



2012

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PURDUE ENTOMOLOGY: DRIVING PEST MANAGEMENT FORWARD

What can the pest management industry expect from Purdue going forward? More of the same great stuff, as well as some new surprises.

here would the pest management industry be without science? Without entomologists who understand why termites tunnel and cockroaches climb? Without researchers who evaluate the effectiveness of the products we use and offer ideas for making them better? Without those who ask the questions that help us consistently improve the way we protect homes, schools, hospitals and food plants?

Where would the pest management industry be without Purdue University?

For 100 years, the Department of Entomology at Purdue University has shed light on issues that concern pest management professionals most. Purdue became integral in the industry's fabric when J.J. Davis took over the Department in 1920. His vision of sharing Purdue's scientific discoveries set the stage for a relationship that has grown stronger each decade. In 1948, Davis hired John Osmun to develop and teach the first four-year curriculum devoted to urban and industrial entomology. With Davis and Osmun at the helm, the program could go only one way: forward.

"From those early years until now, the momentum has never slowed," says Entomology Department Head Steve Yaninek. "Purdue launched what has become one of the industry's premier pest management conferences, which



Purdue urban pest scientists Gary Bennett and Abdul Ameen examine German cockroaches. (Purdue photo by Tom Campbell)

is now in its 77th year; developed a correspondence course that enables pest management professionals to build knowledge and attain certifications; and wrote 'Truman's Scientific Guide to Pest Control Operations,' which is now published in four languages and widely considered 'the bible of the industry.' The foundation for all of these accomplishments is a research and education program that continues to evolve with the needs of the industry."

EVOLUTION OF RESEARCH. Research is the cornerstone of Purdue's contributions to the pest management industry. In the 1880s, before the Entomology Department took root, agricultural researchers at Purdue studied the interactions of insects and plants. The first professional entomologist at Purdue, USDA researcher F.M. Webster, studied Hessian flies, which were of particular interest due to the risks they posed to wheat harvests.

Today, in Purdue's Center for Urban and Industrial Pest Management, research has evolved to incorporate new technologies and tools most notably, molecular biology and arthropod genomics. Researchers can look into all levels of an organism, going so far as to zoom in to the molecular level to see, for example, which genes are involved in a termite's gut when it's digesting wood or how metabolic pathways in a cockroach might be manipulated to influence growth and development.

"We have the ability to explore the whole organism. Our goal is not to gather knowledge for its own sake but rather to learn how to manage the insect through

better pest management approaches," said Mike Scharf, the O. Wayne Rollins/ Orkin Endowed Chair in Urban Entomology and Molecular Physiology, one of two endowed chairs at Purdue.

One of Scharf's landmark projects, funded by the U.S. Department of Energy, is a study into termite digestion that has significant implications for biofuel development. In short, the way a termite converts wood into fuel for itself offers insight into how plant materials might be converted into biofuels. This study, which relied in part on advanced genesequencing technologies, provides information for pest management in that it reveals more about the basic physiology of termites, which could lead to the development of new control methods.

Scharf, along with Research Assistant Professor Grzesiek Buczkowski, is also working on the challenge of insecticide resistance in cockroaches. These studies, backed by several manufactur-



ers to improve product development. address how the initial effectiveness of baits and other products declines as insects build up a tolerance to them.

Scharf, Buczkowski and Gary Bennett, coordinator of the Center for Urban and Industrial Pest Management. continue to research horizontal transfer as well. Buczkowski and Bennett made a groundbreaking discovery through a project involving cockroaches: In addition to primary and secondary transfer, tertiary kill from a bait is possible. Cockroaches that feed on insecticide baits effectively become "walking bait stations," and can bring secondary and tertiary mortality after their own death.

Buczkowski also worked with researchers at Rutgers University on testing the effectiveness of various kinds of bed bug treatment programs. The findings? When used in combination with IPM measures, insecticide dust application that is restricted to furniture legs can be effective. In two weeks, the test units were at nearly zero bed bugs throughout the 16-week test period.

STRENGTH IN PARTNERSHIPS. Most research projects conducted at Purdue



F Throughout its 100-year history, Purdue Entomology has not only weathered change but embraced and enhanced it with science discoveries of its own. While many entomology programs across the country are being absorbed by, or split into, other departments. Purdue is strengthening its

position to remain one of the premier departments in the world. Its innovative technologies and outreach programs will take it confidently and competently into the next 100 years." — Gene White (MS '96), Director of Education and Training, Rose Pest Solutions

involve collaboration with external entities. Purdue has a broad network of affiliations and an official program for manufacturers and other partners who want to become involved: the Industrial Affiliates Program, led by Buczkowski.

"The world of research is much more complex than it was a hundred years. or even a few decades, ago," Bennett said. "When I joined the faculty in 1970, I selected research topics and worked on them myself. Today we bring teams together - multidisciplinary scientists, agencies with a stake in the outcomes, manufacturers interested in improving their products - and each entity brings a unique skill set and specialized

O. Wayne Rollins Endowment Fuels Advances in Urban Entomology

In 2004, the O. Wayne Rollins Foundation committed \$1.5 million to establish the first endowed faculty position in Purdue Entomology's history: the O. Wayne Rollins/Orkin Endowed Chair in Urban Entomology and Molecular Physiology. Purdue appointed Mike Scharf to this position in 2010.



Mike Scharf

Scharf's charge was to develop and maintain a research program integrating urban pest management and insect molecular biology. He embraced that challenge and today conducts basic research on urban pest insects — namely, termites and cockroaches — that directly contributes to improving pest management.

"The Rollins Chair gives us the freedom to explore a broad range of areas related to pest management," says Scharf. "We are extremely fortunate to have the opportunity to conduct research that is sometimes 'risky,' meaning that we ask a scientific question and may or may not uncover a telling answer. The vast majority of researchers don't have this kind of flexibility.

The O. Wayne Rollins Foundation supports U.S. colleges and universities with programs dedicated to science research and public health issues. O. Wayne Rollins, the late head of Orkin, established the foundation in 1967. Born in 1912, the same year the Purdue Entomology department was founded, Rollins was a visionary businessman who became involved in pest management when he bought Orkin Exterminating from Latvian immigrant Otto Orkin in 1964. He led the company's extraordinary growth for 27 years as chairman and CEO.

knowledge to the table. This enables us to maximize the impact of our research in terms of how it applies to the real world. In urban pest management, for example, research may have economic, social and political implications."

Clay Scherer, technical services manager at Syngenta, has worked with the Purdue research team for nearly a decade. "On the manufacturing side, research dollars are scarce, so when we invest in a project, we have to be certain we're working with a team who provides accurate data in a reasonable amount of time. That's why we work with Purdue," he said. "Grzesiek, Mike and the entire Purdue research team bring an outstanding level of knowledge and expertise to every project. When we get results back, we know they are reliable."

Ronda Hamm, lead biologist at Dow AgroSciences, says that Purdue is a valued working partner in research. "The Purdue team is talented and reliable, but even more importantly, they contribute greatly to the science by challenging the ideas set forth. Who else would think of connecting termites and biofuels?"

PROMISE OF THE FUTURE. What can

we expect from Purdue going forward?

"We will continue to make inroads with modern tools as we explore new ways of manipulating behaviors and managing pests," said Yaninek. "Our conference will keep getting stronger, and our research team will continue to grow and ask the questions that lead to discoveries vital to the urban pest management industry. There will always be new insects and new challenges. Purdue will be there to meet them headon." 100

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PURDUE THROUGH THE YEARS

Entomology has been part of Purdue University since it was founded in 1869, but in 1912 the Department of Horticulture and Entomology were split into separate departments. As a result, the university is celebrating the department's centennial throughout the 2012-13 academic year. Here's a timeline showing the notable moments in Purdue Entomology history.



| 1869 | Purdue University is founded as a land-grant university under the Morrill Act |
|------|---|
| 1880 | First entomology course is taught at Purdue |
| 1884 | School of Agriculture is established; J. Troop is hired as first head of Horticulture and Entomology |
| 1912 | Department of Horticulture and Entomology splits into separate departments; J. Troop remains head of Entomology |
| 1920 | J.J. Davis joins Purdue as second department head |
| 1937 | First Purdue Pest Control Conference takes place (this photo is from the '38 conference) |
| 1948 | John Osmun joins Purdue to develop first four-year curriculum in urban and industrial entomology |
| 1956 | When Davis retires, Osmun becomes third department head (Osmun accepts office keys from Davis) |
| 1961 | Purdue entomologist William Butts partners with PMP Lee Truman to develop the first Purdue urban pest management correspondence courses |
| 1962 | Butts and Truman co-author the first edition of the "Scientific Guide to Pest Control Operations" |
| 1969 | Agriculture Hall becomes Entomology Hall |
| 1972 | Eldon Ortman (right) becomes fourth department head upon Osmun's (left) temporary leave to work with USDA and EPA |
| 1976 | Osmun establishes the Purdue pesticide applicator training program |
| 1988 | Following Osmun's retirement in 1987, the John V. Osmun Alumni Professional Achieve- ment Award in Entomology is established and awarded to its first recipient, Max Summers |
| 1990 | Chris Oseto becomes the fifth department head |
| 1992 | Gary Bennett establishes the Center for Urban and Industrial Pest Management |
| 2000 | Steve Yaninek (right) becomes the sixth department head (with Osmun late last year) |
| 2004 | 0. Wayne Rollins Foundation commits \$1.5 million to endow a chair in urban entomology — the first in the department |
| 2004 | With renovation complete, Entomology Hall is re-dedicated as David C. Pfendler Hall of Agriculture, featuring the Hromada Grand Foyer |
| 2006 | John V. Osmun Professorship in Urban Entomology is established with gifts and pledges from 51 donors totaling just more than \$1 million |
| 2010 | The O. Wayne Rollins/Orkin Endowed Professorship in Urban Entomology and Molecular Physiology is filled with the hire of Mike Scharf (BS '91, MS '93, PhD '97) |

Celebrating 100 years of academic entomological excellence.

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Congratulations to Purdue University's Department of Entomology and all they do for our industry.

You've created a culture of teaching, research, and professional excellence that has elevated the entire structural pest control industry. We look forward to continuing our partnership and supporting your outstanding efforts. Thank you for 100 successful years.

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John Osmun applying insecticides in 1945; Osmun as a captain in the U.S. Army serving as an entomologist for New York City (also in 1945).



My most cherished memories of Oz were the times he accompanied me during graduate school on night excursions to observe bats in attics or mice in poultry houses. On those trips, he provided wonderful counsel on all aspects of life and entomology. Those trips helped shape who I am today." — Bobby Corrigan, President, RMC Pest Management Consulting, and former Purdue Entomology faculty member

THE GREAT AND

In October 2012, Dr. John Osmun passed away at age 94.

ome people are born with a driving passion that helps them change the world and influence generations. Dr. John V. Osmun was such a person. His passion? Bugs.

"When I visited West Lafayette in 1971 to interview for my faculty position, John came to meet me at the airport," says Purdue Entomology Professor Tom Turpin. "We hopped into his little burnt orange sports car, and he quoted Robert Frost, announcing, 'It's a blue-butterfly day here in spring!' His energy and enthusiasm was contagious — not just that day but every day. He was absolutely passionate about entomology, and he instilled that passion into every student and colleague who was fortunate enough to work with him."

THE EARLY YEARS. For 39 years a member of the Purdue faculty and for more than 60 years a professional of the pest management industry, Osmun — "Oz" as he was known to many of his colleagues and students — played an unparalleled role as educator, researcher and regulator. He served as

a chief entomologist for the U.S. Army and as a research entomologist with Merck & Co. before meeting Purdue's J.J. Davis in 1947. Davis asked Osmun to join the faculty and develop a program in urban entomology. Several months later, in 1948, Osmun did precisely that. As assistant professor of entomology, he made history by developing and teaching the first four-year curriculum in urban and industrial entomology. His goal was to further the work that had been done by Davis to establish urban entomology as a highly respected, professional field.

"John was a leading light in establishing national and international recognition of entomology as a profession," says Contech Enterprises Chief Scientific Officer John Borden. "Although he was always soft-spoken and unassuming, John was a true leader, whose dedication to professionalism lives on in legions of Board Certified Entomologists."

In 1950, Osmun made history again, by forming Pi Chi Omega with six of his students — Bill Brehm, George Gilmore, Frank Harder, Harlan Shuyler, Clifford Weiss and Clayton Wright, each of whom went on to earn his own place in pest management history. The professional fraternity now boasts 450 members from eight countries and supports education and camaraderie throughout the pest management industry.

THE GROWTH YEARS. Upon Davis' retirement in 1956, Osmun was appointed head of Purdue's Entomology department, a position he held until 1972. During these 16 years, he led the department to phenomenal growth in terms of both size and reputation. Laboratory and field research became interactive, classes broadened in scope and diversity, and extension efforts, including the correspondence course that has become one of Purdue's signature programs, grew.

He took leave from the university in 1972 to work on termites in Australia for a year while on sabbatical, then moved to Washington, D.C., in 1973 to work with the Cooperative States Research Service and as the first director of the Operations Division of the EPA, where he helped set the earliest performance standards.



Though long retired as a professor emeritus by the time I was a doctoral grad student at Purdue in the 1990s, Oz became for me a great mentor, friend, fellow entomologist and urban pest management colleague. He got to know us students because, even into his late 80s, he still came into the office every day." — Kathy Heinsohn (right with Osmun), technical and training entomologist at American Pest. Fulton. Md.



POWERFUL "OZ"

Osmun returned to Purdue in 1975 as a professor of Entomology and coordinator of Purdue's pesticide programs. He retired in 1987 as professor emeritus.

"Though long retired as a professor emeritus by the time I was a doctoral grad student at Purdue in the 1990s, Oz became for me a great mentor, friend, fellow entomologist and urban pest management colleague," says Kathy Heinsohn, technical and training entomologist at American Pest, Fulton, Md. "He got to know us students because, even into his late 80s, he still came into the office every day."

HONORING AN ICON. Upon his retirement, an award fund, The John V. Osmun Alumni Professional Achievement Award in Entomology, was established in honor of Osmun's numerous and enduring contributions to Purdue and the industry. Recognizing and promoting high achievement and professionalism in entomology and related fields, it is bestowed upon a degree-holding alumnus of the Purdue Department of Entomology. The 2012 award went to Rob Wiedenmann, professor and head of the Department of Entomology at

the University of Arkansas, a worldrenowned expert on invasive species and biological control, and the current president-elect of the Entomological Society of America.

More recently, Osmun's legacy was celebrated through the establishment of the John V. Osmun Endowed Professorship. Pest control companies, distributors and others involved in the pest management industry contributed \$1 million in funding. Once the endowment reaches its target goal of \$1.5 million, it becomes an endowed chair, which will be used to recruit and retain a professor who will be charged with conducting timely research that is immediately applicable to the pest management industry. Like many of Osmun's efforts, it will facilitate the advancement of the pest management industry.

On Oct. 13, 2012, during Purdue Entomology's centennial celebration, Osmun, one of the most universally respected educators in the pest management industry, passed away at the age of 94. Once again, he was honored with a special tribute: the Dr. John Osmun Memorial Scholarship, established by Pi Chi Omega to recognize each year's strongest scholarship applicant.

Gary Bennett, coordinator of the Center for Urban and Industrial Pest Management, worked closely with Osmun for many years. "Anyone who knew John, whether related to Purdue or not, would call him a mentor and friend," Bennett said. "He knew all of our students and pest management people all over the world, and if he knew you, he helped you. He was a good guy. We will miss him." 100

Pi Chi Omega Establishes the Dr. John Osmun Memorial Scholarship

At NPMA PestWorld 2012 in Boston in October, the Pi Chi Omega board created the Dr. John Osmun Memorial Scholarship. This scholarship will be the top scholarship offered to the most qualified student applicant each year and will be at a higher dollar value than other Pi Chi Omega scholarships. The organization said it is pleased to honor Osmun in this manner, recognizing his vast contributions to the industry, Pi Chi Omega and Purdue Entomology.



PURDUE UNIVERSITY SUPPLEMENT



Top to botttom: A Pi Chi Omega group photo from 1978: William Brehm, John Osmun and Clayton Wright in 1950 in front of the Osmun house. where Pi Chi Omega formed; Pi Chi Omega



President Jim Sargent (left) and Executive Director Vern Toblan at 2012's Purdue Pest Management Conference.

PI CHI OMEGA: PURDUE BORN AND BRED



More than 60 years ago, Pi Chi Omega, the industry's professional fraternity, was established at Purdue University.

n May 1950, Entomology Professor John Osmun and six of his Purdue students gathered in Osmun's living room to discuss the establishment of a professional fraternity of urban entomologists. By the time they left, Pi Chi Omega had become a reality, complete with bylaws and aspirations. Today, Pi Chi Omega is an international fraternity that promotes education, networking and excellence in the industry.

"John and the other founders saw the fraternity as a way to elevate the reputation of the pest management industry," says Executive Director Vern Toblan, who has been a member since 1979. "It began as a society of entomologists, but the founding members soon realized that broadening its membership to include other professionals in the pest management industry would help them better fulfill their mission."

Pi Chi Omega's 450 members represent 44 states and eight countries, and include members at every level of the pest management industry.

EDUCATION INITIATIVES. Promoting education has always been, and continues to be, one of Pi Chi Omega's highest priorities. In 1977, membership and donations had grown large enough to support a scholarship program that would help aspiring urban entomologists achieve their academic goals. Since then, Pi Chi Omega has awarded more than \$100,000 in scholarships. In 2012, the fraternity established the Dr. John Osmun Memorial Scholarship to honor its founder and recognize the year's most qualified scholarship applicant.

The scholarships help students financially to become entomologists and encourage them to seek nomination into the fraternity. Students bring new ideas and benefit from the experience of established members.

Stephanie (Larrick) Hill, a 2010 scholarship recipient, recognizes those benefits. "Pi Chi Omega gives me the opportunity to see the practical side of pest management. That's some-

thing I don't often get to experience in academia," said Hill, who is pursuing her doctorate at the University of Florida. "The organization has also helped me start to build a network of professional contacts. This is im-

portant to me not only because I'll want to get a job in the industry one day but also because it's so gratifying to share insights and ideas with people who are passionate about the same things I am."

SERVICE PROJECTS. Throughout its history, Pi Chi Omega has reached out to the world to promote healthier environments for both people and wildlife. One of the organization's most wellknown projects, a collaboration with Heifer International, involves donating beehives to impoverished families, who are trained to care for the bees and harvest the pollen, honey and wax, which provide a source of income.

In an effort with the World Wildlife Fund, Pi Chi Omega is helping to save the winter habitat of monarch butterflies in Mexico by supplying underprivileged families with beehives. "When monarchs migrate each winter, they settle in a particular type of tree," said Toblan. "Local underprivileged people had been selling those trees for firewood, leaving nowhere for the monarchs to winter. By providing these people with beehives and teaching them to market the honey, we have been able to stop them from destroying the trees."

THE FUTURE. Pi Chi Omega's wish for the future is to continue growing in number and diversity. Toblan says he would especially like to draw more younger members into the organization.

"Ours is a strong, recession-proof industry — there will always be a new

important insect, and bugs will outlive us all. We need to encourage more young people to take an interest in pest management and build careers in it," said Toblan.

Younger members like Hill are striving to do just that. "We're

starting to get the word out through social media and the website, letting emerging entomologists and others interested in pest management careers know about the scholarship opportunities and the benefits of being part of this professional network," she said. "It will take some time to build the membership, but we're getting there." 100



Pi Chi Omega Congratulates Purdue Entomology on its Centennial Anniversary

Announcing the creation of the Dr. John Osmun Memorial Scholarship





www.pichiomega.com

Pi Chi Omega is the national professional pest management fraternity founded in 1950 at Purdue University by students of Dr. John Osmun.

Pi Chi Omega is pleased to announce the creation of the Dr. John Osmun Memorial Scholarship, which will be the most prestigious scholarship the Fraternity will offer each year as part of its annual scholarship program for outstanding students in urban entomology.

If you would like to contribute, send donations to: Dr. John Osmun Memorial Scholarship Vern E. Toblan, Executive Director Pi Chi Omega P.O. Box 8149 Wilmington, DE 19803



PURDUE ALUMNI PLAY PIVOTAL ROLES

When conversations turn to the big names in pest management, it doesn't take long for Purdue names to pop up. Historically, more than 40 percent of Purdue Entomology alumni pursue careers in pest management or chemical companies, and these individuals, along with other alumni who choose government or academic careers, are renowned for influencing the direction and progress of the pest management industry.

Monumental advances in pest management began with the very first graduating class of urban entomologists at Purdue. In the 1950s, Bill Brehm and George Gilmore made history by inventing the first commercial sprayer, the B&G sprayer, while they were undergraduates. Their classmate Clayton Wright became a driving force in the areas of pesticide formulation and distribution, and founded B&G Chemicals and Equipment Company in Dallas. All three became iconic figures in the pest management industry.



Left: Charlie Hromada and wife Frankie with John Osmun and wife Dortha. Right: Dave Mueller ('75) with Osmun and Steve Yaninek, Purdue Entomology Department head.

This tradition of excellence has continued through the decades, as Purdue alumni are among the most knowledgeable, innovative and committed professionals influencing the pest management industry. Some of these individuals, such as Charlie Hromada (MS '54) and Austin Frishman (Ph.D. '68), have achieved icon status. Hromada was named a PCT/Syngenta Crown Leadership Award winner in 1994 for his cutting-edge work at Terminix, where he spent 45 years; Frishman was inducted in 2002 for his revolutionary cockroach bait research and his ongoing contributions to the industry as an international authority on pest management.

Others who have contributed, and continue to contribute, to the industry's success include leaders such as Eric Smith (MS '70), David Mueller (BS '75), Bobby Corrigan (BS '77, MS '80, Ph.D. '95), Stoy Hedges (BS '81), Gene White (MS '96) and Kathy Heinsohn (Ph.D. '98), to name just a few.

Oh, Beautiful Bugs! Purdue Gallery Showcases Artwork

The aesthetic splendor of a German cockroach might be wasted on a homeowner with an infested kitchen, but visitors to the Robert L. Ringel Gallery in Purdue University's Stewart Center March 4 through April 21 will appreciate the elaborate display of insect photography, illustrations, cartoons and period posters.

"On Six Legs: 100 Years of Insect Art & Science" is a free exhibition that will serve as a centerpiece for this year's annual Bug Bowl, taking place during Purdue University's Spring Fest, April 13-14. Selected works from the Bug Bowl's Insect Art Contest, which draws thousands of entries from K-12 students each year, will share the stage with artwork from the Entomology Department's collections.

Scientific illustrations and art of several other artists associated with the department over the years will be on display. Each illustration and photograph celebrates the connection of art and science to create a meaningful and memorable experience. Why is Purdue Entomology so influential? Here's what alumni said:

G Purdue has the distinction of taking a personal interest in students. When you graduate from Purdue, you're not simply a student of the book; you're a student of the book and the field. That's because your education has included coursework specific to your interests and hands-on experience in the lab and field. A Purdue education doesn't just give graduates an edge in the job market, it makes them extremely valuable to the industry." — Austin Frishman, President, AMF Pest Management Services, Boca Raton, Fla.

G Can you say networking? In Gary Bennett's urban entomology program, you get to know everyone who is anyone in the business. From helping with the annual pest control conference, to visiting pesticide manufacturing companies, to hosting international and national researchers in the lab, to presenting research at professional meetings, students have countless opportunities to meet people. This networking pays huge dividends down the road in terms of both job offers and research opportunities." — Kathy Heinsohn, Technical and Training Entomologist, American Pest, Fulton, Md.

G Students graduate from Purdue feeling confident, prepared and motivated. I did, and the Purdue graduates I hire do. The reason I had the confidence to start my own business right out of school was that I knew the program had prepared me from a knowledge standpoint and I knew I had Purdue's backing going forward. The ongoing support and mentorship is extraordinary." — David Mueller, President, Furnigation Service & Supply and Insects Limited, Westfield, Ind.

Purdue has a rich, blended history between its people and their science. I returned to graduate school from the pest management industry because I could clearly see that studying at the Urban Pest Management Center would add to my understanding of integrated pest management. Now, years later, the classroom learning has been replaced by networking with Purdue alumni and faculty. The science meshed with the people creates a support system that helps us all succeed." — Gene White, Director of Education and Training, Rose Pest Solutions, Troy, Mich.



THE LEGACY OF EXCELLENCE CONTINUES: IAN KAPLAN BRINGS HOME THE PECASE

You'd be hard-pressed to find anyone in the pest management industry who hasn't at one time or another sung the praises of a faculty member or alumnus of Purdue. Sometimes that praise comes in the form of a prestigious award — sometimes from the USDA and the President of the United States.



President Barack Obama addresses 2012 Presidential Early Career Awards for Scientists and Engineers (PECASE) recipients, including Purdue's lan Kaplan, in the East Room of the White House, July 31, 2012. (Official White House Photo: Pete Souza) Assistant Professor Ian Kaplan, one of the youngest faculty members of Purdue's Entomology team, earned the Presidential Early Career Award for Scientists and Engineers (PECASE) in 2012 for his leading-edge research on maximizing the positive effects of natural enemies on pests. In short, this particular aspect of Kaplan's work explores the manipulation of chemical odors naturally emitted when a plant is damaged so that the predators can more easily locate their prey.

Kaplan, now in his fourth year with Purdue, explains, "We're exploring ways to reduce the need for insecticides within agricultural systems by harnessing the instincts of predators.

If we can encourage beneficial insects to come into the fields where they're needed, farmers can better control their pest populations."

Entomology Department Head Steve Yaninek adds, "This 'ecology of fear,' which delves into the nuances of chemical communication between biological systems, is a new area of study — an area in which Ian is considered a leader. We're very excited about his research and this well-deserved honor."

PECASE recognizes scientists and engineers whose early accomplishments show promise for assuring America's preeminence in science and engineering and for contributing to the awarding agencies' missions.

Leading Entomologists Light Up the Stage

Members of the Purdue Entomology Department teamed up with nationally acclaimed scientists, distinguished alumni and respected partners to deliver the Centennial Lecture Series, weekly presentations addressing topics related to Purdue's teaching, extension and research missions.

The series, which began in August and will conclude in May, features speakers from numerous universities and organizations across the country. The talks cover a variety of topics



Visit http://centennial.entm.purdue. edu/events to see videos from the Centennial Lecture Series.

the country. The talks cover a variety of topics, from the technical — genetic pest management on human health and biodiversity, flying insect light trap research and vector pest management, for example — to the historical – 100 years of entomology at Purdue, experiences in the pre- and post-genomic eras and the development, evolution and emergence of urban entomology in the U.S.

Many of these presentations are available for viewing on YouTube. Visit centennial.entm.purdue.edu/events for links to these videos and the complete lecture series schedule. I00

The articles in this Purdue Entomology supplement were written by PCT Contributing writer Donna DeFranco. She can be reached at ddefranco@qiemedia.com.

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