Greetings from sunny Ithaca! My name is Jeff Scott and I became Chair of the Department of Entomology on January 22, 2007. One of my goals as Chair is to reconnect with YOU. So I am pleased to be part of this Entomology Newsletter that I plan to make an annual event. It has been a long time since we sent out a newsletter, so we have some serious catching-up to do! Please note that we do not have complete contact information for many of you. If you could please fill out the “Reconnect With Us” form on the last page of this newsletter and return it we would greatly appreciate it.

The first great news I have to share is that we are a vibrant department and continue to be one of the top Entomology Programs in the USA! This newsletter highlights many of our recent events, and I think clearly demonstrates the vitality, relevance and quality of our Department. One of our most recent success stories is our departmental open house, “Insectapalooza” (Pg 2). This annual event brings thousands of people of all ages to Comstock Hall to learn about the wonders of Entomology. Our undergraduates and graduates continue to be stellar. Details are provided about what our recent graduates are doing, as well as information about our incoming students.

Second, I would like to thank Jan Nyrop who was the previous Chair of the Entomology Department. Jan has moved on to become Senior Associate Dean in the College of Agriculture and Life Sciences. We all wish Jan the best of luck in his new position.

Lastly, I would like to invite you to stop by and visit us the next time you have an opportunity. The campus continues to change and grow, with the new Weill Life Sciences building going up not far from us. Alternatively, please visit us at the Entomological Society of America Annual Meeting in San Diego, CA. Our mixer will be on Monday December 10, 2007 at the Town and Country Resort and Convention Center (6:30-8:30 p.m., room will be announced at the meeting). I hope to see you in San Diego or here in Ithaca!

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Acknowledgements
Many thanks to those who have helped behind the scenes gathering and compiling information. Without their help this project would have never been possible.

Sue Ganey
Marian Hartill
Carol Hunter
David Smith
Janice Waller
S&W Undergrad Entomology Club

It is with great sadness that we announce the passing of the following alumni:
Martin M. Barnes, (Ph.D., 1946) Professor Emeritus of Entomology at the University of California, Riverside passed away on April 22, 2007. Martin had a long and distinguished 46-year career as an Economic Entomologist and Professor at UCR. He retired in 1991.
Mark Lacey (Ph.D., 1976) passed away on April 10, 2007. Mark was a well known pest control industry author and speaker. Since 2003, he served as district sales manager of Liphatech’s northeast territory.

Learn more about the Cornell Entomology Department in Ithaca at http://www.entomology.cornell.edu/IthacaCampus/Welcome.html
Spotlight: Making the Move to Kansas

By: Melissa Hardstone

Andrew Short recently obtained his Ph.D. in May of 2007. He is a model student, teacher and researcher in the department. Andrew has been an active member of the department serving as a member on many committees as well as being an active member of Jugaette. During his graduate student career, Andrew has obtained numerous grants and awards such as the Palmer Fellowship (Entomology), Rawlins travel grants (Entomology), Graduate School Conference and Research grants, as well as the prestigious John Henry Comstock Award from the Entomological Society of America. Andrew has served as a teaching assistant for Introductory Entomology, Insect Systematics and many semesters of Introductory Biology for which he earned the Outstanding Teaching Assistant Award in 2006. Not only is it evident that Andrew is an accomplished researcher passionate about his work and an avid teacher in the classroom, but he has also embraced the many chances to mentor and train students in the field.

Andrew’s interest in insects started early in life and at the age of 11 he created his first collection with a make-shift collecting box using his mom’s sewing pins. Andrew decided to major in Entomology for undergraduate studies at the University of Delaware, where he began dabbling in the beetle family Hydrophilidae. Andrew says “I was always playing in streams, so working on an aquatic group seemed natural. I've been working on the family ever since.”

Andrew wanted to continue researching hydrophilids, so when the choice of graduate schools was at hand he looked for schools that had strong systematics programs, and everyone he talked to suggested Cornell. With the robust systematics program (in Entomology and the Horticulture in Plant Biology) and a healthy group of Coleopterists, Andrew didn’t hesitate to start his graduate work at Cornell in the lab of Dr. James Liebherr. The powerful systematics program created an incredible atmosphere for student training in the field while the combination of the Entomology Library and Insect Collection provided tools that only a handful of other institutions could compete with.

Most of Andrew’s research program centered on the systematics and diversity of the water scavenger beetles (Hydrophilidae). He was particularly interested in the interplay between habitat and morphology, and in the case of aquatic beetles, the ecomorphological pathways between aquatic and terrestrial ways of life. His approach was composed of both revisionary systematics and descriptive faunistics (e.g. biotic inventories). Andrew has been extremely fortunate to conduct fieldwork during his degree, crediting many of the travel opportunities provided to him by the Graduate School and department grants. His fieldwork travels have included domestic and international locations including trips to Hawaii, Venezuela, Mongolia, and six expeditions to Costa Rica. To date he has described four new genera and more than fifty new species of this group and has published 21 papers.

Andrew recently accepted a tenure-track position at the University of Kansas (KU) as an Assistant Professor in the Department of Ecology and Evolutionary Biology and assistant curator in the Division of Entomology in the Biodiversity Research Center. At KU he plans to continue work on the systematics and evolution of aquatic beetles, with an emphasis on the water scavenger beetles. Currently, he is organizing a biotic survey of these insects in Venezuela and will serve as a Postdoctoral Researcher at the Santa Barbara Museum of Natural History for 6 months before starting his position at KU. To see more about Andrew’s research and research trips see his online resource for hydrophilid systematics at http://hydrophiloidea.org.

ENDOWMENTS PAVE THE WAY FOR ENTOMOLOGY’S FUTURE

With the extraordinary generosity of our alumni we are able to fund many outstanding activities in our department. Some of our more recent endowments, and their uses, are detailed below.

Dr. Daljit S. and Elaine Sarkaria have invested in the Department of Entomology’s future by endowing the Daljit S. and Elaine Sarkaria Institute of Insect Physiology and Toxicology. Dr. Daljit S. Sarkaria completed his Ph.D. studies at Dr. Robert Patton in 1948. This extraordinarily generous endowment will provide for the hiring of a new Endowed Professor (a first for our department), an annual lectureship in honor of Dr. Patton and support for training of postdoctoral associates and graduate students. Our goal is to become the premier department in the world for the study of insect physiology and toxicology.

W. Arthur (Ph.D.,1936) and Alma D. Rawlins Graduate Student Endowment is a gift to our department. Our graduate students greatly appreciate this endowment which provides funds for travel to national meetings, field trips, and research support. Recent examples include trips to the Entomological Society of America National Meetings (to give presentations), to the British Museum of Natural History (to examine specimens) and to Europe (searching for natural enemies of new invasive species).

John L. McDonald (M.S.,1964) Scholarship in Entomology. This very generous gift provides support to undergraduates majoring in Entomology. Scholarships like this are the only way that many students are able to afford to attend Cornell.

William M. Rogoff (Ph.D.,1943) Lectureship in Entomology. This wonderful gift provides us the opportunity to bring in an exceptional scientist to speak at our weekly departmental seminar (Jugatea). Our most recent Rogoff Lecturer was Dr. Greg Lanzaro (UC Davis) who spoke on “The sand fly salivary protein, maxadilan: Insights into the complex interactions among blood-feeding insects, their hosts and the parasites they transmit.”

ENTOMOLOGISTS TAKE HOME THE PRIZE

Faculty and Staff:

- Laura Harrington - 2006 CALS Award for Excellence in Mentoring Undergraduate Students in Research
- James Liebherr - 2006 Entomological Foundation Thomas Say Award for outstanding contributions to the Science of Entomology
- David Pimentel - 2006 L. O. Howard Distinguished Achievement Award from the Eastern Branch of the Entomological Society of America (ESA)
- Linda Rayor - 2007 CALS Innovative Teacher Award
- Donald Rutz - 2006 Employer Recognition Award from Cornell

Graduate Students:

- Maureen Carter – 2007 Outstanding Graduate Teaching Assistant in Entomology (Office of Academic Programs)
- John Diaz-Montano - 2006 President’s Prize Award, ESA National meeting (poster presentation, Section F)
- Torsten Dikow - 2006 John Henry Undergraduate - Paul Schreurs Memorial Award
- Melissa Hardstone – 2006 President’s Prize Award, ESA National meeting (10 min talk, Section B)
- Andrew Short - 2007 John Henry Undergraduate Award Runner-up, ESA National meeting (poster presentation, Section B)
"Caught Between the Pages: Treasures from the Franclemont Collection"

On June 8 there was a reception in the Comstock Memorial Library celebrating the books given by the late Professor John G. Franclemont. Dr. James Liebherr gave a special presentation entitled "Reflections on the importance of these works for the study of modern entomology." The exhibit of rare books will be up until mid-October so come by and have a look!

Jugatae & Graduate Students Give Back
By Melissa Hardstone

Jugatae, the Graduate Student Entomology Club, maintains and continues a tradition of being an active departmental group. Overall, Jugatae strives to serve the needs of Entomology students, to enrich the academic and social lives of everyone in the Entomology Department, and to promote interest in all aspects of insect biology in the Cornell community. The club’s graduate talks continue the long standing tradition of organizing and implementing the departmental weekly seminar series (http://www.entomology.cornell.edu/ithacaCampus/jugatae.html). One of the highlights from this year’s series was a talk on Atta ants by Cornell Alum Dr. John Moser (Ph.D., 1958) who works for the USDA-Forest Service at the Alexandria Forestry Center in Louisiana.

Recently, many members of Jugatae and the faculty took on the daunting but very rewarding task of revising and updating Exuviae, the Graduate Student Handbook, to better acquaint new students to life in Comstock. To enhance the camaraderie and support within the Club, the graduate students engage in a Graduate Student Seminar Series (affectionately called GS³) which meets bi-monthly and is organized by a graduate student. GS³ is a great way for graduate students to practice scientific meetings, prepare A-exam presentations, as well as a way to present research findings to a group of peers. Jugatae hosts various social activities, such as coordinating Entomology sponsored SNEEs (a Friday afternoon social hour) as well as organizing for the second year in a row, the Department’s End of the Year Dinner.

Sarkaria Arthropod Research Laboratory Up and Running

After many years of planning by the department, the Cornell campus now has a new quarantine facility for the containment of non-indigenous arthropods. The Sarkaria Arthropod Research Laboratory features two walk-in rearing rooms, a bank of reach-in incubators, two wet labs, and two greenhouses. This is the first arthropod quarantine facility on campus featuring greenhouse space, which will better enable researchers to investigate the biology and management of exotic pests that feed on plants. The need for such a facility has become acute in recent years with the arrival in the U.S. of major pests such as the Asian Long-Horned Beetle and Emerald Ash Borer. In addition to providing space for working on exotic pests, the facility will also serve a critical role in the evaluation of non-indigenous arthropods being considered for release in this country as biological control agents. A significant portion of the funding for the facility came from department alum Dr. Daljit S. Sarkaria and his wife, Dr. Elaine Sarkaria. Other sources of funding include the State of New York, Leonard Litwin, and Cornell Trustee Emeritus Howard Milstein.

Written by Paul Weston

Undergraduate Publications
Compiled by: Cole Gilbert and Melissa Hardstone


Undergraduate authors highlighted in bold.
Welcome New Graduate Students
By: Melissa Hardstone

These students are starting Fall 2007:
Sarah Jandricic graduated from the University of Guelph (Canada) where she obtained both B.S. and M.S. degrees. She is currently the Director of Research at the greenhouse IPM consulting company, Habitat Agriculture Services. She will be working with Dr. John Sanderson.

Margarita Lopez-Uribe graduated with a B.S. from the University de los Andes in Colombia, and obtained her M.S. degree at the University Federal de Sao Carlos, Brazil with advisor Dr. Marco Antonio Del Lama. At Cornell, she will be in Dr. Bryan Danforth’s lab.

Frank Rinkевич obtained his B.S. from Millersville University in Pennsylvania. He received his M.S. at Cornell University with Dr. Jeff Scott and then moved on to become a Technical Specialist with Home Paramount Pest Control. He will again be working with Dr. Scott in the fall of 2007.

Calum Russell will be working in Dr. Ann Hajek’s lab. Calum obtained a B.S. degree from SUNY Geneseo and currently works as a lab technician in the Department of Biomedical Sciences at Cornell.

Xiaoan Zhao “Swezy” Song attended Shanghai Fisheries University and then received a M.S. degree at Bowling Green State University in Ohio. Xiaoan obtained his B.S. at the New York State Agriculture and Experiment Station in Geneva and will work with Dr. Ping Wang at the Geneva campus in the Fall.

Erik Smith attended SUNY Oswego as an undergraduate. He is now working as a research assistant with Dr. Brian Nault at the New York State Agriculture and Experiment Station in Geneva and will work with him at the Geneva campus in the Fall.

Anuar Morales attended Universidad Distrital as an undergraduate and received a M.S. from Universidad del Valle. Anuar was also a research assistant at the International Center for Tropical Agriculture. Anuar now works at the Geneva campus with Dr. Daniel Peck.

Xiaozhao “Swezy” Song attended Shanghai Fisheries University and then received a M.S. degree at Bowling Green State University in Ohio. Xiaoan obtained his B.S. at the New York State Agriculture and Experiment Station in Geneva and will work with Dr. Ping Wang at the Geneva campus in the Fall.

Maria Diaz obtained her degree with Dr. Daniel Peck (Geneva). She looked at population dynamics, phenology, and in the overwintering behavior of the annual Bluegrass Weevil, Listoroxus maculicollis Diel (Coleoptera: Curculionidae), in the golf course landscape. She is currently working for the USDAA-ARS as a Biological Science Technician (Insects) in Kamuela, HI. She is involved in the Hawaii Area-Wide Fruit Fly Integrated Pest Management Program.

Wendy Horse worked with Dr. John Ewer. Her thesis project was looking at the role of the neuropeptide, crustanean cardioactive peptide (CCAP), in Drosophila melanogaster. Wendy remains at Cornell as a technician in the lab of Dr. K. Kemphues.

2007 M.S. graduates:

Lora Crampton worked with Dr. Michael Hoffmann investigating the biological control of the tarnished plant bug, Lygus lineolaris (Hemiptera: Miridae), by Peristenus spp. (Hymenoptera: Braconidae) in New York apple orchards. Lora is currently teaching biology at Mt. Hood Community College in Portland, Oregon.

Erin Stephens earned her degree with advisor Dr. John Losey investigating the direct and indirect non-target effects of C3yBb on the common milkweed, Asclepias syriaca. After graduating, Erin taught biology at a community college, but her career goal is to teach middle or high school science. Erin has also managed to keep up with many of her hobbies such as rock climbing, kayaking and backpacking.

2006 M.S. graduates:

Luo Cai worked with Dr. Michael Hoffmann investigating the biological control of the tarnished plant bug, Lygus lineolaris (Hemiptera: Miridae), by Peristenus spp. (Hymenoptera: Braconidae) in New York apple orchards. Lora is currently teaching biology at Mt. Hood Community College in Portland, Oregon.

Masanori Seto attended Tokyo University of Agriculture and Technology, Japan as an undergraduate, and was an exchange student at Purdue University. Masa then returned to Tokyo University of Agriculture and Technology to obtain his M.S. degree. He works with Dr. Douglas Calvin (Geneva) on a project on the foraging and learning in the paper wasp, Polistes fuscatus under Dr. Martha Weis. After graduation, Jacob took a position as a research technician in the genetic engineering lab of Dr. Peter Armbruster at Georgetown working on the adaptive divergence of Aedes aegypti in Africa. He then worked on “fungal priming: the effect of larval ecology on adult immunity” project with Dr. Tovi Lehmann at the Laboratory of Malaria and Vector Research, NIAID, NIH as a Post-Bac IRAF Fellow. He currently works in the lab of Dr. Brian Lazzaro looking at immunity in mosquitoes to Plasmodium.

Jonathan Darbo working with Dr. Laura Harrington exploring factors affecting blood feeding patterns of Culex mosquitoes: studies of host-seeking patterns, avian anti-mosquito defensive behavior, and host disease. Jon is in Australia working as a Post-doc in CSIRO Division of Entomology.

Vladimir Andrews has received a degree from the University of Queensland with advisor Dr. Galen Waltenier. Vladimir is currently working as a Post-doc with Dr. Galen Waltenier at the University of Queensland.

Eduardo Almeida attended the University of Brasilia in Brazil and received his M.S. degree in pest management from the University of Illinois. Eduardo worked in Dr. Bryan Danforth’s lab while at Cornell University. Eduardo is now back at home in Brazil and is doing a Post-doc with Gabriel Melo at Laboratorio de Biologia Comparada de Hymenoptera, Department of Zoology, Universidade Federal do Parana.

Jonathan Darbo working with Dr. Laura Harrington exploring factors affecting blood feeding patterns of Culex mosquitoes: studies of host-seeking patterns, avian anti-mosquito defensive behavior, and host disease. Jon is in Australia working as a Post-doc in CSIRO Division of Entomology.

Gabor Neumann examined dual-strategy biological control of the alfalfa snout beetle, Lepillodes lupulina L. (Coleoptera: Curculionidae), using persistent entomopathogenic nematodes in a single- vs. multispecies natural enemy approach (advisor: Dr. Elson Shields). Gabor is working as a US government employee for the Hawaii National Park Service.

Andrew Short’s project was determining the phylogeny, morphology, and biology of the Hydrobiusine and Hydrophiline water scavenger beetles (Coleoptera: Hydrophilidae: Hydrophilini) (advisor: Dr. James Liebherr). Andrew spent a month in France learning Spanish and as a postdoctoral researcher at the Santa Barbara Museum of Natural History. He has accepted a faculty and curatorial position at Kansas State University which will begin Fall 2009. See highlight on page 2.

2007 M.S. graduates:

Xin Zhang received his M.S. from Dr. Ping Wang (Geneva) looking at sequence variation in cadherin alleles from the cabbage looper, Trichoplusia ni. “Xin” is currently at Kansas State University working in the lab of Dr. K. Zhu.
Congratulations Class of 2007 Undergraduates

By: Melissa Hardstone

Juliane Deacutis graduated in May 2007 with a degree in Entomology (Cum Laude, with Research Honors). She is a wonderful example of the stellar undergraduates we have in the department. When Juliane started out four years ago, she had no idea what to expect and was a bit apprehensive since she knew college courses would be challenging. But during her time here, Juliane has surely sparkled. She was recruited to Cornell as part of the prestigious Cornell Presidential Research Program, which allowed her to experience research right from her first semester. Research was Juliane’s true interest, her success in this area include working independently on research projects, publishing four papers, receiving two grants, being a Hughes Undergraduate Scholar, completing her honor thesis and receiving runner up for the President’s Prize for her poster presentation at the 2006 ESA National Meeting. Juliane also excelled in her coursework, graduating Cum Laude with a 3.5 GPA and served as a Teaching Assistant for Introductory Entomology. In her free time she was also co-founder and president of the Cornell Photography Society, one of her favorite hobbies being insect macro photography.

She attributes much of this success to the mentoring, openness, and opportunities provided by the Entomology faculty. With small class sizes, she was able to get to know professors on a more personal level and felt a compelling sense of obligation to perform as well as she could in classes and the lab. The small classes and lab research opportunities also allowed her to meet and work closely with graduate students. Her interactions with faculty and graduate students allowed Juliane to better gauge what graduate school was like and what research she would want to pursue. She states she has ‘personally conducted research in the department for about three years, and having worked side-by-side with graduate students, I feel well prepared for graduate school. I received a lot of guidance from my faculty mentor [Dr. Jeff Scott] along the way, which really made me think about what makes good research. This sort of experience has given me a good sampling of graduate level affairs, the good and the bad.”

Her research projects revolved around resistance to the insecticide spinosad. One project that spanned a couple years, monitored resistance of house flies to spinosad under field conditions. Another project that spanned a couple years, monitored resistance of house flies to spinosad under field conditions. A third project examined the fitness costs of two subunit genes, which were candidates for contributing to spinosad resistance. A third project examined the fitness costs of two subunit genes, which were candidates for contributing to spinosad resistance. A third project examined the fitness costs of two subunit genes, which were candidates for contributing to spinosad resistance.

In the fall of 2007 Juliane will be pursuing her Ph.D. at the University of Kentucky under the direction of Dr. Bruce Webb. She will be studying the polydnavirus in the parasitoid Ichneumon wasp, Campoletis sonorensis. Keith Bayless plans to attend North Carolina State University (advisor: Dr. Brian Wiegmann) for graduate school where he will continue his work on Dipteran systematics. Keith attended the 2006 national ESA meeting in Indianapolis, IN where he presented a 10-min. talk. This talk and his senior thesis were based on research conducted at the American Museum of Natural History in NYC during the summer of 2006 with Torsten Dikow (Cornell, Ph.D., scheduled Aug ’07) on revising the robber fly genus Schildia. Keith won the Academic Excellence Award in Entomology for having the highest GPA in the department.

Juliane Deacutis plans to pursue her Ph.D. at the University of Kentucky under the direction of Dr. Bruce Webb where she will work on the polydnavirus in an Ichneumonid wasp. Juliane attended the 2006 national ESA meeting in Indianapolis, IN where she presented a poster of her research on house fly spinosad resistance in the field and won runner-up for the President’s Prize. Juliane conducted research in Dr. John Losey’s lab for 1 semester and Dr. Jeff Scott’s lab for over 3 years (with whom she completed an undergraduate thesis). Juliane was also a Cornell Presidential Research Scholar, a Hughes Research Scholar and graduated Cum Laude. See highlight on Pg 5.

Carlos Dominguez worked in John Losey’s Lab.

Kyle Dumont is currently working in Dr. Michael Hoffmann’s lab in the Insectary on the Ithaca campus running several pest control experiments. Since graduation much of Kyle’s time has also been devoted to getting his start-up company running. The company FiberShield LLC revolves around a patent developed at Cornell for the process of protecting plants using a polymer fiber matrix sprayed out of a gun.

Kojun Kanda plans to attend the University of Arizona at Tuscon (advisor: Dr. David Maddison) for grad school where he will continue his long time passion of working with Tenebrionidae on the West Coast.

Meaghan Pimsler completed her undergraduate thesis on dung beetles of New York state dairy farms. Meaghan will be spending a year in Okinawa, Japan teaching English (JET Program) after which she plans to pursue graduate studies in either Medical Veterinary or Forensic Entomology. She is grateful to have had an opportunity to work and study with the superlative Entomology department here at Cornell University. Meaghan says “I believe that no matter how you stumble, it is never too late to dust yourself off and achieve your dreams.”

Allison Taisey graduated in Dec. 2006 and began a Master’s in Education degree during the Spring 2007 semester. This summer Allie is working at home in Maine. She will return in the Fall to complete her Master’s degree and to continue working in the veterinary entomology lab with Dr. Don Rutz.

Timothy Wells is working in the lab of Graduate School Dean Alison “Sunny” Power over the summer. Dr. Power’s lab focuses on field ecology and epidemiology of insect-transmitted plant diseases as well as the ecology and evolution of disease.

Ariel Zimmerman completed her undergraduate thesis comparing the growth and metabolic rates of social and solitary huntsman spiders from Australia along with investigations on the reproductive behavior of the common periwinkle in the presence of a castrating parasite. Ariel was awarded the Paul Schreurs Memorial Award for excellence in undergraduate research by CALS, and was named one of the 25 most influential Cornell Undergraduates for her research and work on the 3rd annual Insectapalooza. This summer she will work as a field technician for the Lab at the University of South Dakota studying the adult and immature stages of the endangered Hines Emerald Dragonfly in Illinois and Wisconsin. In December, Ariel will be a TA with Cornell Adult University on a trip to the Galapagos. She’s hoping to prolong her stay by finding fieldwork in Ecuador, but will eventually return to the States to start a Ph.D.

Undergraduate Entomology Club

By: Melissa Hardstone

Spodopteran grass and Wigglesworth (S & W) is Cornell’s Undergraduate Entomology Club. S & W exists to promote the study and appreciation of invertebrate organisms and to spread awareness and admiration of entomology throughout the Cornell campus and Ithaca area. Insectapalooza, the open house for the Department of Entomology, was run by S & W in the Fall 2006 and was a great success. Though Insectapalooza dominated the fall semester, the S & W were still able to continue their tradition of meeting weekly to organize other activities. Some of these activities were: collecting trips to local sights, a trip to Washington DC where they were given a tour of the National Insect Collection, a mini-symposium in which S & W members gave talks to approximately 40 guests, and a fundraising bake sale on Ho Plaza. One S & W member commented “The Cornell community was amazingly open to eating the baked goods with insects in them!” If you are interested in learning more about their events, seeing photos or contacting the officers, we encourage you to visit their website http://ro.cornell.edu/bugclub/.
Laura Harrington: My research focuses on the biology, ecology, and behavior of mosquitoes that transmit human disease. Current research projects in my laboratory focus on the feeding behavior of mosquitoes and the development of new methods to control or manipulate the behavior of these insects. My laboratory has been involved in research on vector-mosquito interactions, vector ecology, mosquito reproductive behavior, and the evolution of insecticide resistance. I have recently begun a cross-disciplinary project on the role of mosquitoes in the transmission of diseases, including malaria and dengue, in the United States. Two other new projects involve the mating biology of the yellow fever mosquito, Aedes aegypti and development/ ecology of transgenic mosquitoes that are refractory to insecticides.

Richard Hoebeke: To adequately appreciate arthropod diversity, and especially that of insects, one needs only to look around. But in spite of this tremendous diversity, many insects are very similar to each other morphologically, thus making the process of identification a species-specific challenge and often quite challenging. Nevertheless, the cornerstone to sound pest management is the authoritative identity of the pest species in question. To this end, and as the department liaison between the Department of Entomology and the Insect Identification Laboratory, I have remained actively involved in providing identification support for both research and extension efforts in the Department, College, and overall University community as well as federal, state, and local university staff and the general public. The focus of my applied research will continue to be the development of IPM programs for the control of pests, parasites, pathogens and predators that threaten the supply of honey bee colonies that provide pollination services for many species of flowering plants.

Bryan Danforth: My laboratory studies the phylogeny, biodiversity, and evolution of bees. Bees include over 20,000 species worldwide and they are by far the most important pollinators in natural and agricultural ecosystems. My research uses a combination of traditional and molecular methods to understand the evolutionary history of bees. Such studies are helping to establish a stable classification of the bees, infer the historical biogeography and antiquity of bees, and understand the evolution of bees and their hosts. To achieve these goals, my research involves the use of comparative and phylogenetic methods. I am also the Department Extension Co-Leader.

Paul Feeny: The first major goal of my research is to explore the roles of host-plant specialization and intraspecific competition in the evolution of plants and herbivores. I use a comparative approach to examine the functional bases of herbivory, and how plant traits influence insect behavior. The second major goal of my research is to understand the ecological and historical factors that lead to different patterns of chemical defense by plants against attack by insects and other taxa.

Cole Gilbert: The goal of my research is to understand the current and future role of insecticides in pest management, especially in non-agricultural habitats. We use an interdisciplinary approach to examine the effectiveness of insecticides and other pest control tools in residential and non-residential settings. Our research results are used to develop guidelines for the effective use of insecticides and other pest control tools in non-agricultural settings.

Ann Hajeck: Emphasis in my program is on pathogens of invertebrates, predominantly focusing on insect hosts. My interests are broad, ranging from systematics to population genetics, immune responses, basic biology of pathogens, interactions between hosts and pathogens and the epidemiology and environmental impact of invasive species. I am also interested in the use of biological control agents for managing pests in agroecosystems.

James Liebich: I undertake revisionary systematics to elucidate species identity, geographic distribution, and evolutionary history of beetles of the Hawaiian Islands, including radiations classified in the genera *Blackburnia* (133 spp.), *Bembidion* (24 spp.) and *Mecyclothorax* (>200 spp.). Species distributions within these groups are often limited to small, isolated forests. My research is supportive of conservation. For example, recently completed revisions of Molokai carabids document the existence of a unique fauna in eastern Molokai, an area currently without any organized conservation plan. My research is being conducted by combining revisionary systematics and phylogenetics for a diversity of groups, including *Hemiptera*, *Coleoptera*, *Diptera*, and *Lepidoptera*.

John Losey: My program has two complementary foci, the management of natural enemies to control outbreaks of endangered or declining insect populations. My research program focuses on the ecological impacts of transgenic crops on insect control. Since I specialize in field crops, I have narrowed that focus further to Bi-corn including both Btk (for lepidopteran pests) and Bt (for coleopteran pests). Ecological impacts include both impacts on the target pest population (eg resistance) and impacts on non-target organisms (eg mammals and beneficial beetles). My research with Bi-corn focuses on evaluating these problems and identifying potential solutions.

Linda Raylor: My research focuses on the costs and benefits of group living in social, but readily cannibalistic, predatory arthropods. I am an arthropod behavioral ecologist examining the evolution of social behavior. My research area includes the study of unusual social huntsman spiders from Australia and in spider relatives, the amblypygids. Since 1988, I have directed the Naturalist Outreach Speakers' Bureau with Cornell undergraduate and graduate students. I have worked on community engagement in science in K-12 classes. Eighty Cornell students and I have talked to 75 groups reaching 25,500 people in Central New York and beyond.

Donald Ruhl: The goals of the Veterinary Entomology program at Cornell are IPM and technology transfer. My split appointment provides me the exceptional opportunity to interact directly with stakeholders and work toward needed solutions on both dairy and poultry farms. As the only veterinary entomologist in the Americas, I have the opportunity to develop and implement new IPM and technology transfer programs that are of direct benefit to the livestock and poultry industries. I am also Associate Dean of the College of Agriculture and Life Sciences and Director of the Cornell University Agricultural Experimental Station.

Karyn Klass: The core of my work is to provide insect identification and effective pest management information for people in and around their homes. Through the Community IPM program and school IPM work group, we provide information to schools, school administrators and other municipalities on pests and pest management. The Cornell IPM Network (NEPNID) and Community Horticulture work group we do the same for homeowners and home gardeners. The 4-H Science/Technology committee has been instrumental in bringing existing 4H subject matter in the sciences into the mainstream. I aspire to continue to offer excellence in insect identification, and inspiration to young people interested in insect science.

Brian Lazzaro: I study host-pathogen interactions with a focus on the evolutionary genetics of insect immune systems. Work in my lab is aimed toward understanding how *Drosophila melanogaster* and antimalarial defenses in mosquitoes of the genus *Anopheles*. Current projects include characterization of the *Anopheles* genome and a comparative genetic analysis of *Drosophila* resistance to infection, identification of mosquito genes that may coevolve with human malaria parasites, and general evaluation of how natural selection shapes resistance to infection in insects.

John Sanderson: My lab is devoted to making discoveries on the way to advancing arthropod IPM strategies for greenhouse floral crops. My research aim is to develop simple, effective, and sustainable strategies to the enhancement and adaptation of existing biological control components to the monitoring and manipulation of insecticide resistant pest populations. Incorporation of these components by our livestock and poultry producers has simultaneously led to drastic reductions in insecticide use and greatly reduced pest abundance. I am also Director of the NYS IPM Program.

Jeffrey Waage: My research is focused on insecticide toxicity and the evolutionary biology of insect pests. My research work concentrates on the biochemical basis, population genetics, and selective forces involved in insecticide resistance. We are also involved in understanding the mechanisms of action of new insecticides and their impact on non-target organisms. My research efforts are focused on understanding the mechanisms of action as well as understanding sex determination in *Musca domestica*. I am currently the Department Chair.

Emil Shlons: The focus of my extension and research efforts is to reduce the environmental impact of insect management in field crops utilizing a broad suite of innovative strategies. A key focus is placed on biological control of insect pests, host plant resistance, least dose pesticide usage when required and insect long-ranged migration. These foci are supported with active research programs focused on the use of plant parasitic nematodes for snout beetle resistant alfalfa (with Don Viands), least dose evaluations with corn rootworm and potato leafhopper and long-ranged movement of potato leafhopper and soybean aphid.

Catherine Tauber: My research focuses on the systematics of New World Chrysopidae. Emphasis is on the comparative morphology of the aphidid and larval psyllid species of adults and larvae. Its specific goal is to provide a degree of order for the large and long-neglected fauna of the New World and to bring a broadly based phylogenetic perspective to the family’s classification. The research is collaborating with the Museum for the comparative biological studies; thus benefits from a rich source of significant character data.

Jennifer Thaler: My research has two major objectives, both unified by mission of developing a predictive framework for understanding the coevolution of crop and insect pests. The first major goal of my research is to study the ecological interactions between plants, herbivores, and carnivores in wild Solanaceous plant species. The second goal of my research program is to identify the phenotypic characters associated with high pest setting, to understand the specific role of factors such as plant defense pathways (jasmonate, salicylate, etc) in mediating interactions between plants, herbivores and pathogens, and predators and parasites.

Ward Tingley: My research and extension programs are focused on understanding the interactions between insect pests, their host plants and the stresses within agricultural ecosystems which affect pest and host plant performance. Our research programs improve our understanding of the complex interactions that occur between plant and insect relatives, the amblypygids. Since 1998, I have directed the ‘Naturalist Outreach Speakers’ Bureau’ with Cornell undergraduate and graduate students. I have worked on community engagement in science in K-12 classes. Eighty Cornell students and I have talked to 75 groups reaching 25,500 people in Central New York and beyond.

Paul Weston: My basic research interests are centered on increasing our understanding of insect responses to secondary products from higher plants, including attractants, repellents, feeding stimulants, and deterrents. My current research interests include the potential of using research findings with clientele and helping growers and extension educators solve practical problems, to use alternative media more extensively for delivering information to county extension educators, landscape professionals, arborists, and nursery practitioners.