
- Isaac Esquivel
- Erin Reilly
- Tina Kim

**Welcome to our newest students!**

**Graduate Students:**
- Nancy Power
- Jessica Sully
- Christine Dodge
- James DeCarlo
- Paul Masonick
- Benjamin DeMasi-Sumner
- Adriana Medina
- Manish Poudel
- Kristin Cole

**Undergraduate Students:**
- Ellen Horowitz
- Blake Miles
- Shao-Hung Lee
- Aubrey Furukawa
- Seanathan Chin

**New Alumni (Students graduating during 2013-2014)**

**21st annual UC Riverside Dept. of Entomology Student Seminar Day**

**Oral Presentation:**
First - Emily McDermott (PhD, Bradley Mullens)
Runner up - a tie: Amy Murillo (PhD, Bradley Mullens)
Austin Baker (PhD, John Heraty)

**Poster Presentation:**
First - Alex Knyshov (PhD, Christiane Weirauch)
Runner up - James Ricci (PhD, Bradley White)

**Undergraduate Poster Presentation:**
Joint authored poster: Krissy Domingues and Scott Heacox

**“Education is not the filling of a pail, but the lighting of a fire”**
- William Butler Yeats

**Recently Retired...**
- Peggy Wirth (SRA)
Introducing Our Newest Faculty...

**Dr. Naoki Yamanaka**
My lab is focused on identifying and characterizing neuroendocrine signaling pathways that regulate physiological and behavioral changes during insect development. Similar to humans, where physical and mental development during juvenile stage (puberty) is controlled by the neuroendocrine system, insects also have a sophisticated hormone signaling network that regulates their developmental transitions. Mainly by using fruit fly molecular genetic tools, we would like to understand what kind of hormones and receptors are involved in this system, how they work at the molecular level, and how such knowledge can be applied to develop new approaches to control animal development.

**Dr. Quinn McFrederick**
Symbiotic relationships are pervasive in nature, and my research aims to understand the evolution and ecology of these relationships. I focus on understanding how symbioses affect the viability of wild bee populations, with the ultimate goal of protecting these important pollinators. In the McFrederick lab, we use a combination of experimentation, phylogenetics and phylogenomics, population genetics and genomics, and microbial community next-generation sequencing surveys to answer questions about the evolution and ecology of symbioses between bees and bacteria, fungi, and viruses. We are currently investigating how microbes affect bee nutrition, tolerance of heavy metals, and resistance to disease. Other research in the lab investigates how microbes are transmitted and shared in the pollination landscape. Ultimately, our goal is to help maintain healthy pollinator populations for wild and agricultural ecosystems.

How Malaria-Spreading Mosquitoes Can Tell You’re Home

Anopheles gambiae, spends much of its adult life indoors where it is constantly exposed to human odor— from used clothing, bedding, etc.— even when people are absent. But is human odor enough as a reliable cue for the mosquitoes in finding humans to bite? Not quite.

Ring Cardé was joined in the study by Ben Webster (first author of the research paper) and Emerson S. Lacey (Journal of Chemical Ecology 41: 59-66). The researchers’ experiments with female Anopheles gambiae show that the mosquitoes respond very weakly to human skin odor alone. The researchers found that the mosquitoes’ landing on a source of skin odor was dramatically increased when carbon dioxide was also present, even at levels that barely exceed its background level. The researchers also suggest that the mosquitoes use a “sit-and-wait” ambush strategy during which they ignore persistent human odor until a living human is present.

Cardé explained that mosquitoes, once indoors, conserve their energy by ignoring omnipresent human odor in an unoccupied room. Small increases in carbon dioxide indicate to the mosquitoes the probable presence of a human. This then triggers the mosquitoes to land on human skin.

The findings could help in the design on new types of mosquito control. One take-home message from this work is that studies defining which human odors mediate host finding and which compounds are good repellents need to precisely control exposure to above ambient carbon dioxide—an experimenter entering an assay room quickly elevates the level of carbon dioxide and thereby alters the mosquitoes’ behavior.

Ring Cardé, working on an experiment involving a wind tunnel. Photo credit: Carrie Rosema.
In Memoriam

Evert Irving Schlinger (1928-2014): Following a long and difficult battle with Alzheimer's disease, Evert Irving Schlinger passed away during a spectacular lunar eclipse in the early morning hours of Wednesday, October 8, 2014. Ev was peacefully resting at the home of his daughter Jane and son-in-law Brad Omick in Lafayette, California. He is survived by his brother Warren and sister-in-law Katie Schlinger, his four children Pete, Mathew, Jane, and Brian, and his 11 grandchildren.

Ev earned a B.S. degree from the University of California, Berkeley in 1950 and a Ph.D. from the University of California, Davis, in 1957. His research into biological control began when he accepted a position as a research entomologist with the biological control unit at the University of California Citrus Experimental Station, Riverside. Teaming up with Professor Robert van den Bosch his activities involved a multi-year effort to control the newly introduced and highly destructive spotted alfalfa aphid. The methodologies Ev and Van developed during this project proved so effective that, to this day, they form an indispensable part of any classical biological control toolbox.

His research focus pivoted in 1963, when he was awarded a professorship in systematics in the newly formed Department of Entomology at UC Riverside. His research focused on two diverse yet complimentary areas of science: an innovative approach to biological control of agricultural pests, and the biology, taxonomy, and evolutionary ecology of parasitic flies belonging to the dipterous family Acroceridae, commonly referred to as spider flies, small-headed flies, or, as Ev preferred to call them, “Acros.”

Ev was passionate about life. He had the mental and physical capacity to do almost anything he wanted. He was an enthusiastic and excellent gardener. He loved food and wine, especially wine. He took joy from listening to classical music and to opera in particular. Ev spent a lifetime in the dedicated service of entomology, agriculture, biological control, and systematics. This service is punctuated with inspiration, dedication, and vision, and with important and lasting innovation and discovery. He was an inspiring teacher and mentor, has served key leadership roles in entomology and the broader science arena, and, through his research foundation, has provided resources to enrich the prospects of systematics and biodiversity well into the future. The impact his students and their students have had and are having on science, agriculture, and systematics is substantial.

By Michael E. Irwin

Daniel Ernest Ott (1931-2014) died May 20, 2014 in LaVerne, California. Born December 13, 1931, in Macdoel, CA, to Royal and Alice (Davis) Ott, he graduated from Live Oak High School and LaVerne College. In 1955, he married Doris Jeaneen Crist. Daniel was employed for 32 years as a research chemist for UC Riverside’s Department of Entomology. He lived in Riverside and LaVerne, California. He sang in the choirs of First United Methodist Church in Riverside and Church of the Brethren in LaVerne, as well as several other choral ensembles. He was a devoted volunteer for Heifer International. Daniel is survived by his wife, Jeaneen; sisters Lena Coffman and Leola Ott; brother Dale Ott; children Carolyn Thomas, Dana Bailey (Robert), and David Ott; grandchildren Crista, Matthew, and Kyle Thomas and Ryan and Sarah Bailey; brothers-and-sisters-in-law Edith Ott, Philip and Catherine Walker, Ronald and Judy Crist, and Calvin Crist; and many nieces and nephews. He was preceded in death by his parents, younger brother Roy Ott, and son-in-law Darren Thomas.

Jorge Arias (1943-2014), PhD at UCR in 1973. He was a medical entomologist with Pan American Health Organization (PAHO) until 2003, then Virginia Health Department through 2013. His scientific work took him into the jungles of the Amazon where he set up research labs and identified 19 new species of insects. His research and work with sand flies and leishmaniasis led to numerous publications and editorial work. In more than 30 years of scientific work, Dr. Arias received numerous accolades and dozens of honors and awards in the field of entomology, including 14 insect species named in his honor. He passed away on September 12, 2014.
Natural history collections are libraries of biological specimens and their associated data which are used to better understand the world. These collections are essential to document both present and past biodiversity, distributions of native species, the presence and spread of invasive species, and the impact of global climate change. At UCR, our largest collections focus on botanical (UCR Herbarium), nematological (UCR Nematode Collection), paleontological (Earth Sciences Collection), and entomological (Entomology Research Museum) resources. Our living collections include the Citrus Variety Collection and the UCR Botanic Gardens. Our collections provide the infrastructure to scientists for research on global biodiversity, evolution, conservation biology, paleogeography, climate change, invasive species, and emerging diseases (agricultural, human, veterinary). In addition, these biodiversity resources are crucial for instruction at K-12, college, and university levels and include displays or support events that are vehicles of outreach and interchange with local communities.

UCR’s natural history collections hold about 4 million specimens and rank among the leading collections in the World in their respective area of expertise. As examples, the UCR Nematode Collection (established in 1956 and holding ~370,000 specimens and 1000s of type specimens) is among the top three most important nematological collections, and the Citrus Variety Collection (initiated in 1910 and comprising 4,500 trees) is one of the largest collections of citrus diversity on a global scale. The Entomological Research Museum holds ~3 million curated specimens and is especially renowned for its extensive collection of voucher specimens for biological control projects conducted in California since the early 1990s.

In 2014, the interdepartmental Center for Integrative Biological Collections, the CIBC, was established within the College of Natural and Agricultural Sciences (CNAS) to facilitate interaction between these UCR collections and to promote their unique resources. CIBC’s mission is to advance research and teaching in biodiversity and provide support for the management of natural resources by fostering an interdepartmental alliance among UCR’s world-class natural history collections. This will be accomplished through integrated and transformative approaches across UCR collections that leverage novel systems in communication, relational databases, datamining, georeferencing, outreach, advocacy and securing enhanced funding.

Visit the CIBC website at http://www.cibc.ucr.edu/ and learn more about the collections, research conducted by faculty, staff and students involved in the CIBC, opportunities for student training at the undergraduate and graduate levels and how to get involved.

Christiane Weirauch, Professor of Entomology and Director of CIBC
Allen C. Cohen, (1978 alumnus, Ralph March and John Pinto, advisors) is publishing the 2nd edition of Insect Diets: Science and Technology this June (2015). Dr. Cohen is continuing his active program of teaching and researching insect rearing at NCSU.

Rick Vetter: In March 2015, Cornell University Press will be publishing my book “The Brown Recluse Spider” which is a culmination of two decades of work on this creature. Upon retiring from my SRA position in July 2012, this was the number one item on my bucket list. In retirement, I have been sponsored in the Entomology department by Dr. Mark Hoddle, continuing spider research under his auspices as well as initiating urban entomology projects on the brown widow spider with Entomology faculty member Dr. Dong-Hwan Choe. Once my official job was out of the way, I was able to fully concentrate on my own spider research where I have gotten out 15 publications in the last 30 months, bringing the current career tally to 137 peer-review publications, 3 book chapters and 2 books with more projects and manuscripts lining up this year as well.

Hello, Entomophiles

UCR Entomology merchandise is now available through our online store. Any of the designs in the store can be ordered in kid's, baby, men's, or women's sizes through the "color and style" options.

http://www.zazzle.com/riversideentomology

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Email us at richard.redak@ucr.edu

Where are they now? Spotlight on a former UCR entomology student

After graduating with my BS from UCR in 2012, I went on to complete my MS in Entomology/Molecular Biology with Dr. Marjorie Hoy at the University of Florida. For my research I attempted to elucidate the genes involved in the sex-determination pathway in the western orchard predatory mite *Metaseiulus occidentalis* and assisted with components of our lab’s genome project on this important natural enemy of pest mites.

As I was wrapping up my MS degree in 2014, I was invited to join another graduate colleague for a research expedition in the Peruvian Amazon. You can check out a recent story on that work in Popular Science at this link: http://www.popsci.com/article/science/what-i-learned-hunting-amazonian-spiders-weave-fake-spiders. While on that trip, I was offered a position to work with the Tambopata Research Center as a science communicator and I now organize expeditions to the Amazon rainforest with teams of biologists, writers, and photographers. Every trip has a scientific research component and our objectives also include surveying the unexplored rainforest while documenting interesting, rare, and potentially undiscovered species. My overarching goal involves utilizing social media to interact with online communities where we can share the process of scientific discovery and answer questions about nature and biodiversity for a broad audience. The work that I’m doing in science communication will hopefully also help to bridge gaps that exist between scientific researchers and the public.

I also contribute to a Facebook page called “Relax. I’m an Entomologist” which is an education website dedicated to sharing insect and arthropod related news and questions. The page has quickly expanded to have over 43,000 followers, so if you have any news you’d like to share please don’t hesitate to send it my way.

I’m thankful for the great experience I had at UC Riverside and the amazing mentors who taught me in my entomology courses. I feel fortunate to have the opportunity to communicate science by utilizing my background in entomology in one of the most biodiverse regions on the planet and I hope to share these experiences with you!

Please don’t hesitate to get in touch with Aaron at pomerantzaaron@gmail.com or follow him on twitter @AaronPomerantz
We also continue to engage in off-campus events with school groups, libraries, and other organizations in the area. For example, we have collaborated with the LA Natural History Museum for its 28th Annual Bug Fair. We also participated in Cal Poly Insect Fair. Some notable new events for us this year included a Bug Fair at Hidden Valley Nature Center and a fundraising event for Woodcrest Library.

The Department of Entomology continues to maintain an active public outreach program. Over the last year our students have participated in over 60 events associated with campus and the broader community.

University events included homecoming, freshman orientation, campus recruitment days, UCR Botanic Gardens plant sale, young women in math and sciences event, and the chancellor’s new faculty welcome picnic.

We will continue to serve campus community and beyond by developing and providing educational entomology outreach programs. Many thanks to all of the students whose hard work makes this program possible.

By Dong-Hwan Choe
Outreach Committee co-Chair