

POSIES & PATHOGENS



Department of Botany and Plant Pathology

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Twenty First Edition

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FROM THE DEPARTMENTAL CHAIRPERSON

Dear Alumni and Friends,

With this edition of "Posies and Pathogens" we mark the 21st year of our newsletter distributed to all members of our extended family. When I wrote to you last year I commented that it had been "a year of transition". Well, Botany and Plant Pathology continues to be in transition as I visit with you again.

As many of you know, BPP has been a joint unit administered through both the College of Agricultural Sciences (CAS) and the College of Science (COS). Several years ago the faculty in BPP voted to request of Provost Randhawa that BPP be solely administered through the CAS. This transfer included all COS state-funded faculty and staff FTE and our graduate and undergraduate programs. There were multiple reasons for this request, but the one that was a priority for the faculty was the view that the CAS would provide the environment for the continued strengthening of the plant sciences at the university and in BPP. The Provost approved this request and we are now (as of July 1, 2010) completely in the CAS.

Our students, faculty, research associates and assistants, and staff continue to flourish and make us proud! They continue to publish high-profile manuscripts in prestigious journals, obtain research funds that continue to expand our grants and contracts portfolio, and are honored as recipients of awards here on campus and throughout the US. The quality of the individuals and the culture of BPP are instrumental to our success. I hope you will enjoy the selection of these activities and accomplishments provided in this edition of Posies and Pathogens. However, I would like to highlight three very special contributions. As you will see, Drs. Everett Hansen, Bob Spotts and Mark

Wilson retired this year. Everett and Mark continued on a partial appointment until June and Everett will continue on this partial appointment for several years. It is impossible to adequately express our deep appreciation for all that they have done for BPP and to appropriately acknowledge their outstanding accomplishments in teaching, research, and outreach over the many years they have served as valued members of our department – Bob, of course, was one of our off-campus members working at the Mid-Columbia Agricultural Research and Extension Center in Hood River. We are profoundly grateful – thank you Everett, Bob and Mark!

With the fiscal situation in Oregon and on campus, we experienced budget cuts and faculty furloughs this past year. We continue to be concerned how further budget cuts will affect our finances and programs over the next several years. However, I do strive to keep a positive attitude as we have many "silver linings" in BPP. The most precious of these is the absolutely amazing group of individuals that make up this very special Department; we are truly very fortunate.

I would like use the remainder of my time with you this year to honor (and knowingly will embarrass) a remarkable woman, Dianne Simpson. Dianne's committed service to BPP and OSU for forty years (yes, the end of July marks forty years that Dianne has been with BPP) undoubtedly means that almost all of us (and you) have interacted with Dianne in some way. Dianne is unique in the breadth and depth of her contributions to the life of the individuals in BPP. The loyalty, commitment, and effort that Dianne has given to BPP over so many years reflect her qualities as a person. If there is one phrase that describes Dianne Simpson, with respect to her professional activities, it is

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Erik & Verilyn Stromberg and Richard & Leona Converse



Carol Ishimaru, Ken Johnson, Tim Paulitz, and Dan Ishimaru



Ray Schneider and Hassan & Asal Melouk (left to right)

Then on October 8 we held a symposium featuring our very Distinguished Professor and National Academy of Sciences Member, James Carrington, alumnus and NAS member Steven Lindow; and guest speakers Jacqueline Mohan and Claude dePamphilis. This was followed in the evening with dinner at the Clubhouse, Adair Village for more than 110 guests at which Everett Hansen, Jay Pscheidt, Stella Coakley and Lynda Ciuffetti paid tribute to the many people who have made and are still making significant contributions to the department. With much conviviality, laughter and even tears, everybody enjoyed the occasion.

We want to thank all those who made these events possible but most especially Chris Mundt and Dianne Simpson for their tireless organizing.



Aaron Liston, Lynda Ciuffetti, and Chris Mundt



Our speakers ; James Carrington, Claude dePamphilis, Steven Lindow and Jacqueline Mohan (left to right)

Thanks to photographers Joyce Loper and Ryan Kepler

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that she is the “soul” of the Department of Botany and Plant Pathology. We cannot imagine BPP without the incalculable contributions of this truly remarkable individual. Dianne’s positive outlook and willingness to contribute has touched all of our lives in so many ways. Dianne is such a personable individual and this means that under all circumstances, irrespective of pressures or problems, she is always there, always approachable, and always willing to help. Yet she does all of this with a smile on her face and a sense of humor in her heart! Thank you Dianne, for all you do for me and for BPP! If you would like to email Dianne, simpsond@science.oregonstate.edu, I am sure she would love to hear from all of you!

I wish all of you productivity in your endeavors, good health, and happiness in your lives. Please take the time to enjoy the people and activities that are special to you. We look forward to hearing from all our friends and hope that you will visit us when you find the opportunity to do so. We are also very grateful for your kind contributions to the department over the years!

Warm regards,



Lynda M. Ciuffetti
Professor and Chairperson
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WELCOME NEW FACULTY

Luisa Santamaria



applied research in soil-borne pathogens.

Luisa received her B.Sc. in Biology at the Pontifical Catholic University, Quito-Ecuador, and a M.Sc. in Horticulture and Ph.D. in Plant Pathology from the University of Delaware. She conducted postdoctoral research on *Phytophthora* spp. in nursery crops at Otis L. Floyd Nursery Research Center – Tennessee State University. She joined Oregon State University in March 2009, based at the North Willamette Research and Extension Center in Aurora, as Extension Nursery Crop Plant Pathologist (Assistant Professor) with an academic home in the Department of Botany and Plant Pathology. Her main goal in the area of extension is to develop a bilingual education program in plant health based on the needs assessment of the Oregon nursery industry. Her research areas of interest include: best management practices to control plant diseases in nursery crops and ornamentals, and

Inga Zasada



MD. Inga’s current research interests include: the identification of resistance to economically important plant-

Inga joined the department in 2009 as a Courtesy Assistant Professor; she is a Research Plant Pathologist/Nematologist in the USDA-ARS Horticultural Crops Research Lab. Inga received her Bachelor’s degree in Crop Science from Oregon State University and a Master’s degree in Crop Science from North Carolina State University. She then served as a United States Peace Corps Volunteer on the Maltese Islands where she was responsible for Nematology research, extension, and education. From the Peace Corps, Inga went to the Department of Nematology at the University of California, Davis where she received her Ph.D. in Plant Pathology. After completing her Ph.D., Inga continued to research the use of cover crops and amendments to control plant-parasitic nematodes as a Research Plant Pathologist at the USDA-ARS Nematology Lab, Beltsville, MD.

parasitic nematodes in small fruits and the evaluation of current and novel nematode management strategies relevant to the small fruit and nursery crops.

Andrea Thorpe



Andrea is Director of the Conservation Research Program at the Institute for Applied Ecology in Corvallis. She joined the department in May 2009 as Courtesy Assistant Professor. Her latest research included a study investigating how manipulation of soil nutrients affects growth and competitive ability of *Lupinus sulphureus* spp. *kincaidii* (Kincaid's lupine), a threatened plant that is the primary host for larvae of the endangered Fender's blue butterfly; completing a three-year study on edge effects in rare species buffers left during timber operations in southern Oregon; and initiating a new project testing the effectiveness of carbon addition in restoration of upland prairies.

Maria Ivanchenko

Maria changed her status in the department in May 2009 to Assistant Professor (Senior Research). She earned her PhD from the Institute of Genetics (Moscow), Russian Academy of Sciences. Before joining BPP, she worked as Research Associate in the departments of Biochemistry and Entomology at OSU. She is a PI on a National Research Initiative Competitive Grants USDA project to study the auxin regulation of root development in tomato. Her major focus is to understand the mechanisms underlying root architecture, an important agronomic trait, specifically the factors that can influence root elongation and lateral root density. The ultimate goal of her research is to provide knowledge that can be useful in developing crops with improved nutrient absorption and productivity.



Sergei Filichkin



Sergei changed his status in the department to Assistant Professor, Senior Research. Sergei earned his PhD in plant biochemistry from the Krasnodar Polytechnic Institute, USSR. He received an additional training in molecular biology at Moscow State University and post-doctoral training in Department of Biological Sciences at Purdue University. Sergei works in plant genomics with a particular emphasis on circadian control of the metabolic processes at the genome level. To achieve this goal Sergei uses model plant systems with sequenced and annotated genomes such as *Arabidopsis*, rice, poplar, and *Brachypodium*, and approaches such as whole-genome microarrays and NextGen sequencing. He is also interested in the extent and the roles of alternative splicing in regulating gene expression in plants, and especially in the specific responses to environmental stress. Sergei's area of special interests includes nonsense mediated mRNA decay and its coupling with unproductive alternative splicing in plants.

Fritzi Grevstad

Fritzi joined the department as Courtesy Assistant Professor (Senior Research) to work on the population dynamics and interactions of plants and herbivorous insects, particularly as they relate to the biological control of weeds. Her current research focuses on the development of safe and effective classical biocontrol programs for invasive knotweeds (*Fallopia* spp.) and gorse (*Ulex europaeus*). In the Richardson Hall Quarantine Facility at OSU, she is studying several insect species collected from the native ranges of these plants to determine if they are sufficiently host-specific and effective to be used biological controls. Further research interests include the optimization of release strategies for biocontrol, patterns of establishment and invasion, and the effects of geographic displacement on insect-plant interactions.



FACULTY NEWS

This past year, **Mike Behrenfeld's** lab members have been involved in a wide range of field, laboratory, and satellite modeling activities. They participated on research cruises in the Atlantic, from the UK to southern Chile, and the South Pacific, with research focused on relationships between planktonic properties, optics, and nutrient stress. A primary focus of their laboratory work has been investigating impacts of nutrient stress on algal photosynthesis and carbon metabolism as well as physiological consequences of iron stress. Satellite work this year has largely focused on modeling global ocean productivity and investigating relationships between prey (phytoplankton) and predators (zooplankton). They also have a visiting scientist, Dr. Shaoling Shang, with them this year on sabbatical from China.

Aymeric Goyer continues research on vitamins B₁ and B₉ in *Arabidopsis* and potato. He spent a portion of his time working on the characterization of new components of thiamine biosynthesis and salvage in plants. He also kept working with potato breeders and geneticists on thiamine and folate in tubers of domesticated and primitive cultivated potatoes. Aymeric co-authored two book chapters on potato nutrients ("Developing the nutritional potential of potato" published by Global Science Books, and "Nutritional Value of Potatoes: Vitamin, Phytonutrient and Mineral Content" published by Elsevier). He participated in the first joint Oregon – Washington Potato Conference in Pasco in January 2010. He is a member of the organizing committee of the next Annual Meeting of the Potato Association of America which will be held on the OSU campus in August. This is a great opportunity for OSU researchers to exchange about this exciting crop!

"Hello" from **Phil Hamm** at Hermiston! "Fortunately the diversified and valuable agricultural production area of the Columbia Basin continues to provide challenges related to plant diseases....or life might be boring." says Phil. Two Thousand Ten marks the twentieth year since he left Corvallis and accepted the plant pathology position at the Hermiston Agricultural Research & Extension Center. This year also marks the 5th year since Phil became superintendent of that facility. While he still misses working on diseases of trees/conifer seedlings, he also enjoys working on things he like to eat....like watermelon, sweet corn, and even potatoes! And of course lots of "great" diseases are associated with each. In addition, Hermiston is a great place to work and play, and to raise a family. The only major adaptation from moving from the Valley has been getting use to all the sunshine!

This past year, **Gayle Hansen** focused on the seaweeds of Oregon for her floristic studies. Her database of historical and present-day collections enabled her to provide a talk on the history of Oregon seaweed collecting for the Coastal and Estuarine Research Federation and to fine tune her list of rare species for the Oregon Natural Heritage Information Center. For a Sea Grant Workshop last summer, she provided a talk and hands-on lab on Oregon's introduced seaweeds. Much of the year was spent investigating the seaweeds of Seal Rock, Otter Crest, and Boiler Bay rocky intertidal sites located close to Newport. Although Oregon's seaweed flora has been reported to be species poor compared to neighboring states, Gayle's new identified species counts for each of these sites range from 170 to 200 species, making each site locally species rich. Data from this study will be given to the Oregon Department of Fish and Wildlife for their evaluation of new marine reserves, and it will be presented at the upcoming Northwest Algal Symposium. Each year NWAS attracts from 60 to 120 phycologists and their students, and last year they presented Gayle with their highest award, the Phycologist of the Year.



The **Oregon Flora Project**, led by **Linda Hardison**, has developed a new version of its popular online mapping program, the Oregon Plant Atlas (<http://oregonflora.org/atlas.php>). Users can view the state-wide distribution of plants on a variety of background maps, download the information in a table, and link to photos. The Atlas, along with other resources covering the ~4,500 vascular plants of Oregon, are freely available to researchers and amateur plant enthusiasts alike on the website. The OFP is poised this summer to shift its emphasis to the writing of a new *Flora of Oregon*. A taxonomic director will be hired to join the existing staff of **Thea Cook**, **Katie Mitchell**, and **Jennifer Sackinger**.

On August 31, 2009 **Kathy Merrifield** retired from the department after working for 19 years as a Research Assistant and Senior Research Assistant in **Russ Ingham's** nematology research program, 13 years of which she also operated the **Oregon State University Nematode Testing Service (NTS)**. The NTS will continue to be supervised by

Russ and samples will be processed by **Nadine Wade** who has worked as a Research Assistant in Russ' program since 1992. Questions regarding sample submission and replies should be directed to Nadine at (541) 737-5253 and questions regarding interpretation of results should be directed to Russ (541) 737-5255. Information on sample submission and sample submission forms can be found on the NTS website: <http://www.science.oregonstate.edu/bpp/Nematodes/index.htm> along with other information about nematodes.

Pankaj Jaiswal, one of the creators of the **Gramene database**, describes how this tool can spur a quiet revolution in crop genetics. To find the genes that enable a crop — ryegrass or wheat, for example — to resist disease or tolerate drought can mean endless searching, not through one haystack but through many. And success is only the beginning of time-consuming breeding trials. Now scientists, farmers and plant breeders who feed the world have a new scientific resource at their disposal to help them cut through the DNA clutter. "What's unique about Gramene," says Jaiswal, "is that it builds relationships between scientists who work from a purely genetics and breeding perspective and the people who work from the molecular and biochemical perspective. It tries to bridge the gap between these two." To develop crops with desirable characteristics, crop breeders can identify genes that are associated with specific traits, such as cold hardiness, disease resistance or flowering time. And by providing genetic information about multiple species, the database bridges genomes that have been fully sequenced and are relatively well described, such as corn and rice, and those that are less well known, such as wheat and ryegrass. Commonalities between different genomes can generate important clues for breeders of new plant varieties. (from *Terra Magazine*, Spring 2010)

Joyce Loper and her husband Carl Baker spent a brilliant three months in Oxford, England this fall, where Joyce did research on bacterial-nematode interactions with Gail Preston in the Plant Sciences Department and Jonathan Hodgkin in Biochemistry. Her stay in Oxford was funded by a grant from the Organization of Economic and Cooperative Development. Highlights included dinner at the high table at Brasenose College, morning tea breaks at the university, walks along the Oxford canal, and weekend trips to London.

The Foliar Pathology Lab with **Walt Mahaffee**, Andy Albrecht, **Dani Martin**, Tara Neil, **Patricia Wallace** continue their focus on diseases of grapes. Their research on the timing of leaf defoliation for powdery mildew and Botrytis management (with Patty Skinkis, Horticulture) is showing that leaf pulling just before bloom reduces disease development with no impact on fruit quality. The next question is whether fungicide rates can be reduced because the leaf pulling allows for better spray coverage. Their work (in Collaboration with Gary Grove, Washington State University) on initiating powdery mildew fungicide program based on inoculum detection has proven very successful in reducing fungicide use in commercial vineyards by 2-3 applications over the past 3 years. **Dani Martin**, with the advice of **Todd Temple** and **Ken Johnson** and funding from the Oregon Wine Board, is heading up the development of grower preformed LAMP-PCR for inoculum detection. This year they will be testing whether growers can perform the LAMP-PCR (with only \$2500 in equipment) at their office or home and get accurate results. The Grower performed LAMP-PCR is the last step in implementing inoculum detection as an industry practice, unless there someone out there that wants to provide traditional PCR results as a service. Their collaboration with the Weather System Workgroup (**Len Coop**, Chris Daly, **Dave Gent**, Paul Jepson, **Bill Pfender**, Alan Fox (FoxWeather, LLC), Doug Gubler, Carla Thomas (UC Davis), Gary Grove, and Dennis Johnson (WSU)) was successful in landing a \$1 million NIFA Plant Biosecurity Grant on development of virtual weather stations for delivery weather and forecast data on 800 meter grids. **Patricia Wallace** will graduate in the next few months with a Masters degree in Plant Pathology.

Bob Martin, Plant Virologist works on virus diseases of small fruit crops and is Research Leader for the USDA-ARS Horticultural Crops Research Unit. Travel over the past year included conference travel to the 21st International Conference on Virus and Graft Transmissible Diseases of Temperate Fruit Crops in Neustadt, Germany in July; the APS meetings in Portland, OR; Great Lakes Fruit and Vegetable Expo and several trips associated with the development and establishment of the National Clean Plant Network (Washington, D.C., Davis, CA and St. Louis, MO). In addition, he made many field visits in the Northwest to vineyards as well as blueberry, raspberry and strawberry fields. He received funding from the Specialty Crops Research Initiative on two projects, one, a west coast project on grapevine leafroll viruses and mealybugs (CA, OR, WA), the other on Management of Virus Diseases in *Rubus* (OR, AR, NC). Pamela Rojas a graduate student from Talca, Chile spent the year in the lab and is now back in Chile preparing her thesis, and **Diego Quito**, graduate student from Ecuador, is continuing his work on raspberry virus complexes and feverishly preparing for his prelims. In addition, they have four undergraduate students working in the lab this year. With these students together with the technicians and the lab runs very well,

even if Bob spends more time on administration. For fun, Bob did a two week trip to China in May, Hood-to-Coast relay in August and a Holiday trip to Wisconsin.



Bruce McCune's four PhD students (**Martin Hutten, Heather Lintz, Peter Nelson, and Heather Root**) are all working on some aspect of species distributions in relation to climate, air quality, and other aspects of the environment. Their studies are supported by the National Park Service, the Bureau of Land Management, and the US Forest Service and span all of the Pacific coastal states, including Alaska. Lichens, trees, and caribou are all included as subjects. One project initiated in 2009 was a "Lichen Blitz" in Yosemite National Park. Grad student and Park employee Martin Hutten and

Bruce organized a dozen international lichen experts to scrutinize the lichen flora of Yosemite, the participants coming from Austria, Canada, Germany, Norway, Sweden, and the U.S. The photo shows Martin and a colleague on one of the rock faces of Yosemite. Although the senior experts did not use ropes, they enjoyed many of the more accessible lichen hotspots. The work has revealed a number of new species and disjunct occurrences, and has greatly increased the recognized biodiversity for the Park. In 2009, Bruce published with OSU Press the second edition of his book '*Macrolichens of the Pacific Northwest*' co-authored with Linda Geiser

Laurie Gilligan, MS student with **Pat Muir**, successfully defended her MS thesis during winter term, 2010. Her thesis, "Stand Structures of Oregon White Oak (*Quercus garryana*) Woodlands and their Relationships to the Environment in Southwestern Oregon," presents some remarkable findings. For one, don't assume that a small oak is young! Her sample included sapling-sized trees (less than 10 cm in diameter) as old as 164 years! **Olivia Duren**, who completed her MS with Pat in fall of 2009, has returned to work with Pat as a Faculty Research Assistant on a project that seeks to compare quantitatively vegetation cover types at the time of European settlement with current vegetation types in southwestern Oregon, and to understand the major drivers of change. **Erin Sanders** began as an MS student with Pat in fall 2009. Erin's research will attempt to determine whether *Kochia prostrata*, a small semi-evergreen non-native shrub that is widely planted in the western US to stabilize soils and facilitate post-fire rehabilitation, is "staying put" or spreading out of areas in which it has been planted. Stay tuned!

Melodie Putnam, Maryna Serdani and the **OSU Plant Clinic** had a very busy year diagnosing diseases and disorders from the largest number of samples received for several years. Why all the samples? Well, in 2009 Utah State University decided to send all their samples to OSU because of transitions in personnel, and they get a lot of out-of-state samples otherwise due to their expertise in diagnosing certain bacterial diseases that cause other people problems. Last year Maryna and **Marc Curtis** continued to develop their Loop-Mediated Isothermal Amplification (LAMP) to detect the bacterium *Rhodococcus fascians* in nursery crops, with the goal of releasing it to growers for their own in-house testing. The great thing about LAMP is no specialized equipment is needed. The Clinic is gearing up to offer new tests, including those for viruses of grapevines and Hop stunt viroid in hop (although it also can be found in other hosts). **Sue Jepson**, who works away in the background providing various essential services to the clinic, is preparing information about these diseases for the OSU Plant Clinic website (http://www.science.oregonstate.edu/bpp/Plant_Clinic/index.htm). Finally, Insect Diagnostician, **James Young**, departed in September for a position with USDA APHIS in Maryland. With assistance from the ODA, the OSU Plant Clinic is still able to receive insect samples for identification.

Jay Pscheidt's group are all running around - an early spring had them scrambling to get trials out before plants bud out too far. Two weeks early this year compared to two weeks late the last two years (so it feels like a month early!). Spring break has a completely different meaning for those in Agriculture. **Steve Cluskey** and **John**

Bassinette are still here to make it all happen. A new Masters graduate student, **Stephanie Heckert** has joined the group recently to work on eastern filbert blight projects. Winter meeting presentations went well and committee work is still in full swing. Funding is hard to find just about anywhere and to top it off the BPP farm got broken into early March! They took all the power saws, pneumatic shears and welding equipment but left the computers and vehicles. Jay would be more disappointed if it were not for a new pesticide storage room that is almost finished in a large new barn. Maybe there will be an open house to show it off once completed. Jay is excited for the next handbook (56th) to come out from the printers since it will have an awesome cover picture of bacterial canker of cherry. Check it out if you get a chance.



Guiping Yan, Richard Smiley and Deliang Peng, President of the Chinese Society of Nematology and Director of the Nematology Laboratory in the Chinese Academy of Agricultural Sciences' Key Laboratory for Biology of Plant Diseases and Insect Pests, at Beijing.

Richard Smiley and Guiping Yan continue to direct the plant pathology program at the Columbia Basin Agricultural Research Center, at Pendleton. Their current emphasis is on developing wheat varieties with resistance to root-lesion nematodes and cereal cyst nematodes. This work involves characterizing resistance genes in exotic germplasm, crossing the gene donors with locally adapted wheat, and developing molecular markers to track the inheritance of the resistance genes. They are also developing real-time PCR techniques to identify and quantify these nematodes in soil. These activities are closely coordinated with colleagues in countries such as Australia, China, Belgium, France, Syria and Turkey. Smiley also serves on graduate committees of two Ph.D. students and one M.Sc. student at Washington State University. Much of Guiping Yan's research during 2009 was performed in Harbin, China at a Chinese Academy of Sciences Key Laboratory for Molecular Biology and Molecular Breeding. In Harbin, Smiley and Yan presented multiple seminars and met with students, scientists and administrators at the Chinese

Academy of Sciences, Northeast Agricultural University, and Heilongjiang Academy of Agricultural Sciences. They also traveled to Beijing for similar visits and seminars at the Institute of Plant Protection, a unit of the Key Laboratory for Biology of Plant Diseases and Insect Pests within the Chinese Academy of Agricultural Sciences. They also presented their work at a Cereal Cyst Nematode Workshop in Turkey, where they were the only American representatives among scientists from 22 countries. Smiley continues to serve on the External Advisory Board for the European Network for the Durable Exploitation of Crop Protection Strategies (ENDURE), a center of excellence program featuring the collaboration of 300 scientists affiliated with 18 national and international organizations in 10 member states of the European Union. Further information about this program is at <http://cbarc.aes.oregonstate.edu/plant-pathology>.

Don Zobel continues to work on projects at Mount St. Helens, giving talks and with plans for summer re-sampling of permanent plots, and with Port-Orford-cedar, thinking about how its current distribution might be changing as the climate is modified. Don continues to teach occasional special topic and seminar classes for the Honors College. His personal travel highlight for the year was a trip to Easter Island.

RETIREMENTS

Everett Hansen

While you likely will still see Everett lurking in the halls of Cordley, he did officially retire at the end of last year. Fortunately for us he will be around awhile longer on a 1039 appointment with a fully functional lab, and he will continue to teach BOT 415/515 Forest Insect and Disease Management, and to advise graduate students. Everett joined the department in 1972 as a research associate, and was ultimately promoted to Professor in 1988. He had two bosses, the College of Forestry and the College of Science, but his academic home was the Department of Botany and Plant Pathology. As our resident Forest Pathologist he has become an acknowledged authority on diseases caused by *Phytophthora*, although he and his students have addressed virtually every disease of economic



concern in conifers in the Pacific Northwest. Port Orford cedar root rot, caused by *Phytophthora lateralis*, and sudden oak death, caused by *Phytophthora ramorum*, are just two of the diseases where he has made extremely significant contributions in the area of disease management in both forest and nursery environments. Everett is an international expert in this group of organisms that once were called fungi. That is what happens when one is in the businesses long enough; species once considered fungi suddenly evolve and become algae. Everett has authored or co-authored hundreds of professional works, in journals, conference proceedings, technical reports, book chapters, abstract, and books. A sought after speaker, he has frequently been invited to present his research around the world.

Everett trained at least 19 MS and 10 PhD students. He taught notorious students in his early days at OSU like Borys Tkacz, Keith Reynolds, Peter Angwin, Paul Hennon, Paul Hessburg and of course myself Phil Hamm. Along the way he served on countless graduate committees in many departments, and served on the committees of at least 15 students participating in graduate studies outside of the United States. Likewise, he served on numerous department committees in Botany and Plant Pathology and in the College of Forestry, as well as scientific review panels, and he reviewed manuscripts for more than 42 different journals/publishers. Everett also taught a variety of lower and upper division classes, that included advanced graduate courses in Plant Pathology, in the department, as well as in Finland and France while he was on sabbatical leave.

Everett has been recognized for his outstanding efforts by the USDA, twice receiving their Certificate of Appreciation; by the Western International Forest Disease Work Conference for Outstanding Career Achievement; and by the College of Forestry with a Dean's Award. In 2002 he was selected to become a Fellow of the American Phytopathological Society in recognition of his distinguished contributions to plant pathology.

Unless Everett has gotten soft in recent years, my experience was that he always expected much out of his students. In return one learned a lot about being a plant pathologist, a colleague, how to be successful, and how to have fun along the way. I can remember one of the goals of field plots was never getting there the same way twice. That sometimes required back tracking many miles when bridges were washed out. Or indicating from the highway at 60 miles/hr what killed the tree on the hillside ¼ mile off the road. If you didn't agree, there was always a pulaski in the back of the car to challenge, then correct, or confirm the diagnosis. Or the flat tire that occurred when trying to catch up to the mergansers (like ducks) flying down the river to confirm which species they were...or the time when the car had two flat tires simultaneously requiring hitchhiking with a tire on your lap. The stories are endless....climbing trees, the rock throwing contests (which he never won...and never paid his bets), the volcano eruption.... Those were the good years!

Thank you Everett for everything you have done for BPP, OSU and beyond; enjoy your retirement but we're grateful you'll be around a little longer.

by Phil Hamm

Gone Fishin'

Bob Spotts, BPP plant pathologist located at the Mid-Columbia Agricultural Research and Extension Center in Hood River, retired in December after 32 years of service to OSU. With retirement, Bob leaves behind a distinguished record



in research to the Pacific Northwest Tree Fruit industry. Bob's research efforts spanned both pre-harvest and post-harvest disease problems of pear, apple, and cherry. In particular, his efforts in understanding and reducing losses of stored fruit to fungal rots distinguished him as a preeminent authority and scholar in postharvest plant pathology. An ongoing theme of his postharvest research was that most rot problems begin in the orchard, and through his research, he identified numerous cultural factors that could be modified to reduce fruit losses to storage decays. Bob also made significant contributions to the biology and management of scab of pear and the powdery mildews of apple and cherry, devising and revising predictive models that indicate, based on environmental conditions, when these diseases are likely to become a problem. Bob's pear scab model is used extensively as an aid to decision-making in the pear industry. For cherry growers, he summarized his work on bacterial canker by producing "Twelve Steps to Manage Bacterial Canker of Sweet Cherry." In the research behind these programs, Bob became renowned for his innovative use of 'limb cages', which were growth chamber contraptions on wheels that were fitted over tree branches in the orchard! Bob's research was highly valued by fruit producers throughout the Pacific Northwest and throughout the fruit-growing

world. In 1994 Bob moved his family to South Africa for eight months where he did a sabbatical in the Plant Pathology

Department of the University of Stellenbosch. He maintained this connection by hiring a post-doc and later a research assistant from that department as well as serving as co-supervisor for one of their Master's students. He also developed strong collaborations with researchers in New Zealand and Australia, resulting in additional trips to the southern hemisphere.

Over his career, Bob directed the thesis research of four graduate students -- Dave Spring, David Sugar, Steve Whitesides, and Jill Calabro -- and five postdoctoral research associates -- Themis Michailides, Robin Dobson, Peter Sanderson, Tara Chand-Goyal, and Cheryl Lennox. He also routinely served as mentor for local secondary school students.

These days, a likely place to find Bob is swatting the water in search of the cagey lunger. Not only does he fly-fish all over Oregon, Washington, Montana, Colorado and Alaska, but he also finds great joy in passing the finer skills of his passion on to others. He now has more time to spend with his wife Kim as well as his two sons and three beautiful grandchildren (aged 3 months, 21 months and 3 years). Bob also volunteers at the FISH food bank, Horizon Christian School and Hood River Alliance Church.

We are grateful for the work that Bob has done for the fruit industry of the Pacific Northwest, for OSU, and for the knowledge that he has passed along to his colleagues. Best wishes to Bob for a *fruitful* retirement!

by Ken Johnson, Maryna Serdani and David Sugar

Mark Wilson

Student: *"The article concludes that differences in shade tolerance underlie the patterns in species' occurrences."* Wilson: *"What evidence did the authors invoke to support that claim?"* Student: *"Well, they compared patterns in species occurrences to the species shade tolerances and measured canopy cover for each site."* Wilson: *"What assumptions did the authors make in reaching this conclusion, and what alternative explanations might account for the observed patterns? How about if you, as a group, offer five alternative explanations, and for each, indicate what you'd need to know to test those possibilities?"*



One of the hallmarks of Mark's long and distinguished career in BPP, which began in 1983, is his dedication to excellence in teaching. He is a master of the Socratic method, as the following comments provided by recent and current BPP ecology graduate students attest:

"Mark Wilson is known for many talents, but... among his most exemplary is his rare ability to teach by engaging students to think independently and creatively. Mark's own intellectual acuity and agility, and his care for his students and sensitivity to their individual abilities, led to the most lively and compelling discussions that I've had the pleasure to take part in." (Olivia Duren)

"Mark's classes to me are the epitome of what graduate education should be. He pushes you to your limit and then has the ability to make you want to move beyond it. I feel so fortunate to have been able to soak up the knowledge he has to share." (Erin Sanders)

Mark has for many years provided the backbone of our undergraduate and graduate course offerings in plant ecology. He developed (or substantially revised) and has taught Plant Ecology (BOT 341); Field Methods in Vegetation Science (BOT 440/540, web-based); Plant Population Ecology (BOT 442/542); Plant Community Ecology (BOT 443/543, alternate years); and BOT 691, Special Topics in Plant Ecology (alternate years; over 13 offerings, each on a new topic!). After Fred Rickson retired, BPP needed someone to teach Plant Anatomy and Mark stepped up to the plate, teaching BOT 313, Plant Structure, starting in 2004. BOT 440/540 was highlighted by OSU's Extended Campus for its exemplary website, and, in 2000, he received OSU's College of Science Carter Award for Outstanding and Inspirational Graduate Teaching, having been a finalist twice before that. He will be hugely missed as a teacher.

During his years at OSU, Mark developed and maintained a strong and diverse research program in conservation and restoration biology. Over time, his research focused increasingly on theoretical and applied questions about Willamette Valley prairies. As Mark wrote a few years ago, *"The strength of my research lies in its ability to develop basic findings in the vegetation science of prairie ecosystems, while applying them to current management needs."* An editorial in *Nature* (8 Nov 2007, 450:135-136) highlighted the crucial importance of work at the interface between theory and practice in conservation biology, yet the rarity of people working at that interface. Mark positioned himself firmly in that gap, as was testified to by a prestigious outside reviewer, who, when commenting on Mark's record, wrote, *"Dr. Wilson stands out as one of the best examples anywhere of a*

scientist who collaborates regularly with managers and has been able to influence management and restoration practices to the point that endangered species and ecosystems are actually recovering.” Findings from his research have influenced management, “...without his efforts...the Agency would be years behind in its efforts to stabilize declining populations and recover those with threatened or endangered status,” wrote a Federal land manager who has associated with Mark. He published over 50 refereed journal articles during his time at OSU, had continuous grant support during his ~ 27 years with BPP, served as major professor or co-major professor for more than 20 MS or PhD students, and also participated in innumerable graduate committees; Mark’s research legacy will be long-lasting.

His quiet wisdom and the communication skills he brought to faculty meetings (always seeking clarity, understanding, and closure) will be sorely missed. The good part about his retirement, however, is that he will be able to focus on new interests including drawing and pottery-making, travels, and being a grandfather!

Thank you Mark Wilson for all that you have done for BPP, OSU, and the academic and management sides of plant ecology. We will miss you more than you could imagine, but hope that you have fun!!

by Pat Muir

GENOME SEQUENCE PUBLISHED IN NATURE

Todd Mockler, one of our young star faculty, is one of 12 OSU researchers who recently successfully sequenced the genome of the wild grass *Brachypodium distachyon*, a significant advance that was just published in the journal *Nature* in April. While this particular plant is a weed that originated in the Mediterranean and Middle East and spread worldwide by human activity is itself of no economic importance, it has recently become the premier model grass plant that will have far reaching value in work with other plants of agronomic importance. Because of its relatively small genome of just 272 million base pairs, the quality of work that can be achieved on this species is



James Carrington and Todd Mockler with *Brachypodium distachyon*

directly applicable to biofuel grass and cereal crops that have much larger and very complex genomes. It is hoped that the research will enable genetic modifications to incorporate desirable attributes into non-food plants like switchgrass that will ensure their success in the production of cellulose ethanol fuel. It will also provide opportunities to improve food crops such as wheat, rice, sorghum and corn because of the similarities in their gene content and gene family structure to those of *Brachypodium*.

A most important feature of this research is that the results are freely shared with any researcher in the world via the BrachyBase website (<http://www.brachybase.org/>), and *Brachypodium* seeds

have been shared with more than 300 laboratories in 25 countries.

This work is supported by the Joint Genome Institute of the U.S. Department of Energy, the U.S. Department of Agriculture, the OSU

Computational and Genome Biology Initiative, and the Oregon State Agricultural Research Foundation. Scientists from around the world were involved with the OSU researchers in the genome sequencing. Todd Mockler’s group, including graduate students, were involved in the transcriptome sequencing utilizing the cutting edge technology and supercomputing resources available at OSU’s Center for Genome Research and Biocomputing, directed by **James Carrington**, that enables the scientists to make very rapid genetic advances.

The authors conclude in this significant article that “The *Brachypodium* genome sequence analysis reported here is therefore an important advance towards securing sustainable supplies of food, feed and fuel from new generations of grass crops.”

THE ELECTRON MICROSCOPE AND IMAGING FACILITY

The EM facility is no longer supported by Botany and Plant Pathology. The facility is now part of the College of Science, and is supported by OSU Office of Vice-President for Research. Dr. Yi Liu joined the university as Director of the facility in January this year. Yi earned

Ph.D. degrees from both Shanghai Jiao Tong University in China, and Wayne State University in the U.S., and he brings more than 17 years of electron microscopy expertise to OSU. He received postdoctoral training at both University of Michigan and Case Western Reserve

University. He previously managed the imaging lab at Wayne State University in Michigan. Yi's expertise is in material science and he will continue to serve clients focusing, though not exclusively, on life science imaging and sample preparation. "It is very stimulating so see what students bring in learn about their research" he says. Yi prefers the life sciences but material science has opened his eyes to many new things. Several grants have been submitted to replace the older transmission electron microscope and obtain new sample preparation tools. Still in Cordley Hall for

now, the Linus Pauling Science Center that is being constructed just down the street will be the facility's new home in 2011. The Microscope and Microanalysis Society meeting will be held in Portland this August which is a great opportunity to visit vendors and see what is new in the microscopy field. Please visit the new facility webpage at <http://www.science.oregonstate.edu/emfacility/>.

STAFF NEWS

Along with all other changes in BPP, we've had several new hires and we are now a part of the Agricultural & Marine Sciences Business Center (AMSB) which means some staff will be handling BPP's work but located in Hovland Hall. There will be two centers –financial and human resources. **Itsue Pfund** (long-time BPP Accountant) and **Sheryl Powell** were selected to fill the two AMBC Finance and Accounting Manager positions. Sheryl comes from U of O where she was the Grants Financial Manager in the Office of Research and Administration. Sheryl will essentially take over **Steve Hoelscher's** role for BPP. In April, Steve accepted a promotion as Accounting Manager for the Auxiliaries and Activities Business Center. Mid-December, **LeAnne Rutland** transferred to the Sea Grant Office as their Grants/Contracts Technician. **Sarah Child-Rodgers** accepted the vacant grant's position the last of March. Although Sarah came from off-campus, didn't take her long to get in the swing of things. **Katie Remiyac** continues to handle the human resource aspect of things and will not have to move to the HR Business Center. Fortunately **Blaine Baker** will remain in the department and not have to join the financial business center, some of his duties will change but as always, Blaine goes with the flow. Out at the BPP Farm – **Tony Wutzke** left in early January to pursue a farm career on his own farm in south Corvallis, which leaves **Aaron Henderson** managing things on his own. As for me, I just celebrated 40 years in BPP which is hard to believe it's been that long. I have been so fortunate to have worked with so many wonderful folks over the years. Retirement – one day. In the mean time, I await the birth of my second granddaughter in October.

by Dianne Simpson

FROM A FORMER CHAIRPERSON

As I write, August has just arrived and it seems like 2010 is racing by at lightning speed. As of August 1, 2009, we have a new dean, Dr. Sonny Ramaswamy, in the College of Agricultural Sciences. You can learn more about Sonny and his background from <http://agsci.oregonstate.edu/faculty-staff/administration/profile/ramaswamy>. For sure, it is wonderful to have a full complement in the Deans' office again. Unfortunately for our state and country, it has been a year of major economic challenge which has brought an additional layer of complexity to budget balancing and planning for further staffing reductions. We are hopeful that as we make adjustments in college and university structure that we will gain the opportunity to better support our smaller faculty numbers. In all regards, our faculty continue to excel in both the quantity and quality of research, teaching, and outreach that they deliver. It is rewarding to note our faculty successes and our student's completion of degrees and movement into the next phases of their lives.

This past year marked the official 100 years of the Department of Botany and Plant Pathology. We enjoyed seeing many of you for the picnic in Corvallis following the 2009 annual meeting of the American Phytopathological Society. A formal symposium in honor of the event was held in October and we appreciated those who were able to join us for that event. A side note to those who may wonder how I spend my time these days. I continue on as an associate dean in the College of Agricultural Sciences. I have responsibility for the day-to-day oversight (meaning that I am the first stop for help for the unit leaders) for approximately ½ the departments and ½ the branch stations in the college. Add in several centers and institutes and you can rest assured that I have neither dull nor spare moments.

Our family has had another full year. We celebrated my mother's 100th birthday last November on the farm where I grew up near Ceres, CA. Over 150 family and friends enjoyed visiting in the house that my mother was born in and that my middle sister had restored to use for her law office. It was a wonderful celebration and especially so given that my mother passed peacefully away on December 10th, thus ending my relatively frequent travels to

California. Our family has been expanding again this year---our oldest daughter Sarah had a son, Charles Eden Lewis Jr., in May, and our youngest, Martha, will marry Jesse Schonau-Taylor on August 15th in Newport, OR. We will, however, be losing our close proximity to our middle daughter Miriam and grandchildren now 5 and 7--- Miriam will be attending George Mason Law School near Washington D.C. starting this summer. This will undoubtedly make travel to meetings in that area more attractive than usual but I know that three years will fly by! If you come to campus, please let me know. My office phone remains (541-737-5264) and my e-mail: stella.coakley@oregonstate.edu. I look forward to seeing many of you in the year ahead. It is always wonderful to catch up with you either in person or by mail. I wish you the best for the year ahead.

by Stella Melugin Coakley

JAPAN-US SEMINAR ON PLANT-PATHOGEN INTERACTIONS

On January 24-28th, the 10th US Japan Seminar on Plant-Pathogen Interactions was held at Oregon State University. The theme of the conference was *Genome-Enabled Analysis of Plant-Pathogen Interactions* and was organized by **Tom Wolpert** from BPP, Jane Glazebrook from the Department of Plant Biology, University of Minnesota and Alan Colmer from Department of Plant Pathology, Cornell University. The Japanese organizers included Tomonori Shiraishi from the Laboratory of Plant Pathology and Genetic Engineering at Okayama



University in Okayama Japan and Kazuya Akimitsu from the Department of Applied Biological Science at Kagawa University, Miki (Kagawa) Japan.

This, the 10th meeting, was the latest in a continuing series that has a long history. The meetings were originally established by a joint agreement by President John F. Kennedy and Japanese Prime Minister Hayato Ikeda in 1961, to broaden the scope of scientific cooperation between the two countries. The *Japan-US Seminar on Plant-Pathogen Interactions* resulting from this agreement has provided a recurring forum for the assembly of a diverse group of research leaders from both countries for the purpose of fostering scientific collaborations,



exchanging ideas and materials, and critically discussing research on molecular aspects of plant/pathogen interactions. For over four decades, this highly successful series of workshops has been convened at approximately four-year intervals with each country alternately serving as host and arranging for publication of the Proceedings. As a direct result of these workshops, scientists from both countries, who otherwise may not have had an opportunity to interact, have established meaningful, significant research collaborations. Further, beginning with the 9th and continuing with the 10th seminar, the workshops have placed a special emphasis on the participation of graduate students and postdoctoral fellows, thereby providing them with a unique scientific and cultural experience intended to enhance the formation of future collaborations. The 10th meeting involved the

participation of over 60 people from throughout the US and Japan including 19 faculty, postdoctorates and graduate students from BPP. Among those attending the 10th meeting from BPP was **Dr. Dallice Mills** who

participated in the organization of the 6th and 7th meetings and **Dr. Seiji Ouchi** an affiliate faculty member of BPP who not only served as a previous organizer, but has the distinction of being the only individual to participate in all 10 of the US Japan meetings. Dr. Ouchi was presented with a medal by Dr. Jan Leach (Colorado State University) on behalf of the organizers in recognition of his unwavering support and dedication to the seminar series (photo, left). The meeting was an outstanding event thanks in part to funding received from the Japanese Society for the Promotion of Science, the National Science Foundation, the Agriculture and Food Research Initiative Competitive Grants Program, the OSU College of Agricultural Sciences Walt and Lois Rising Lectureship Fund, the OSU Research Office, Applied Biosystems and the Department. A publication of the proceedings will be forthcoming from APS Press.

by Tom Wolpert

UNDERGRADUATE STUDENT NEWS

Congratulations to the following students who received a B.S. in Botany in academic year 2009/2010:

Andrew Johnson
Thomas Wade Homan
Elaine Daggett

Ryan Woolverton
Jessica Larson
Chase Annen

Congratulations to our Honor Roll Students Spring and/or Fall terms 2009, Winter 2010 and/or Spring 2010:

Elisa Alphandary
Rheanon Arvidson
Gina Bono
Bridget Chipman
Jamie Coggins
Andrew Corkery
Charity Deatherage
Marlo Gil
Matt Groberg
Jonathan Halama
Bryce Johnson
Katrina Isch

Julia McGonigle
Julie Nist
Amanda Ohrn
Tamra Prior
Bailey Roe
Jessie Showers
Robert Smith
Devin Stucki
Stephanie Vandruff
Courtney Wilson

GRADUATE STUDENT NEWS

The BPP-Graduate Association (GSA) Committee is thankful to Lynda Ciuffetti and the BPP department overall for smoothing the reorganization of the department's college affiliation and for looking out for both the undergraduate and graduate interests in these times of change.



John Bienapfl, Cindy Ocamb, Natasha Cerruti, Sierra Hartney, Patricia Wallace, Andrew Hubbard, Alisha Owensby (left to right)

The BPP-GSA is a student-run organization that works to unite and strengthen the graduate students within the department and university as a whole. They organize a graduate meeting once a term to discuss upcoming events, ideas for fundraisers and concerns they might have regarding the department. This year's officers are Andrew Hubbard (president), Alisha Owensby (vice president), Alija Mujic (treasurer) and Ian Pfingsten (marketing/social chair) and they helped organize an excellent graduate student's beach weekend, pre-seminar coffees, sales of BPP merchandise, and they also assisted and welcomed potential students at the departmental recruitment weekend.

The Graduate Student Beach weekend is an opportunity for new and returning students to socialize and become acquainted with one another as the term begins. This year's weekend welcomed over 30 attendees. The weather at the coast was beautiful and the Lincoln City Kite Festival was in full swing. Friday started with a potluck and on Saturday we prepared a bountiful feast of fresh picked mushrooms and wild caught crab from the

coast. We were fortunate to go fall apple picking, care of Dr. Ken Johnson, and processed them with a cider press during that day.

Merchandise is currently available at the BPP office with T-shirts, tote bags and new “noble rot” wine glasses. Proceeds from the fundraising go to annual BPP-GSA travel grants which provide students a small allowance of \$200 for travel to attend conferences and present their research nationally and internationally.

The BPP recruitment weekend was a success this year as we welcomed many prospective students into our departmental family. A trip into the coastal range was a chance for the recruits to see just what’s “in our backyard”.

Recipients of the 2009 BPP-GSA travel grants were: **Stephen Meyer, Liz Martin, Molly Botts and Laurie Gilligan.**

Matthew Parks (Liston lab) has continued his involvement in sequencing and assembling pine chloroplast genomes from short read sequence data. The ultimate goal is to produce a nearly complete sequence for the chloroplast genome for every recognized species of pine, and to use this sequence to determine the evolutionary relationships among the pine species. He also gave oral presentations of the research at the Evolution meetings in Moscow, Idaho and at the Botany meetings in Snowbird, Utah. The results of the work and subsequent analyses have also been published in two articles over the last year, one in *BMC Biology* (Parks *et al.* 2009) and the other in *Molecular Ecology* (Whittall *et al.* 2010).

Samantha Colby (Moldenke lab) has been developing her thesis project, titled “Ecosystem Productivity and Soil Food Web Structure – Paired Forest and Grassland Transects Across Oregon.” She also won the Parkinson Award for student travel to attend the Soil Ecology Society meeting in Burlington, Vermont where she presented a poster of her proposed thesis research.



Sierra Hartney, Patricia Wallace and Andrew Hubbard

Ryan Kepler (Spatofora lab) received an EAPSI fellowship to travel to China last summer. He was able to collect specimens of *Cordyceps* and related species throughout the country. He is now in the process of writing his dissertation.

Sam Fox (Mockler lab) has co-authored several papers, including one published in *Nature*: “Genome sequencing and analysis of the model grass *Brachypodium distachyon*”. He also presented two talks at the Plant & Animal Genome Conference in San Diego, California for which he received the Anita S. Summers Graduate Student Travel Award. An invitation to participate on the Molecular and Cellular Biology Graduate Student Admissions Committee was given again this past year. Finally, he was invited to elementary schools to speak to students about various biological topics.

Andrew Hubbard (Johnson lab) has continued his research on Integrated Control of Fire Blight on Apple and Pear and is beginning his second field season of research. He attended The

Washington Tree Fruit Research Commission meeting where his first year’s data was presented to growers, and he also attended the annual APS meeting in Portland. He has greatly enjoyed serving his fellow graduate students as a member of the GSA.

Tyler Gordon (Pfender lab) recently joined us in BPP. He is part of the USDA Forage Unit and is studying a mycoparasite that has the potential to control stem rust on perennial ryegrass. He has been trying to determine environmental factors that limit spread in the field. He has also been assisting in the creation of a model that simulates how stem rust overwinters in the Willamette Valley.

Sierra Hartney (Loper lab) attended the International Plant Growth Promoting Rhizobacteria workshop held in Portland Oregon where she gave a talk on the TonB-dependent receptors of *Pseudomonas fluorescens* Pf-5 and their roles in siderophore uptake. Sierra also attended the American Phytopathology Society annual meeting where she presented a poster entitled TonB dependent receptors of *Pseudomonas fluorescens* Pf-5 and siderophore uptake.

Diego Quito (Martin lab) is continuing his work on raspberry viruses. He attended the 21st International Conference on Virus and other Graft Transmissible Diseases of Fruit Crops in Neustadt/Weinstrasse, Germany, where he gave an oral presentation titled “A new member of the family *Reoviridae* may contribute to severe crumbly fruit in red raspberry, *Rubus idaeus*” He also presented another oral presentation at the American Phytopathological Society annual meeting in Portland, Oregon. The presentation was entitled “A new member of the family *Reoviridae* isolated from crumbly fruited ‘Meeker’ red raspberry”.

by Andrew Hubbard (GSA President)

RECENT THESIS TITLES

Donald Campanella (PhD, McEvoy and Mundt)

Ecology and biological control of an apomictic invasive plant, *Chondrilla juncea* (Asteraceae).

Olivia Duren (MS, Muir)

Chaparral history, dynamics and response to disturbance in southwest Oregon: Insights from age structure.

Paul Severns (PhD, Liston and Wilson)

Conservation genetics of Kincaid's lupine: A threatened plant of western Oregon and southwest Washington grasslands.

Robin Mulvey (MS, Hansen)

Castilleja and *Pedicularis* are confirmed as telial hosts for White Pine Blister Rust in Whitebark Pine ecosystems of Oregon and Washington.

Laurie Gilligan (MS, Muir)

Stand structures of Oregon White Oak (*Quercus garryana*) woodlands and their relationships to the environment in southwestern Oregon.

Molly Botts (MS, Hansen)

Histological examination of *Phytophthora ramorum* in *Notholithocarpus densiflorus* bark tissues.

Stephen Meyers (PhD, Liston and Meinke)

Evolutionary relationships and an investigation of sympatric speciation within Limnanthaceae.

AWARDS, HONORS AND PROMOTIONS

Faculty

Dr. Todd Mockler was promoted to **Associate Professor with indefinite tenure**

Dr. Allen Milligan was promoted to **Associate Professor Senior Research**

Zuzana Vejlupkova was promoted to **Senior Faculty Research Assistant**

Dr. James Carrington, **OSU Distinguished Professor**

Dr. James Carrington, **Fellow of the American Phytopathological Society**

Dr. Robert Martin, **American Phytopathological Society, 2010 Lee M. Hutchins Award**

Dr. Bruce McCune, **Northwest Scientific Association, 2010 Outstanding Scientist Award**

Dr. Lynda M. Ciuffetti, **2009 President's Beaver Champion Award**

Dr. Lynda M. Ciuffetti, appointed to **State Board of Higher Education**, Jul 2010 - Jun 2012

Melodie Putnam, **2009 OSU Extended Education Faculty Achievement Award**

Dr. Todd Mockler, **Phi Kappa Phi 2009 Emerging Scholar Award**

Dr. Jeff Chang, **College of Science, 2009 Loyd Carter Award for Outstanding and Inspirational Teaching at the Graduate Level**

Dr. Joseph Spatafora, **Mycological Society of America 2010 William H. Weston Award for Excellence in Teaching**

Dr. Joseph Spatafora, nominated and a finalist for the **College of Science Loyd Carter Award for Outstanding and Inspirational Teaching at the Graduate Level**

Dr. Joseph Spatafora, appointed as **Faculty Athletics Representative at OSU**

Dr. Patricia Muir, nominated and a finalist for the **College of Science Loyd Carter Award for Outstanding and Inspirational Teaching at the Undergraduate Level**

Dr. Pat Muir, **2009-2010 OSU Family Friendly Faculty Award**

Dr. Walt Mahaffee is **President of the American Phytopathological Society, Pacific Division**

Dr. Jay Pscheidt is **President-Elect of the American Phytopathological Society, Pacific Division**

Dr. Luisa Santamaria, **North Willamette Research & Extension Center**, Assistant Professor chose her department home in BPP

Dr. Fritzi Grevstad, new appointment as **Courtesy Assistant Professor (Senior Research)**

Dr. Andrea Thorpe, **Institute for Applied Ecology**, new appointment as **Courtesy Assistant Professor**

Dr. Inga Zasada, **ARS-USDA Research Nematologist**, appointment as **Courtesy Assistant Professor**

Dr. Maria Ivanchenko, change of status to **Assistant Professor (Senior Research)**

Dr. Sergei Filichkin, change of status to **Assistant Professor (Senior Research)**

Professional Faculty

Dianne Simpson, **College of Agricultural Sciences, 2009 Professional Faculty Award**

Students

- *Undergraduates*

Stephanie Vandruff, **2010 Outstanding Senior Award**

Stephanie Vandruff, 2010 Jean L. Siddall Memorial Scholarship
Robert Smith, 2010 Charles and Helen Fulton Memorial Award
Rheannon Arvidson, Thomas C. Moore Memorial Scholarship
Kelly McDonald, 2010 Student Employee Award

- *Graduates*

Katherine Jones and Rosalie Bienek received **Portland Garden Club Fellowships from the Katherine R. Pamplin Fund**
Stephen Meyers, Botanical Society of America, 2009 George Cooley Award
Heather Root received the **2010 Goward Prize** for the best student oral paper delivered at joint annual meeting of **Northwest Lichenologists and Northwest Scientific Association**
Josh Cuperus and Sam Fox received **December 2009 Anita S. Summers Graduate Student Travel Awards**

Laurie Gilligan, Ryan Kepler, Cedar Hesse, Heather Root, J. Steen Hoyer, Noah Fahlgren, and Diego Quito received **April 2010 Anita S. Summers Graduate Student Travel Awards**
Claire Taylor, Samuel Fox and Stephanie Heckert received **2010 Larry Moore Awards for Graduate Education in Plant Pathology**
Julia McGonigle, and Jared Streich received **2010 Ernest and Pauline Jaworski Scholarships for Summer Experiences for Underserved Undergraduates in Plant Science**
Stephen Meyers received the **2009 Leslie and Vera Gottlieb Research Fund in Evolutionary Biology**
Heather Root received an Oregon Lottery Scholarship
Matt Parks received an Oregon Lottery Scholarship
Ali Mujic received an NSF EAPSI award - summer travel to East Asia
Alisha Owensby received an NSF Graduate Research Fellowship (3 years) and an NSF EAPSI award
Joanna Woods - received a Travel award

IN MEMORIUM

Lloyd C. Cochran

April 5, 1906 - Feb. 4, 2008

Dr. Lloyd C. Cochran died Monday at the age of 101.

He was born April 5, 1906 at Frankfort, Ind., son of Bertha E. and Morris E. Cochran, both school teachers and later farmers. Lloyd attended a country one-room grade school and graduated from Rossville, Ind., High School. He received a BSA degree from Purdue University and M.S. and Ph.D. degrees in plant pathology from Michigan State University.

In 1933 he married Maud V. Tague and in 1936 they moved to Riverside, Calif., where he joined the Citrus Experimental Station of the University of California. For the next 21 years he did research on virus diseases of citrus and deciduous fruit and nut trees for the university and the U.S. Department of Agriculture.

In 1957 they moved to Orlando, Fla., where Lloyd became Director of Citrus Production Research for the U.S. Department of Agriculture. In 1959 they moved to Beltsville, Md., where Lloyd became Chief of Fruit and Tree Nut Crops Research for the U.S. Department of Agriculture.

Lloyd retired in 1969 and they moved to Corvallis where he joined the botany department of Oregon State University to work on rose diseases. Following retirement from Oregon State University in 1973 Lloyd took several consulting assignments which included three years in Iran and shorter terms in Pakistan, Kenya and The Philippines.

Lloyd helped found several International Fruit Tree Research Groups, including The European Fruit Tree Virus and the International Citrus Virus Congresses. They traveled widely to meetings and fruit growing areas in many countries.

Lloyd and Maud had two children, a daughter and a son; four grandchildren; and five great grandchildren.
(Corvallis Gazette Times)

David H. Hansen 1945–2009

David Hansen, a lifetime member of the



Northwest Scientific Association who served as a trustee from 1987–1989 and as treasurer from 1989–2003, died after a brief illness May 13, 2009, in Olympia, Washington. He was 64.

David was born in May 1945 to Henry P. and Helen Hansen in Corvallis, Oregon, where he was raised. After graduating from Corvallis High School in 1963, he earned a bachelor's degree in botany from Oregon State University in 1968. He received a master's degree in biology from the University of Utah in 1970, and a doctorate in population and

environmental biology from the University of California-Irvine in 1974.

After receiving his doctorate, David began a teaching career at Pacific Lutheran University, from which he retired in 2006 after 32 years of service. David's area of research was physiological plant ecology and much of his work related to water movement in plants. One of his primary areas of interest was the study of water relations in Koa trees, which started a tradition of teaching the January term in Hawaii. He also collaborated with Don Ryan on a project involving the identification of plants used in ancient Egypt to make rope.

David married Idell Emery in 1968. They lived in Tacoma for many years before moving to Olympia in 1990. They have two daughters, and four grandchildren.

A memorial fund in David Hansen's name is being established with the Northwest Scientific Association. Donations may be sent in care of NSA Treasurer Dr. Doug Call, Veterinary Microbiology & Pathology, PO Box 647040, Pullman, WA 99164-7040.

John Robert Hardison Sr.
Jan. 12, 1918 - Oct. 27, 2009

John Robert Hardison Sr. died Oct. 27, 2009, in his home.

He was 91 years old, and a direct descendent of Oregon pioneers Gabriel and Barbara Slater Hardison, who arrived in Oregon by wagon train in



1845 and settled in the Monmouth area. John was born in Yakima, Wash., to Earl James and Genevieve Sompil Hardison.

Dr. Hardison graduated from Yakima High School and Washington State University with a bachelor of science degree. He was awarded a master of

science degree and a doctoral degree in plant pathology from the University of Michigan.

He began his career at the University of Kentucky in Lexington. He arrived in Corvallis in 1944 to work on blind seed disease infecting crops of perennial ryegrass worldwide. He is credited with control of the disease through his research and quick action.

In 1974, he was named Oregon Seedsman of the Year by the Oregon Seed Council. The Oregon Seed Trade Association named him Man of the Year in 1980 for his "untiring efforts and faithful service." He worked as a plant pathologist for many years for the

U.S. Department of Agriculture and Oregon State University, retiring in 1980.

He married Eleanor Lynch of Yakima in 1937. They were married for 50 years, until Eleanor's death in 1987. John and Eleanor raised four children: John Robert Hardison Jr. and wife Jutta of Corvallis; Catherine Hardison of Yakima; Mary Hardison Parchman of Oak Park, Calif.; and Patrick Hardison and wife Lonnie of Aloha. Karen Stiles of Yakima is also a treasured member of the family.

In 1988, he married Janet; together they developed several new varieties of grasses.

John is also survived by his grandchildren: and great-grandchildren.

(Corvallis Gazette Times)

Cyrus Milo McKell
1926-2009

Cyrus McKell was born in Payson, Utah, in March 1926, the son of Robert Dewey McKell and Mary Cecelia Ellsworth. He was the second of three sons



and an older daughter. When he was only 9 years old, his father died unexpectedly. His mother raised the young family as a single mother during the Depression, working afternoons and evenings as the librarian for the Payson City Library. Cyrus attended school in Payson. Upon graduation from high school in 1944, he entered the

U.S. Army Air Corps as an aviation student in Texas but he did not finish his training before WWII ended. He then returned to Utah to attend college at the University of Utah. He married the love of his life, Betty Marie Johnson, in 1947. They had three boys and two girls. Cyrus earned a B.S. degree in biology and an M.S. degree in botany and geography at the University of Utah. He was a member of the ROTC. In 1952, he and Betty moved to Corvallis, Ore., where he earned a Ph.D. in plant ecology, range management and soils at Oregon State College (University). He gained wide experience and professional contacts in his subsequent employment as a USDA range plant physiologist at the University of California at Davis campus, where he also did post-doctoral work in crop physiology. From there he was invited to be the chairman of the agronomy department at the University of California at Riverside, where he attained full professorship. After almost a decade in Southern California, he returned to his Utah roots in 1969, accepting the chairmanship of the range management department at Utah State University. From 1971 to 1975, he was

director of the Environment and Man Program, a grant program funded by the Ford Foundation, also at Utah State University. After that he directed the Institute for Land Rehabilitation from 1976 to 1981 at Utah State University. He served as vice president for research at NPI, a biotechnology company, in Salt Lake City then returned to academia, at Weber State University, where he served as dean of the College of Science. He continued his involvement with Weber State long after his retirement, establishing a botany scholarship there. His research has resulted in more than 230 peer-reviewed scientific publications, including editor or co-editor of seven books. He received a Rockefeller Foundation Travel Grant to Nigeria in 1965, a Fulbright Academic Fellowship to Spain in 1967-68, a six-month project in Kenya with the United Nations Food and Agriculture Organization (FAO), the Governors Medal

in Science and Technology in 1990 and, in 1999, he received the Willard Gardner Prize for Distinguished Accomplishments in the Sciences. He has served as a member of the Utah Governors Science Advisory Council and a member of the Cache County Planning Commission. During his academic career, he served as a member or chair of scientific consulting groups to foreign countries, being sponsored by the National Academy of Sciences, United Nations FAO, USAID, American Academy for the Advancement of Science and the Ford and Rockefeller Foundations. He consulted on agricultural field work and environmental development problems in more than 30 countries.

(Logan Herald Journal)

THANK YOU DONORS

The following individuals and organizations generously supported the Department with donations received between March 2009 and March 2010. Those who wish to remain confidential are not listed.

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Donald and Priscilla Zobel

ALUMNI NEWS

Steve Sillett and **Marie Antoine** were featured in the October edition of *National Geographic* photographed with the 1,500 years old, a 300-foot titan in California's Prairie Creek Redwoods State Park that has the most complex crown scientists have mapped. Both now at Humboldt State University, Steve completed his PhD with **Bruce McCune** in 1996, and Marie, after gaining her environmental science BS with a specialty in botany, completed her MS with **Bill Winner** in 2002.

Kent Davis (BS Botany and MS with **Don Zobel** in 2005) had his work on carbon monitoring featured in **OPB News** in December. Kent is a Faculty Research Assistant in the Department of Forest, Ecosystems and Society at OSU. He tends OSU's five carbon monitoring stations from Newport to Burns to measure how trees, vegetation and even the soil itself "breathes" carbon dioxide and oxygen in and out of the forest. Data collecting and modeling help policy makers with climate change decision making.

It was good to hear from **Jaewoo Ahn** (BS Botany 1998) who recently sent a card to **Don Zobel** from his young family now based in Seoul, Korea.

Randy Smith (BS 1983) recently contacted **Everett Hansen**, he now lives in Ohio with his wife and high school age daughter, with a son away at college.

Steven K. Whitesides (BS Botany 1984) "After working for the last two years with an environmental sciences consultation firm based in Alaska, this APHIS PPQ position enables me to return to Portland and become more fully interactive with family and a growing number of grand kids. The job duties also permit me to

return to my roots as a plant pathologist trained initially at a plant disease diagnostic lab at Utah State University and within the Dept. of Botany & Plant



Pathology at Oregon State University. I spent the majority of my career with private corporations specializing in development of bio-control agents for import, registration, and commercialization in the USA and many other countries. I also have broad range of regulatory experience with the US EPA and other regulatory agencies along with considerable crop and nursery research experience having managed field research facilities in California and Washington. I enthusiastically return to my home in Portland to actively participate in the evolution of family life (2 active grandchildren here, and four others in Utah), the ongoing development of favorite passions (gardening) and hobbies (house remodeling), and the perpetual learning processes afforded within APHIS that will enable me to become a contributing team member within Oregon and beyond.. "

Alumni – please keep sending your news we love to hear from you

SCHOLARSHIPS AND AWARDS MADE POSSIBLE BY OUR ENDOWMENTS

The **Department of Botany and Plant Pathology** is fortunate in the support it receives from alumni, friends, and other organizations. Through the OSU Foundation, we have established named funds and endowments in honor, or, in memory, of friends, alumni, and faculty. The growth of these funds enables us to enhance support for our students and programs.

Botany and Plant Pathology Endowment Fund in Honor and Memory of Alumni and Friends holds smaller endowments that have been established in honor and in memory of particular individuals so we can reach the minimum amount required for an individual fund (as required by the OSU Foundation) more rapidly and benefit from the potential earning power of these gifts. Once a particular fund reaches the endowment level it will be moved into a separate account. The **Donald J. Armstrong Fund, Dallice I. Mills Seminar Fund, Mary L. Powelson Fund, Alfred H. Soeldner Fund, Donald B. Zobel Fund, William Chilcote Memorial Fund, William C. Denison Memorial Fund, Harold Evans Memorial Fund, MacSwan Memorial Fund, F. McWhorter Memorial Fund, E. Otto Memorial Fund, Mark T. Patterson Fund, Harry K. Phinney Memorial Fund,** and the **James Sandeno Memorial Fund,** are all held within this larger fund. Awards are periodically made in the individual's name for the purpose associated with the original gift.

Charles and Helen Fulton Memorial Endowment provides scholarships for botany majors and undergraduate research projects in botany.

Leslie and Vera Gottlieb Research Fund in Plant Evolutionary Biology provides funds to graduate students to support both laboratory and field research in the evolutionary biology of plants native to western North America: including evolutionary and population genetics, systematics and phylogenetic studies, comparative analyses of development, and physiological and biochemical studies of plant adaptations.

Bonnie Hall Student Activity Fund supports group activities for undergraduate and graduate students.

Hardman Award for Native Plant Research supports graduate student research concerning the native plants of Oregon.

The Ernest and Pauline Jaworski Fund for Summer Research Experiences for Underserved Undergraduates in Plant Science is offered for undergraduate research during summer term. The goal of this program is to increase the level of diversity among students who enter Ph.D. programs to pursue careers in university teaching and research by providing research opportunities to undergraduates that have been underserved.

Bill and LaRea Johnston Endowment supports undergraduate education and is used either to directly support students or their research efforts, or teaching activities on behalf of these students. The ***Outstanding Senior Award*** is also made possible by this endowment.

Georgia Mason Herbarium Fund provides funds for a student worker to participate in the day-to-day operating activities of the Herbarium and its programs.

Moldenke Fund for Plant Systematics supports graduate student travel to herbaria to study preserved plants, and travel to field sites to collect specimens for plant systematics research.

Larry Moore Award for Graduate Education in Plant Pathology supports graduate student education in plant pathology.

Thomas C. Moore Memorial Scholarship assists undergraduate students in botany and plant pathology.

Portland Garden Club Katherine R. Pamplin Fellowships are offered for research in aspects of native plant biology, rare and endangered plant conservation and environmental effects on native plants.

Jean Siddall Memorial Scholarship supports undergraduate students studying rare and endangered plants.

Anita Summers Graduate Student Travel Fund supports travel of graduate students within the area of Botany and Plant Pathology for attendance at professional meetings where the recipient has a specific responsibility such as presenting a poster or paper, or participating in a discussion as an invited participant.

The Dr. Bonnie C. Templeton Endowment supports graduate student research in systematics.

To see this newsletter in color

please visit our website at

http://www.science.oregonstate.edu/bpp/for_alumni.html



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CONTRIBUTIONS may be sent to **The Oregon State University Foundation, 850 SW 35th Street, Corvallis, OR 97333**

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