

***Penn State
Department of Plant Pathology
Newsletter
January 2011 – June 2012***



photo courtesy of Derik Kalp

A view of Old Main showing the matching American elms in full leaf.

The right (east) side elm was removed on March 9-10, 2012 due to elm yellows.

<http://live.psu.edu/flickrset/72157629555978119>

Penn State Plant Pathology Newsletter

January 2011-June 2012

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Cover photo: The two American elms were planted in 1933.

Below: Photos of Old Main (circa 1930) and a concept image of Old Main if/when the left (west) side elm succumbs and is removed.





Greetings from the Department Head

A lot has happened in Happy Valley since our last newsletter, and a lot of changes have occurred on campus and in the Department. One of the most visible changes involving plant pathology was the removal of one of the two giant elms in front of Old Main. The dual ravages of Dutch elm disease coupled with elm yellows phytoplasma infection are taking a toll on the campus elms. Dr. Gary Moorman has been involved in attempts to slow these epidemics by developing detection methods, mapping infected trees for removal, and working with entomologists to study insect vectoring. However, it is likely that fewer of the stately elms will be noticed on campus over time. All is not lost, though, as there is an architecturally very interesting Old Main hidden behind the elms as viewed when reconstructed in 1930 for \$840,000 (photo inside front cover).

Another change associated with Plant Pathology this year is the restructuring of the College of Agricultural Sciences and the renaming of our department. As of July 1, 2012, we are now properly referred to as the Department of Plant Pathology and Environmental Microbiology. Over the past year the College of Agricultural Sciences was restructured from 12 to 9 departments. Due to the strength of our graduate programs, our quality faculty research, and our strategic role supporting agriculture through our strong extension programming, the Department of Plant Pathology was selected to remain an independent disciplinary unit. During this time of transition the faculty elected to broaden the scope of our department's focus to include Environmental Microbiology, an area of science in which many of our faculty were already working. During the coming year the department will expand its role in

undergraduate education by teaching and advising in a new Plant Science major and developing a new interdisciplinary Minor in Environmental Microbiology. Next year (2013) will mark the 50th anniversary of the founding of the Department, and we are planning a major symposium in Environmental Microbiology as part of the celebration and to announce our participation in this expanding branch of science. Stay tuned for details on the symposium and 50th anniversary celebration.

Please take some time and review our newsletter to get updated on happenings in the Department. Faculty retirements this year included **Elwin Stewart** (Head 1993-2002), **Dan Royse**, and **Pete Romaine**; while new faculty hires included **Marilyn Roossinck** and **John Pecchia**. **Diane Yoder** is the new Administrative Assistant following **Becky Peplinski's** retirement after 41 years, and **Sandra Beck** is our new staff assistant. This year we recruited 6 new graduate students and graduated 4 Ph.D.'s in Plant Pathology and our first graduate in the new Agricultural Biosecurity Masters degree program. Check the Faculty and Staff awards section including Outstanding Staff awards to **Jean Juba** and **Vija Wilkinson** and outstanding teacher awards to **Wakar Uddin** and **Gary Moorman**. Note that **Beth Gugino** is the newly elected president of the Northeast Division of APS and that **Dr. Larry Moore** (Ph.D. 1965) was selected as an Outstanding Alumnus of the College of Agricultural Sciences for 2011. Whether you are an alumnus or a friend of the Department, write and let us know what you are up to and always feel welcome to stop by for a visit when in town.

Fred Gildow, Professor & Head

In Memoriam

Nellie Garreta Girvin Boyle died on March 20, 2012 at the Huntingdon, PA, J. C. Blair Memorial Hospital. Nellie was born April 10, 1918 in Kansas City, the oldest of three children to Garrett A. and Edna Mae Girvin. She received a B.S. in Science from The University of Wichita in 1939. In 1941, Nellie married John S. Boyle, who came to Penn State to serve on the Plant Pathology faculty. They celebrated 69 years of marriage until his death in 2010. Nellie taught home economics in Cheney, Kansas, for two years, was twice employed by Penn State, and retired in 1982 from the College of Human Development and Family Studies. She was very active in Girl Scouting, the State College branch of AAUW, and St. Paul's United Methodist Church. She is survived by two daughters, Elizabeth B. Taylor and Margaret B. White and husband, Eric; and two grandchildren.

Webster Chandler, Jr., of Griffin, GA, passed away Saturday, June 4, 2011, at his residence. Dr. Chandler was born September 17, 1914, in Newton, Massachusetts. He received a B.S. degree in Botany from Massachusetts State College in 1937, and a Masters degree in Plant Pathology from Cornell University in 1940. After being honorably discharged from the U.S. Army in 1946, he accepted a position in the Penn State Department of Plant Pathology, where he worked and studied until 1955, when he received his Ph.D. He served as a fruit pathologist at the Georgia Experiment Station for 26 years, until his retirement in 1981. Following retirement he operated a peach orchard for 15 years, and along with his wife spent many hours as a community volunteer. He is survived by his wife, Margaret (Peggy) Elizabeth Chandler; son Randall Allen Chandler, daughter and son-in-law, Barbara and Kent Antley, five grandchildren, and two great grandchildren.

John B. Coppolino passed away on December 14, 2011 in State College, PA. Born September 22, 1922, he was a son of the late Anthony and Jean (Caletri) Coppolino. John received a B.S. degree in landscape horticulture from Penn State in 1951, and he was employed for over 40 years in different capacities at Penn State, retiring as a project manager from the Department of Plant Pathology. John was involved with many volunteer activities, including Special Olympics and Boy Scouts. John was predeceased by his wife, Frances, in 2008; he is survived by a daughter and son-in-law, Jeanne and Kenneth Snyder; a son, John and wife Joyce A. Marshall; five grandchildren, seven great-grandchildren, and three brothers.

Patricia H. Hickey passed away in Gettysburg, PA, on Saturday, August 6, 2011, at her home. She was born in Arendtsville, PA, on August 24, 1940, the daughter of the late Catherine and Royse Heckenluber. Patricia was a graduate of Lankenau School of Nursing. She was an active member of the Winchester Presbyterian Church and Gettysburg Presbyterian Church, and along with her husband was involved with many volunteer activities in their community. She is survived by her husband of 51 years, Kenneth D. Hickey (Professor Emeritus of Plant Pathology); children Deborah Murray, Benjamin Hickey, and Beth Hocker; and five grandchildren.

W. F. O. Marasas. We recently learned that Dr. Wally Marasas, Professor Extraordinarius of the Faculty of Biology and Agricultural Sciences at the University of Pretoria and past Director of the Medical Research Council in South Africa, has passed away. Dr. Marasas was a long-time collaborator with Drs. Paul E. Nelson and T. A. Toussoun; he completed a sabbatical working on *Fusarium* taxonomy at Penn State in 1981 and was made Adjunct Professor of Plant Pathology at Penn State in 1986. Dr. Marasas was most known for his work on *Fusarium* mycotoxins and was the first to make the connection between T-2 toxin production by *Fusarium*, cereal grain contamination by toxins, and the resulting deleterious effects of mycotoxins on animals and humans fed on or exposed to contaminated grains.

New Plant Pathology Graduate Students



Brian Aynardi
Ph.D.
(W. Uddin, advisor)



Caroline Black
M.S.
(M. Jimenez Gasco, advisor)



Ilse Huerta
M.S.
(B. Gugino, advisor)



Kristi Fenstermacher
Ph.D.
(D. Geiser, advisor)



Emmie Warnstrom
M.S.
(D. Royse, advisor)



Douglas Whalen
Ph.D.
(S. Kang, advisor)

Comings & Goings

Administrative Staff

Sandra Beck joined the department in August 2011, as administrative support assistant, filling the position vacated by **Amy Perryman**. Sandy came to Plant Pathology from the Penn State Institutes of Energy and the Environment (PSIEE).

In January of 2012, **Diane Yoder** assumed responsibilities as Administrative Support Coordinator for the department, replacing **Becky Peplinski**, who retired at the end of December. Diane previously held an administrative position in the Department of Meteorology. .



l-r Sandy Beck, Diane Yoder, Lori Long, Debra Clemmer

On July 1, 2011, **Dr. Jung-Eun Kim** joined Dr. Seogchan Kang's program as post-doctoral scholar. The department also welcomed new post-doctoral scholar **Dr. Natalia Kovalskaya** on September 15; Natalia is working at the USDA-ARS in Beltsville, MD on a research project coordinated by Dr. Beth Gugino.

Dr. Marilyn J. Roossinck joined the department as Professor of Plant Pathology and Biology on August 15, 2011. Dr. Roossinck is affiliated with the Center for Infectious Disease Dynamics, located in the new Millennium Science Complex. Her areas of interest include virus-plant interactions, virus evolution and ecology, and evolution of disease. She received her Ph.D. from the



Colorado School of Medicine, and prior to joining Penn State was a Professor of Plant Biology at The Samuel Roberts Noble Foundation. Joining the Roossinck research lab are Research Associate **Dr. Justin Pita**, Postdoctoral Scholars **Dr. Xiaodong Bao** and **Dr. Luis Marquez**, and visiting scholar **Dr. Mahtab Peyambari**.

l-r Justin Pita, Mahtab Peyambari, Marilyn Roossinck, Justin Pita, Xiaodong Bao, Luis Marquez

Retirements

Jean Juba retired from her position as Research Support Assistant on June 29, 2011. Jean served as the mainstay of the Fusarium Research Center since 1988, working with Drs. Paul E. Nelson, T. A. Toussoun, and Dr. David M. Geiser. Jean was an acknowledged expert on Fusarium and assisted in



many workshops and training sessions for scientists from around the world. The department acknowledged Jean's service and contributions with the Laurence and Mary Ann Moore Award for Staff Excellence in 2011, and celebrated her retirement at a special gathering on July 29, 2011. As Jean eloquently put it, she was "backing out the door slowly," and has continued to help out in the Fusarium Research Center.

Jean Juba receiving photo of campus elms from David Geiser, July 29, 2011

Becky Peplinski retired on December 31, 2011 after more than 41 years of service to Penn State. Becky was hired to Plant Pathology by Dr. James Tammen in May of 1971, and subsequently worked as administrative assistant for all ten heads of the Department of Plant Pathology. A retirement celebration was held during the annual holiday party in December 2011, and among her gifts was a beautiful memory book full of photos, letters, and artwork. Becky extended her heartfelt thanks to everyone in the department for a long and satisfying career.





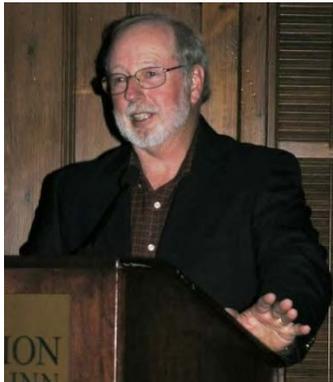
C. Peter Romaine retired on June 29, 2012 as Professor Emeritus of Plant Pathology. Pete is a graduate of Cornell University, came to Penn State in 1977 as Assistant Professor, and at the time of his retirement held the John B. Swayne Chair in Spawn Science. Pete plans to continue the research program he developed on transgenic manipulation of mushrooms, mushroom pathologies, and innovative approaches to mushroom cultivation. Through his extension responsibilities Pete worked closely with the mushroom growers of Pennsylvania, and his teaching responsibilities included PPATH 416 (Plant

Virology: Molecules to Populations).



Daniel J. Royse also retired on June 29, 2012 as Professor Emeritus. Dan joined the department in 1978 after completing a Ph.D. in Plant Pathology at the University of Illinois. His program has been directed toward improving the production efficiency and quality of edible mushrooms to help minimize production costs and maximize farm profits. Dan expects to continue his research working with cultivated mushrooms, including *Agaricus bisporus*, *Grifola frondosa*, *Lentinula edodes*, and *Pleurotus* spp. Dan has served the mushroom industry not only in Pennsylvania but worldwide, and most recently received the

Outstanding Research Award at the International Conference on Mushroom Biology and Mushroom Products held in France in 2011.



Elwin Stewart retired on June 30, 2011 as Professor Emeritus of Plant Pathology, following a distinguished career as faculty member, department head, and mentor. Elwin joined Penn State in May, 1993, as Professor and Head of the Department of Plant Pathology. Elwin served in this leadership role for nine years, and then returned to the faculty to devote full time to research, teaching, and service. A special celebration was held at the Nittany Lion Inn on November 17, 2011, when colleagues, friends, and family honored his service to the department, college, and university, and to agriculture in the Commonwealth of Pennsylvania.

Congratulations Graduates



Li Guo – Ph.D. – Plant Pathology – Fall 2011

Thesis: Molecular Genetic Analysis of Development and Pathogenicity in the Filamentous Fungus *Fusarium verticillioides*

Advisor: **Gretchen Kuldau**



Steven A. Lee – Ph.D. – Plant Pathology – Spring 2012

Thesis: Virulence of *Erwinia amylovora*: Hunting Down Its Determinants Using Transposon Mutagenesis of a High Virulent Strain, HKN06P-1

Advisor: **Timothy McNellis**



Dylan P. Short – Ph.D. – Plant Pathology -- Fall 2011

Thesis: Widespread Occurrence and Evolution of Human Pathogenic *Fusarium*

Advisor: **David Geiser**



Dharmendra K. Singh – Ph.D. – IBIOS -- Fall 2011

Thesis: Characterization of Fibrillin4 Protein Function in Plants

Advisor: **Timothy McNellis**

AGBIO – Agricultural Biosecurity



Dr. Joe Smith, DVM, is the first graduate of the Master in Professional Studies in Homeland Security option in Agricultural Biosecurity and Food Defense. Dr. Smith is a large animal veterinarian working in western Pennsylvania and northeastern Ohio. He will be starting a livestock surgery residency at UC Davis this summer and will be taking along his new-found knowledge and appreciation for plant biosecurity and food defense as well as animal biosecurity, as he begins his residency. Congratulations and best of luck, Dr. Smith!

J. Smith, and G. Kuldau

Outreach Education Activities

2011 WISE Day Camp--Girl Scouts learn some plant pathology while earning their plant life badge



Graduate students **Sara May, Yinfei Li, Emily Pfeufer, Maria Velez-Climent, and Steve Conaway** from the Department of Plant Pathology and Rupesh Ram from the Department of Biology helped the Graduate Women in Science (GWIS) teach middle school aged Girl Scouts about plants as part of their Plant Life badge. The graduate students organized an activity about pest control on plants and the differences between organic and non-organic pest control methods. The Girl Scouts learned how we use scientific experiments to study the behavior and

biology of pests in order to develop sustainable and effective ways to control the plant pests. At the end of the activity the Girl Scouts received tomato plants donated by the Penn State Centre County Master Gardeners to take home and plant in their gardens.

Plant Pathology Association (PPA) Outreach Teaches Children About Fungi

The PPA participated in an outreach activity held at Discovery Space in State College. This event was held in conjunction with the State College Fall Festival. Graduate students taught children (and their parents!) about the importance of fungi through a fungi matching game, a mushroom stamping activity, a mushroom identification station, and a microscope station.



Pictured from left to right are Doug Whalen, Ilse Huerta, Emmie Warnstrom, Jill Demers, and Anna Testen; Laura Ramos also helped at the event.

Short Course on Agricultural Plant Biosecurity

On July 10-12, 2011, Dr. Dan Collins and four students from the Department of Urban Forestry at Southern University, Baton Rouge, LA, visited the department to participate in a two-day short course on Agricultural Plant Biosecurity. The agenda included a half-day of lectures on invasive species and biocontrol strategies by **Don Davis**, the role of APHIS in pathogen forensics by **Grace O'Keefe**, and Agricultural Biosecurity Initiatives by **Gretchen Kuldau**. Each graduate student from

Southern University made a brief presentation summarizing his/her research. The afternoon was spent observing and discussing research efforts on campus, including the combined Dutch Elm



Disease and Elm Yellows control program (**Gary Moorman**), invasive longhorn beetle biocontainment research laboratories (Erin Scully, an Entomology graduate student working with Kelli Hoover), and the Mushroom Research Center and University Composting Facility with **John Pecchia**. Day two included a

tour of research and diagnostic facilities for plant pathogen detection at the Pennsylvania Department of Agriculture in Harrisburg, PA, with Ruth Welliver and adjunct professor **Seong Kim** and the insect ID lab with Sven Spichiger; a tour of tree fruit research programs at the Penn State Fruit Research and Extension Center in Biglerville (**Henry Ngugi** and **John Halbrendt**); and the USDA-ARS Biocontainment Greenhouse and APHIS Training Facilities in Frederick, MD (Doug Luster and colleagues). The course was funded in part by a USDA/NIFA Capacity Building Grant to Enhance Graduate Education and Training in Global Food Security and Agricultural Biosecurity.

Ag Day

Each spring the PPA represents the department at Ag Day , an on-campus event sponsored by the College of Agricultural Sciences. The PPA helps teach current Penn State students and the public about plant pathology through several educational games. Ag Day 2011 was held next to the Creamery and PPA activities were coordinated by **Emily Pfeufer**. Ag Day 2012 was held in the HUB, and **Sarah Bardsley, Caroline Black, Maria Burgos, Hilary Cheesman, Jill Demers, Kristi Fenstermacher, Ilse Huerta, Grace O'Keefe, Laura Ramos, Anna Testen, and Emmie Warnstrom** represented PPA and the Plant Pathology department. The students presented educational games, such as Save the Elms, Pathogen-Disease Matching, and Fungi-Fungal Product matching, to teach students about plant microbe interactions and talked with visitors about plant pathology.

Ag Progress Days - 2011



Beth Gugino



Kim Paley

Undergraduate Education

The Fungal Jungle (PPATH 120)



students with M. Jimenez Gasco



students with G. Kuldau



The Fungal Jungle: A Mycological Safari From Truffles to Slime Molds

Plant Pathology Association (PPA)

Behind the scenes, painting the Plant Pathology Association (PPA) mushroom, which sold at the Kennett Square Mushroom Festival in September 2011 and raised \$300 for the PPA. Artists included Maria Velez Climent, Jill Demers, Steve Conaway, Hilary Cheesman, Yinfei Li, Anna Testen, Mischa Moschera, and Emily Helliwell. Thanks to Kim and Michael Paley and Brian Aynardi for helping to move the 108 lb artwork!

<http://plantpath.psu.edu/news/2011/penn-state-plant-pathology-association-wins-at-kennett-square-festival>



Faculty Activities



The key activities of the **Paul Backman** laboratory are in the general area of biological control of diseases and weeds. In the control of diseases of plants, the primary efforts have utilized plant associated microbes to colonize plants, and there as epiphytes or endophytes they suppress disease by either direct effects on the pathogen, or indirectly by activating plant defenses. Our primary funding sources for research on biological control of plant disease are through USAID research projects. Particularly we are funded for work in central and south America through the IPM CRSP, and through the SANREM CRSP in Bolivia and Ecuador. Currently, we are looking at populations of *Bacillus* isolated from *Chenopodium* sp. from Pennsylvania, Ecuador, and Bolivia to determine the ability of specific *Bacillus* species to solubilize phosphate and control disease. We are also working on methods to detect *Peronospora variabilis*, the causal agent of quinoa downy mildew, in quinoa seeds and plant tissue. *P. variabilis* is seedborne and can be detected in consumable quinoa seeds using methods we have developed. Our weed biological control activities (funded through NIFA) utilize a rust fungus (*Puccinia punctiformis*) to develop systemic infections of the target weed Canada thistle. The original strategy was to colonize thistle patches by planting infected “mother plants” that would provide rust inoculum to kill the patch over time. We quickly found out that planting sick mother plants in the spring provided very little longevity for these plants, and did not result in strong epidemics. In collaboration with our USDA/ARS partner, we found out that the literature on this rust disease was incorrect, and that the prime infection time for the disease was during the fall on young rosettes of emerging root sprouts. Inoculum collected as sporulating infected leaves in the summer can be utilized

(after grinding) by sprinkling on a few rosettes in each patch during mid-late fall to produce an epidemic that will move much more effectively through the patch and to adjacent areas as well.



David Beyer and John Pecchia (fourth and fifth from left, respectively), hosting delegation of scientists from Jilin Agricultural University, China, on a tour of mushroom facilities



David Beyer had a good year working with the mushroom community here in North America and Europe. Much of his time was devoted to maintaining the few pesticides the industry has left in their arsenal and conducting on-farm visits to help minimize the impact of losing a fungicide critical to the control of *Trichoderma* green mold. He conducted farm walks/workshops on different aspects of mushroom cultivation for the mid-level grower/supervisors. He worked with Dr. **John Pecchia** to help conduct an International Composting Workshop in Poland, which was attended by composters from around the world. The focus of his research was towards several of the fungal pathogens looking at cultural factors influencing disease development and screening existing and potential new bio-fungicides. We were just awarded a \$1.4 million Specialty Crop Research Initiative grant from USDA for pest and disease research. As the PI, this 5 year project has

him collaborating with John Pecchia of Plant Pathology, Tom Baker and Nina Jenkins of Entomology, and Ryan Elias of Food Science. Our objective of the project is the transition of the management of fungal pathogens and flies that vector these pathogens from short-term reliance on a dwindling number of pesticides to more sustainable strategies. He also continues to dabble in composting and mushroom nutrition research as time and space allows.



Beth Gugino continued to build her vegetable extension/research program during 2011. As usual, field season was a busy time of year and thanks to the extreme weather it proved to be another exciting one filled

with drought and flooding! In the fall she welcomed **Ilse Huerta** to her program. Back in fall 2009, Ilse spent several months in the Gugino lab as a visiting student from the University of Guanajuato. Now as an M.S. student, Ilse will be working to better understand the potential for *Phytophthora infestans* oospore development in PA as well as evaluate decision support systems for managing late blight with funding from the PVGA/PVMRP and USDA-AFRI. **Emily Pfeufer** (M.S. 2010) continues to do extensive travelling across the state (over 6000 miles!) for her Ph.D. research, which is focused on identifying the on-farm factors contributing to onion bacterial disease, a problem that continues to plague vegetable growers in PA. All this work and much more would not be possible without the continued dedication and support of **Michele Mansfield** (Ph.D. 2005) and **Tim Grove** in both the lab and field. In 2011, **Jill Pollok**, **Evan Stover**, **Marie Ebner**, and **Khanh Nguyen** also contributed to the labs' success. Both Jill and Marie are headed off to grad school this summer at Virginia Tech and Case Western, respectively. Good luck ladies! In October 2011 Beth received the Early Career Award from the Northeast Division of APS where she is also currently serving as President. In

addition, she continues to serve as co-leader of the Vegetable and Small Fruit Program Team for Penn State Extension.



John Halbrendt. My program is beginning to shrink as I have opted to enter voluntary phased retirement. Although there is still some time before full retirement I appreciate the ability to strategically plan a

time-table that allows me to slowly step back from research and wrap-up ongoing projects in a timely manner. At present, my half-time appointment is divided between research and extension. On the research side, I am in the final year of monitoring for Plum Pox Virus that would clear the way for nurseries to reopen previously PPV infested sites. I am also finishing a SARE project to promote the use of entomopathogenic nematodes for borer control in orchards and continuing to evaluate biofumigation and chemical nematode control products. On the extension side, there is an ongoing need to visit orchards and vineyards to diagnose soil-borne diseases and educate growers on their control. This seems to be a bit more pressing this year perhaps due to the mild winter and unusual weather patterns we have been experiencing.



Gretchen Kuldau's lab congratulates Dr. **Li Guo** who successfully defended his dissertation in fall 2011 and formally graduated in December. Dr. Guo is now a post-doctoral associate with Dr. Li-Jun Ma at University of

Massachusetts at Amherst. Back in the lab Ms. **Nancy Wenner** continues her work elucidating the dynamics of mycotoxin and masked mycotoxin formation in wheat. Dr. Kuldau traveled to Southern University in Baton Rouge with students **Anna Testen** and **Steve Conaway** to attend the *Global Food Security and Plant Biosecurity Symposium* organized by Dr. Daniel Collins. This year

marked completion of the final course for the online Master of Professional Studies in Homeland Security option in Agricultural Biosecurity and Food Defense coordinated by Dr. Kuldau. We also celebrated the first graduate of this program, Dr. Joe Smith, DVM.



Li Guo, Lili Zhang, and Deborah



Gary Moorman's graduate student, **Maria Burgos**, continues to study *Pythium* in greenhouse irrigation water. This is part of a project with several researchers at Virginia Tech and the University of Maryland who

work with *Phytophthora* in nursery crop systems. Maria plans to finish her Ph.D. this summer and continue her research as a postdoctoral scholar here. Gary received the 2012 Department Teaching Award. Elm yellows and Dutch elm disease continue to have a negative impact at PSU. The Old Main elm east of the main entrance was removed this spring as a result of elm yellows. Tentative plans are to plant small groves of trees to replace the Old Main elms after (if!) the west-side elm dies. On the home front, Fran is doing a lot of home gardening and volunteer work. Sara is an Assistant Prof. of sociology at Boston College. Nathan graduated with a two-year degree in automotive technology from the Pennsylvania College of Technology in Williamsport (a Penn State campus) and has a job in State College with Sutliff Motors.

Dr. Wakar Uddin is Professor of Plant Pathology, with specialty in turfgrass disease research and teaching. Wakar's research program entails epidemiology and



management of gray leaf spot (blast diseases) of perennial ryegrass turf, and population biology of *Magnaporthe oryzae* from various gramineous hosts. Wakar also maintains an outreach program providing diagnoses

of turfgrass disease problems and management recommendations to turfgrass industry clientele in Pennsylvania. Wakar teaches three courses in turfgrass disease diagnosis and management including an online course at Penn State World Campus. **Brian Aynardi, Alamgir Rahman, and Yinfei Li** are Ph.D candidates in the turfgrass disease research program. The turfgrass disease research program maintains two laboratories, 58,000 sq ft turf research plots, and three out-door humidity/mist chambers (1500 ft² each) at the Joseph Valentine Turfgrass Research Center. The turfgrass disease program is part of the Center for Turfgrass Science and the World Campus Distance Education Program at Penn State. Wakar teaches two courses (PPATH 412 and PPATH 902A) in resident education and two courses (PPATH 412 and TURF 8530) in distance education.



Yinong Yang continues to teach PPATH 543 Pathogen Variation and Host Resistance (spring, 2012) and AGRO 518 Plant Stress Biology (fall, 2011, with Prof. Dawn Luthe from Crop and Soil

Sciences). These graduate level courses involve lectures and case studies with an emphasis on the molecular, biochemical, genetic, and genomic aspects of pathogen virulence, host immunity, and plant stress tolerance. Using rice as a model crop, Dr. Yang's research aims to elucidate the complex mechanisms of fungal pathogenesis, disease resistance and drought tolerance, and to develop new strategies for crop improvement. His lab has identified novel factors and mechanisms important for plant

disease resistance. An important finding on the role of jasmonic acid receptor in mediating rice growth and defense was recently published in the Proceedings of National Academy of Sciences USA. Dr. Yang's program is mainly supported by research grants from the United State Department of Agriculture and National Science Foundation Plant Genome Research Program. He works with three Ph.D. students (**Wenhua Liu**, **Emily E. Helliwell**, and **Yueying Chen**), one postdoctoral research associate (**Dr. Kabin**

Xie) and a senior research technologist (**Qin Wang**). In addition, **Dr. Hongwu Bian**, a visiting scientist from Zhejiang University in China, is working in his lab to study rice genes involved in stomatal development and drought stress response. In the past year, Dr. Yang served as a panel member for the USDA/NIFA Foundational Grant Program and co-organized two special sessions during the annual APS meeting. He also gave invited seminars at the University of Maryland and Zhejiang Normal University in China.

American Phytopathological Society

Dr. Barbara Christ, Professor of Plant Pathology and Senior Associate Dean of the College of Agricultural Sciences, received the Past-President Award at the 2011 meetings of the American Phytopathological Society. Barb has been an active member and leader in APS throughout her career, serving on numerous committees at both the divisional and national level. She served as Division Councilor from 2000-2003 and Councilor-at-Large from 2004-2007, and is a recipient of the Northeastern Division Award of Merit. Barb was elected Vice President in 2007-08, served as President-Elect in 2008-09 and chaired the Annual Meeting Program Committee for the 2009 Annual Meeting in Portland, OR. She served as President of the Society in 2009-10 and presided at the 2010 Charlotte meetings.



President, 2010 Annual Meeting at Charlotte, NC



Receiving Past President Award, from Dr. John Sherwood, 2011 Annual Meeting, Honolulu, HI

APS Field Crops Rust Symposium

The 2011 Field Crops Rust Symposium was held in San Antonio, TX, on December 14-16. **Dr. Scott Isard** helped to organize the scientific program for the symposium and presented simulations of the potential atmospheric movement of wheat stem rust from Africa to wheat production regions around the world. **Dr. Reid Frederick (B.S. PLTSC 1981** and adjunct professor) made a

presentation describing on-going efforts to use the tools of genomics to provide novel insights into the interaction of soybean rust and its host.

Northeastern Division



Dr. Beth Gugino assumed responsibility as President of the Northeastern Division of APS during the 71st annual meeting held October 12-14, 2011 and will serve in that role for 2011-12.

Congratulations are due to Beth on being awarded the NED-APS Early Career Achievement Award. **Dr. Gary Moorman** also participated in the meeting as an invited speaker.

Dr. Beth Gugino receiving NED-APS Early Career award from Dr. Norman Lalancette (Ph.D. 1985)

Awards and Honors

Faculty Awards

❖ **Dr. David Geiser** has been elected Fellow of the Mycological Society of America and will be formally recognized at the MSA meetings in July 2012.

❖ **Dr. Beth Gugino** received the 2011 Early Career Achievement Award from the Northeastern Division of the American Phytopathological Society

❖ **Dr. Scott Isard** is the recipient of the International IPM Award of Excellence, presented at the 7th International IPM Symposium, held March 27-29, 2012, in Memphis, TN

❖ **Dr. Maria del Mar Jimenez Gasco** received a North American Colleges and Teachers of Agriculture (NACTA) Award of Merit from the College of Agricultural Sciences.

❖ **Dr. Seogchan Kang** was selected as a 2012 Penn State Institute for CyberScience (ICS) Faculty Fellow based on his proposal entitled "iFungi: A Comprehensive Cyberinfrastructure Supporting Data

Management and Utilization and Knowledge Sharing on Fungi."

❖ **Dr. Daniel Royse** received the Outstanding Research Award at the International Conference on Mushroom Biology and Mushroom Products held in France in October, 2011.

Staff Award

❖ **Sara May** received an Outstanding Service Award from the National Plant Diagnostic Network (NPDN) in recognition of her leadership in coordinating the NPDN-Penn State Basic Techniques and Fusarium Identification Workshops held in 2010. The award was presented at the NPDN National Meeting in Berkeley, CA, November 6-9, 2011.



Student Awards

❖ **Brian Aynardi** (Ph.D. candidate) – elected as Faculty Senate representative for the Penn State Graduate Student Association for the 2012-2013 academic year

❖ **Katy Baldwin** (undergraduate) – “best overall” award at Undergraduate Exhibition poster session on April 11, 2012. Katy works with T. McNellis.

❖ **Sarah Colihan** (undergraduate) – 2nd Place, Penn State 20th Annual Undergraduate Exhibition (Health and Life Sciences). Sarah is an undergraduate researcher in M. Jimenez Gasco’s program.

Gamma Sigma Delta Agricultural Sciences Honor Society - 2012 Annual Agricultural Sciences Research Expo awards:

❖ Biological Sciences Division, 1st place **Anna Testen** and 4th place, **Emily Helliwell**

❖ Environmental and Natural Resources Division, 2nd Place, **Sarah Bardsley**.



l-r, PPATH students Sarah Bardsley, Anna Testen, Emily Helliwell

❖ **Emily Helliwell** (Ph.D. candidate) – selected to represent the Penn State Department of Plant Pathology and present

her research at Cornell University as part of the graduate student exchange.

❖ **Matthew Kasson** (Ph.D. candidate) – 1st Place, oral presentation, Gerald N. Lanier Graduate Student Symposium, held during the 73rd Annual Meeting of the Northeastern Forest Pest Council (March 2011)

❖ **Alamgir Rahman** and **Jill Demers** (Ph.D. candidates) – 2011 College of Agricultural Sciences Graduate Student Competitive Grants

Scholarship and Travel Awards

L. Earl and Veronica G. Casida Graduate Scholarship

2010-11 – Vasileios Bitas

2011-12 – Matthew Kasson

Arthur Gaspari Memorial Scholarship

2011-12 – Emmie Warnstrom

Harold J. Miller Memorial Award

2011-12 – Suzanne Slack

Lester P. Nichols Memorial Award

2010-11 – Maria Burgos

2011-12 – Yueying Chen

Henry W. Popp Award

2010-11 – Sarah Bardsley, Matthew Kasson, Emily Pfeufer, Dylan Short

2011-12 – Brian Aynardi, Steven Conaway, Hilary Cheesman, Anna Testen

James P. Roberts Scholarship

2010-11 – Maria Velez Climent

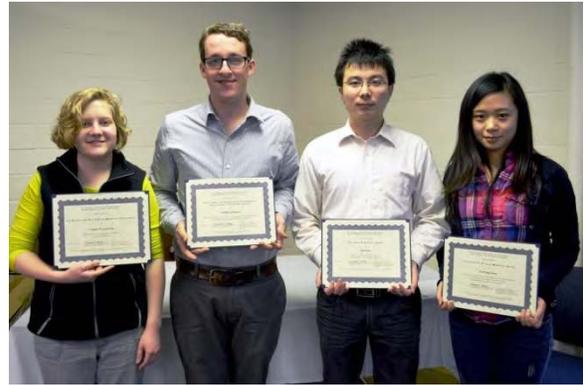
2011-12 – Jun Xiao

Graduate Student Travel Awards

2010-11 – Steven Conaway, Bin Tian



2011-12: Anna Testen, Brian Aynardi,
Hilary Cheesman



2011-12: Emmie Warnstrom, Matt Kasson, JunXiao,
Yueying Chen

Service Awards

5-Year Awards

2010 – Maria del mar Jimenez Gasco and John Pecchia
2011 – Chad Moore, Qin Wang, and Yinong Yang

10-Year Award

2010 – Gretchen Kuldau

20-Year Award

2010 – David Beyer

25-Year Award

2011 – Debra Clemmer

30-Year Award

2011 – Nancy Wenner

40-Year Awards

2010 – Becky Peplinski;
2011 - Donald Davis



2011 Service Awards

l-r Qin Wang, Debra Clemmer, Nancy Wenner, Don Davis, Yinong Yang

Laurence D. and Mary Ann Moore Staff Excellence Award



*Jean Juba – 2010-11 Recipient
with D. Geiser and F. Gildow*



*Vija Wilkinson
2011-12 Recipient*

Merrill Award for Excellence in Teaching



*Wakar Uddin
2010-11 Recipient*



*Gary Moorman
2011-12 Recipient*

Department Get-Togethers

Special thanks go to the social committee and volunteers who organized events over the past year and a half that brought together department members, retirees, and their families. A special coffee in September welcomed new faculty, post-docs, staff, and students, and a mid-winter cookie contest served up sweet treats for all. The annual holiday party was a great success, and a summer picnic provided a break from busy field seasons



Summer picnic - Steve Lee and Daryl Sinn (r)

Guest Seminar Speakers

2011 Richard R. Nelson Memorial Lectures

October 24, 2011

Dr. Lynda Ciuffetti & Dr. Thomas Wolpert

Department of Botany and Plant Pathology, Oregon State University

Same Fungus, Two Different Host-Selective Toxins: Perceptions and Outcomes (Dr. Ciuffetti)

A Born Again Effector: Exploiting Plant Defense for Susceptibility (Dr. Wolpert)

Dr. Betsy Arnold, School of Plant Sciences, University of Arizona: *Fungal Endophytes from the Tropic to the Tundra: Clues to the Evolution of Plant Fungal Symbioses*

Dr. James C. Correll (B.S. PLTSC 1980), Department of Plant Pathology, University of Arkansas: *Applied Plant Pathology in the Genomics Era*

Amara Dunn, Department of Plant Pathology and Plant-Microbe Biology, Cornell University (graduate student exchange speaker): *Host Resistance and Pathogen Population Structure: Two Approaches to Improved Management of Phytophthora Blight in New York State*

Dr. Wade Elmer, Department of Plant Pathology and Ecology, The Connecticut Agricultural Experiment Station: *Sudden Vegetation Dieback in Atlantic and Gulf Salt Marshes: Role of Plant Pathogens and Herbivores*

Dr. Marc Fuchs, Department of Plant Pathology and Plant-Microbe Biology, Cornell University: *Grapevine Fanleaf Virus: New Insight into Transmission and Management Options*

Dr. Scott Gold, Department of Plant Pathology, University of Georgia: *An Earful of Corn Smut*

Dr. Tim Gottwald, Department of Plant Pathology, University of Florida: *Epidemiology and Management Scenarios for Citrus Huanglongbing – Is it Possible to Slay the Dragon?*

Alissa Kriss, Department of Plant Pathology, The Ohio State University (graduate student exchange speaker): *Fusarium Head Blight Development in Relation to Climate and Weather*

Dr. Shing Kwok, USDA, National Institute of Food and Agriculture: *Competitive Funding Opportunities in the Plant Sciences from the National Institute of Food and Agriculture (NIFA)*

Dr. Jeff Newman, Department of Biology, Lycoming College: *Novel Bacterial Species Everywhere You Look*

Dr. Nick Read, Institute of Cell Biology, University of Edinburgh, Scotland: *Dynamics of Cell-Cell Communication and Hyphal Network Formation During Fungal Colony Initiation and Infection*

Dr. T. C. Regnier, Department of Chemistry, Tshwane University of Technology, South Africa: *Research at Tshwane University of Technology: An Overview*

Gautam Shirsekar, Department of Plant Pathology, OARDC, The Ohio State University (graduate student exchange speaker): *Arms Race Between Rice and Rice Blast: A Tale of Plant Defense Manipulation by a Fungal Effector!*

Dr. Christine Smith, Vice President of Research and Technical Director, Lambert Spawn, Inc.: *Spawn Research and Production: Swimming Upstream Against a Strong Current*

Dr. Krishna Subbarao, Department of Plant Pathology, University of California, Davis: *Anthropogenic Host Range Expansion: A Unique Cause of Verticillium Wilt of Lettuce*

Dr. Frank White, Department of Plant Pathology Kansas State University: *Nature's Microbiologist: Xanthomonas Mines the Rice Genome*

Dr. Frank Wong, Technical Service Group – Fungicides and Plant Health, Bayer Environmental Science: *Waitea call it? Brown Ring Patch and the Taxonomic Mess that is the Rhizoctonias*

Dr. Bingyu Zhao, Department of Horticulture, Virginia Tech: *The avrRxo1 Gene Encodes an ATPase Protein that Suppresses Plant Immunity in Arabidopsis*

News from Alumni and Friends

Dr. Laurence D. Moore Named Outstanding Alumnus



Larry & Mary Ann Moore



Larry Moore at podium, Nittany Lion Inn

Congratulations to **Dr. Laurence D. Moore**, who was awarded the Penn State College of Agricultural Sciences Alumni Society's Outstanding Alumnus Award by Dean Bruce McPherson at a ceremony held at the Nittany Lion Inn on October 21, 2011. Dr. Moore was recognized for his academic accomplishments, for his service and continuing contributions in support of the discipline of Plant Pathology, and his demonstrated interest in student welfare and advocacy for minority groups. Dr. Moore received his M.S. and Ph.D. degrees in Plant Pathology from Penn State. He joined the faculty of the Department of Plant Pathology, Physiology, and Weed Science (PPWS) at Virginia Polytechnic Institute and State University (Virginia Tech) in Blacksburg, Virginia, in April 1965. During his distinguished career at Virginia Tech, he was instrumental in establishing a program in physiology of pathogenesis and taught several courses in pathogenesis and in air pollution damage to plants. Over the course of his career, Dr. Moore served as advisor to 16 M.S. or Ph.D. students, and more than 120 publications resulted from his research program. Dr. Moore was active in the American Phytopathological Society (APS), chairing numerous committees, serving as President of the Potomac Division of APS, and as Editor of *Phytopathology News*. From 1985-1997 he served as head of his department, and in 1997 was named Special Assistant to the Provost for Diversity and Co-Director of the Minority Academic Opportunities Program. He retired from Virginia Tech as Emeritus Professor in 2003.

Douglas Audley: Doug sends news that his family (wife Wendy and son David) still lives in Amelia, as they have for the past 20 years. David just finished his second year at NCSU in Raleigh, studying Electrical and Computer Engineering. Doug says that they live about two hours from John and Linda Skelly, who live near the epicenter of last year's earthquake in Virginia. As John Skelly relays, they suffered some damage to their home. Doug was in the field working when it hit; "it shook the ground for a while but was more like standing too close to the railroad tracks when a train passes here. No damage around here." Doug passes along his best wishes to all in Plant Pathology.

Lorraine Berkett (Ph.D. 1985): It is amazing how fast time passes. I "retired" from my faculty position at the University of Vermont last June after 27+ years, but, within a week, I was appointed into a faculty position as Professor Emerita to continue to work on the various apple and cold climate winegrape projects that I have. I did change from a 12 month position to a 9 month position

so my husband Stephen and I can go to a sunnier place for 3 months in the winter (Arizona). The citation that was read at the College of Agriculture Ceremonies last June is at:
<http://www.uvm.edu/cals/?Page=news&storyID=12082&category=calshome> . The blurb on career 'highlights' is
<http://www.uvm.edu/~cmncmnt/commencement2011/?Page=emeritifaculty2011.html#berkett>

Britt Bunyard (Ph.D. 1995): Just a couple notes of interest from the past year . .



In the winter/spring 2012 issue of Penn State AgScience magazine—I hope all of you saw this—I had a letter to the editor published. My letter was in response to seeing a photo from previous issue of AgScience—from 20 years ago. And how that long forgotten issue of AgScience was what led me to my degree at Penn State. [ed. note: an excerpt of the editorial follows; the entire editorial in AgScience can be found at:
<http://agsci.psu.edu/magazine/articles/2012/winter-spring/ripples>]

“I remember that photo vividly,” Britt said. “I also remember the cover, an extreme close-up of a mushroom’s gills. I’m certain I still have that issue in a file cabinet somewhere. I can say with absolute certainty this story was the catalyst that led me to working in Dan Royse’s lab. .

“I sent a letter to Dan requesting information on his research. Four years later, including hundreds of late nights in Buckhout Lab, I graduated.

“I met my wife at Penn State. And when I was teaching, one of my students, Michele Mansfield (’05 Ph.D. Plant Path), went on to Penn State. She left after graduation but has since returned as a researcher in the plant pathology department. Talk about a ripple effect!”

The editorial can be found on the Press page of FUNGI magazine, which I publish.

You can see the photo of Dan Royse from 20 years ago, in AgScience, here:

<http://www.fungimag.com/press.htm>. By the way, if unfamiliar with FUNGI magazine, we’re now in our fifth year of print and now have a circulation approx double that of the 4 other N American mycological journals combined. That includes Mycologia. Last I checked, Pattee Library holds a subscription to FUNGI. With best wishes and many fond memories, Britt

Christopher Burkhart (M.S. 2005): Chris and Kari Burkhart are pleased to announce the birth of their first child on February 14, 2011, a boy, Caleb Christopher Burkhart. Congratulations!

Jairo Castano (Ph.D. 1981): Attached, I’m sending the pictures of the national prize obtained on August 18, 2011, from the Colombian Association of Plant Pathology (Asociación Colombiana de Fitopatología, ASCOLFI), to be published in the next Newsletter of our Department of Plant Pathology, of that lovely University. I take this opportunity to wish you, family and all members of the Faculty: Merry Christmas and Happy New Year.



Jairo Castano Zapata (center) 19-08-2011

Thomas Cynkar (B.S. PLTSC 1986): I have a new position at EDVOTEK that I'm very excited about: Vice President, E D V O T E K® The Biotechnology Education Company, 1121 5th Street NW, Washington DC 20001."
email: tomc@edvotek.com
web: www.edvotek.com

Gary Emberger (M.S. 1978): Following completion of a Ph.D. in Plant Pathology at North Carolina State University in 1981, I accepted a faculty position at Messiah College, a Christian college of the liberal and applied arts and sciences located near Harrisburg, PA. This May, I completed my 31st year as a faculty member in the Biological Sciences Department. I've taught a surprisingly (at least to me!) diverse assemblage of courses during this time, served as department chair for a number of years, and initiated a web site that brought me full circle to my undergraduate roots in biology at PSU. As an undergraduate, the mycology course taught by Charles L. Fergus first stimulated my interest in fungi and, ultimately, graduate school in plant pathology. Microscopic plant pathogenic fungi (i.e., *Fusarium oxysporum*) entertained me through graduate school but when I started to teach a mycology course at Messiah College, I shifted the course focus to emphasize macroscopic fungi. I came to particularly enjoy working with wood decay fungi and, in 2006, I launched a web site devoted to the identification of fungi utilizing wood as a substrate. The site is based on an out-of-print 1960 publication by Dr. Fergus called Illustrated Genera of Wood Decay Fungi and, in recognition of his contributions in shaping my academic career, the site is dedicated to him. It may be viewed at: http://www.messiah.edu/Oakes/fungi_on_wood/index.htm

Nancy Fisher Gregory (M.S. 1981) is currently the Plant Diagnostician in the University of Delaware Plant Diagnostic Clinic, processing about 800 samples per year. Nancy also does the diagnostic testing for detection of plant pathogens for USDA/APHIS CAPS Surveys and for the Delaware Department of Ag. Nancy is the Delaware representative to the Northeast region of the National Plant Diagnostic Network, and serves as Chairman of the NPDN National Database Program Area Committee. She has taught Introduction to the Fungi at the University of Delaware every other fall. **Vann Gregory (Ph.D. 1982)** retired from an industry position in 2011. Dulcy lives in New York City and works for Spafinder, while Cory is a dressage sport pony trainer in West Virginia.

Mary Hausbeck (Ph.D. 1990): Greg and I continue to renovate our farmhouse and barn (a "work in progress" for 20 years). I think we're getting close to finishing it! Anna is 23 (born in State College) and has just completed her first year of graduate work at MSU in Rehabilitation Counseling through the College of Education. Adam is 20 and just finished his sophomore year in Mechanical Engineering at MSU. Scott is 16 and finishing his sophomore year in high school. Greg is the environmental director for the Golf Course Superintendents Association of America. As of July 1, the Department of Plant Pathology will be merged with the Crop and Soils Department. Lots of plant diseases in Michigan to keep me and my students out of trouble! Best regards to all.



Kelly Ivors (Ph.D. 2002): Doing great! Still an associate professor and Extension Specialist in Dept. of Plant Pathology at North Carolina State University.

Rachel Melnick (Ph.D. 2006): I received a American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellowship under the Energy, Environment, and Agriculture Program. As of September 1, I will be an AAAS Science & Technology Policy Fellow working at USDA NIFA (National Institute of Food and Agriculture). I will be marrying my long time boyfriend Eric Lippart on Saturday May 26th, 2012.

James Moyer, an M.S. (1973) and Ph.D.(1976) graduate, has been selected as an a 2012 Outstanding Alumnus of the Penn State College of Agricultural Sciences and will be recognized at a ceremony in October.



Manuel Ospina-Giraldo (Ph.D. 1998): After graduating from the Plant Pathology Department in 1998, I knew I wanted to conduct research on molecular plant-microbe interactions. But having done some teaching prior to coming to PSU and during my time as a graduate student, I was also very enthusiastic about the possibility of teaching at an undergraduate institution. The best approach was, then, to look for a position at a selective liberal arts college where both, teaching and scholarship, were valued equally. After two short post-doctoral stints at PSU and a longer one at the United States Department of Agriculture, the opportunity presented itself when, while working as a visiting assistant professor at Wilkes University, Lafayette College advertised a faculty position in molecular genetics, with emphasis on plant biology. I joined Lafayette in 2006 as an assistant professor in the Biology Department and my specific duties included developing a molecular genetics course with a laboratory component and an upper-level course on my area of expertise. Since then, I teach molecular genetics, typically every spring. During my first year at Lafayette, I also taught a molecular plant-microbe interactions course, which gradually morphed into a genomics course. In addition, I was encouraged to develop a 200-level course on a topic of my interest. I took on the challenge and developed a mycology course, which I taught for three years. Eventually, I expanded this class and turned it into the plant pathology course I currently teach every other year. As teaching is the primary commitment during the academic year, research occurs mostly during the summer. With support from the college and a federal grant I applied for during my first year, I was able to fund the research in my laboratory conducted by three undergraduate students in the summer of 2007. Additional funded federal grants have facilitated the expansion of my group and, since 2007, I usually supervise four to five undergraduate students every summer, and two to four students per semester, during the academic year. Research at an undergraduate institution moves at a slower pace than at a large university, and consequently, publications are also less numerous. This is compensated, however, by the inclusion of undergraduate students as co-authors, an aspect that is highly valued in our college. At Lafayette, as it is also the case in most undergraduate institutions, service to the college and the profession is an important component of a faculty member duties. Therefore, involvement in faculty committees, recruitment activities, and other community service is expected. There is certainly a lot to do as a faculty member at an undergraduate institution but the rewards are equally handsome!

Payungsak Rauyaree “M” (Ph.D. 2003): Time has gone by so fast. Can you believe that I graduated from PSU almost 9 years? My family and I are doing okay. After Thailand flood disaster we are now almost all set. Except some new decorations in the house, which it will become another priority following cleaning stuffs.

Jose Santa Cruz (M.S. 2008): I graduated in 2008 with a Master of Science from the Plant Pathology department. I just graduated from North Carolina State University with a Ph.D. degree

(Spring 2012), and I am currently the Southern Corn Field Pathologist at Monsanto.Co., a position I started in January 2012.

John Skelly (Ph.D. 1968): Linda and I enjoy the Lake Anna area here in central Virginia. Our home is located about 8 miles from the epicenter of the August 23, 2011 earthquake (5.8) with continuing aftershocks numbering well above 100 . . . but most of these have been 3.5 or below. Many stories connected to those few moments of last August . . . several thousands of \$ damage to our home, lost an antique clock off the mantle, driveway gravel "bounced," and our dog would not come back into the house after the 1:30 p.m. quake til midnight . . . he actually went wild about 5:30 a.m. of that morning and once out of the house I .had trouble getting him back in for over an hour. Most neighbors had similar damages . . . and like us . . . and no insurance . . . last quake was 1907 in this area . . . who'd thunk?

I am working in "retirement" on a few NASA sponsored ozone-bioindicator education projects (Saint Louis University and The Virginia Living Museum, Newport News closer to home) . . . and also starting up a hazardous tree consulting business here in the Lake Anna area . . . no take downs! . . . just advice. Both projects are a lot of fun and keep me outta Linda's hair. I'm in Ruritans and Linda is in the Belmont Club of Women with both clubs working cooperatively on charitable fund-raising projects in the communities and we are both involved with Church and our homeowner association committees . . . and this is retirement? Thirteen grand kids and one great grandchild fill in the gaps . . . especially on weekends and holidays . . . our water ski and tubing pontoon boat has an arrival and departure schedule posted during those times.

Christopher M. Wallis (M.S. 2004): I am still working on grapevine host chemical responses to *Xylella fastidiosa*, but I have also branched into looking at chemical ecology of zebra chip. I am also currently the chair of the American Phytopathological Society's Early Career Professionals Committee. (Christopher M. Wallis, Crop Diseases, Pests, and Genetics Research Unit, USDA-ARS SJVASC, Parlier, CA).

Inigo Zabalgoeazcoa (Ph.D. 1992): Inigo is a Research Scientist with the Spanish National Research Council working in the Institute of Natural Resources and Agrobiology of Salamanca, Spain, and Adjunct Professor of Biology. Although Inigo's thesis research focused on characterization and inheritance of double-stranded RNA in barley, his career as a plant virologist has eventually turned to mycology, showing just how versatile a degree in Plant Pathology can be. Inigo is now an international expert on studies of fungal endophytes infecting pasture grasses and wild grassland species. These seed-transmitted endophytes develop symbiotic relationships with their grass hosts influencing host plant survival. Inigo also thinks that these infecting endophytic fungi may have potential for commercial uses in turfgrass improvement. Inigo has discovered that the grass-infecting endophytic fungi also are infected with their own viruses, thus returning Inigo to his virology roots as well as to new interests in the ecology of plant-fungus-virus interactions. In addition to his research position at the Institute of Natural Resources and Agrobiology, Inigo has been teaching Plant Pathology at the University of Salamanca for the past 10 years. He believes that his teaching makes him even more interested in pursuing his research to learn more. For more information, Dr. Zabalgoeazcoa may be contacted at i.zabalgo@irnasa.csic.es or through <http://www.irnasa.csic.es/>



Nik Zitomer (Ph.D. 2006): Just wanted to give a general update. I have also attached a pic of me with my two sons, Samuel (4) and William (1). I am currently a Research Toxicologist at The Centers for Disease Control in Atlanta, still working on mycotoxin issues.

Endowments and Gifts to Plant Pathology

We sincerely thank all of our alumni, friends, and families who generously contributed to the endowments listed below or made gift donations to the department. During this time of decreasing state and federal support your contributions are becoming critical for our ability to maintain high quality graduate and undergraduate science education through support of faculty research programs or through direct support of student scholarships.

Your continued support of our endowments allows us to offer unique educational opportunities to our graduates and allows us to remain competitive in recruiting highly motivated students who will further advance the science of Plant Pathology and will continue to enhance the reputation of the department and its graduates into the future.

Program Support

Leonard J. Francl Memorial Endowment in Plant Pathology
Albert Hildebrandt Botany Library Endowment
Larry J. Jordan Memorial Endowment in Plant Pathology
Alan A. MacNab Plant Pathology Memorial Endowment for Vegetable Research
William Merrill, Jr. Memorial Endowment for Teaching Excellence
Laurence D. and Mary Ann Moore Faculty and Staff Award in Plant Pathology
The Mushroom Industry Endowment for Mushroom Research
James F. and Marilyn L. Tammen Memorial Endowment for International Plant Pathology
James Oscar Watts Memorial Potato Research Endowment for Plant Pathology

Student Support

L. Earl and Veronica Casida Graduate Scholarship in Plant Pathology
Arthur Gaspari Memorial Scholarship
Harold J. Miller Memorial Endowment
Lester P. Nichols Memorial Award
Henry W. Popp Graduate Assistantship
James P. Roberts Scholarship
Plant Pathology Graduate Studies Enhancement Fund

If you would like to contribute to help support our department programs, please send your gifts in care of the Department of Plant Pathology and Environmental Microbiology, 212 Buckhout Lab, University Park, PA 16802. Please make checks payable to The Pennsylvania State University, and please be sure to specify which endowment you wish to support. Your support will be very much appreciated and acknowledged.



The PPA (Plant Pathology Association) sponsored a canoe trip on the Juniata River for Plant Pathology graduate students and families on July 23, 2011. Fred Gildow and son Nick (in photo, last two on right, kneeling), led the trip.

This publication is available in alternative media on request.

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Please Keep In Touch

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