Department of Plant Pathology and Plant-Microbe Biology

2010 Alumni Newsletter Volume 52

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Send feedback and suggestions for future newsletters to plantpathcornell@cornell.edu

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Greetings from the Chair

Fall 2010

George Hudler
Chair, Department of Plant Pathology and Plant-Microbe Biology

Wow! We're about to turn the calendar on yet another year, and it seems like just yesterday that I was writing the chair's introductory letter for the 2009 version of this newsletter. Nonetheless, the time has passed and with it there have been some major shakeups at the University with high hopes from Central Administration that these and others surely to come will further cut costs, save money and otherwise streamline the way we all do business. Even our amazingly successful Sweet 16 basketball team let their coach go in the interests of preserving fiscal resources for educational endeavors! (Well…maybe it didn't happen *quite* that way, but it is true that Coach Donohue couldn't afford to turn down a "monster offer" from Boston College.)

As I mentioned last year, a merger of the Ithaca department with its counterpart at the NYS Ag. Experiment Station in Geneva was on the horizon and that merger did, indeed, become official on July 1 of this year. Now we're 36 faculty, 104 staff, and 27 students strong, collectively covering a wide range of contemporary topics in our field with the standards of excellence that have been our hallmark for over 100 years.

I remain as Chair of the new, two-campus department, working collaboratively to administer the team with Wayne Wilcox who was appointed as Associate Chair following Harvey Hoch's departure from the Geneva campus for a 1-year study leave. As I write this, members of various committees are in the midst of developing a new departmental website and crafting a new strategic plan that reflects the expanded intellectual firepower of the new department. Our intentions are to stay at the top of our game for the foreseeable future and we seem to be well-positioned to do that.

Among other things, we expect to have at least one new faculty search coming up – perhaps yet this fall but if not, by next fall for sure. And…with any luck, by next fall we could have as many as three searches underway as the College begins an aggressive campaign to fill pending vacancies with the best next-generation faculty we can attract. If you are now mentoring graduate students and/or post docs with those special skills to strengthen our programs, please keep their eyes open for our announcements.

Speaking of special notices, be sure to check out one for our Summer Scholars program that should be posted on our website by the time you get this. The program is intended to acquaint grad-school bound undergraduates who might not otherwise have known about plant pathology with opportunities for satisfying careers in the field. For the first two years, the program was run exclusively by Geneva-based faculty but we're hoping to expand to include a small cohort in Ithaca, as well. If the past two years' experiences are any measure of the potential success of this program, we can only conclude that it's a winner.

Please also be aware that during a relatively short window this spring (soon after April 15) we'll be running a campaign to strengthen our Plant Pathology Excellence Fund. Donors will enjoy not only the satisfaction of contributing to a strong future for the department but will also receive a special, personalized gift as a token of our appreciation.

As you'll see in the stories on the pages that follow, our department has had another wonderful year of successes and good times. And we look forward to more of the same in 2011.

Best wishes,

George W. Hudler

Cornell University
Department of Plant Pathology
and
Plant-Microbe Biology

Faculty News

Gary Bergstrom

The Bergstrom Lab, aka Field Crops Pathology Lab, remains very active on numerous research fronts. Katie Waxman continues to coordinate lab and field activities for the group that includes graduate students Julia Crane, Christine Layton and Brian King (joint with Donna Gibson), several undergraduate research assistants, and high school student interns. Stan Kawamoto continues part time. Research Associate Marshall Hayes splits his time between the Bergstrom Lab in the Plant Science Building and the New York Biofuels Research Laboratory in Riley-Robb Hall. Marshall is the principle scientist on a new grant (with Gary and Donna Gibson) from Northeast Sun Grant (U.S. Dept. of Transportation) to utilize genomic tools to identify novel auxiliary enzymes from fungi for the conversion of lignocellulosic biomass to be used in the production of liquid transportation fuels. Bergstrom presented a report at the Northeast Sun Grant Conference in Syracuse (May 2010) on the group's previous work to identify useful enzymes for conversion from fungal pathogens of perennial grasses. Lab members have been spending increasing time on identifying and assessing the impact of diseases on switchgrass and other potential biofuel feedstock crops. Gary and Katie are wrapping up a large North American collaborative study on the contribution of inocula from local corn stubble to Fusarium head blight and mycotoxin contamination in wheat – the study including more than 30 site/year environments in New York, Illinois, Michigan, Missouri, Nebraska, Ontario, Quebec, Vermont, and Virginia. Speaking of *Fusarium*, Katie again this year inoculated thousands of corn ears to assess the resistance of commercial and pre-commercial hybrids to Gibberella ear rot. In March, Gary hosted the Great Lakes Wheat Consortium in Ithaca including wheat researchers from New York, Michigan, Ohio, Ontario, and Wisconsin, plus two colleagues visiting from Sweden. In June, lab members bid adieu to Michael Wunsch who finished his Ph.D. (Characterization of *Fusarium oxysporum* and *Phoma sclerotioides*, pathogens of birdsfoot trefoil and alfalfa) and began his new job as plant pathologist at the Carrington Research Extension Center of North Dakota State University. Michael will develop disease management strategies for the broad range of field crops grown in North Dakota.

Steve Beer

In October 2009 Dr. Steven Beer celebrated 40 years in the Department of Plant Pathology and Plant-Microbe Biology.

The sign, designed by Kent Loeffler, hung above the doorway for the party in celebration of Steve's 40 years in the department.

Bill Fry

I'd like to welcome two visitors to my lab: Dr. Sanjoy Guha Roy is a Fulbright Senior Fellow. He is a Reader in the Post Graduate Department of Botany, Ramananda College, Bishnupur, Bankura, West Bengal, India. He arrived in mid August. Dr. Guho Roy's research has focused on *Pythium* and *Phytophthora* spp. in eastern India, with particular emphasis on *Phytophthora nicotianae*.

Ian Small is a visiting scholar from Zimbabwe via South Africa. Ian received his MSc. from the University of Stellenbosch, in Stellenbosch, South Africa. He is on an internship working on the potato/tomato late blight Decision Support System.

Faculty News

George Hudler

Shawn Kenaley (post doc, West Virginia University) continues to anchor the research program in the Hudler lab with occasional assistance from undergraduates and colleagues in neighboring programs. The two main areas of study continue to be (1) bleeding cankers of European beech caused by *Phytophthora* spp and (2) diseases of willow grown as biofuels feedstock. New directions with regard to the former focus on distribution and spread of bleeding cankers in beech populations and movement of the pathogen(s) within host trees. Insights into both of those issues promise to lead to new guidelines for treatment of diseased trees and safe disposal of wood from infected trees. With regard to the willow project, the main disease of concern clearly is willow leaf rust caused by one or more species of *Melampsora*. Determination of the variability of the pathogen is of highest priority because some of the best selections from the Cornell Willow Breeding Program have proven to be highly susceptible to rust on rare and unpredictable occasions. A side project involving uredospore germination on willow leaves netted undergrad Amy Spallone a "First Place, Best of Show" award for her scanning electron micrograph titled "Hyphal handshake … better than sex?".

Shawn Kenaley and Amy Spallone with the winning photo.

Meg McGrath

In June 2010, after 6 months of trying single-handedly to keep the Long Island vegetable disease research/extension program afloat, Meg welcomed Laura K. Hunsberger to the position of Research Support Specialist with wide-opened arms and a big sigh of relief. Laura brings to the program nine years of experience in extension in Maryland that included research and programming in sustainable and organic agriculture, including vegetable pathology. Additionally, her training for triathlons was useful for keeping up with all the projects underway.

The 2010 field research season was another busy one with 22 experiments. Program focus continues to be on cucurbit powdery mildew. There are always research needs as new management tools are developed (fungicides and resistant cultivars) and the pathogen continues to evolve to overcome the tools (job security!). Fungicide sensitivity bioassays were conducted in commercial and research fields to examine sensitivity of pathogen populations to fungicides at risk for resistance development, which are all the most effective materials due to their ability to move to the underside of the leaf where powdery mildew develops best. Isolates were collected for sensitivity testing in the laboratory over the winter. Efficacy was determined for both new fungicides and those already registered and being used. Registered fungicides are evaluated each year to detect when resistance affects efficacy. Interestingly, the first research on fungicide resistance in this pathogen, which was the first pathogen documented to have developed resistance in the US, was done at Cornell in Geneva in 1967. Seven experiments with cultivars of different cucurbit crop types resistant to powdery mildew were also conducted on Long Island in 2010 to monitor pathogen adaptation to genetic resistance while obtaining information on disease suppression, yield and fruit quality for growers to assist them in cultivar selection. Additionally, biopesticides were evaluated for downy mildew in cucumber and in basil. Fungicides were tested for Phytophthora blight in snap bean and powdery mildew in tomato. Heirloom tomato varieties were evaluated for disease susceptibility as well as yield and fruit quality. Late blight resistant tomato varieties and experimentals were evaluated, mostly for yield, fruit quality and susceptibility to other diseases, as late blight had not appeared by late Sept. A sentinel plot was maintained for the cucumber downy mildew forecasting program. Biofumigant mustard was evaluated for Phytophthora blight in squash. Disease occurrence was examined as part of a SARE project on reduced tillage. And impact of ambient ozone on plant productivity and perchlorate accumulation was investigated using snap bean lines that vary in their tolerance to ozone. The diversity and quantity of fresh vegetables was a greatly-appreciated reward for all of the work.

The media found another disease of interest in 2010 – basil downy mildew – and again turned to our Department for information. Responding did not consume nearly as much of Meg's time as late blight had in 2009, fortunately. NPR found this new disease, which was first found in the US in 2007, interesting enough to feature in two shows (All Things Considered and Science Friday):

http://www.npr.org/templates/story/story.php?storyId=128061773

http://www.npr.org/templates/story/story.php?storyId=128410573&ft=2&f=510221

Meg appreciated all the experience gained being on radio shows covering late blight before being on the NPR shows. These interviews are a very different experience from the usual research and extension presentations we all routinely make because someone else is directing the content by the questions they ask, and the audience reached with a national show like these is much larger than the usual.

Summer Happenings

How did you spend PP&PMB Geneva & Ithaca Merger Day, July 1, 2010?

Gary Bergstrom

For 19 students and staff involved in the Plant Path/Entomology Summer Field Course coordinated by Herb Aldwinckle and Brian Nault, Merger Day was spent on a Field Crops Trip to Churchville, NY (Monroe Co.). Participants from Geneva and Ithaca viewed soybean, corn, and wheat production on the Mike Kohlman Farm where Gary Bergstrom (plant pathologist) and Mike Stanyard (entomologist and extension educator) discussed disease and insect pest management, respectively. Plant Manager Francois Lachance and his staff led the group on a tour of the Star of the West Flour Mill where much of the winter wheat grown in western New York is milled into flour for production of pastry, breakfast cereals, and other food products. The tour included laboratory demonstrations of mycotoxin and grain quality testing procedures.

Cornell Cooperative Extension Field Crops Educator Mike Stanyard explains soybean pest management to class members. Photo by G. Bergstrom.

Plant Manager Francois Lachance explains to class members how wheat is milled into flour at the Star of the West Flour Mill in Churchville, NY. Photo by G. Bergstrom.

Dean Susan Henry Steps Down

George Hudler

Dean Susan Henry ended her 10-year term as the Ronald P. Lynch Dean of the College of Agriculture and Life Sciences (CALS) on June 30, 2010. During her term, Dean Henry shepherded the college through some extraordinarily difficult budgetary challenges (that was, *before* the recent stock market crash), initiated an overhaul of the introductory biology curriculum, planted and cultivated the seeds that led to the creation of the undergraduate Dyson School for Business Management, and significantly strengthened relationships between CALS alumni and the university administration. At one of the many receptions held to honor Dean Henry, she was presented with a photograph made by our own Kent Loeffler and signed by all of the department chairs with whom she worked.

Dean Henry is succeeded by Food Science Professor Kathryn Boor, who you'll get to know more about in next year's newsletter.

Dean Susan Henry poses proudly with a Kent Loeffler photo of one of the new entrance gates to Minns Gardens.

Summer Research Scholars in Geneva

Harvey Hoch

The 2010 Summer Research Scholars program (http://www.scholars.pppmb.cals.cornell.edu/) was another success story. The program started in 2009 with 12 Scholars from universities across the U.S. In 2010, seven Scholars spent eight weeks working with Geneva faculty and their graduate students, postdocs, and staff learning about the discipline of plant pathology. The program is geared toward undergraduate students, mostly in their junior and senior years. The Scholars spent their time conducting research in the field and/or in the laboratory, interspersed with a few weekend trips around NY State to such places as Niagara Falls, Watkins Glenn, and the Corning glass museum. Prior to the Scholars arrival in the Department, very few of them knew anything about plant pathology or the interactions of microbes with plants. By the end of their visit they all gained great insight into the importance of our discipline and the kind of research conducted in plant pathology. A major goal of the program is a hope that some of the Scholars will enter graduate school at Cornell or elsewhere, and become plant pathologists. Already, a few have either applied to graduate schools for plant pathology or have indicated that they intend to do so. A secondary goal of the program is the hope that the Scholars will become so enriched with their experience that the importance of plant pathology will be considered in their everyday affairs in their future careers – whether they are attorneys, physicians, agriculturalists, or others. Importantly, students who had no intent of becoming a plant pathologist, much less having heard of plant pathology prior to participating in the Scholars program. For some Scholars, the program exceeded their expectations by far. "I knew this would be a very positive experience, however I was not aware how much I could learn in the course of 8-weeks" said one of them. "Since I didn't know anything about formal research in plant pathology, the program very much enlightened me with what plant pathology is… I thought it was exciting to learn and see all the work being done on crops that are so vital to our lives" added another Scholar. "I was very surprised to examine all of the facets that comprise plant pathology and it was exciting to feel like I was on the breaking edge of technology every day" reported another. Providing Scholars with opportunities to contribute to varied enticing research projects in Plant Pathology is clearly one success of the program.

Summer Scholar setting up an experiment in a lab.

Summer Scholars participating in a field experiment.

The Summer Field Course

Herb Aldwinckle

The Summer Field Course (or more formally PLPA 4190/ENTOM 4190 Agricultural Application of Plant Health Concepts: Diseases and Pests of New York Crops) celebrated its 6th year this past summer. It was also its best attended year, as the usual group of graduate students was joined by the 2010 class of Summer Scholars (see separate story). Since its inception, Herb Aldwinckle has served as facilitator for the course, and has arranged the participation of a broad spectrum of PPPMB faculty, both Geneva and Ithaca based. Paraphrasing Gary Bergstrom, the Field Course was merged long before the I and G departments! Not only does the course acquaint students with diseases of New York crops, it also gives equal treatment to arthropod pests. Entomologist Brian Nault now co-leads the course with Herb. The course strives to show the diversity of crops grown in New York and their problems. Students annually visit orchards, vegetable fields (including muck soils), grain/corn production and storage sites, vineyards, forests, golf courses, nurseries, and berry crops farms. Conventional and organic production receive equal emphasis as far as possible. We try to also show the students the utilization of some of the crops they see, and have included visits to wineries, a flour mill, a fruit market, a saw mill, and a soybean crusher producing biofuel. The course appears to have appealed to grad students and undergrads alike. Plans are afoot to develop a compressed version of the course to be given in the fall semester specifically for undergrads. This may be another way to stimulate their interest in the wonderful world of plant diseases, and perhaps even entice the best and the brightest into a career in PPPMB!

Field course participants at a flour mill.

Students beside a wheat field duirng the summer field course.

Graduate Students

New Graduate Students – Fall 2010

Elizabeth Brauer
MSc – University of Guelph; major – Plant Agriculture
Research Experience: Plant biotechnology, plant physiology and genetics, viral synergism.
Interests: Plant-microbe interactions and molecular mechanisms of disease initiation.
Chairperson: TBD

Eric Carr
BS – Millersville University; major – Biology
Research Experience: Suppression of *Pythium aphanidermatum* using vermicompost; plant disease diagnostics; fungal and bacterial pathogens of onion.
Interests: Identifying the mechanisms responsible for vermicompost-mediated disease suppression of *Pythium aphanidermatum* and illustrating the effects of vermicompost on different stages of pathogen development.
Chairperson: Eric Nelson

Amara Dunn
MS – Cornell University; major – Plant Pathology & Plant-Microbe Biology
Research Experience: Management and biology of *Phytophthora capsici* in NY.
Interests: Biology and management of vegetable diseases, especially Phytophthora blight (*P. capsici*) and the potential for field populations of *P. capsici* to mutate and diversify, possibly developing resistance to fungicides and overcoming host resistance.
Chairperson: Chris Smart

Cynthia Hansen
BS – Western Washington University; major – Cellular & Molecular Biology
Research Experience: Estuarine ecology, marine bird population ecology, vegetable seed pathology.
Interests: Biology of fungal pathogens.
Chairperson: Kerik Cox

Simon Schwizer
MS – University of Zurich; major – Plant Sciences
Research Experience: Barley powdery mildew resistance genes, *Phytophthora infestans* RxLR effectors, *Pseudomonas syringae* pv. *tomato* type-three effectors.
Interests: Manipulation of plant defense by bacterial, fungal and oomycetal effector proteins.
Chairperson: Gregory Martin

Carly Summers
BA – New College of Florida; major – Biochemistry
Research Experience: Induced resistance with biocontrols, MLSA analysis of *Xanthamonas axonopodis* pathovars.
Interests: Microbial ecology of disease suppression.
Chairperson: Chris Smart

Barbara McClintock Award Winners

Brian King

Each year, several graduate students in the Plant Sciences at Cornell are awarded the Barbara McClintock Award. This year two graduate students in Plant Pathology received the award, Jonathan Oliver based in Geneva and Brian King based in Ithaca. The award honors Dr. McClintock who won the Nobel Prize in Physiology or Medicine in 1983 for her work with mobile genetic elements, or transposons. McClintock began her scientific career at Cornell where she received her BS, MS, and PhD in the 1920s. The time she spent as a student and young researcher and her association with George Beadle and Marcus Rhoades at Cornell were, in her words, "by far, the most influential [events] in directing my scientific life." The Barbara McClintock Award was established by an endowment from Dr. Robert Rabson and provides $1,650 to the recipients for supporting research and travel.

Jonathan's advisor is Marc Fuchs, and he works on *Grapevine fanleaf virus* using information about the genetic diversity of *virus* populations to develop, improve, and test constructs for *Grapevine fanleaf virus* control through genetic engineering. In this case, transgenic grapevine rootstocks would be used to provide resistance to this soilborne virus. In addition to studying the genetic diversity of the virus and creating transgenic constructs which might confer resistance to grapevine rootstocks, Jonathan is also developing a high throughput way to test putative resistance constructs for their ability to provide broad-spectrum and durable resistance to *Grapevine fanleaf virus*.

Brian's advisor is Donna Gibson, and he works with plant cell wall degrading enzymes produced by plant pathogenic fungi to investigate basic biological questions and to develop industrial enzymes for the production of cellulosic biofuel. He has screened over 150 species of fungi from the culture collections of Gary Bergstrom and Dave Kalb for their ability to break down isolated cellulose and hemicellulose as well as whole plant cell walls. Brian is currently working to characterize and engineer selected cell wall degrading enzymes for enhanced stability and function using *in vitro* evolution.

Mobius-Clune Wins Outstanding TA Award

Daniel Mobius-Clune won an *Outstanding TA* Award for his work as TA in Kathie Hodge's course, "Mushrooms of Field and Forest" in the fall of 2009. This is a field course, in which students collect mushrooms on a series of field trips to nearby natural areas. In the evenings, they come back to the lab to study their collections and learn to identify them. According to Kathie "Dan made sure students were organized with maps and collecting gear, and helped them find the identification resources they needed. He was always enthusiastic, and supported students' learning without feeding them the answers."

Department Doings

57th Annual Charles Horton Peck NYS Mushroom Foray a Resounding Success

By Torben Russo, Assistant Curator, Cornell Plant Pathology Herbarium (CUP)

On the weekend of September 17–19, the Watson Homestead in Painted Post New York was overtaken by nearly 70 participants from the northeastern United States and Canada. In tow were dissecting & compound scopes, woven baskets, hand lenses, and an insatiable curiosity for all things mycological. This was the start of the Peck Foray, hosted by George Hudler and Kathie Hodge via Cornell's Department of PP&PMB.

A unique opportunity presented itself for this year's Peck Foray. The CUP Herbarium was recently awarded a NSF grant to help update the George F. Atkinson collection. Atkinson was the first Cornell mycologist, arriving here in 1892 as an assistant professor in Cryptogamic Botany. Four years later he was the Professor of Botany & Head of the Botany Department at Cornell. A recent visit to the Division of Rare and Manuscript Collections in the Carl A. Kroch Library showed that Peck and Atkinson had an excellent working relationship, often sending specimens to each other for help in identification or clarification of species. Because Cornell hosted the event, we provided a brochure on G.F. Atkinson for participants. A short list of Atkinson's type-specimens was also made available for those interested in hunting a bit of history.

The hunting, however, was not fantastic. New York's weather had been somewhat dry and thus unfriendly for mushroom growth in previous months; yet the weekend itself was a beautiful mix of blue skies, light breezes, puffy clouds, and great company that spawned several mushroom forays throughout the weekend. At night, mushroom hunters gathered in either the great Retreat Hall surrounded by the rustic Retreat Centers, or at the fire pit for a mushroom-and-S'mores social.

Retreat Hall was set as the mycological collection center. In the front, eight foldout tables displayed informally organized mushrooms. Hundreds of ascomycetes, boletes, amanitas, and polypores were presented on small paper plates for identification and appreciation. To the rear, chairs were organized for lectures and presentations. Surrounding it all were tables against the walls with all the necessary food and equipment to enrich and perpetuate any mycological interest. Students and teachers, professionals and novices, sat together, flipped through identification guides and keys, looked intently though microscopes, asked lots of questions, noted many observations, and occasionally made wonderful discoveries.

The fire pit was reserved for those who needed a bit of a break from the Retreat Hall. Chocolate, graham crackers, and marshmallows were provided, sticks were sharpened, and once the fire produced some hot coals, the business of making S'mores and relaying the hunting success of the day began in earnest. After some ginger and root beer, and perhaps a stronger drink or three, singing and dancing broke out and the fire, reflecting in the drowsy and content eyes of those satisfied with the night, carried us through the evening happy and excited for another fruitful day of hunting.

Saturday evening started with an announcement by Kathie Hodge that Dick Korf had achieved the Ainsworth Medal: the most prestigious mycological award. The audience responded with warm applause and a humble acknowledgement by Dick. Shortly thereafter, George Hudler presented "Great Moments in History and How Fungi Got Us There." Raised eyebrows and outbursts of laughter complimented George's well-loved and eccentric lecture style. Finally on Sunday, the 1st annual Peck Mushroom Toss was successfully completed and, to the dismay of a few, nobody was beaned by flying fungi, and 1st through 3rd prizes were handed out along with gobs of leftover snacks. The Foray officially ended after the Mushroom Toss and, as good folks do, those still attending helped clean up while chatting about the events of the past few days.

1st Annual Mushroom Toss Winners. From Right: 2nd Place Richard Aaron, 1st Place (center) Bill Yule, 3rd Place (Tie) Kelley Duckworth (LHU) and Joe Chafardon (Salsbury U).

Of course, any successful event takes the hard work and contributions of several individuals. George Hudler, Kathie Hodge, Bob Dirig, and Torben Russo formed a strong team that put many hours of work and effort into the Peck Foray. Kathie was the MC and master-organizer of the event, George lent his driving skills and considerable knowledge, Bob created the wonderful tri-fold brochure on Atkinson, and Torben did the grunt work, coordinating with the Watson Homestead and Kathie, while handling the many concerns or questions of those who wanted to attend.

Ultimately, our measure of success comes from the satisfaction of our participants. To quote two of our many mushroom hunters:"Very fun, Torben! Many thanks to you, Kathy and any other Cornellees for a great time" (Amy Rossman). And "Thank you, too, for your hospitality and generosity. It was nice to spend the night at Watson Homestead; I enjoyed some great company and had some great conversations. The event was memorable, and it has motivated me to step up the pace of my mycological self-study. I cannot thank you enough" (Liz Cornish).

Thus ended the 57th Annual Charles Horton Peck NY State Mushroom Foray. It finished with a wave of good memories, smiling faces, and fond farewells. Hunters left with a spring in their step, a little more knowledge, and perhaps a greater appreciation for mycology. Success!

Department Doings

Another Round for 'Cheers with Peers'

Eric Carr

Departmental morale was boosted again this year by the bi-weekly social event, 'Cheers with Peers'. The Department of Plant Pathology and Plant-Microbe Biology hosted the bi-weekly happy hour during the spring and summer months. Frosty fermented beverages and free snacks enticed faculty, staff, students, and post docs to partake in socializing and camaraderie.

'Cheers with Peers' began during the summer months of 2009 where Marshall Hayes and Eric Carr operated according to the time-honored philosophy, "provide the beer and people will come, and as long as they come, the festivities will continue." They served a diverse selection of nonalcoholic beverages and local, domestic and imported beer. Fruit, veggies, chips and salsa, pretzels, peanuts, and other traditional fare were provided as a free perk.

This year, 'Cheers with Peers' opened their doors during the spring semester with PPPMB graduate students Bradford Condon and Eric Carr as barkeeps. During the chilly months of the spring semester the event was held in the 3rd floor hallway of the Plant Science Building. Once the weather broke, the event was quickly moved to the Susan A. Henry Terrace, adjacent to the Plant Science Building. Soon enough 'Cheers with Peers' became a highlight for the department and patrons often bellied up to the bar at 4:30 pm on the dot. Kent Loeffler, Dawn Dailey O'Brien, Rachel McCarthy, Karen Snover-Clift, and Sandra Jensen were among the regulars, but everyone deserves credit for their continuous support.

You may have noticed many individuals from outside of PPPMB regularly attending the event this summer. Eric Carr felt there was enough good cheer to go around and decided to officially extend an invitation to all departments of the Plant Science Building, including Plant Biology and Horticulture. The largest and most amusing turnouts occurred this year when the doors were opened to all departments, proving "the more the merrier!" 'Cheers with Peers' will continue to invite all departments and spread good cheer and thanks to all.

The pressure was on this summer for entire lab groups to make a presence. The kindness of Rose Loria was recognized when she treated her lab members to a drink a couple of times. Other faculty members from Plant Biology and Horticulture were also seen treating their lab members to drinks as well.

Socializing is critical for research development and communication. Weekly events such as 'Cheers with Peers' and PPPMB's Friday Coffee break provide an atmosphere where colleagues can share laughs and their thoughts, research related or not. For many individuals it's an entertaining mini-vacation to their work week.

Thanks to all the organizers of 'Cheers with Peers', past and present. When will the next social hour take place? We wait with our glasses ready in hand…Cheers!!

Chili Cook off (11/20/2009)

Juila Crane

The 5th annual Plant Sciences Chili Cook-Off was held on 11/20/09. Faculty, staff, and student chili chefs from Plant Pathology & Plant Microbe Biology, Horticulture, Plant Biology, and Plant Breeding engaged in a heated competition that left mouths burning and social appetites fulfilled. Chefs competed in three chili categories, Vegetarian, Meat, and Wild Card (contains at least one non-traditional chili ingredient). Among the winners were Judy Kolkman, who won first place in the meat category. The Barley Legal String Band, featuring PP&PMB graduate student and banjo player Brian King, set the mood with knee-slapping folk tunes. There were also t-shirts for sale and a raffle with prizes from area businesses such as Triphammer Wine & Sprits, Kingbird Farm, and Cornell Plantations. All proceeds from the cook-off went to the Graduate Student School Outreach Program (GRASSHOPR), a program at Cornell's Public Service Center that places grad & professional students in K-12 classrooms in Ithaca-area schools to develop and teach their own mini-courses.

John Gottula at the 2009 chili cookoff with one of the raffle prizes (a bag of potatoes)

The 2009 chili cookoff organizing committee, which included several Plant Path students.

Department Doings

Game Night (4/30/2010)

Juila Crane

The Plant Pathology & Plant Microbe Biology Game Night was held on Friday April 30, 2010. Faculty, staff, students, and their families brought their own games, including party hits such as Jenga, Scrabble, and Wii bowling, which was projected onto the overhead. There were also some unique games such as Table Top Croquet, made by Allison Jack's husband Steffen, and a Dutch game called Sjoelin which was brought straight from the homeland by Bill Fry. Thanks to the unhealthy amount of fun shared by all, the PP&PMB Graduate Student Association has decided to repeat this event in the coming year.

Hanh Lam and Allison Jack set up table croquet during game night.

Michael Wunsch planning his Scrabble strategy while Sandy and George Hudler look on. Santiago Mideros and Hanh Lam in background.

BMets Baseball Game (7/7/2010)

For the second year in a row graduate student Jay Worley organized an outing for PPPMB members to attend the Binghamton Mets baseball game.

Members of the department enjoy the Binghamton Mets baseball game against the Erie SeaWolves on July 7, 2010.

Everytime there was a right-handed batter we got on the jumbotron! In the background are Jay Worley, and Hanh Lam and Tien Tran

Department Doings

Plant Science BBQ–Stewart Park (5/22/2010)

Juila Crane

Over a hundred faculty, staff, students, and family members from Plant Pathology & Plant Microbe Biology, Horticulture, Plant Biology, and Plant Breeding gathered on 5/22/10 for the annual Plant Science BBQ at Stewart Park. The BBQ was a celebration of the end of the school year, a kick-off to the start of the field season, and a great opportunity for people from the four plant science departments to meet newcomers and re-establish old connections. Picnic goers were treated to an array of homemade potluck goodies, as well as burgers and other grilled delights. Children at the BBQ were mesmerized by Allison Jack's large bubble maker, and adults had a blast playing a lively game of softball. The BBQ was hosted and paid for by the Graduate Student Associations of the four participating departments.

Annual Department Picnic at Sampson State Park (9/12/10)

Juila Crane

The Plant Pathology & Plant Microbe Biology annual department picnic was held this year on September 12 at Sampson State Park, on the eastern shore of Seneca Lake. Despite the rainy weather there was a record-setting turnout from our newly consolidated department, thanks to the enthusiastic attendance from members of the Ithaca and Geneva campuses. Besides the obvious purpose of doing something awesome, the picnic also served as a welcome party for new graduate students and other members of the department.

Sandra Jensen, Sara Carpenter, Paris Laskaris and Shaun Reining at the annual department picnic on September 12, 2010.

Bowling Tournament (4/02/2010)

Bradford Condon

The annual Plant Pathology & Plant-Microbe Biology bowling tournament took place on April 2, 2010. The bowling tournament is an event that brings together students, post-docs, staff, faculty, and their families for a night of pizza, soda, beer, socializing, and bowling. For two hours, the PP&PMB department filled Helen Newman lanes and waged war, but in the end the Faculty/Staff team beat the Students/Post-docs with an average of 104.6 to 102.8.

The graduate student social committee would like to thank everyone who participated, and George Hudler and the department for their financial support. We'll see everyone again at the 2011 bowling tournament, tentatively April 1, 2011!

Winners of the "Best Team Uniform" for the department bowling tournament. The NEPDN and Friends group consisted of (standing left to right) Collin McCarthy, Rachel McCarthy, Karen Snover-Clift, Todd Clift, Sandra Jensen. (Sitting) Dawn Dailey O'Brien and Bob O'Brien.

One of the department bowlers showing off her special talents. Photo by Sandra Jensen.

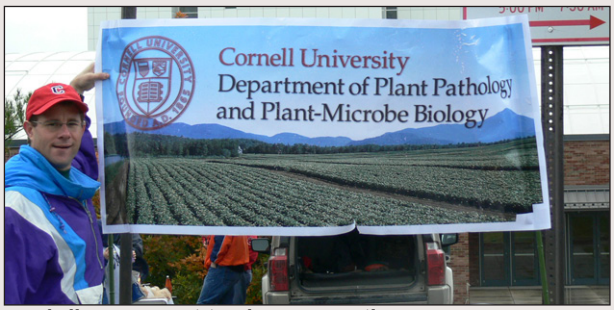
Department Doings

3rd Annual PPPMB Touchdown Tailgate Party Witnesses Football History

By George Hudler, Carol Fisher and Marshall Hayes

Michigan vs. Notre Dame. Army vs. Navy. Minnesota vs. Wisconsin. Colgate vs. Cornell. Yes indeed, at the top of the list of storied rivalries in college football is the matchup between the Big Red and the Raiders, two programs separated by a mere 53 miles as the General Lee flies.

Cornell and Colgate have squared off on opposing sides of the pigskin since 1896, with our beloved Big Red leading the all-time series 48-42-3. On October 16, 2010, PPPMB faculty, staff, and students gathered at the Schoellkopf Field Crescent to witness the latest waging of this historical battle – and, of course, to ensure the 3rd Annual PPPMB Touchdown Tailgate Party its own place in college football history. Thanks to everyone who came out and participated!



Marshall Hayes organizing the PPPMB tailgate party crew

For the third year in a row, the Touchdown Tailgate coincided with the annual Cornell Employee Celebration Day and scored a solid victory, thanks to dedicated planning by George Hudler, Carol Fisher and Marshall Hayes. At 9 am, George's Carnelian Red pickup truck and Shawn Fisher's Little Red Truck had secured prime tailgating spots alongside the Cornell Football Association's own tailgating venue, and multiple grills were fired up by 9:30. A seemingly endless supply of hot dogs, hamburgers and hot cider kept tailgaters happy, even as midday temperatures struggled to break into the low 50s. Also among the hearty tailgating fare were Carol's award-winning vegetarian chili, George's espresso-marinated chicken as well as Taylor Gilbert's exquisite bacon, jalapeno and olive dumplings. Fine food, beverages and camaraderie were enjoyed by all.

Andrea Gilbert and her son Taylor enjoying the tailgate party

History was made on the gridiron, though it came at Cornell's expense. Colgate earned its landmark 600th victory, thoroughly dominating a young Big Red squad by a score of 44-3. With this win, the Raiders became only the 15th school in the Division 1-AA Football Championship Subdivision to reach this milestone, a distinction that Cornell achieved during the 2005 season. Now, the Big Red will have to wait until next season to avenge this loss, when they will play the Raiders on Oct. 15, 2011 in Hamilton, NY.

Win or lose, the PPPMB tailgaters had a wonderful time playing their small role in football history, and department support of Cornell Football continues to be on the upswing. Stay tuned for the official announcement of the 4th Annual Touchdown Tailgate in 2011!

Tracy & Alisa Make the News

From PawPrint

Four Hundred faculty, staff and students attended the annual ice cream social held on the Ag. Quad on a picture-perfect summer afternoon. Kathryn Boor, the new Ronald P. Lynch Dean greeted all in attendance and thanked them for their service to College of Agriculture and Life Sciences (CALS). Administrators served as 'scoopers' to dish up the 60 gallons of Cornell Dairy ice cream to the crowd.

"Scoopers", pictured left to right are: Alisa Gardner, CALS Human Resources, Christie Sayre, CALS Human Resources, Tracy Holdridge, Plant Pathology and Plant-Microbe Biology

Facilities

Plant Pathology Photo Lab

Kent Loeffler

2010 was another fun and busy year in the Plant Pathology Photo Lab. The first half of the year was dominated by a very large out-of-department job for Rick Hoebeke of the Entomology Dept. Rick is working on a coffee table book of weevil species of North America and needed high resolution images of about 175 species. The weevil specimens were all mounted on pins and points and photographed dorsally and laterally using a deep focus, multiple image technique and Helicon Focus software for compositing (http://www.plantpath.cornell.edu/PhotoLab/KnowledgeBase/DigiPhotoTips/MacroFocus.htm). The weevils ranged in size from barely visible (1.5 mm) to monstrous (30 mm) with striking surfaces ranging from rainbow colored chrome to fuzzy doglike fur. We're hoping to do a show next year at the Mann Library Gallery of wall sized prints from this collection. It should be truly frightening!

With the completion of this job it became imperative to spend the proceeds on upgrades to the equipment in the Photo Lab. To that end, a new super PC and Mac were purchased with the older computers being used in the Photoshop teaching lab and to run the time-lapse apparatus. Additionally, a Nikon 300s was added to the lab's digital camera arsenal, several flat panel monolights were added to the studios light farm and an automated deep focus macro rail (http://www.cognisys-inc.com/stackshot/stackshot.php?osCsid=237e30367f9575623112ee1811985fcf) was purchased to make macro photography faster and more accurate.

Besides the weevils and new equipment, day to day activity in the lab remained as normal as could be. Thousands of petri plates, tobacco leaves, corn leaves, rotten tomatoes, mushrooms and mutant this and that passed through the portal and wound up in digital format on the J-drive (department server for you luddites out there). Several Photoshop training workshops were conducted as in past years (8 two-hour sessions per group) for students and staff of the department. As a matter of fact, a new one starts tomorrow!

On a personal note, I put together an exhibit of infra-red images of the Cornell campus, titled Cornell (infra) Red, which was on display in the Mann Library Gallery from May thru August. Images from this show and lots of my other personal work can be viewed here: http://klphoto.smugmug.com/. Catalogs of the show can be purchased online through Lulu Publications (http://www.lulu.com/product/paperback/cornell-%28infra%29-red/6303974?productTrackingContext=search_results/search_shelf/center/2).

Gate to Minns Garden is one of the photos in Kent's Cornell (infra) Red collection.

An infrared photo of Bradfield Hall by Kent Loeffler.

Borescope photos by Kent Loeffler.

Facilities

Herbarium Notes

by Robert Dirig (Curator)

This review highlights activities of the **Plant Pathology Herbarium (CUP)** from October 2009 to September 2010.

NSF Grant

▶ We were notified in March that our grant proposal (*Atkinson's Fungi: Curation and Databasing at the Cornell Plant Pathology Herbarium*) had been funded for 3 years! This is the first NSF money that CUP has ever received. It will allow us to database the Atkinson Herbarium (ca. 90,000 specimens) and scan and archive Atkinson's associated notes and magnificent historical mushroom photographs. We hired two student interns (**Mike Rowell** and **Kiera Crowley**) during the summer, and began this massive organizational project, making good progress. We also hired **Torben Russo** (who volunteered with me for several years) as a full-time assistant in July. Torben is a Cornell alumnus, with a strong background in mycology and botany, excellent organizational and computer skills, and grace with people. We are very happy to have him collaborate on this exciting project.

Torben Russo

Outreach & Visibility

▶ In last year's *Alumni Newsletter* (Vol. 51, p. 14), I wrote about the **Fungi of China** collection, which has been safeguarded at Cornell since the 1940s. In early October, we shipped 2278 specimens back to Beijing (see photo). They arrived in time for a formal Repatriation Ceremony in China in November that was attended by President Skorton, Alice Pell (Vice Provost for International Relations), and many Chinese dignitaries. **Wen-ying Zhuang**, who studied for her Ph.D. with **Dick Korf** at Cornell, participated in this important diplomatic event.

Ready to go back to China, 7 Oct. 2009! Each raft was 28 in. wide 538 in. long 516 in. high, and weighed about 70 lbs.

▶ From January 15 to March 26, 2010, part of the CUP lichen collection was on display at the Tompkins County Public Library in Ithaca. Titled "**Lichens of the Ithaca Area, N.Y.**," the exhibit was an adjunct to the Finger Lakes Native Plant Society's juried show ("Living Light: A Celebration of the Finger Lakes Flora") at the Library. It contained about 50 lichens, most from this region, with explanatory cards alongside. This effort was part of Ithaca's "Light in Winter" festival, and provided a nice showcase for the Herbarium.

▶ **Kathie Hodge** and I talked with two student reporters from *The Cornell Daily Sun* in April about the Herbarium, and showed them highlights of our collection. **Jing Jin** wrote an article that appeared on April 28(*Library of Fungal Diversity: Cornell Plant Pathology Herbarium showcases unique collection of fungal samples, photos and paintings*, p. 12); and **A. Drew Muscente** issued a 6-minute video about the Herbarium that was available on the *Sun*'s website after May 3 (*Plant Pathology Herbarium & The Secrets Within 'Snape's Cabinet'*). The Harry Potter reference is to our quintessential "antique museum cabinet" of very old jars of pickled fungi and diseased plant specimens, which recall the strange objects floating in liquids in the dungeon office of Severus Snape, Hogwarts' Potions Master.

▶ **Dick Korf** was awarded the **Ainsworth Medal** "for extraordinary service to international mycology" by the International Mycological Association at IMC-9 in Edinburgh, Scotland, in August.

▶ In September, Kathie & Torben organized the **2010 Peck Foray**, an annual mushroom collecting field event, which was held near Corning, N.Y., with 65 mycologists attending. I helped **Scott LaGreca** (a Cornell undergrad alumnus, now a professional lichenologist) organize and lead the first **Cryptogam Walk** ever sponsored by the New York Flora Association, at the limestone pavement barrens near Watertown, N.Y., on September 19.

Gifts to CUP

▶ In January, the Herbarium received a fine copy of the five-volume *Icones Mycologicae* by E. Boudier, a classic historical reference on the Discomycetes with gorgeous color plates, from former PPPMB graduate student **Robert Stack**. He offered these as a gift "in honor of Richard P. Korf, at whose hand I learned a lifelong love of mycology." Bob earned his Ph.D. in 1976 for his study of *Fusarium Stub Dieback of Carnation: Etiology and Epidemiology*.

▶ A large collection of fungi assembled by British mycologist **J. T. Palmer** was given to CUP in April. Dick Korf suggests that his specimens of Nidulariales may be the most extensive in any herbarium.

Please Visit

▶ Department personnel, students, and alumni, as well as other University and community members, are welcome to visit our museum and see the collection. We are also happy to arrange tours for Cornell courses or outside groups, and offer opportunities for volunteering. Please send a message to our email address (cup-herbarium@cornell.edu) to schedule a visit.

Get your PP&PMB Beaker Mug now!!!

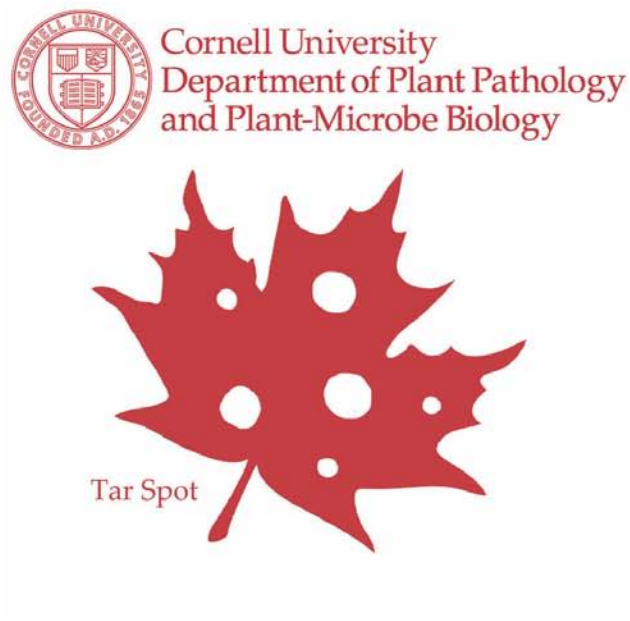
The perfect gift for family, friends, and yourself

$15 each

Proceeds benefit PP&PMB GSA

(we sponsor events including bowling tournament, game night, chili cook-off, colloquium)

You can pick up your mug in Ithaca or Geneva
Email orders to Tiffany at tmj35@cornell.edu



Beaker mug

(will have design shown at left)

The design features the leaf of the New York state tree (Sugar Maple) with Tar Spot. The lesions on the leaf are clear so when your mug is filled with coffee they appear dark. Thanks to Kent Loeffler for helping with the design!

Northeast Plant Diagnostic Network

Karen L. Snover-Clift

We have served as a member of the National Plant Diagnostic Network (NPDN) and as the regional center for the Northeast, known as the Northeast Plant Diagnostic Network (NEPDN) since 2002. We are currently in our second, five-year cooperative agreement that runs through 2012. As you may remember from our introduction and updates in past newsletters, the Network was established to enhance national agricultural security by quickly detecting introduced pests and pathogens. The Network allows land grant university diagnosticians and faculty, State Agriculture and Markets personnel, and First Detectors to efficiently communicate information, images, and methods of detection throughout the system in a timely manner.

A number of faculty and staff work with the program. Our Chairman, Dr. George Hudler holds the position of Director of the NEPDN. Karen L. Snover-Clift serves as the Associate Director of the NEPDN and Program Area Manager of the National Diagnostics Program Area Committee and the National Database Program Area Committee. Other members of the NEPDN regional center team include Karen Scott as the Information Technology Specialist, Rachel McCarthy as the Education and Training Coordinator (a new member to our team, joining us in January) , Sandra Jensen as our Clinic's lead Diagnostician, and Molly Swartwood as our Laboratory Technician. The Northeast region is comprised of 12 land grant universities and an Agricultural Experiment Station which includes the University of Connecticut, the Connecticut Agriculture Experiment Station, University of Delaware, University of Maine, University of Maryland, University of Massachusetts, University of New Hampshire, Rutgers University, Cornell University, Pennsylvania State University, University of Rhode Island, University of Vermont, and West Virginia University.

It has been an exciting year. We received a prestigious award from our funding agency, the NIFA Partnership Award for Innovative Program Models was given to 35 members of the NPDN Operations Committee including George Hudler, Rosemary Loria (Director from 2002 – 2007), Karen Snover-Clift, Mary McKellar (Education & Training Coordinator from 2004-2009), Rachel McCarthy, and Karen Scott. The nomination included poignant comments received during a five year review. One of the review committee members remarked "If the Network ceased to exist, it would need to be reinvented. The speed of distribution of potential harmful pests, pathogens and invasive species has never been greater due to multiple natural events and human activities." Another said, "This statement affirms the importance of the mission as well as the success of the efforts by the NPDN team members acknowledged in this nomination. The accomplishments and goals of the NPDN are clearly aligned with a strategic goal of NIFA to enhance protection and safety of the nation's agriculture and food supply."

Responsibilities of the NEPDN regional center included the provision of training, guidance, and sample diagnoses for the region, as well as back-up for the four other NPDN regional centers. One regional center staff member met the requirements to become provisionally certified to conduct *Phytophthora ramorum* testing at the regional center laboratory. The certification program benefited the entire Network inasmuch as there are now ten laboratories that are approved to process these samples. This continues to relieve pressure on the APHIS confirmatory laboratory in Beltsville, Maryland, because only regional positive results were forwarded to them for confirmation, thus lowering the number of suspect samples that they needed to process. We continue to process samples associated with *Phytophthora ramorum*, the causal agent of Sudden Oak Death/ Ramorum Blight. The only samples being collected for a survey were done by the State of Connecticut through the USDA Forest Service. Additionally the Plant Disease Diagnostic Clinic, acting as the NEPDN regional center, supported all our NEPDN members by providing DNA extractions and molecular testing for anyone not capable of performing these techniques.

Training is a major component of the NEPDN mission. We provide training to our regional members and to First Detectors. This year we worked with our colleagues in Beltsville, MD at the USDA-APHIS-PPQ-CPHST-National Plant Germplasm & Biotechnology Laboratory to offer advance morphological and molecular training on *Phytophthora ramorum*, Plum Pox, Citrus Greening, and Bioinformatics. Nine NEPDN members attended these trainings. Receiving this training for the identification of these pathogens is a critical component of our NPDN preparedness mission. Thousand Cankers of Black Walnut was found for the first time in black walnut's native range (in Tennessee) and a couple of our members participated in an identification workshop in Denver, Colorado with Drs. Ned Tisserat and Whitney Cranshaw, the original identifiers of the disease complex.

A major function of the Network is to capture information about samples already moving through the land grant university (and sometimes state department of agriculture) laboratories. Between July 1, 2009 and June 30, 2010, the NEPDN laboratories processed a total of 15,926 samples. As we enter our 9th year, we are confident in our ability to train others on the potential risks to our agriculture and natural resources, to perform the testing required to quickly identify the pests and pathogens of concern and as needed, to communicate all this information to the responders in the system. We have come a long way thanks to the support and funding opportunities given to us through the National Plant Diagnostic Network.

Plant Disease Diagnostic Clinic

Sandra Jensen and Karen L. Snover-Clift

The 2009 and 2010 seasons at the Plant Disease Diagnostic Clinic were a bit atypical compared to most years as the majority of samples submitted were vegetable plant samples rather than the more typical woody ornamentals. In 2009, early detection of the late blight pathogen, *Phytophthora infestans*, on tomato plants being sold at a local retail establishment was the start of an influx of calls, emails, and samples for confirmation of this pathogen on tomato and later, potato samples. Recommendations by research specialists and extension personnel in 2009 may have helped some commercial growers recognize the threat early enough to take action with pesticides to try to protect their crops. For homeowners and organic growers, fewer options were available, and because the disease spread so quickly, tomato crops were frequently lost. With little evidence that the pathogen overwinters in New York except on protected material such as buried tubers, it was hoped that instructions for destruction of infected plant material given by extension personnel would help prevent another early outbreak in 2010. Scouting for this pest started early in 2010, and industry and extension personnel, researchers, commercial growers and home gardeners began submitting suspect samples as early as March 16! The first positive sample in NYS was confirmed on Long Island on June 19. Within a few weeks, the Clinic was confirming infections on samples from around the state. Likewise, we received reports of positive diagnoses at the Long Island Horticultural Research and Extension Center (LIHREC) and the New York State Agricultural Experiment Station (NYSAES). Samples diagnosed as positive at the Clinic were shared with Bill Fry's laboratory personnel (Paola Zuluaga and Kevin Myers), who further analyzed them to identify the clonal lineage of the specimens.

In the process of analyzing late blight samples, we noticed another trend. A few samples of entire tomato plants were submitted and were found to exhibit symptoms that were highly characteristic of the disease pith necrosis, caused by the bacterium *Pseudomonas corrugata*. As additional samples came in, we eventually identified five samples showing highly characteristic symptoms of this disease. Although certainly not an epidemic, this was more samples of this disease than had previously been reported at the Clinic in the previous five years combined. We suspect the unusual influx was due to the increased concern over late blight. Note: although one of the authors of this report failed to find evidence of *P. infestans* in her own vegetable garden this season, she was unusually pleased to find evidence of pith necrosis.

Another late season sample provided an additional opportunity to work together with other researchers within the department to provide answers to a problem devastating some NY onion crops. Several onion growers in Orange Co. complained of a decay of scales within their recently harvested onion bulbs and we were contacted by a seed company representative, through Jim Lorbeer, to try to determine the cause of this problem. We sought assistance from Steve Beer and his colleague Ali Zaid, who were able to confirm that the bacterium isolated from the samples was *Burkholderia cepacia*, the pathogen that causes Sour Skin of onion.

In 2009, many local (New York State) garlic growers experienced at least a partial crop loss due to various bulb rot pathogens. In 2010, the Clinic received substantially more garlic samples than usual (23 so far, compared to 8 in 2009), for nematode and disease diagnosis, with each new sample arriving almost the moment the previous sample had been completed. This made for an interesting late summer/early fall season not only due to the challenge of trying to identify the various pathogens on the samples, but also in the unusual "aromas" emanating from the lab. Although lab personnel are now overly familiar with the odor of rotting garlic, we will still be happy to accept more samples! In addition to general analysis, we are also trying to confirm, with the assistance of Dr. Christine Smart and her laboratory at the NYSAES, isolation of *Fusarium proliferatum* from one of these samples. This fungus is not only a potential mycotoxin producer, but was first reported to cause bulb rot of garlic in North America as recently as 2001 (see: http://ddr.nal.usda.gov/bitstream/10113/36454/1/IND44288209.pdf). If confirmed, this find would most likely be a first report for New York State.

In the land of ornamentals, another interesting find this year was confirmation of the presence of the pine wood (or wilt) nematode which is rarely found in upstate NY. Long known as a problem on pines in Long Island, our own "jack of all trades", Dawn Dailey O'Brien suspected the pest was killing trees on her property and submitted a sample. It was found to be loaded with the nematode – a treat, as we so rarely see this pest. Although dying pine trees have been noted along many roadways in Tompkins, Seneca, and adjacent counties over the past 4 – 5 years, here is proof that the pest is established as far West as Tioga County. Now armed with this bit of information, we are diligently requesting suitable samples from any client who complains of dying pine trees.

Other interesting disease samples in the past year have included: bacterial wilt of turfgrass, basil downy mildew, chrysanthemum white rust, rose rosette disease, and gymnosporangium rust on Callery pear. We also had a plant sample with an interesting abiotic disorder known as Birch Abnormal Growth Syndrome aka "Mouse Ear Disorder". Foliage on affected plants is not only dwarfed, but slightly curled causing each leaf to resemble a mouse ear. This syndrome develops on river birch being grown in peat which causes a nickel deficiency; it can be corrected with an appropriate fertilizer or by planting into a more suitable substrate!

We enjoy fulfilling our role in the identification process of various regulatory pathogens and in assisting regulatory agents in a rapid confirmation or rejection of the presence of a harmful agent. Each year brings new challenges, but as always, if there is anything the Plant Disease Diagnostic Clinic staff can do to help diagnose and/or answer questions about your plant problems, please contact us. We are here to help!

Congratulations

Herb Aldwinckle received the Career Accomplishments award

CALS honors 2009 Research and Extension Award winners
November 13, 2009, By Ted Boscia, CALS Newsroom

On November 3, the College of Agriculture and Life Sciences (CALS) honored six faculty members as recipients of the 2009 Research and Extension (R&E) Awards.

Recipients included a plant pathologist known for his career-long research to improve fruit crops through genetics and biotechnology, a food scientist with a broad extension program that ensures the safe handling of foods from the farm to the fork, and a pioneer in the field of plant cell biology.

Among the winners of the college's sixth annual R&E Awards were Herb Aldwinckle, credited with helping with the release of numerous named apple varieties and disease-resistant rootstocks, Bob Gravani, whose Good Agricultural Practices (GAPs) program is a model for limiting contamination of fresh produce, and Maureen Hanson, a 24-year CALS professor with an impressive research output concerning genetic function in plants.

Herb Aldwinckle (center), professor in the Department of Plant Pathology and Plant-Microbe Biology, receives the Career Accomplishments award from Dean Susan Henry (left), and Tom Burr (right), CALS associate dean and director of the New York State Agricultural Experiment Station. Photo by Anja Timm

Susan A. Henry, the Ronald P. Lynch Dean of Agriculture and Life Sciences, and Tom Burr, CALS associate dean and director of the New York State Agricultural Experiment Station, led the ceremony.

"The college's Research and Extension Awards honor a range of accomplishments in support of our vision to be the preeminent college for research, teaching, and extension of agriculture and life sciences," Henry said. "The honorees perform research and extension that exemplifies Cornell's land-grant mission to improve the lives of people across New York, the nation, and the world."

Career Accomplishments: Herb Aldwinckle, professor in the Department of Plant Pathology and Plant-Microbe Biology at the New York State Agricultural Experiment Station in Geneva, is widely known for his research in fire blight of apples and pears, a devastating disease that costs New York growers millions annually. His lab is credited with developing model techniques for the genetic enhancement of fruit crops.

Congratulations to Our Newest Alumni

2010

Laura Wakefield	Ph.D.	February
Chia-Lin Chung	Ph.D.	February
Shi-Yung Hsu	M.S.	May
Holly Lange	M.S.	May
Michael Wunsch	Ph.D.	May
Craig Austin	Ph.D.	August
Alan Chambers	M.S.	August

Congratulations to Those Students Who Have Passed Their 'A' Exams

2010

Julia Crane	January	Gary Bergstrom
Christine Layton	January	Gary Bergstrom
Stephen Mondo	June	Teresa Pawlowska
John Gottula	July	Marc Fuchs
Han Lam	July	Samuel Cartinhour

Congratulations

Nelson Lab – APS Video Contest Winner

Allison Jack

The American Phytopathology Society (APS) Office of Public Relations and Outreach held its annual video contest for communicating about plant pathology to the public. The E. Nelson Lab submitted a shortened version of an outreach video I was producing for our NYFVI project in the "It's a microbial world after all" category. We won for that category and the grand prize ($500) which was announced at the APS meetings. Our video is now being advanced to a larger plant biology video contest where anyone can vote. Voting is not open yet, but the website is: www.chlorofilms.org

Our APS video submission "Pythium Suppression with Vermicompost" can be viewed on the APS YouTube Channel: http://www.youtube.com/user/plantdisease#p/u/33/60hmY4GLicU

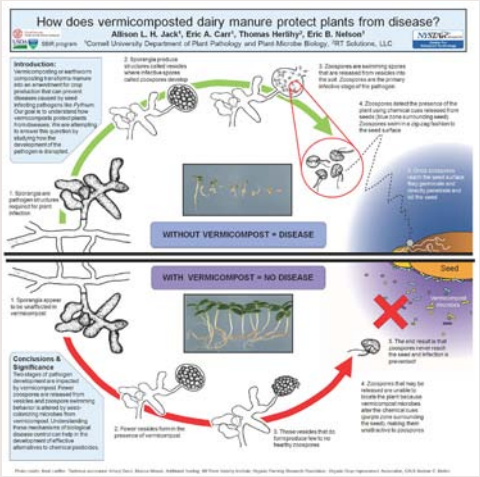
We had excellent production support from the local company, Insights International http://www.electronranch.com/, and we would highly encourage anyone in the department working on a technical or outreach video project to check out their services.

Nelson Lab – 2nd Place in Poster Contest

Allison Jack

The E. Nelson lab (Eric Nelson, Eric Carr, Allison Jack and industry collaborator Tom Herlihy) won 2nd prize ($1000) in the Public Engagement and Science Communication outreach poster contest. The contest is put on by the Cornell Center for Life Science Enterprise. Our poster was entitled "How does vermicomposted dairy manure protect plants from disease?"

For more information about the 2010 event: http://www.biotech.cornell.edu/index.cfm/index.cfm/news.details?newsID=599



This poster won 2nd place in the Public Engagement and Science Communication outreach poster contest.

Congratulations to Service Award Recipients

George Hudler

Simon Moll – 5 years

Simon – he celebrates all of five years,
Chasing small RNAs round in cells.
He deftly directs
All they do but have sex.
Leaving them gasping for resting spells.

Sandra Jensen – 20 years

Sandra's our sleuth, solving puzzles a plenty,
She loves to know why plants are sickened.
Necrosis grooves her
And juicy rot moves her
To make her quest that much more quickened.

David Kalb – 30 years

David! Can thirty years really have passed,
Since we lucked out here and you joined us?
Look now what's happenin'
You're leaving us clappin'
For service that's way beyond A plus.

Hudler Wins Gold Medal

Each year the New York State Nursery and Landscape Association (NYSNLA) presents a Gold Medal of Horticulture Award to an individual who has made outstanding contributions to horticulture in the state of New York. NYSNLA is proud to honor **Dr. George W. Hudler** as the recipient of the 2010 George L. Good Gold Medal of Horticulture Award. His contributions to horticulture in New York State have made a substantive difference in the lives of many individuals associated with this field of endeavor. NYSNLA's Annual Awards Ceremony took place on Thursday, August 26, 2010 at the New York State Fair grounds in Syracuse, NY.

Martin Petrovic from the Horticulture Department presents the 2010 George L. Good Gold Medal of Horticulture award to George Hudler on behalf of the New York State Nursery and Landscape Association.

Congratulations

Loeffler Wins SUNY Chancellor's Award

On April 27, 2010 Kent Loeffler was presented with the SUNY Chancellor's Award for Excellence in Professional Service. Kent has been the photographer for the Department of Plant Pathology and Plant-Microbe Biology since 1985.

Nominees for the award are individuals who have repeatedly sought improvement of themselves, their campuses and ultimately State University and, in doing so, have transcended the normal definitions of excellence. Nominees are those individuals who can serve as professional role models for a University system in the pursuit of excellence. Congratulations Kent!

Kent Loeffler celebrates winning the SUNY Chancellor's Award for Excellence in Professional Service, with his wife, Kate (right) and George Hudler (left).

Best Review Article of the Year co-authored by McGrath

Meg McGrath

"The Ozone Component of Global Change: Effects on Agricultural and Horticultural Plant Yield, Product Quality and Interactions With Invasive Species" published in the Journal of Integrative Plant Biology (JIPB) was awarded the best expert review article for 2009. The article includes results from Meg's research investigating the impact of ambient ozone on plant productivity on Long Island.

Meg McGrath

Fry Honored by AAAS

Bill Fry

The American Association for the Advancement of Science (AAAS) has recently elected Dr. William Fry to the rank of AAAS Fellow. Bill is being honored for distinguished contributions to the field of biology, especially for his considerable and varied work with *Phytophthora infestans*. This honor will be presented in San Diego on February 20, 2010 during the AAAS Fellows Forum, a part of the Association's annual meeting.

Bill Fry

Bill's research has focused on *Phytophthora infestans*. Many very talented people (students, support personnel, visiting scientists and postdoctoral scientists) have contributed wonderfully to this laboratory effort. Initial activities were directed at disease management, disease forecasting and simulation modeling. A model initiated in the late 1970s and improved during the subsequent decades, is a component of a current Decision Support System. The modeling effort has been informed by lab and field experiments. During these epidemiological studies it became clear that while much was known about the population dynamics of this organism, very little was known about the population genetics. The lab began genetics investigations and then population genetics investigations. Early investigations compared populations in the USA with populations in Mexico. These studies quickly expanded to include populations from all over the world. These investigations happened to occur while there was a major worldwide migration of *P. infestans* (from Mexico) and the collections made during this time provided the proof of that migration. The migrations brought new traits to many locations and the migrating population has now displaced the previous population in those locations into which it has been introduced. Unfortunately, the migrating population has made late blight a more difficult problem to manage.

Wedding Announcement

Eric Carr from the Eric Nelson lab got married on September 4, 2010. Congratulations to the newly weds Eric and Jamie Carr!

Congratulations

Duo Wins Award Promoting Green Practices to Keep Plants Green

Elizabeth G. Thomas

Being surrounded by attractive trees and shrubs is one of the joys of visiting park and garden landscapes. Thanks to the work of Dawn Dailey O'Brien and George Hudler, plants will continue to hold the advantage over destructive pests. Since 1994, these two have diligently produced *Branching Out*, an Integrated Pest Management (IPM) newsletter used by arborists, landscapers, and growers to safely keep trees and shrubs healthy and attractive and which, this year, won them an Excellence in IPM Award from the New York State IPM Program.

George Hudler and Dawn Dailey O'Brien win the Excellence in IPM Award from the New York State IPM Program for their work on Branching Out, an IPM newsletter for trees and shrubs.

Printed throughout the growing season, *Branching Out* connects the research community with landscape professionals, supplying information to keep ornamental trees and shrubs from being ruined by insects or diseases. The newsletter not only helps arborists, landscapers, and growers to identify pests, but also predicts their arrival in locations across the state. Since many insects can only be kept in check when very small, the timing of when to take action is critical. "We not only provide details of when to look and potentially treat problems, but when the window of opportunity has passed" says Hudler, Chair of the Department of Plant Pathology and Director of the Northeast Plant Diagnostic Network.

O'Brien and Hudler focus on other tenets of IPM too. Selecting the optimal site for plants, using resistant varieties, and paying close attention to soil health and fertility are all critical tools. Naturally occurring predators can keep destructive insects at bay, and *Branching Out* includes strategies to protect and maximize the benefits from these free, safe, and battle-ready friends. Most importantly, Hudler feels *Branching Out* helps customers understand that some pests and pathogens, while present, pose no threat. In these cases treatments are not required–reducing overall use of pesticides.

In tight budget times, there is never a dull moment for O'Brien, an Extension Plant Pathologist. She fills the role of writer, editor, layout designer, webmaster, and most recently videographer for *Branching Out*—this on top of cooperating with other Extension field staff to cruise the state, seeing firsthand what pests are poised to cause problems. Senior Extension Associate Margery Daughtrey, based in Long Island, values O'Brien and Hudler's work compiling information into a one-stop IPM resource for trees and shrubs.

Among the tree care community, praise runs high for *Branching Out*. Plant Health Care Manager for Koch Tree Services, Robert Ciliento says, "This publication has vital information that helps my technicians achieve optimal results in diagnosis and treatment of plant pests." Elizabeth Lamb, NYS IPM Program Coordinator for Ornamentals, notes that "*Branching Out* is an essential tool for many Christmas tree growers. Whenever we hold educational programs we talk about resources and always have very positive responses from growers on how useful *Branching Out* is."

See for yourself why arborists and growers throughout New York and New England, are grateful for Hudler and O'Brien's IPM work: http://branchingout.cornell.edu/.

They received their award at Cornell University at the New York State Arborist's Fall Educational Seminar in Ithaca, NY on September 26, 2010.

Worm Composting Aired on PBS Affiliate

A TV segment featuring a bit about the worm composting research of Allison Jack from Eric Nelson's lab aired in early November on the Rochester PBS affiliate WXXI. It is posted online at:
http://www.innovationtrail.org/post/worm-power-high-tech-composting

Congratulations

Loria and Martin Receive APS Awards


Greg Martin

Greg Martin has received the Noel T. Keen Award. This award recognizes APS members for research excellence in molecular plant pathology. Martin's research focuses on the mechanisms that bacteria use to infect plants and, in turn, the mechanisms that plants have evolved to interfere with bacterial pathogens Link to more information about Greg's award at www.apsnet.org/members/awards/Keen/Pages/MartinGregoryB.aspx.


Rose Loria

Rose Loria received the Ruth Allen Award. This award honors individuals who have made an outstanding, innovative research contribution that has changed, or has the potential to change, the direction of research in any field of plant pathology. Rose's research focuses on diseases of potatoes. Link to more information about Rose's award at www.apsnet.org/members/awards/RuthAllen/Pages/LoriaRosemary.aspx.

Dick Korf awarded Ainsworth Medal

On August 6, 2010, the International Mycological Association awarded to Dick Korf, our Emeritus Professor of Mycology, its Ainsworth Medal for extraordinary service to international mycology at the closing ceremony of the Ninth International Mycological Congress held in Edinburgh, Scotland. Though Dick was not able to be present, he used his acting talents to provide a video clip acceptance including some comments in a thick Swedish accent. He had used that accent in his three humorous appearances, two at the 5th (1994) and 7th (2002) International Mycological Congresses, in the role of Elias Magnus Fries, a Swede generally considered to be the "father of mycology." His third and last impersonation of Elias Fries was at the 100th anniversary celebration of the Danish Mycological Society, at Copenhagen in 2005. Dick's 3-minute video clip can be downloaded at http://vimeo.com/14145401


Dick Korf

Beer and Aldwinckle Honored by ISHS


Steve Beer and Herb Aldwinckle

Steve Beer and Herb Aldwinckle each got an "ISHS Recognition" at the recent International Workshop on Fire Blight in Warsaw, Poland. ISHS is the International Society for Horticultural Science. The award was for the significant contribution made to the understanding of the bacterial disease – fireblight.

Professor Jim Lorbeer Pauses Momentarily to Retire

George Hudler


Jim Lorbeer

Jim Lorbeer reached a major milestone in his career and in the history of Cornell Plant Pathology when he officially retired on June 30, 2010 *after nearly 50 years of service to the department*. For all of that time, Jim and his 23 graduate students have directed their attention toward understanding and solving problems faced by growers of crops on New York's unique muckland soils scattered across various regions of the state. Onions have definitely been number one on Jim's list for most of his time, but lettuce, carrots, and garlic have also received some of his attention. True to form, Jim eschewed the idea of a big retirement celebration and opted instead for a few small gatherings of friends and colleagues. However, if you're just now learning this news for the first time and are thinking of sending good wishes, we're sure he'd be happy to hear from you. In the meantime – and you won't be surprised to hear this – Jim plans to continue to do what he has been doing since 1960. With several grants still active and a new bacterial disease threatening the most recent generations of onions, Jim will still be in his office or lab or field plots every day - setting up experiments, taking data, or counseling a distraught grower. In fact, he's even agreed to continue to serve as the department representative to the University Faculty Senate. PLEASE JOIN US IN CONGRATULATING JIM ON A TRULY OUTSTANDING CAREER MARKED BY HIS RELENTLESS, DEDICATED SERVICE TO HIS PROFESSION.

In The News

Business Keeps Worms 'Fat, Dumb and Happy'

Democrat and Chronicle, Jim Stinson, October 8, 2010

Tom Herlihy's business in Avon is taking off, mostly because he has millions of workers he doesn't pay.

They are earthworms, and their only job is to feed on the 10 million pounds of solid cow manure that come to Herlihy at the farm space he leases on Jenks Road.

The worms add value to the microbe-treated dung, and then Herlihy and his company, Worm Power, sell the resulting fertilizer to golf courses and greenhouses.

"We work for the worms," Herlihy said Thursday while leading a tour that included federal agricultural officials. "Our job is to keep them fat, dumb and happy."

Herlihy and Worm Power have stepped up their business, going from 300,000 pounds of fertilizer produced last year and early this year to a planned 2.5 million pounds of product in 2011. He declined to specify revenues.

His 40 customers are in 17 states. They like the effectiveness and organic quality of the material, Herlihy said. So does the U.S. Department of Agriculture, which has made $410,000 in grants to Worm Power. On Thursday, the Department of Agriculture sent one of its top scientists, Roger Beachy, to the Livingston County farm.

Beachy is head of the USDA's National Institute of Food and Agriculture. Charles F. Cleland, the institute's national program leader, was also on hand to watch Herlihy show off his 18 new worm beds. Each bed can hold up to 3 million worms.

Beachy said one of the problems presented by large dairy farms, like the one that Worm Power leases land from, is the tons of manure they produce.

While the cows' liquid manure can be used on fields almost immediately, the solid waste has to be moved to lagoons, which could leak into waterways.

The worms' involvement, however, safely treats the solid manure and adds value to the waste as a fertilizer, Beachy said.

"And it has great disease suppression abilities," said Cleland. "A superior product."

Herlihy, who lives in Geneseo, said about 40 percent of Worm Power's grants go to Cornell University researchers who assist his company in scientific examination of the process.

The manure is treated with microbes before the worms get it, and Herlihy said that is to remove by heat — as high as 160 degrees — any harmful items in the manure.

Allison Jack, a Cornell doctoral student, said that such worm-powered composting, or "vermicomposting," has the potential to protect crops from disease, an organic alternative to chemical-based pesticides, and a natural tool to fight nasty plant infections caused by pathogens such as *Pythium aphanidermatum*.

"I see this as the next frontier in bio control," said Jack.

Cornell Scientists Hope to Save New York Fruit Trees From Plum Pox

By Juan Forrer, Cornell Daily Sun, September 13, 2010

As Cornell researchers work to eradicate the plum pox virus, things are looking more and more peachy for New York's stone fruit harvest.

Plum pox virus, also known as PPV, targets trees bearing stone fruit, including plum, nectarine, peach and apricot trees. The virus was first discovered in Ontario in 2000, prompting Cornell researchers to begin looking for the virus in the United States. With the first case being discovered in the U.S. in 2006, the virus quickly spread, affecting a peak of 20 trees discovered in 2007.

The virus, which is transmitted by human production processes and aphid bugs, changes the color, shape, and quality of the fruit, making it unmarketable. According to Prof. **Marc Fuchs**, plant pathology, this does not pose a threat to health, but it poses a threat to the state economy.

"If you were to eat a PPV infected peach, you wouldn't be rushed to the emergency room," he said. "This is an economic issue."

Fuchs, who leads the University research on eradicating the virus, noted that without the help of Cornell research and preventative steps taken starting in 2000, the virus would have most likely spread uncontrollably and decimated the state's stone fruit population.

Thanks to the work of Fuchs and his team, the number of infected trees has dwindled to two this season out of 225,000 trees tested.

Fuchs says Cornell researchers have been working closely with the USDA and the New York State Department of Agriculture. These agencies collect the thousands of samples and deliver them to the lab. He says that both state and federal governments are providing financial compensation to farmers for removed trees which have tested positive. These agencies collect samples from a third of the stone fruit trees in the state every year.

"Every three years, we are going through every tree, which is quite humongous when you think about it," Fuchs said.

Fuchs is confident that the virus will be eradicated within the next five years, based on the declining number of infected trees.

"Based on the number of trees we've found, this program has been successful so far," he said. "This is a foreign virus that we want to eradicate as quickly as possible."

In The News

Northern NY is Eastern U.S. Center for Brown Root Rot Research

From Northern New York Agricultural Development Program, June 23, 2010

Northern New York has become a significant center for research on brown root rot (BRR), the soil-borne fungus causing root and crown rot of alfalfa, other perennial legumes, and overwintering grasses. The fungus *Phoma sclerotioides*, associated with yield loss, winterkill, slow crop emergence after winter dormancy, and stand decline, was first detected in the eastern U.S. in a Clinton County (northern NY) alfalfa field in 2003.

With small grants funding from the farmer-driven Northern New York Agricultural Development Program, Cornell University established research trials and a BRR-resistant alfalfa nursery program at the W.H. Miner Agricultural Research Institute at Chazy, NY.

"Because the Cornell-managed BRR test plots at the Miner Institute contain natural populations of all five subtypes of the BRR fungus that occur in eastern North America, the northern New York site is an ideal location for evaluating alfalfa germplasm for BRR resistance," says BRR project leader Gary C. Bergstrom, a Cornell plant pathologist.

"I believe the research plots at Chazy are the only ones in the eastern U.S. that have been inoculated with the BRR fungus," he adds. "The research being conducted in northern New York is critical to helping farmers manage brown root rot by identifying resistant varieties."

Preliminary research suggests that alfalfa cultivars resistant to one subtype of the fungus may be susceptible to other subtypes.

At least seven genetically distinct subtypes of the BRR fungus occur in North America and five of the subtypes are found in eastern North America. Identifying varieties that will show BRR resistance across New York and the northeast requires screening against all major subtypes of the fungus.

"Identification of varieties with resistance to multiple subtypes is important," Bergstrom adds.

The Northern New York Agricultural Development Program, which receives funding from the New York State Senate, underwrote a 6-county survey to determine if BRR is affecting forage crops in Clinton, Essex, Franklin, Jefferson, Lewis, and St. Lawrence counties.

"The good news is that while we found BRR present in the forage grasses in Northern New York, it does not appear to be causing much, if any, damage to bromegrass, tall fescue, orchardgrass, reed canarygrass, perennial rye or timothy, or in winter wheat crops evaluated in southern New York State," Bergstrom says.

"The bad news is that alfalfa appears to a primary host for the fungus, and it survives in a number of weeds making it a broad-host organism that will not allow control by crop rotation practices," Bergstrom adds. "The long-term solution to BRR is in identifying, breeding and planting resistant varieties."

As a Cornell graduate student Michael Wunsch, now a plant pathologist at North Dakota State University, conducted foundational research to characterize BRR in the Northeast and he began the work to identify the more BRR-resistant varieties of alfalfa growing under Northern New York conditions. He also collected BRR research data from Western Canada where farmers have seen success with BRR-resistance varieties.

"A multi-year, two-location field study conducted in Saskatchewan fields with high brown root rot pressure showed that in the second and third production years, alfalfa varieties with elevated BRR resistance yielded 40 to 65 percent higher than varieties highly susceptible to BRR. Alfalfa varieties with moderate BRR resistance yielded 23 to 43 percent higher than alfalfa varieties highly susceptible to the fungus," Wunsch says.

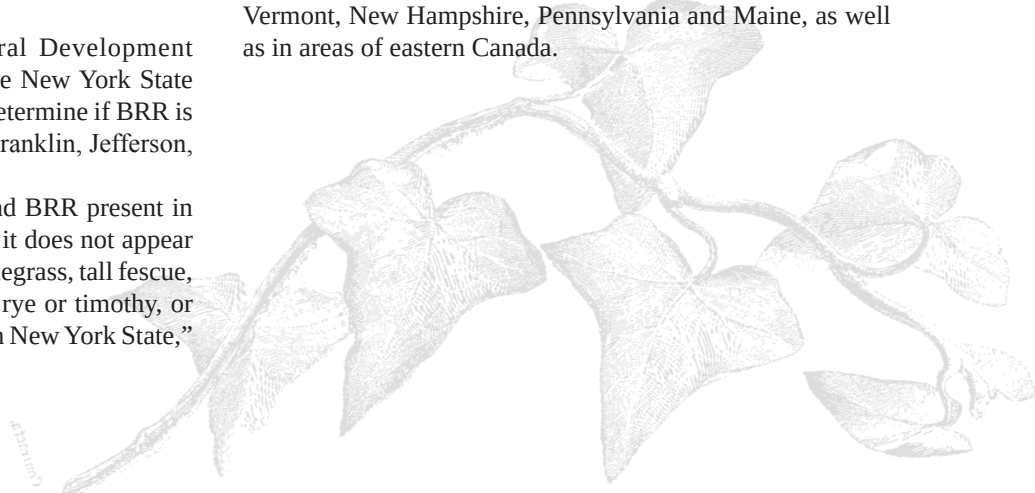
"Peace" and other BRR-resistant alfalfa cultivars grown in Saskatchewan and Alberta, however, perform poorly in New York.

"Northern New York provides a perfect screening laboratory for testing varieties in the harshest environment where brown root rot exists, and the nursery program at Chazy dedicated to identifying the alfalfa varieties that will best tolerate BRR is creating a foundation for selective breeding of BRR-resistance alfalfa," Bergstrom adds.

Cornell Plant Breeding & Genetics researchers Julie L. Hansen and Donald R. Viands are spearheading the continuing BRR nursery at Chazy and will conduct yield evaluations. An analysis of plants that have been through one winter of BRR-resistance testing is currently underway at the Cornell plant pathology lab at Ithaca, NY.

BRR research, photos and analyses are posted on the Northern New York Agricultural Development Program website at www.nnyagdev.org in the Alfalfa section.

In the northeast, BRR is currently found in New York, Vermont, New Hampshire, Pennsylvania and Maine, as well as in areas of eastern Canada.



Alumni News

Ed Jones (PhD 1964)

Ed was honored by the University of Wisconsin on January 19, 2008 at the University of Wisconsin/Northwestern basketball game. Ed was honorary coach for the game and was presented with a commemorative basketball by UW Athletic Director Barry Alvarez for being on the 1940–1941 NCAA Championship Basketball team. This team was UW-Madison's only team to have ever won the NCAA basketball championship.

James Starr (PhD 1976)

In August 2009, Jim Starr (PhD '76) traveled to the University of Ibaban in Nigeria where he met Dele Fawole (PhD '76). Jim and Dele were both students of W. F. Mai. This was only their second get together since 1976. The previous meeting was a chance meeting in 1986 in Reading, England when Dele was on a sabbatical leave in Reading and Jim was visiting Rothamsted Experiment Station in nearby Harpenden.

Jodi Creasap Gee (PhD 2006) and Chris Gee (PhD 2009)

Cornell Plant Pathology has a growing source of prospective students. Chris Gee (PhD from Lance Davidson's program) and Jodi Creasap Gee (PhD from Tom Burr's program) recently welcomed the first of many(?) future Cornell plant pathologists into their family: Henry Needham Gee. Born 8/23/2010 at 00:16. 6 lb 15 oz, 21 inches. As the viticulture extension associate with the Lake Erie Regional Grape Program housed at the Cornell Lake Erie Research and Extension Laboratory in Portland, NY, Jodi works with grape growers in Western New York and Northwest Pennsylvania. Chris is an assistant professor of Biology at Pennsylvania State University Erie - The Behrend College, and his lab is studying fungicide resistance in downy and powdery mildew populations in the Lake Erie Region.

Henry Needham Gee

Maryann Herman (PhD 2008)

I'd like to announce the birth of my daughter, Fiona Grace Herman (April 20, 2010, 7 lb 10 oz, 21 inches). I'm currently an Assistant Professor of Biology at St. John Fisher College in Rochester, NY. I'm teaching plant biology, microbiology and intro biology labs, medical ethnobotany elective, a non-majors mycology course and hopefully developing a plant pathology elective in the near future. My research is looking for plant and microbes that remediate lead in soil.

Necrology

Schafer, Dr. Lewis A. PhD '54 (Oct 22, 1919–Jul 6, 2010),

Born in Jewell, Kansas. Preceded in death by parents Gwen (Hower) Schafer and Benjamin H. Schafer, and brother Arthur Eugene Schafer. Married Aug. 4, 1942 to Twila May (McDill) Schafer who survives him along with two sons, Rodney E. Schafer of Lincoln and Dennis A. (Kathy) Schafer of Omaha. Graduated from Jewell, Kansas Rural High School in 1937. Attended Fort Hayes Kansas State College in 1937–1938. Attended Kansas State University in 1940–1941. He proudly and faithfully served his country in the U.S. Navy during WWII from 1941-1945. Returned to Kansas State University after WWII military service to earn a B.S. degree (Agronomy) in 1947 and an M.S. degree (Plant Pathology) in 1948. He then taught at Kansas State University 1948–1950 and conducted research at Cornell University 1951–1954, prior to earning a **Ph.D. degree (Plant Pathology) at Cornell University in 1954**. During 1954–1956 he was a Plant Pathologist at Standard Oil Co. (Indiana) in Whiting, Indiana, after founding their Plant Pathology Department. He then spent the balance of his career pursuing his greatest joy, which was his endless dedication as a teacher. In that pursuit, he assisted countless students in achieving their highest potential. In 1956 he became Biology Department Head at Nebraska Wesleyan University. Shortly thereafter he was granted a leave to serve as Visiting Professor in the College of Agriculture at College Laguna, Philippines during 1958-1959. In this capacity he orchestrated a new college curriculum under contract with Cornell University and the U.S. State Department. He later enjoyed another traveling tenure as Visiting Professor at the Inter American University in San German, Puerto Rico in 1969. Dr. Lewis A. Schafer retired as an eminently revered Nebraska Wesleyan University Professor in 1985, but he never retired from being an inspirational and dedicated teacher. He proudly remembered his organizational associations as: Phi Kappa Phi, Gamma Sigma Delta, Tri Beta, Farm House Fraternity, Sigma Xi. On his personal side, Lewis will be equally remembered for his passionate dedication to family, and as a faithful member of First Presbyterian Church (member, Deacon and Elder). To have had the privilege of knowing this extraordinary man is to love all that he ever held dear.

Young Hawk Visitors

Young hawks on ledges of the Plant Science building on June 29, 2010. Top photo by Sandra Jensen, view from inside the Graduate Student Office of a baby hawk. The bottom two photos are by Kent Loeffler.

Departmental and University Web Sites of Interest

Plant Pathology & Plant-Microbe Biology
www.pppmb.cals.cornell.edu/

Plant Disease Diagnostic Clinic
plantclinic.cornell.edu/Default.htm

Cornell Mushroom Blog
blog.mycology.cornell.edu/

Branching Out Newsletter
branchingout.cornell.edu/

Extension Publications
pppmb.cals.cornell.edu/cals/plpath/outreach/extpub.cfm

CUP Herbarium
www.plantpath.cornell.edu/CUPpages/CUP.html

CUP Photograph Collection
odell.mannlib.cornell.edu/cupp/catalog/

Department Photo Lab
www.plantpath.cornell.edu/PhotoLab/Default.htm

Faculty Web Pages
www.pppmb.cals.cornell.edu/cals/plpath/directory/faculty-menu.cfm

Glossary of Technical Terms
www.plantpath.cornell.edu/Glossary/Glossary.htm

International Agriculture
www.cals.cornell.edu/cals/plpath/about/international-ag.cfm

Smokin' Doc Thurston's Greatest Hits
www.tropag-fieldtrip.cornell.edu/docthurston/smokin-home.html

Summer Scholars Program
www.nysaes.cornell.edu/pp/scholars/

Tree Fruit and Berry Pathology web site
www.nysaes.cornell.edu/pp/extension/tfabp/index.html

Christmas Tree Pests
www.plantpath.cornell.edu/trees/TreePests.html

Vegetable Disease
vegetablemdonline.ppath.cornell.edu/

News for Future Newsletters

We want to hear from you...

Send an e-mail to plantpathcornell@cornell.edu or complete the form below and send to:

Newsletter Committee
Department of Plant Pathology and Plant-Microbe Biology
Cornell University
334 Plant Science Building
Ithaca, NY 14853

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Feel free to attach additional sheets

Opportunities in Plant Pathology

The College of Agriculture and Life Sciences has evolved from being a state-supported institution to being state-assisted. Because less and less of our financial support now comes from New York State, private support has become even more important. The Department of Plant Pathology and Plant-Microbe Biology in Ithaca is building several endowment funds to support its future activities. Your contributions to any of these funds will be greatly valued.

Graduate Student Fund

The Department of Plant Pathology and Plant-Microbe Biology and society in general have benefited immeasurably from previous support for graduate education. Early in the history of the Department, the agriculture industry provided graduate assistantships to support investigations important to agriculture in New York. Later, major responsibility for this support came from New York State. Reduced funding from New York State has severely affected the departmental support for graduate students. Continued excellence of the graduate program in Plant Pathology and Plant-Microbe Biology at Cornell will be greatly assisted through the Graduate Student Fund. Gifts of any size are appreciated and enable the brightest minds and most dedicated individuals to work and study in plant pathology and plant-microbe biology.

Plant Pathology Excellence Fund

Income from this endowment fund will be used to facilitate important projects which otherwise would be impossible. For example, the fund will help deserving students present their thesis results at a scientific meeting; it will facilitate the development of teaching aids; and it will aid graduate student research in unfunded areas by augmenting funding for supplies and small equipment items.

Named Gift Opportunities

Graduate Fellowships

Full support	$300,000
Partial support	$50,000

Cornell Plant Pathology Pledge/Contribution Form

Name_____

Address_____

_____

_____

Telephone _____

Please send form to:
Dept. of Plant Pathology & Plant-Microbe Biology
334 Plant Science Bldg
Cornell University
Ithaca, NY 14853

Plant Pathology Excellence Fund

Pledge $ _____/yr

Contribution $ _____

Plant Pathology Graduate Student Fund

Pledge $ _____/yr

Contribution $ _____

Other gift $ _____