POSIES & PATHOGENS

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Nineteenth Edition April 2008

FROM THE DEPARTMENTAL CHAIRPERSON

Welcome to this, the 19th edition of Posies and Pathogens! I hope this newsletter finds you all well and enjoying the spring weather. It has been an interesting spring here in Corvallis, with March weather clearly confirming the axiom "in like a lamb, out like a lion". Within these pages, you can learn many of the details of the goings on in the Department over the last 12 months. Our graduate students continue to make us proud, as they complete their research projects and take their place in the world. We participate in several undergraduate programs including our own botany major. These students keep us on our toes as we strive to challenge the students to become excellent biologists, botanists, and environmental scientists. In the research arena, we continue to set records with papers in prestigious journals, awards to faculty and students, and a seemingly ever expanding grants and contracts portfolio. In the fiscal year 2006/2007, we once again led the entire university in new grants and contracts awarded to a department, school, or center on campus. Our successes with research grants are all the more impressive given that funding rates for most federal agencies are hovering around 10%. And we are doing very well again in the current fiscal year! None of this would be possible without their support our excellent research and office staff provide.

As with all years, this is also a year of transitions. Most notably, after 41 years with the Department (yes, that's correct…over 4 decades!), Al Soeldner has retired. Al was director of the Electron Microscope Facility that is housed in the department but provides service to the entire campus. He will be missed, but he left a legacy of a well-run facility that is now serving as the platform to bring new electron microscopes to campus.

Harold Evans passed away at the age of 86. Harold was at OSU for 28 years and he was the first scientist at OSU to be elected to the prestigious National Academy of Sciences. His research in nitrogen fixation provided insights that are still being built on today.

I, also, am in transition. I recently accepted the position of Dean of the Honors College at OSU. I will begin my appointment with the Honors College half time on May 1 and full time July 1. My academic home will remain with the Department of Botany and Plant Pathology where I plan to continue my research activities. However, I will be leaving the position as Department Head as soon as my replacement can be identified. The process to name my replacement is just now getting underway. It has been a fun four years at the helm of this diverse and nonetheless amazingly collegial department. Knowing that I will still be a part of this group will make this transition easier!
As always, we look forward to hearing from friends of the Department.

Dan Arp
Professor and Chairperson
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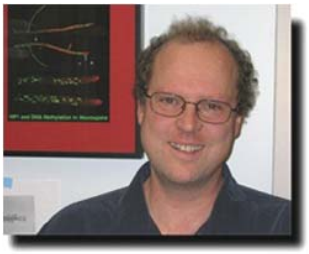
WELCOME NEW FACULTY

Aymeric Goyer joined the department in January 2008 as Assistant Professor Senior Research to work at the Hermiston Agricultural Research and Extension Center. He received his Master and Doctoral degrees from the University of Paris XI and has interests in how plants synthesize and metabolize nutrients essential for human health. By combining molecular biology, biochemistry, and genetics approaches, he plans to further the understanding of thiamin (vitamin B1) and folate (vitamin B9) metabolisms in order to develop new strategies to boost those essential nutrients in crops.



We welcome **Michael Freitag** as an Adjunct Assistant Professor. Michael, who's academic home is the Department of Biochemistry and Biophysics, has overlapping interests with BPP using filamentous fungi as models to understand how genome defense systems and epigenetic silencing phenomena shape and maintain eukaryotic genomes and "epigenomes". Adjunct status will allow him to have BPP graduate students in his laboratory, and participate in departmental teaching and research.

FACULTY NEWS

Two new post-doctoral associates joined **Mike Behrenfeld's** group this past year, **Kim Halsey** and **Paul Schrader**. Kim is working on alternative pathways for electron flow during photosynthesis and Paul is working on physiological consequences of iron stress in marine algae. In May of 2007, **Toby Westberry** and Mike went to sea for 5 weeks to study optical properties in the equatorial Pacific and how they are related to phytoplankton physiology. In September, Mike participated in a televised NASA Earth Science Update celebrating the first decade of continuous satellite global ocean biology measurements. In November, he presented a paper, coauthored by Kim Halsey and **Allen Milligan**, at the Royal Society of London on climate-related changes in ocean phytoplankton and the physiology underlying this relationship. The resultant manuscript will appear this spring in *Philosophical Transactions of the Royal Society B*. In February this year, Mike participated in a press briefing and special session on climate and ocean ecosystems at the American Association for the Advancement of Science (AAAS) meeting in Boston.

James Carrington, professor and director of the Center for Genome Research and Biocomputing was chosen as Researcher of the Year by OSU's chapter of Sigma Xi, a research and scientific honor society. Jim is an expert in virus-host interactions in plants and "small RNA" pathways – systems that can control the development, structure, genome and antiviral defense in plants. Research based on his work has been cited by the journal *Science* as the scientific "breakthrough of the year". His work has significantly altered our understanding of gene regulation in plants.

Jeff Chang is one of the users of the new high-throughput DNA sequencing machine called the Illumina IG Genome Analyzer purchased by the Center for Genome Research and Biocomputing with help from the College of Veterinary medicine and BPP. With lower costs, greater depth of sequencing and speed, it can sequence the entire genome of a bacterium in three days. Jeff's lab is interested in understanding the mechanisms by which bacteria establish symbiotic relationships with their plant hosts. He uses genomic methods to identify and understand specific proteins which bacteria inject into host cells that reprogram the host to make a more hospitable environment. This analysis is computationally demanding in both data volume and expertise.

John Fowler's lab continues to investigate plant small GTPases and linked signaling proteins - with a specific interest in genes that regulate plant cell morphogenesis. Most recently, MCB program Ph.D. student **Rex Cole** successfully defended his thesis. Rex will remain in the lab as a Postdoctoral Research Associate, continuing with the research he began in *Arabidopsis* as a graduate student, and some maize genomics work. MCB grad student **Ann Ketter** is following up on Rex's work, looking for new, related genes and mutants in *Arabidopsis thaliana*.
Collaboration continues with **Dr. Viktor Zarsky** and his group at the Institute of Experimental Botany in Prague, in the Czech Republic. John Fowler went to Prague in June 2007, and Viktor spent time in our

lab in September 2007. The collaboration resulted in a joint paper which will appear in Plant Cell this year. John also traveled to Washington D.C. for the 50th Annual Maize Genetics Conference in February 2008. The Maize Genome Sequencing Project is nearing completion, so it was an exciting meeting!

An EPA-funded study of "Variation in Pollen Competitive Ability in Diverse Maize Lines" is in its 3rd year, involving the genetic basis for pollen fitness, and developing methods to predict whether certain plant cultivars or genotypes pose a high risk for escape of transgenes via pollen. FRA **Zuzana Vejlupkova** is the primary person on this project and she has started conducting microarray experiments on pollen.

A most recent NSF project is a collaborative study with the Carnegie Institution at Stanford University, Iowa State University, and South Dakota State University focuses on genomics of the male and female plant gametophytes, primarily in maize. **Scott Givan**, a Research Assistant Professor in BPP and Bioinformatics Coordinator for the CGRB, is a Co-PI and will help create a public website and database. BPP graduate student **Pallavi Phatale** just completed her winter term rotation in the Fowler lab. We are lucky to have help from undergraduate students **Steven Ma, Luisa Snyder, Nathan Snyder** and **Sierra Wolfenbarger.** Nathan received an HHMI fellowship to conduct research in the lab last summer, and he has continued this past fall and winter. **Zachary Dunn**, a South Albany High School student, worked with Rex on an "Apprenticeships in Science and Engineering" summer project, studying plant cell walls. Finally, we all miss **Hang Thu Pham**, who graduated last December.

David Gent spent six weeks as a visiting scientist at the University of Tasmania, Tasmania Institute of Agricultural Research, supported by an OECD fellowship. He also was offered and accepted a position as Honorary Faculty at the University of Tasmania. Along with **Walt Mahaffee** and Sarah Pethybridge from the University of Tasmania, they recently completed the first edition of the *Compendium of Hop Diseases, Arthropod Pests, and Disorders*, which is to be published in late 2008 by APS Press.

"Continuity" pretty well describes the action in **Everett Hansen's** lab. They continue their research and diagnostic support for the Oregon effort to manage Sudden Oak Death in the tan oak forests of Curry County. At the same time they continue their collaboration with the Forest Service to select and breed Port-Orford-cedars resistant to *Phytophthora lateralis.* That program has seen steady progress and resistant seed is increasingly available to growers. Several horticultural nurseries are returning POC to their inventory, grafting the old horticultural "varieties" onto resistant root stocks that we have selected here. That's exciting.

Tom Kaye continues to enjoy working with graduate students such as **Matt Blakeley-Smith,** who finished his masters work in 2007 on positive and negative effects of herbicides on native plant communities. His newest student, **Ian Pfingsten**, will be working on the impacts and population dynamics of invasive plants. Tom's work as Executive Director of the Institute for Applied Ecology in Corvallis continues to occupy much of his time and energy, and is forcing him to learn more about non-profit management than he really bargained for!

Mary Kentula, an ecologist at the US-EPA National Health and Environmental Effects Research Lab in Corvallis, is a courtesy faculty member of the department. In 2007 she received 4 awards for her outstanding contributions to wetland science, three from the EPA and the 4th a prestigious Merit Award from the Society of Wetland Scientists. The Merit Award is presented every other year to an individual in recognition of "an outstanding piece of original research, achievement, or contribution to wetland science". Dr. Kentula was honored for her research on the assessment of wetlands at the watershed scale, in particular for her contribution to a three–tier approach to wetland assessment developed with other EPA scientists and colleagues. The application of the '1-2-3 Approach' to the assessment of the wetland resource at the watershed scale is described in a series of nine papers in the September 2007 issue of *Wetlands.*

Developed and tested in two wetland-rich watersheds, Nanticoke in Maryland and Delaware, and Upper Juniata in Pennsylvania, the approach encourages resource managers to collect assessment data at three different levels of complexity according to their needs and objectives. The approach starts with the simpler methods and models and advances to more complicated and expensive methods as needed. Level one involves a landscape analysis using readily available digital data to describe the status of the resource and to identify areas of concern. Levels 2 and 3 are field-based assessments. Level 2 is a rapid assessment while Level 3 employs quantitative measures and is the most time-consuming and expensive. An advantage of using the three tiered approach is that results from different levels can be checked against each other. The assessments in the Juniata and Nanticoke watersheds in conjunction with similar work in other places has demonstrated that local communities, states, tribes and others can use the Approach to reduce the cost of monitoring and obtain reliable results. As a result, the US-EPA is planning to use the 1-2-3 Approach in a national survey of wetland condition that is scheduled for 2011.

Jenny Lorang, Teresa Sweat (former PHD student now at HCRU) and **Tom Wolpert,** discovered that a single plant gene can cause resistance to one disease at the same time it produces susceptibility to a different disease – the first time this unusual phenomenon has ever been observed in plants. The finding, published in the September 2007 *Proceedings of the National Academy of Sciences*, may help scientists better understand the pathways that genetic disease resistance can take. Plant diseases are a multi-billion dollar problem in agriculture, and scientists for decades have been trying to develop new varieties of plants with resistance to one disease or another.

The research also explains why an epidemic of "Victoria blight," a fungal disease, occurred in the United States in the 1940s. The Pc-2 gene in a widely-planted, imported variety of oats provided good resistance to oat rust, which is a costly crop disease – but the same gene also caused susceptibility to Victoria blight, and its use had to be discontinued as a result. "The blight fungus makes a toxin that causes disease in susceptible plants – that is, only plants that carry this gene," said Jennifer Lorang, BPP research associate. "But it also turned out that the same gene can provide disease protection. This is very unusual, and should provide insight into genetic influences on disease resistance and susceptibility." Most work that has been done on plant diseases is focused on disease resistance, and less has been done on the genetic basis for disease susceptibility.

Among other things, the study suggests that plants bred for resistance to one disease may inadvertently be changed in ways that make them susceptible to a different disease. It also indicates that the physiological basis for disease resistance and susceptibility may have some similarities. The actual plant used to identify these genetic pathways was Arabidopsis, a small plant in the mustard family, which is frequently used for genetic research. The scientists put the Pc-2-like gene in Arabidopsis, which has a similar function in oats, and were able to determine that it causes disease susceptibility, although it looks like a resistance gene.

from OSU News and Communications Services August 2007

Notable events in **Bruce McCune's** lab include a PhD for **Emily Holt** and a MS for **Amanda Hardman**. Emily studied lichen communities on the Seward Peninsula in Alaska, in relation to reindeer grazing and fire. The National Park Service, who manages the huge Bering Land Bridge Preserve, sponsored the

research. This fascinating area of oceanic tundra hosts many species that are absent from the broader circumpolar flora. The Preserve is unusual for areas managed by the NPS in that introduced reindeer are grazed there, in cooperation with the Native Corporation.
Amanda studied the effect of fuel reduction treatments (logging and prescribed burning) on the moss layer in Starkey Experimental Forest in the Blue Mountains of Oregon. Mosses and lichens form a thin, but important, skin over recently disturbed soils resulting from fire, logging, and grazing animals. These forests were devastated by insects and disease around 1990. The moss layer is resilient to repeated abuse, being dominated by small species with fast life cycles and prolific spore production.
This group's research on other topics continues -- a revised edition of the *Macrolichens of the Pacific Northwest* is on its way as one of Bruce's sabbatical projects. His current PhD students **Heather Lintz** and **Heather Root** continue to push the envelope on statistical tools for multivariate analysis of ecological communities and habitat modeling.

The **McEvoy lab** (**'McLab'**) continues research on the ecology and biological control of plant invasions. **Dr. Evrim Karacetin** completed her PhD thesis entitled "Biotic barriers to colonizing new hosts by the cinnabar moth *Tyria jacobaea* (L.) (Lepidoptera: Arctiidae)" and returned to her native Turkey, where she is an assistant professor at Erciyes University. **Don Campanella** is finishing his PhD thesis on multiple control organisms on multiple biotypes of skeleton weed, and his co-major professors **Chris Mundt** and **Peter McEvoy** applaud the writing ability Don honed at Carlton College before arriving at OSU. Peter spent 5 weeks abroad in South Africa teaching introductory entomology at Rhodes University in Grahamstown and presenting research seminars around the country at University of the Witwatersrand ('Wits') in Johannesburg, the Plant Protection Research Institute (PPRI) in Pretoria, University of Cape Town, and at Stellenbosch University. Peter and his wife Esther visited the Fynbos region in springtime and enjoyed a diverse floral display unlike any other in the world! **Fritzi Grevstad** and **Paolo Sanguankeo** are using the new quarantine facility in Richardson Hall at OSU to screen insects for biological control of gorse and knotweeds. **Dr. Russell Messing** of University of Hawai'i is winding up his sabbatical year in the lab, and **Eric Coombs** of the Oregon Department of Agriculture keeps everyone tuned to the big picture in biological weed control while working on a few model systems including purple loosestrife and ragwort. **Dr. Joseph Dauer** and Peter McEvoy are testing ways to control invasive plants by targeted disruption of their life cycles combining mathematical models and large-scale field experiments. The lab is organizing a session on Ecological Theory for Agriculture for the annual meeting of the Ecological Society of America in August 2008. **Laurel Moulton** has been a welcome addition to the lab this year; she has developed a time-lapse photography technique for monitoring earth worms and ground beetles foraging for weed seeds at night (while the others sensibly slumber!).

As she probes the Gordian knot of *Pratylenchus* (root-lesion nematode) species in the Northwest, Extension Nematologist **Kathy Merrifield** hopes the USDA nematologists taxonomizing Oregon specimens will be the Alexander who cuts to the truth. Meanwhile, Kathy continues to hold aloft the truth in botany by observing, collecting, and keying in pursuit of a bryophyte flora of a California Inner Coast Range preserve.

Pat Muir's graduate student**, Kate Norman,** successfully defended her MS thesis early in winter term, 2008, which is entitled, "The effects of site preparation on native forb establishment in a wet prairie, Willamette Valley, Oregon." Her research was funded by the US Fish and Wildlife Service, for whom she now works as a Botanist, out of the Portland, OR office; personnel from the Institute for Applied Ecology's Native Seed Network also assisted with the project. She worked on a Wetlands Reserve Enhancement Program site that was, for many years, farmed for rye grass seed production and was then taken out of production and planted to the native perennial wetland grass, *Deschampsia cespitosa* (tufted hairgrass) as an initial step in its restoration back to wet prairie. Her study compared several different methods of preparing sites in the area for seeding with native forbs, to further the restoration effort. These methods included burning, mowing, and both of those treatments coupled with herbicide treatment. All treatments enhanced native species cover and diversity; longer term monitoring will help to indicate whether one treatment was significantly more successful than another. **Laurie Gilligan** started her MS studies with Pat in fall of 2007. Her research, funded by the Joint Fire Science Program, will focus on understanding the history and dynamics of oak woodlands in the Applegate River Valley of SW OR. Another MS student, **Olivia Duren** is also working on this Joint Fire Science Program funded study. Her focus is elucidating chaparral age structures and dynamics in relation to fire history. Some of those lovely *Arctostaphylos viscida* shrubs are well over 100 years old!

Ron Neilson was among hundreds of scientists worldwide sharing in the Nobel Peace Prize for contributing to the U.N.'s Intergovernmental Panel on Climate Change, which issued landmark studies on global warming. The prize was split between the scientists and former Vice President Al Gore, who popularized many of the findings the scientists described. Neilson's climate models showed that climate change would turn forests increasingly dry and vulnerable to wildfire. He was lead author on the panel's 1998 report and has been a continuing contributor.

2007 was another busy year for the **OSU Plant Clinic** with 2171 plant and insect samples processed and diagnosed. **Maryna Serdani** joined the Plant Clinic in August 2007 as Senior Faculty Research Assistant, assisting **Melodie Putnam** with plant disease diagnoses. Maryna has more than 11 years experience in plant pathology research. Most recently she worked with **Dr. Robert Spotts** at the Mid-Columbia Research and Extension Center in Hood River on diseases of pears and cherries. **James Young,** Insect Diagnostician, reports that the arthropod samples have increased 91% since he arrived, with the overall proportion of arthropod samples increasing from 10% in 2006 to 20% in 2007. In August 2007 the Insect Identification (http://www.science.oregonstate.edu/bpp/insect_clinic/index.htm) and Honey Bee Diagnostics (http://www.science.oregonstate.edu/bpp/insect_clinic/bees.htm) websites were launched.

Did another year go by? Must have, because **Jay Pscheidt** announces that there is yet another issue (54th) published of the *PNW Plant Disease Management Handbook*. Every once in a while the book shapes up to be a particularly good one. This book will have had all chemical recommendations reviewed by the Washington State Pest Management Resource Service. Not only that, but there have been several people copy editing and finding many of those pesky little errors that seem to pop-up and accumulate every year. So the 2008 book will go down as a good one to have on the shelf. Now if we can only get the web site updated and stable! After that all Jay has to do is survive 1 to 3 presentations each week for about 10 weeks, get the farm trials set up, get ready for teaching the summer class this year, find a grad student, and troubleshoot the various problems that arise this year around the state. But Jay has two great FRAs, **Steve Cluskey** and **John Bassinette**, who help make it all happen, not to mention the entire plant pathology extension faculty who are so good to work with.

Richard Smiley's field crops pathology program at the Columbia Basin Agricultural Research Center, at Pendleton, continues to focus on the biology and control of plant-pathogenic fungi and plant-parasitic nematodes. Applied research on root diseases of wheat and barley is conducted on farms and experiment stations throughout eastern Oregon and Washington. Current emphasis is on developing wheat varieties with resistance and tolerance to locally-important species of root-lesion and cereal cyst nematodes, and on developing molecular markers to detect these resistance genes in seedlings. They have also developed standard and real-time PCR diagnostic procedures for these nematodes, with the intent of transferring these tests into the hands of commercial nematode diagnostic laboratories. The power of these highly refined tests was recently demonstrated by the discovery in Oregon of a cereal cyst nematode species that had not previously been reported in North America. Since there is no comparable research elsewhere in the USA, these activities are closely coordinated with leading research programs in Australia, France, Syria and Turkey. Please view photos and current information regarding this program, staff, and publications at http://cbarc.aes.oregonstate.edu/cbarc/plantpathologyhome.php

Virginia Stockwell and **Ken Johnson** hosted the 11th International Workshop on Fire Blight at the Downtown Embassy Suites in Portland Oregon in August 2007. Fire blight is a bacterial disease of apples, pears, and many rosaceous ornamentals caused by *Erwinia amylovora*. The triennial meeting has been held around the world under the auspices of the International Society of Horticultural Science; this was the first time the meeting convened in the western US.
The week-long conference was attended by 106 people representing 18 countries. The opening ceremony included welcoming comments from **Stella Coakley**, Associate Dean, College of Agricultural Sciences.
There were 99 presentations organized in sessions that covered all aspects of fire blight including pathogen biology and detection, genomics, host-pathogen interactions, breeding for host resistance, and chemical and biological control. The conference proceedings will be published in a volume of *Acta Horticulturae.*
Highlights of the meetings included a pre-workshop tour of the World Pear Collection and facilities at the USDA National Clonal Germplasm Repository near Corvallis. Participants thoroughly enjoyed the mid-meeting tour of the Mid-Columbia Agricultural Research and Extension Center in Hood River that was

hosted by Steve Castagnoli, visits to commercial orchards, and a relaxing dinner at Timberline Lodge on Mt. Hood.
The workshop was very successful. Everyone enjoyed their visit to Oregon and the opportunity to connect with colleagues, share their research, and plan future collaborations.

David Sugar continues his pear pathology/horticulture program in Medford. Recent work involves integrating fruit nutrition and orchard fungicides into postharvest disease control programs, developing protocols for inducing ripening capacity for early marketing of Comice pears, enhancing pear fruit quality through management of fruit russet, and establishing methods for producing "target" fruit - of desired size and quality. David presented some of his work at the International Pear Symposium in Portugal in 2007.

RETIREMENT

Thanks due to Al Soeldner

Oregon State University and the Department of Botany and Plant Pathology in particular, is greatly indebted to **Alfred H. Soeldner** for his over 40 years of service. **Al** joined the department as a research assistant in April 1966. He was promoted to Instructor in 1980 and then to Senior Instructor with tenure in 1989. His was one of the first promotion and tenure cases that I handled as a new department head in 1988 and it was readily evident how extraordinary Al's contributions were to the department in both his capacity as manager of the Electron Microscope Facility and as an instructor, colleague, and friend to numerous students, faculty, and staff over the years. Although Al "hung up" his official responsibilities at Oregon State University in December 2007, he has continued to assist in planning for a new electron microscope facility that is scheduled to be located in the new Linus Pauling Science Center that will be constructed over the next few years to the west of Nash Hall.

I know that most of you are likely wondering why we've not thrown a thank you party for Al---we do indeed plan to do so but we are waiting until Al sees a clear spot on his schedule. After focusing for so many years on work, he now has family related matters as a top priority. We'll let you know when the time comes to properly celebrate and thank him for his many contributions.

Although no one had prepared me for the department providing the electron microscopy services for the entire university, it didn't take me long to figure out what an asset Al was in making that possible. He proved to be resourceful in innumerable ways; he was handy with repairs to equipment as well as to helping write several successful grants to private foundations and to NSF for replacement transmission and scanning electron microscopes. Al was just as adept of taking on oversight for other facility and equipment issues and he was ready and willing to volunteer for just about any necessary duty that presented itself; including capturing notes from more than one faculty meeting.

Al was a very capable teacher and over the years, he helped train hundreds of students in both light and electron microscopy. Many of these were in one-on-one sessions in which he assisted students working on graduate research projects in a wide-range of disciplines. Al was also generous with his time, including precious weekend hours, to providing numerous tours of the facility, including demonstration of the instruments.

Establishing a stable funding for this university facility was a multi-year and continuing effort. It required documentation of use and expenditures and Al was diligent in providing the documentation necessary to make the case for assistance from other colleges and the research office. At one point, the

facility was being used by 22 departments in 7 OSU colleges yet about 1/3 of the income came from outside users, most of them coming and then returning as a result of Al's outstanding technical capability.

I don't think that any of what I've shared above is "new" information for those of you who know Al. He did, however, have a special talent that few were aware of and that I came to treasure. Al had the ability to sit through sometimes long, arduous, and upon occasion, circular argument faculty meetings. After they were over, Al would surprise me by sending a quite brief and comprehensive synopsis of the main take-away points. He would often add a fresh perspective that contributed to moving the issue forward in its next venue. That was a special gift to the department.

In summary, I want to say a big "THANK YOU, Al" for all that you gave Oregon State University over the 40+ years of being a member of the department of botany and plant pathology. We were most fortunate to have had you as a faculty member as well as a colleague and friend. Enjoy your retirement as you've earned every moment of it!

by Stella Melugin Coakley

Robert Linderman

Dr. Robert G. Linderman retired in 2007 after more than 40 years service to the USDA-Agricultural Research Service (ARS), the Small Fruit and Nursery Crop Industries in the Pacific Northwest , and the American Phytopathological Society. Dr. Linderman was also a Courtesy Professor in the Department of Botany and Plant Pathology at Oregon State University. He received his Ph.D. in Plant Pathology from UC-Berkeley in 1967 and joined the ARS in Beltsville, MD, as a plant pathologist working on ornamental crops. In 1973 he moved to Corvallis as Research Leader at the Ornamental Crops Research Laboratory (now the Horticultural Crops Research Unit) where he served as research leader for 27 years. Dr Linderman is recognized for his expertise on diseases of nursery crops, mycorrhizae symbiosis, and other beneficial plant-associated microorganisms. His research on the *Cylindrocladium* disease complex on azaleas resulted in the elimination of the problem in most production areas. He is also renowned as an expert on *Phytopthora* and recently worked on the host range, chemical control and modes of persistence and transmission of sudden oak death (*Phytophthora ramorum*). He was instrumental in the establishment the Northwest Center for Small Fruit Research and the Northwest Nursery Crop Research Center which are consortia among the small fruits and nursery crops industries, Agricultural Experiment Stations of Idaho, Oregon and Washington, and the ARS. Dr. Linderman was able to bring together diverse groups of individuals with diverging interests into coordinated and cooperative research groups to solve critical issues associated with these crop categories. His leadership allowed the HCRU to develop into a nationally recognized center for expertise in all aspects of research on small fruits and nursery crop production, with an international reputation for excellence in understanding beneficial plant microbial interactions. Among his many awards he received a Lifetime Achievement Award from the Pacific Division of the American Phytopathological Society in 2000.

from the UDSA-ARS Horticultural Crops Research Unit website

FROM A FORMER CHAIRPERSON

Yes, it is April again. I'm pleased to say that there are a few pictures on my walls and that I do not plan to move my office again any time soon! There is more settling in to do but that will have to wait its due turn. Meanwhile, 2008 has gotten off to be the year of travel and I hope that our paths may cross upon occasion.

This next year will be one of transition for the College of Agricultural Sciences. Dean Thayne Dutson has announced his retirement effective June 30, 2008. He was the Director of the Oregon Agricultural Experiment Station when I was hired in 1988. In 1992, he became Dean of the College as well. I have been very fortunate to have had the opportunity to work with such a dedicated and skilled administrator over the last twenty years and we are grateful for the strong foundation that he has built under the college that will continue to serve us and the university well. An interim dean will be appointed soon and a national search will be held for a permanent replacement. For those wondering, I declined to apply for interim and I will not apply for the permanent position. I value highly the excellent administrative team that

we have in the college and we will continue to work together to meet the needs of the faculty, staff, students and other stakeholders.

You will have also read about an upcoming change of leadership for the department. Dan Arp has finally figured out a way to no longer report to me! Congratulations are due to him as he moves into the role of Dean of the Honors College. It will be great to work with Dan in that capacity as well. A search for a permanent replacement will be underway soon.

Our family is well and will increase by one in June when our eldest, Sarah, and her husband add a new granddaughter to our family. Our youngest was home for 3 short weeks in December from her Peace Corps assignment in Namibia and we have made plans to go visit her for three weeks in August. Life in Corvallis is enriched daily by having our middle daughter and family just one house over.

If you come to Corvallis, I'd love to hear from you. You can find me in 138 Strand Agricultural Hall, at 541-737-5264 or via stella.coakley@oregonstate.edu ---I hope to see you in the year ahead.

by Stella Melugin Coakley

UNDERGRADUATE STUDENT NEWS

Congratulations to the following students who received a B.S. in Botany in academic year 2006/2007:

Ross Williams
Stephanie McKnight
Nancy Pierce
Kathleen Farrell
Rachael Kofahl
Natasha Cerruti

We welcome Natasha Cerruti back to the department to study for a M.S. focusing in plant pathology with Dr. Cindy Ocamb.

Congratulations to our Honor Roll Students Spring and/or Fall terms 2006, and/or Winter 2007:

Sarah Auerlich
Pat Caldwell
Mitchell Corbet
Morgan Curtis
Charity Deatherage
Rachelle Gomez
Thomas Holman
Andrew Johnson
Lauren Keppler
Amanda Ohrn

GRADUATE STUDENT NEWS

Students, staff, and faculty were enthusiastically welcomed back with a world-class potluck organized by The Fabulous 5 (**Lynda Ciuffetti, Chris Mundt, Dianne Simpson, Joey Spatafora,** and **Tom Wolpert**) at Avery Park. All were delighted at the chance to re-connect with friends and give a warm reception to new members to the hallowed halls of Cordley, as well as to take advantage of the bountiful expression of collective culinary expertise. (Special welcome to **Trude Myhre**, Fulbright scholar from Norway, who joined us for fall and winter to work with **Bruce McCune** on lichen collections!) Everyone left the potluck with grins on their faces and overextended bellies.

The Graduate Student Association (GSA) experienced a changing of the guard with elections of all-new officers **Olivia Duren, Cedar Hesse, Patti Wallace**, and **Pek Wijayratne**. The GSA is a student-run organization that works to strengthen graduate student community and voice within the University. We welcome new students and their families to Corvallis with an active orientation program, help to build close working relationships between students and faculty, and organize students to volunteer for community outreach and education events. The GSA facilitates students in taking ownership over their education and communicating their needs to the administration by holding all-student meetings each term, which this year have been made a success by all the great ideas and insights brought to the table by the active participation of current students. The GSA also fundraises in order to support a modest grant program that aids grads to travel to present their work. The GSA wishes to thank this year's grad students for their energy and commitment, and to thank the department for their generous support of our mission.

The intrepid officers quickly cut their teeth by organizing the Annual Graduate Student Beach Retreat, which this year returned to Seal Rock. In addition to taking advantage of the hot tub, we braved the persistent coastal drizzle to venture forth on crabbing expeditions, forest explorations, tide pool

inspections, plant and insect specimen collecting, and mushroom hunting. The sight of the evening table crowded with forceps, microscopes, and insect pins testified that this year's grads are certainly a driven and dedicated bunch. The weekend was crowned with a phenomenal potluck, including those wild-harvested mushrooms, and a fierce foosball tournament. The Beach Retreat plays an essential role in welcoming new students to the department, as well as in strengthening friendships and working relationships before other responsibilities relegate us to our respective offices and labs. Our most enthusiastic thanks to **Dan Arp and the whole department** for continuing to support this event.

But oh, how quickly do the leaves fade and fall. Before we knew it, winter was upon us! The short nights were brightened by great company, great food, and the frenzy of a silent auction at this year's very well-attended Holiday Party. The GSA organized the silent auction to raise money for our Travel Grant program. Our appreciation goes out to all the students, staff, and faculty that donated items and engaged in (perhaps somewhat wine-fueled) enthusiastic bidding wars - we raised $686 at this event! Special thanks to local businesses Avalon Wine and Gourmet, Allan Brothers Beanery, McMenamin's Brewery, and Wineopolis for their contribution of fine auction items. We are also very grateful to **Dianne Simpson** for her artful organizing. The GSA will be further augmenting funds for our Travel Grant program by introducing the newest edition of our collector's line of pint glasses. This year's series continues the 'beer' theme by featuring everybody's favorite ascomycete, yeast! Look out for spring opportunities to purchase!

Botany and Plant Pathology graduate students continue to be lauded for their achievements on university, state, and national levels. As you'll see below, many students adeptly leveraged their awards into producing top-notch research! Graduate students were quite active this year in the professional community by contributing to the advance of scientific understanding at symposiums, conferences, and international institutions.

Don Campenella (Mundt and McEvoy labs) presented a talk, "Genetic variation of an asexual invasive plant in resistance to biological control organisms," at last summer's Ecological Society of America meeting in San Jose, California.

Olivia Duren (Muir lab) was awarded the Oregon Sports Lottery Graduate Scholarship, and also received funding through the Hardman Award for Native Plant Research for her grant proposal, "Born of fire: Chaparral age structure as a clue to disturbance regimes and biological divergence in southwestern Oregon." The grant will allow her to travel to this year's Ecological Society of America conference in Milwaukee, WI (hopefully to present – acceptance pending!).

Sam Fox (Mockler lab) won a National Science Foundation funded week-long training workshop for plant genome annotation at The Institute for Genomic Research (now the J. Craig Venter Institute). Sam was also the recipient of the Sigma Xi award for his proposal on RNA binding proteins and *Arabidopsis* flowering, and a Fuel Ethanol Workshop scholarship award for his proposal to conduct expression profiling analysis of genes involved in cell wall synthesis. Despite all this, Sam found time to write a book chapter titled "The Applications of Ultra-High Throughput Sequencing in Plants," which is currently in the hands of the book's editors.

Jay Frentress (Lajtha lab) won funding in the Institute for Water and Watersheds' second annual call for proposals, for his proposal "Differentiating seasonal sources of stream DOM at large spatial scales using a novel isotopic characterization method". Jay also was awarded an Anita Summers Travel Award in the fall, which he used to travel to the American Geophysical Union's annual conference in San Francisco, CA, to present a poster on a new isotopic technique to characterize dissolved organic matter in streams.

Brian Knaus (Liston lab) has had a busy speaking schedule, presenting four lectures this year to diverse groups. He spoke on "The architecture of infraspecific differentiation: A case study in *Astragalus lentiginosus*" at the Botany meetings in Chicago, IL last June, and then delivered a triplet of talks in the winter: The first with the mysterious title "An Introduction to R" for the Portland, OR, Linux/Unix group; the second on "What's in a name? The taxonomic history of *Astragalus lentiginosus*" for the Corvallis chapter of the Oregon Native Plant Society; and the third in February titled "A fistful of *Astragalus*: Incipient speciation in the American West?" at the OSU Biology Graduate Student's Symposium.

Sierra Hartney (Loper lab) leveraged her Larry Moore Plant Pathology award of last spring to travel to the Seattle meeting of the American Society for Microbiology. There she presented her poster, "Arbitrary PCR for Rapid Identification of Tn5 Insertions in Pyoverdine Genes of *Pseudomonas fluorescens* Pf-5."

Ryan Kepler (Spatafora lab) was the recipient of the National Science Foundation's East Asia and Pacific Summer Institute fellowship for travel to and research in Tsukuba, Japan, hosted by Japan's National Science Museum's Department of Botany last summer. Ryan continued to collect passport stamps with December travel to the Asian Mycology Congress in Penang, Malaysia, where he presented a talk and a poster, both titled "The Systematics of *Cordyceps* Sensu Stricto: Current Perspectives". His poster won third place in the systematics section.

Sunny Lucas (Parke lab) applied her Anita Summers Graduate Student Travel Award of last year towards summer travel to present her poster, "Development of *Phytophthora ramorum* infection and disease symptoms on coast redwood seedlings," at the International Union of Forest Research Organizations meeting in Monterey, CA.

With last spring's receipt of a Graduate Student Association travel grant, **Dani Martin** (Stone lab) joined the Western International Forest Pathologist work conference in Sedona, Arizona, and presented her poster, "Developing techniques for evaluating the susceptibility of root disease resistant Port-Orford cedar to foliar and stem canker diseases."

Hot off the press! **Liz Martin** (Meinke lab) just last month won the Moldenke Fund for Plant Systematics award for her proposal, "Comparative demography of *Astragalus peckii* and effect of herbivory on population growth."

Matt Parks (Liston lab) will be travelling to the Gymnosperm Tree of Life meeting in Miami, FL, in April and to the Botanical Society of America meeting in Vancouver, BC in July to present his recent work and results. Matt's research is focused on the generation of (mainly *Pinus* spp.) chloroplast sequence data, and the assembly of that data into complete genomic sequences for use in answering question on gymnosperm evolution.

Wendy Phillips (Clark lab) was one of 16 winners out of 59 applicants for the Small Grant Program of Prairie Biotic Research, Inc for her research proposal, "The role of arbuscular mycorrhizal fungi in the preservation of native prairies." Her grant application "Mycorrhizal fungal selectivity in the rare plants *Lomatium bradshawii* and *Erigeron decumbens* var. *decumbens*" has also been selected by the awards review committee this year with a recommendation for funding from the Portland Garden Club. These accomplishments are icing on the cake for Wendy's 2007 receipt of a National Science Foundation Graduate Research Fellowship.

Paul Severns (Liston and Wilson labs) has been very productive this year, with primary authorship on three published papers and authorship on seven additional papers that are in review or revision, all at peer-reviewed journals. Paul's three first-author papers are: "Exotic grass invasion impacts fitness of an endangered prairie butterfly, *Icaricia icarioides fenderi*," published in the Journal of Insect Conservation; "Does standing water and predator presence structure a wetland terrestrial mollusc community?," in Wetlands; and "Is it appropriate to rely on seed set to assess candidate plant populations for genetic rescue? A case study with a Threatened species," which came out in Natural Areas Journal. Paul also was awarded this year's Leslie and Vera Gottlieb Research Fund in Plant Evolutionary Biology.

Patti Wallace (Mahaffee lab) won acceptance of her proposal to the Pacific Northwest National Laboratories–Environmental Molecular Sciences Laboratory that funded her playtime on two microscopes, an Environmental Scanning Electron Microscope and a dual beam Focused Ion Beam microscope, to further her research on leaf biofilms.

Pek Wijayratne (Pyke lab) drew a first place prize for her poster, "Seed Longevity of Two Subspecies of Big Sagebrush (*Artemisia tridentata*)," at the Society for Range Management's annual meeting in Louisville, KY.

More locally, graduate students **Cheryl Bartlett, Brad Collins, Olivia Duren, Jay Frentress, Cedar Hesse, Ryan Kepler, Heather Lintz, Dani Martin,** and **Ebba Peterson**, entertained, inspired, and educated us on their research as speakers for the 2007-2008 Botany and Plant Pathology departmental seminar series.

Many congratulations and best wishes to this year's MS and PhD graduates, **Harold Becker, Matt Blakeley Smith, Mary Jo Bushman, Jill Calabro, Rebecca Currin, Nicholas David, Emily Holt, Jennifer Krenz, Dominic Maze, Nate Miller, Amy Peetz, Keith Perchemlides, Lora Perkins, Rachael Roberts, Aaron Smith, Heather Sweet, Kristin Trippe, Stacey Weller, Ann Willyard,** and **Lacey Yarbrough**. Fortunately, their talents are not yet lost to us – we welcome many of these Masters and Doctors back to the department as Faculty Research Assistants and Instructors.

Looking forward, we were excited to host eight exceptional applicants at this year's Graduate Student Recruitment Weekend. These future graduate students met with faculty to discuss their research interests, were led on a campus tour, were awed by a multi-department poster session, and joined current students, faculty, and their families at a fantastic potluck hosted by **Dan** and **Wanda Arp**. Recruits were also afforded a chance to pick the brains of current grad students, as well as an introduction to the natural wonders of Oregon, by a GSA-organized trip to the coast. Miraculously, the sun was out and we were able to impress the out-of-staters with a bevy of wildlife sightings including salamanders, banana slugs, and bald eagles. BPP continues to attract highly-qualified candidates, and we look forward to them joining us this fall.

- **Olivia Duren, GSA President**

RECENT THESIS TITLES

Kristin Trippe (PhD with Lynda Ciuffetti) Characterization of the molecular foundations and biochemistry of alkane and ether oxidation in a filamentous fungus, a *Graphium* species.

Heather Sweet (M.S. with Aaron Liston) The influence of pollinators on the maintenance of mixed mating in a population of the blue columbine, *Aquilegia coerulea* (Ranunculaceae).

Jill Calabro (PhD with Bob Spotts) Biology of sweet cherry powdery mildew.

Rebecca Currin (MS with Bob Meinke) Conservation of *Oenothera wolfii* (Onagraceae): introducing a threatened plant into two protected locations in Oregon.

Nathan Miller (PhD with Cindy Ocamb) Responses and relationships among *Fusarium* species, sweet corn and western spotted cucumber beetles.

Nicholas David (PhD with Russ ingham) Biology and management of *Meloidogyne chitwoodi* with oxamyl on potato in the western United States.

Amy Peetz (MS with Walt Mahaffee) Understanding sporulation and dissemination of *Podosphaera macularis*, hop powdery mildew.

Ann Willyard (PhD with Aaron Liston and Richard Cronn) New perspectives on evolutionary relationships within *Pinus* (Pinaceae) and within subsection Ponderosae (Subgenus *Pinus*).

Rachael Roberts (PhD with Mark Wilson and Deborah Clark) Functional groups, traits and the performance of species in restoration.

AWARDS, HONORS AND PROMOTIONS

Faculty

Dr. Jeffrey Stone was promoted to **Professor (Senior Research)**

Dr. Robert Martin was promoted to **Professor (Courtesy)**

Dr. Niklaus Grunwald was promoted to **Associate Professor (Courtesy)**

Paul Reeser was promoted to **Senior Faculty Research Assistant**

Maryna Serdani was promoted to **Senior Faculty Research Assistant**

Dr. James Carrington received the **2007 Sigma Xi Researcher of the Year Award**

Dr. Niklaus Grunwald received the **2007 American Phytopathological Society Syngenta Award**

Dr. Mary Kentula received the **2007 Merit Award from the Society of Wetland Scientists**

Dr. Russ Ingham was elected **Vice President of the Society of Nematologists**

Dr. Joyce Loper became **Editor-in-Chief of *Phytopathology News***

Students

Ann Willyard received the 2007 **George R. Cooley Award** from the **American Society of Plant Taxonomists**

Jay Frentress received the December 2007 **Anita Summers Graduate Student Travel Award**

Sierra Hartney received the April 2008 **Anita Summers Graduate Student Travel Award**

Paul Severns received the 2007 award from the **Leslie and Vera Gottlieb Research Fund in Evolutionary Biology**

Cheryl Bartlett, Don Campanella, Samuel Fox, Cedar Hesse, Ryan Kepler, Heather Lintz and **Danielle Martin** received **BPP Graduate Student Association Travel Grants**

Olivia Duren received the 2008 **Hardman Foundation Award for Native Plant Research**

Elizabeth Martin received the 2008 award from the **Moldenke Fund for Plant Systematics Travel**

Stephen Meyers received the 2008 **Bonnie C. Templeton Award for Plant Systematics Research**

Wendy Phillips received the 2008 **Katherine R. Pamplin Scholarship** from the **Portland Garden Club**

Jay Frentress received an **Institute for Water and Watersheds, Graduate Student Research Award**

Upekala Wijayratne received 1st place in the PhD category for her poster "Seed longevity of two subspecies of big sagebrush (*Artemisia tridentata*) co- authored with David Pyke, at the annual meeting of the **Society for Range Management**

Tammy Winfield and **Thomas "Wade" Holman** were awarded the 2008 **Ernest and Pauline Jaworski Summer Scholarships for Underserved Undergraduates in Plant Science**

Charity Deatherage was awarded the 2008 **Jean Siddall Memorial Scholarship**

Thomas "Wade" Holman was awarded the 2008 **Thomas C. Moore Memorial Scholarship**

Two BPP Emeriti honored as 2007 Diamond Pioneers

Thomas Allen Jr, plant virologist and artist, and **Kenton Chambers,** plant taxonomist, were among the farmers, ranchers, educators, research scientists, and a noted author honored as **2007 Diamond Pioneers by the OSU College of Agricultural Sciences**. They were added to the College's Diamond Pioneer Agricultural Achievements Registry which began 24 years ago as a way to recognize those 74 and older for their achievements in agriculture and related fields and in their communities. Tom and Ken both retired from the department in 1991. Tom continues to paint his wonderful pictures, many of which adorn the walls of BPP administrative offices and delight us each day. Ken continues his taxonomic work in the OSU Herbarium and with the Oregon Flora Project.

Professor Emeritus honored in historical U.S. Forest Service publication

Lew Roth, Professor Emeritus in Botany and Plant Pathology, was pleased to see his many years of work on pine mistletoe at Pringle Falls recognized in a recent Forest Service publication: "*Ponderosa Promise: A History of U.S. Forest Service Research in Central Oregon*." This 120 page compilation was published last year by the PNW Research Station as PNW-GTR-711. Lew is honored for his more than 50 years of work at Pringle Falls, as the "dean" of central Oregon forest science. He was particularly happy that the author featured the key role that his wife, Lyn Roth played through those years. The story is (re)told of the revelation on mistletoe seed dispersal that Lew gained from seeing his wife's hair matted with mistletoe seeds one day. Lyn's feelings on the matter were apparently not recorded. Contributions to pine research from several of Lew's Forest Service colleagues and OSU graduate students are also noted, including Jimmy Reaves, Dave Adams, Bob Scharpf, Andi Koonce, Mary Ann Strand, Jim Barrett, and Pete Sikorowsky.

IN MEMORIUM

Harold Evans

1921- 2007

Harold J. Evans an Oregon plant physiologist renowned for his pioneering work in nitrogen fixation, died in Lake Oswego at the age of 86.

In 1972, Evans became the first OSU researcher elected to the prestigious National Academy of Sciences. He was professor in OSU's Department of Botany and Plant Pathology from 1961 until he retired in 1989. He received OSU's Distinguished Professor Award in 1988.

Evans studied rhizobia, soil bacteria that live on the roots of legume plants such as soybeans, peas, clover and alfalfa. These bacteria "fix", or convert atmospheric nitrogen into a form of nitrogen, or natural fertilizer, that plants require. Nitrogen fixation is an essential part of any living system.

As director of the OSU Laboratory for Nitrogen Fixation, he and his colleagues discovered may of the basic biochemical and genetic intricacies of nitrogen fixation. For example, they determined that without cobalt, the growth of nitrogen-fixing bacteria, and the success of legume crops are impossible.

Daniel J. Arp, chairman of the OSU Botany and Plant Pathology Department and who succeeded Evans as director of the OSU Nitrogen Fixation Lab, praised Evans for :"bringing luster" to the university. "In his time he was one of only five or six world leaders in the field of nitrogen fixation. He was always generous in sharing the information he learned from his research."

Evans, a native of Woodburn, KY, was born Feb. 19, 1921. During World War II, he was an Army medic in the Pacific, including New Guinea, the Philippines and Australia. He married Elizabeth Mavis Dunn in 1946.

After the war, he received his undergraduate and master's degrees from the University of Kentucky, which named him a distinguished alumnus in 1975. He received his doctorate from Rutgers University.

Evans contributed more the 200 articles to professional journals. He received numerous awards for his contributions to plant science, including the Hoblitzelle National Award from the Texas Research Foundation and OSU's Milton Harris Award for Excellence in Basic Research. He was past president of the American Society of Plant Physiologists.

Survivors include his wife, daughters, Heather and Pamela, two brothers, and two grandsons. Remembrances may be made to the Oregon Humane Society.

taken from The Oregonian October 2007

Jennifer Kraus

Sept. 20, 1955 - Feb. 16, 2008

Jennifer Elaine Kraus, age 52, of Corvallis passed away on Feb. 16, of a glioblastoma brain tumor. Jennifer was born in Saginaw, Mich., daughter of Kenneth George Kraus and Ruth Gwendolyn Hodder Kraus. She is survived by her daughters, Stephanie Ruth Kraus Scheerer and Phoebe Laurel Kraus Scheerer; brother Matt and his wife Rosellen; brother Steve and his wife Janet Clary; sister Bev Whiteherse and her husband Hugh; stepmother, Nancy Kraus; stepbrothers Kirk, Tim and Kris; caring partner Rich Lague and close friend Roy Rowland.

She earned a B.S. in Botany and Plant Pathology from Michigan State University, a Ph.D. in Genetics and Cell Biology (1987) from Washington State University, and received a prestigious National Science Foundation fellowship for research in plant nitrogen fixation. In 1988, Jennifer began work as a molecular biologist with the USDA in Corvallis. From 1992 to 1995 she published the first molecular analysis of antibiotic production in the beneficial bacterium *Pseudomonas fluorescens* Pf-5, laying the groundwork for subsequent research that included the first genomic sequencing of a biocontrol agent. Jennifer was recently acknowledged for her central role in this scientific achievement. In 2000, she joined the USDA plant virology laboratory, making significant contributions in detection and characterization of viruses.

Most recently she worked as Biological Research Technician with **Bob Martin**, and as Research Associate with **Melodie Putnam**.

Jennifer was a talented musician: she taught swing guitar and other classes through Linn-Benton Community College, and shared her music frequently with residents of nursing homes and elder daycare centers. Jennifer also loved the outdoors and was an avid hiker, whitewater rafter, and gardener.

Contributions for a memorial bench and plaque can be made to "Jen Kraus Memorial Fund" and sent c/o McHenry Funeral Home, 206 NW 5th St., Corvallis, OR 97330.

Adapted from the Corvallis Gazette Times February 2008

Georgia Mason

1910-2007

Oregon botanist Georgia Mason died in Eugene-Springfield, Oregon on October 8, 2007 at the age of 97. Ms. Mason played an important role in Oregon botany. She was the Curator of the University of Oregon Herbarium in Eugene from 1969 to 1976 (the Herbarium was later transferred to OSU). Ms. Mason earned a BA degree from Montclair State University in New Jersey in 1941, and an MS from Oregon State University in 1960. She was an expert on the flora of the Wallowa Mountains, and was also interested in wetland plants and weedy invasives of the Willamette Valley. After her retirement from the UO, she continued to live in Eugene and led many educational botany walks in the area. Otherwise she gardened and lived a quiet life with her beloved dogs. She has approximately 2,230 herbarium sheets at the OSU Herbarium. In 1979 she established the **Georgia Mason OSU Herbarium Fund** with an endowment that supports student employment at the Herbarium in Corvallis.

Georgia Mason published two well-respected books: "Guide to the Plants of the Wallowa Mountains of Northeastern Oregon" (UO Museum of Natural History,1975), and "Plants of Wet to Moist Habitats in and Around Eugene Oregon" (self-published, 1982)

from Botanical Electronic News #384 2007

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ALUMNI NEWS

David A. Dalton (MS 1976 with Don Zobel)

Professor of Biology at Reed College, Portland, David Dalton has a new book *The Natural World of Lewis and Clark* published by the University of Missouri Press. He interprets the expedition's findings from a modern perspective to show how advances such as DNA research, modern understanding of proteins, and the latest laboratory methods shed new light on them. David Dalton recounts the expedition's observations and, in clear, readily accessible terms, relates them to principles of ecology, genetics, physiology, and even animal behavior.

John L. Maas (PhD 1968 with Robert Powelson)

After leaving OSU in 1968, I went east to join the USDA-ARS Small Fruit Improvement Program in Beltsville, Maryland. My area of specialization was research on diseases of strawberry, plus some other fruit and nut crops caused by fungi, bacteria, viruses, and phytoplasmas. I retired in 2002 as a GS-15 from the same Laboratory.

I began my doctorate program at Oregon State University, receiving my Ph.D. in plant pathology under Dr. Bob Powelson in 1968, with my dissertation on a *Botrytis* disease of bearded iris. I also worked part-time in the Plant Clinic under Iain MacSwan, as well as being on a Research Assistantship. Prior to leaving OSU, Stan Nemic and I had brief informal conversations with Dr. Donald H. Scott, USDA Small Fruit and Nut Investigations at Beltsville, which resulted in both of us becoming employed in 1968 with the USDA-ARS in Carbondale, IL and Beltsville, MD, respectively, and working with strawberry and other small-fruit crops. I had occasional dalliances also with diseases of pear, apple, blackberry, and pistachio. During my tenure there, I published over 130 research papers, book chapters, and books on diseases and pathogens of strawberry and other crops, host-pathogen interactions, secondary metabolites, phytonutrients, genetics of specific disease resistance, biotechnology, sources of resistant germplasm, and cultivar development and introduction.

I served as editor of several journals and international meeting proceedings, the Compendium of Strawberry Diseases published by the American Phytopathological Society (APS); co-organizer and Chair of the ISHS Strawberry Working Group, and co-organizer, and Chair of the Small Fruit Diseases Working Group of the APS. I also was a member of several research and advisory committees; the former NCR-22 (Small Fruit and Grape Research Committee), Crop Germplasm Committee for Small Fruits and Technical Advisory Committee for the National Clonal Plant Repository in Corvallis, and the Research Committee of the North American Strawberry Growers Association (NASGA).

My contributions to the small-fruit industry included the introduction of two thornless blackberry cultivars (Triple Crown and Chester Thornless), one black raspberry cultivar (Early Sweet), and 13 strawberry cultivars (Delmarvel, Northeaster, Latestar, Mohawk, Primetime, Lester, Earliglow, Pelican, Winona, Lateglow, Tribute, and Tristar, and patented MNUS-138), and release of two parental strawberry clones that are highly resistant to bacterial angular leaf spot disease, caused by *Xanthomonas fragariae*. These clones are currently being used in several breeding programs to develop cultivars resistant to this devastating strawberry disease.

Other highlights include numerous invited talks at national grower and scientific meetings, at international symposia in Europe and Asia, and, by invitation in 1986, consulted and lectured on strawberry culture and disease research at institutions in The Peoples' Republic of China. And, I was honored several times by NASGA for work on diseases of strawberry. The American Pomological Society recognized my career accomplishments in small fruit cultivar development by presentation of the Wilder Medal in 1999; and I was "Knighted" in Antwerp, Belgium, for continued work in fostering international cooperation in strawberry research through my efforts in the ISHS Strawberry Working Group to bring strawberry researchers together at ISHS strawberry symposia and at International Horticultural Congress meetings; co-recipient of the 2001 Outstanding Fruit Cultivar Award from the ASHS Fruit Breeding Working Group ('Chester Thornless' blackberry); and received numerous grants for research on strawberry pathology and physiology.

Following retirement, I have continued my interest and activities in the strawberry world as President of the North American Strawberry Growers Research Foundation, the strawberry research granting arm of the North American Strawberry Growers Association, and continue consulting with the ARS Small-Fruit Program at Beltsville. The Research Foundation annually provides research grants, "seed money" in strawberry research programs in North America.

Funds for these grants are contributed by strawberry nurserymen as an investment in the future of the strawberry industry nationwide. Also, following retirement, my wife and I built a new house in West Virginia where we share competitive activities with dogs and Civil War interests. Of the latter, I am active in individual and team shooting competition using black-powder Civil War-period arms in the North-South Skirmish Association (N-SSA) and I presently am Commander of my Unit. The N-SSA national range is “fortunately” located 30 minutes from our home.

Stephen J. Danko (PhD 1981 with Malcolm Corden)

I graduated from OSU with a PhD in 1981. My major professor was Mal Corden. The title of my dissertation was "Production and characterization of antifungal compounds produced by tomato plants inoculated with *Fusarium oxysporum* f. sp. *lycopersici*". I'm currently working as the Manager of Regulatory Affairs for a small biotech company in Palo Alto, California.

I study genealogy as a hobby, although I've also conducted some genealogy research for clients. I'm presenting lectures on genealogy at the San Mateo Genealogical Society on March 29, at the California Genealogical Society on April 12, at the United Polish Genealogical Societies Conference on April 18-21, at the Southern California Genealogy Jamboree on June 27-29, and at the Genealogy Seminar at Sea from October 25-November 1. I am currently studying for a Professional Learning Certificate in Genealogical Studies from the National Institute for Genealogical Studies.

I started my genealogy blog at http://www.stephendanko.com two years ago and I write something on the blog almost every day. Usually, I show documents important in my own family history, but sometimes I write about other things. On a couple of occasions, I've even posted photographs of plants and fungi - which makes me think that sometime I should post some images of diseased plants! My blog receives over 80,000 visitors annually.

All my grandparents were Polish immigrants, which has led me to concentrate on 20th Century American Records and 18th and 19th Century Polish Records. My research in Poland has led to a new appreciation for European History and Languages. In the course of writing the blog, I’ve reconnected with lost cousins in Poland, the United Kingdom, and the United States.

I am a member of the Association of Professional Genealogists, the National Genealogical Society, the California Genealogical Society, the Polish Genealogical Society of America, and the Polish Genealogical Society of California.

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 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, Mary L. Powelson Fund, Donald B. Zobel Fund, Dallice I. Mills Seminar Fund, Mark T. Patterson Fund, James Sandeno Memorial Fund, Harry K. Phinney Memorial Fund, MacSwan Memorial Fund, F. McWhorter Memorial Fund, William Chilcote Memorial Fund, Harold Evans Memorial Fund,** and the **E. Otto 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.

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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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