Department of Botany and Plant Pathology
2082 Cordley Hall, Corvallis, OR 97331-2902 Ph 541-737-3451/Fax541-737-3573
http://www.bcc.orst.edu/bpp

Thirteenth Edition April 2002

FROM THE DEPARTMENTAL CHAIRPERSON

Dear Alumni and Friends,
Is it already time for the Thirteenth Edition of Posies and Pathogens? I think that I have aged more rapidly this last year if one counts by how fast the time seems to have passed. And perhaps this is true for everyone this year. We have all been impacted by the events that began on September 11, 2001. In addition to the things that have followed as a result of the acts of terrorism, many of us have been challenged to meet other unexpected events--- quite a few long-time employees at Oregon State University have lost their jobs or been forced to take lower paying jobs due to the budgetary constraints the university found itself in. Others have experienced or are experiencing the illness or death of a family member or friend, the departure of a colleague for a new job, or the discovery that something we thought we could count on is, in fact, not as expected. Despite these bumps, or perhaps because of them, our department members continue to pour heart and soul into our teaching, research, and extension programs. As a result, our unit continues to thrive remarkably well even in the face of an institution with serious fiscal limitations related in part to the severe economic downturn in the Oregon economy.

We have several promotion and tenure cases to celebrate. Effective July 1, 2001, **Melodie Putnam** was promoted to Senior Instructor with indefinite tenure; **Joseph Spatafora** was promoted to Associate Professor with indefinite tenure; **Jeffrey Stone** was promoted from Research Assistant Professor to Research Associate Professor; **Valerian Dolja** and **David Sugar** were promoted to Professor, and **Valera Peremyslov, Sherry Pittam,** and **Teresa Sawyer** were promoted to Senior Faculty Research Assistant. Our faculty received a variety of awards: **Joseph Spatafora**, OSU Faculty Teaching Excellence Award; **Christopher Mundt** and **Joyce Loper** were selected as Fellows of the American Phytopathological Society (APS); **Mark Wilson** was nominated for the Graduate Carter Award and **Mark Patterson** for the Undergraduate Carter Award for excellence in teaching. From the College of Agricultural Sciences, **Christopher Mundt** received the F.E. Price/Agricultural Research Foundation Award for Excellence in Research. It takes the effort of many people to create the nominations (which are always kept secret) and a special thanks is due to **Don Armstrong** and **Susan Jepson** and an unidentified legion of letter writers for the incredible effort they make in support of the award nomination process. Recognition is also due **Melodie Putnam** who became President of the APS Pacific Division.

We have added three new courtesy assistant professors this past year: Drs. **Richard Cronn, Jim Dombrowski,** and **Tom Kaye** have joined us and expect to take an active part in graduate student training in the years ahead.

We continue to make inroads on replacing teaching equipment and our systematics teaching laboratory is home for 24 new dissecting microscopes that were unpacked the second week of Spring term 2002. We are grateful to **Anita Summers** who added $ 2000 to an earlier anonymous gift of $ 4000 that has made possible the purchase of a stereo microscope and digital camera to capture and project images in our teaching laboratories. We've also been able to add a laptop computer/video projector for use in research presentations. It has been very gratifying to be able to continue to add new pieces of equipment in support of our classes.

One of the bright spots for the department in May 2001 was a several day visit and seminar

from Dr. John S. Niederhauser, plant pathologist and recipient of the 1990 World Food Prize. We are very pleased and honored that John will be returning in June 2002 to receive an Honorary Doctorate at the OSU Graduation.

On the scientific front, I have had the opportunity to make two international trips related to my ongoing interest and involvement in global change issues as they may impact the occurrence of insect pests and pathogens. Last July, I attended meetings in London, UK and a workshop near Copenhagen, Denmark, to plan a new activity in the Global Change Terrestrial Ecosystems (GCTE) Focus 3 project that I have been involved in. Effective January 2002, I joined the Scientific Steering Committee (SSC) for GCTE as the sole representative for the research community concerned with pests and pathogens. The annual SSC meeting was held in Sydney, Australia in late March 2002 and that proved to be a good trip because it gave me a chance to think about global change issues that may impact our ability to feed the world's population in the years ahead. I hope this next year will bring more time to focus on these issues.

This year has brought changes in the location of two of our daughters. Our oldest, Sarah, became the interim pastor of the Piedmont Presbyterian Church in northeast Portland on January 6, 2002. She was ordained as a Presbyterian Minister on March 17 (when I was in Australia) and we are enjoying having her in the same city as her middle sister Miriam and brother-in-law Darin. Martha is a freshman at the University of California at San Diego (Sarah's alma mater) and is likely to spend the summer with one or the other sister in Portland while working or taking a class or two. At this point in time, my husband Jim and I are planning to spend a sabbatical period in Washington, D.C. from October 2002 through May 2003. Jim will be at NASA Goddard at Greenbelt, Maryland and I am yet uncertain exactly what tasks that I will undertake at one of many agencies in that area. It will be good to have a change of pace---this marks almost 14 years that I have served as chairperson of our department and I am very confident that the department will continue to thrive regardless of my absence.

Thank you for all the e-mails and letters that we've received and we ask that you continue to send them so that we can include them in next year's edition of our newsletter (which can also be found on our website). Please take time to enjoy each day---life is short and we don't know how much time that we have to live it or to share it with our family and friends. Make each day count in some special way.

Sincerely,

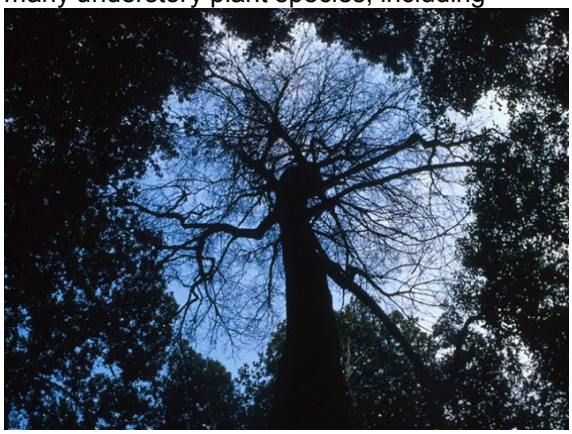
Stella Melugin Coakley
Professor and Chairperson
coakleys@bcc.orst.edu

FROM OUR ON-CAMPUS FACULTY

Dr. Everett Hansen

Sudden Oak Death in Southwest Oregon

A disease that continues to kill thousands of oaks in California has recently been found in southwestern Oregon. What is now called Sudden Oak Death or "SOD" was first reported in 1995 in Mill Valley, California. Since that time, large numbers of tanoak and coast live oak have died in the forests of the counties surrounding San Francisco Bay. Up to 80 percent of the oaks in some stands have been killed. The causal agent, *Phytophthora ramorum*, a previously undescribed species, also causes leaf necrosis and twig dieback on many understory plant species, including



horticultural plants such as rhododendron.

The Situation in Southwest Oregon

The disease was located and confirmed in Oregon in August 2001 via the cooperative aerial survey flown by the USDA Forest Service and Oregon Department of Forestry. Patches of dead tanoak were mapped and later visited and evaluated on site. Nine sites, ranging from less than one acre to approximately 8 acres in size, all located within two to three air-miles of

Brookings, Oregon, have been confirmed with Sudden Oak Death. Tanoak, evergreen huckleberry, and wild rhododendron are affected. Southwest Oregon has the hosts and the climatic conditions preferred by the pathogen; if established, the SOD *Phytophthora* would pose an especially great hazard to many wildland ecosystems in Oregon, as well as threaten the horticultural industry of the state.

This is a new disease; our ignorance outstrips our knowledge. A substantial research program has sprung up to try and fill the gaps. In Oregon**, Everett Hansen, Jennifer Parke,** and **Bob Linderman**, from the Department of Botany and Plant Pathology and USDA Horticultural Crops Lab are heavily involved. Our research focuses on detection and monitoring protocols, host range in wild and cultivated plants, and epidemiology.

Keeping Oregon SOD-Free

In California, The Oak Mortality Task Force, comprised of hundreds of plant pathologists, entomologists, ecologists, arborists, watershed managers, recreation specialists, and California state and local politicians, representing more than 100 agencies and organizations, tries to coordinate the SOD effort. In Oregon, by contrast, a new “gang of four,” representatives of the Oregon Department of Agriculture, Oregon Department of Forestry, the USDA Forest Service, and Oregon State University, has taken up the challenge. What we lack in numbers and money we more than make up with energy and quick reactions. All Oregon lands within 1 mile of the mortality centers are subject to Oregon and federal (APHIS) quarantine, barring the transport of host materials, and an eradication effort is underway. All host plants within 50-100 feet of symptomatic plants are being cut and burned in the first phase of this operation. The total treated area is about 40 acres. Eradication programs are often unsuccessful, and we may well fail here. But considering the ecological and economic values at risk, and the very early detection, we felt we had to try. We think we have a better than fighting chance of holding the line in Oregon. Time will tell.

FROM OUR OFF-CAMPUS FACULTY

Dr. James Dombrowski...

Back in the 60s developing new types of grass was the dream of many, well "I'm living the dream!" Did you know that over 60% of the world's supply of forage and turf grass seed are produced in the Pacific Northwest ?

I arrived in Corvallis in the fall of 2000, as a new Research Plant Molecular Geneticist at the USDA-ARS National Forage Seed Production Research Center located just down the road from Cordley Hall. I was very happy to join the department as a courtesy Assistant Professor in May of 2000.

As many of you know developing a research program from the ground up is never easy task, but I survived my first year, and I am excited about the days ahead. Currently we are pursuing two avenues of research in my lab.

Grasses infected with endophytic fungi display enhanced tolerance to a variety of biotic and abiotic stresses. Yet very little is known about the molecular mechanisms of the symbiosis that increase host stress tolerance or the nature of the communication between the endophyte and grass. In my laboratory we hope to identify bioactive peptides/compounds produced as a result of tall fescue/endophyte symbiosis (*Festuca arundinacea/Neotyphoidium coenophylum*) that mediate increase stress tolerance in the plant. A better understanding of this communication network will provide knowledge that can be applied to enhance stress tolerance in a spectrum of grasses, some of which may not serve as endophyte hosts.

Forage and turf grass quality diminishes during the transition from vegetative to reproductive growth. Liginification reduces forage digestibility and the increased energy partitioning for seed development reduces vegetative tissue production and nutritional content. Delaying or inhibiting the transition to reproductive growth would improve forage and turf grass quality. Therefore we will identify

genes that regulate flowering in grasses and use that knowledge to develop an approach to control the onset of reproductive growth in end-use environments. In addition, flowering control genes such as those related to vernalization, have the potential to be used as markers for development of a diagnostic assay to determine the amount of annual ryegrass contamination in perennial ryegrass lots. A new diagnostic test will improve the quality of turf grass for consumers and reduce the financial hardship that grass seed producers suffer as a result of inaccuracies associated with existing tests.

On a personal note, I was born and grew up in the city of Detroit, Michigan. In my youth I hitchhiked across the country, and worked a variety of interesting jobs before settling on a career in science. I received my Ph.D. under Natasha Raikhel at Michigan State University working on mechanisms of protein transport within the plant cell and conducted my postdoctoral research for Bud Ryan at Washington State University working on various aspects of the wound response. I love the ocean. I enjoy hiking, camping, photography, jazz and good conversation.

OUR ADMINSTRATIVE SUPPORT STAFF
By Itsue Pfund

The support staff is busy as usual keeping up with the many activities in Botany and Plant Pathology. Last winter (2001) we had our first bake sale. Staff members baked their favorite goodies and proceeds from the sale were donated to OSU's Annual Food Drive. We just completed this year's bake sale for the 2002 Food Drive and surpassed last year's proceeds. Our donations from the sale were more than triple that of the previous year, thanks to the generosity (and sweet tooth) of our faculty and students.

Currently, staff members are busy making arrangements for the upcoming graduate student recruitment weekend. Prospective graduate students will be visiting campus to meet with faculty and see if OSU is where they want to continue their graduate studies.

Our staff continues to attend meetings and workshops to keep pace with the many changes taking place at Oregon State University. Some of our members are involved in issue groups, mentoring groups and discussion groups around campus.

Overall, we are very fortunate to work for such a great group of people in BPP and hope to continue doing what it takes to help the department run smoothly and efficiently.

ABOUT OUR UNDERGRADUATE STUDENTS

Botany and Plant Pathology congratulates 13 students receiving B.S. degrees in Botany in 2001.
Andrew Neill, Jesse Mitchell, Amy Bartow, Jim Davis, Amber Wierck, Kent Davis, Michael Daly, Karin Rohland, and **Kathryn Sackett** completed in June 2001.

Jerika Duran and **Govardhana Bichel** completed in September 2001. **Melissa Olson** completed in December 2001 and **Cheryl Shippentower** completed in March 2002.

We welcome back **Kent Davis** who is pursuing an M.S. with Don Zobel and **Kathryn Sackett** who is pursuing an M.S. with Chris Mundt.

THE UNDERGRADUATE BOTANY CLUB
By Jonathan Reed and Jay Well

The Botany Club is having a great year! Participation in the Botany club was at an all time high this year with a solid core of eight members; as a result, we were able to have many interesting activities, including a five-day spring trip to the Sequoia National Park.

During fall term we had two speakers: **Don Zobel** and Bob Ross. Don Zobel discussed the flora that he encountered on a recent trip to a volcanic region that is part of the former USSR and Bob Ross gave a helpful presentation on plant photography.

During winter term we worked with **Scott M. Holub**, a graduate student of **Kate Lajtha**, in performing a scotch broom survey at Roth Forest. The survey involved both club members and other volunteers. The group mapped plots and measured the density of scotch broom, half of which was subsequently removed. Hopefully the information collected will aid future studies.

The spring trip this year was an extraordinary success. Eleven of us left on a Monday, early, and arrived back in Corvallis late on the following Friday. We drove eighteen long hours in a 15-passenger van and one cargo van and arrived late in South Fork River campground in the southern end of the Sequoia-Kings National Park. The primitive campground provided

ample access to several trailheads that led up the sides of the canyon at the southern end of the park. The unfortunate aspect of South Fork is that the access road is an hour-long death-defying trip along tight corners and steep sides. We spent the first day hiking along the western side of the canyon and worked our way up to a sequoia grove. The trees were truly giant and awe-inspiring. After passing through the grove, a part of the group worked its way further up to a view of the sequoias from above. The giant trees prominently poked out above the surrounding forest canopy, making their location easy to spot. The second day we drove into the main part of the park and visited the museum. Several people hiked up to Moro rock to take in a view of the park. The third day we remained in South Fork campground and hiked around the surrounding area in several different groups. Finally, on Friday, we began the long trip home early in the morning. One unexpected disappointment from visiting the Sequoia-Kings National park is that that towards the early and late afternoon the canyon fills with smog making the encroachment of pollution on this natural treasure evident. Fortunately, this did not deter us from enjoying the flora and the beautiful landscapes of the park.

On May 5th the Botany club will have a booth at the Spring Garden Festival. We have cultivated a number of native plants that were graciously donated in hopes that we can sell them at the festival to raise funds. As an additional twist this year, we are going to set up a couple of educational activities. First, we will have a plant characteristics game for children in which participation will result in a lollipop award. Second, we will have a plant i.d. game for adults and they will be able to key from the "Handbook of Northwestern Plants" by Gilkey & Dennis.

The Botany club has participated in a number of volunteer activities this year. Every year the Botany club participates in Museum Days at La Sells Stewart Center. This year the club participated in both fall and spring sessions. Additionally, the club has devoted the last two years to developing a Botany presentation aimed for 3rd-4th grade audiences in Portland Area schools as part of the Science Connections program. Spring term, we were finally able to present our hard work and it was a smashing success. We are continuing to visit additional Portland schools throughout the remainder of spring term.

ABOUT OUR GRADUATE STUDENTS
By Anne Halgren

Last May, the torch was passed to new Graduate Student Association representatives **Rachael Andrie** (President), **Anne Halgren** (Vice President), **Todd Temple** (Treasurer), and **Kristin Skinner** (Marketing Manager). Working as a team to coordinate social events and seminar speakers has been great fun, though it's given us a greater appreciation for what Stella and all the administrative staff orchestrate on a daily basis! Together we coordinated a Winter Social, complete with potluck, dancing, and an auction, featuring **Djibo Zanzot** as the auctioneer. Thanks to all of the auction donors and high-rolling bidders, the auction raised $1100 for student travel grant funding! We are also raising money with the premiere of a new BPP T-shirt, featuring a design by **Sarah Jovan** and a print of *Castilleja chambersii*.

In the fall, we welcomed 13 new students to the department. The new school year began in style, first with a department picnic at Avery Park and then a grad student weekend at the coast, complete with hiking, plant and fungi identification, hot tub, and amazing ocean views (thanks **Stella**!)

Several students received prestigious honors this year. Notably, **Teresa Sweat**, a student with **Tom Wolpert**, was awarded the Howard Hughes Medical Institute Predoctoral Fellowship. This funding will go toward her project of genetically, biochemically, and morphologically characterizing programmed cell death in *Arabidopsis*. **Kate Worster**, a student with **Chris Mundt**, was awarded The Land Institute's Natural System Agriculture Fellowship in May of last year. She attended their conference in Kansas last summer and plans to attend again this summer. **Rachael Andrie**, student with **Lynda Ciuffetti**, received an Honorable Mention for the 2001 National Science Foundation Graduate Research Fellowship for her proposal entitled "Evaluation of a Mechanism for Genetic Exchange in the Environment and its Role in the Evolution of Pathogenesis".

Kentaro Hosaka traveled with his professor **Joey Spatafora** to the "Deep Hypha" Conference at Louisiana State University in Baton Rouge, LA, which just happened to coincide with Mardi Gras! The year wouldn't be complete for the plant pathology students without the annual migration to the American

Phytopathological Society conference, held in the pre-Olympic Salt Lake City. Students in attendance were **Kentaro Hosaka, Gi-Ho Sung, John Bienapfl, Todd Temple, Ionannis Tzanetakis,** and **Anne Halgren**.

This year, Stella has given the graduate students the opportunity to nominate three speakers from outside the department to give a seminar in the BPP seminar series. The first invited speaker, **Dr. Dennis Gonsalves**, gave an outstanding seminar on virus-resistant transgenic papaya. Our next student-nominated speaker, **Dr. Jeff Dangl**, will give a seminar co-sponsored by the Center for Gene Research and Biotechnology, entitled "Surveillance of Disease Effector Proteins by Plant Resistance Gene Products." Our final spring term speaker will be **Dr. Sarah Grant**, delivering the first Dr. Bonnie C. Templeton Annual Lecture entitled "Genetic control of sex determination in dioecious plants".

We look forward to future professional conferences, a grad student spring rafting trip, and our fast-approaching fieldwork season!

FROM THE ELECTRON MICROSCOPE LAB
By Al Soeldner

A continual stream of literature discussing new or improvements to analytical instrumentation crosses my desk. One recent report described the design specifications and development of the world's first one million volt transmission electron microscope to incorporate a field emission electron source. Without presenting the technical complexities of field emission or details about thermionic electron emission, which pre-dates field emission as the favored technology, let it suffice to say that a field emission electron source is superior to a thermionic source because the resulting beam of electricity that illuminates a specimen is much more intense, much tinier in diameter, and the electrons within the illuminating beam are much more uniform in terms of the energy carried by these electrons. Each of these characteristics carry important imaging and analytical benefits. The primary benefit of a million volt instrument over, say, a 100 or 200 kilovolt microscope is that thicker specimens, which are easier to prepare and more representative of the bulk specimen material, can be penetrated by the higher voltage machine.

Million volt transmission electron microscopes, and even a few microscopes that operate at three million volts, have been in service for nearly two decades. It is the use of a field emission source that represented the technological development discussed in the literature. To house a one million or three million volt transmission electron microscope requires a three to four story tall building and about fifteen hundred square feet of floor space. The new one million volt field emission instrument also requires a three to four story building, but requires three to four thousand square feet of floor space, much of it devoted to system's electronics.

Coincidentally, when the report announcing the one million volt field emission source microscope arrived, it shared space on my desk with a note from the history of the development of the first transmission electron microscope. In the 1920's a laboratory in Germany was constructed to study the effects of lightning striking high voltage power transmission lines. Max Knoll and Ernst Ruska, who eventually constructed the first transmission electron microscope, were working in this laboratory. One of the principal analytical tools they were using to quantify lightning-power line interaction dynamics was an oscilloscope, but they were unhappy with the quality of the display their circa 1920's oscilloscopes could produce. Hans Busch in another laboratory had been using an electro-magnetic coil to control a beam of electrons so as to bring it to a focused point. Ruska borrowed this idea, installing a pair of the Busch electro-magnetic coils in series with one another in an oscilloscope to thereby achieve a smaller point of focus which greatly improve the sharpness of the trace formed in the oscilloscope. Interestingly, this innovation soon lead Ruska, using the same principal, to construct the first transmission electron microscope. That first microscope formed an image of a platinum mesh grid at a maximum magnification of 13x! That performance might be contrasted with today's the one million volt field emission source instrument, which offers a maximum magnification of nearly 1.5 million times and resolves structures down to about one Angstrom (one ten millionth of one millimeter).

But, is it not also interesting how the oscilloscope, a tool we routinely use with electron microscopes for signal and fault tracing, is really the great grandfather of these modern electron microscopes?

FROM THE BPP FIELD LABORATORY
Greetings from the farm,
By Aaron Henderson

Another year gone by already and it seems Y2K was just yesterday. The growing season started off very warm with 90-degree temperatures in May, and with less than average rainfall. Without the rain the irrigation pumps were running all day and into the night. On a Thursday morning in the middle of June, the inside well grew tired and burned out. We had two-week-old corn in the ground scheduled for watering on the Friday morning, and this presented a real problem. Fortunately, by the Friday afternoon we were watering with a new pump and back to normal.

By August we were faced with a catch 22 hoping the water wouldn't run out, but hoping temps would hold for ripening the crops. Despite a few bumps in the road we had a good season. Everything worked itself out.

If you drive by the farm you may notice a new Hop yard and a few more plots filling in the gaps. With more plots comes more research and progress. We are looking forward to this season and are excited about opportunities 2002 holds.

Until next time !!

RECENT THESIS TITLES

Jason Alexander, M.S. (Aaron Liston) Genetic diversity of populations of *Astragalus oniciformis* using Inter-Simple Sequence Repeat (ISSR) markers.

Kelly Amsberry, M.S. (Robert Meinke) Conservation biology of *Plagiobothrys hirtus* (Boraginaceae). Evaluation of life history and population enhancement.

Marie Antoine, M.S. (Bill Winner) Ecophysiology of the cyanolichen *Lobaria oregana.*

Jennifer Goodridge, M.S. (Mark Wilson) The effects of native plants on non-native plant abundance in a restoration setting: differences among native species and the predictive ability of species traits.

Jenifer Hutchinson, M.S. (Bruce McCune) Riparian lichens of northern Idaho.

Thomas Kaye, Ph.D. (David Pyke and Pat Muir) Population viability analysis of endangered plant species: an evaluation of stochastic methods and an application to a rare prairie plant.

Dylan Keon, M.S. (Pat Muir) Factors limiting the distribution of the sensitive lichen *Usnea longissima* in the Oregon Coast Range: habitat or dispersal ?

Pablo Rosso, Ph. D. (Everett Hansen) Distribution and predication of Swiss Needle Cast of Douglas-fir in coastal Oregon.

Andrea Ruchty, M.S. (Bruce McCune) The association of epiphytic macrolichens and bryophytes with riparian stand types along a Valley continuum, Oregon Coast Range.

Loretta Winton, Ph.D. (Everett Hansen) Phylogenetics, population genetics, molecular epidemiology, and pathogenicity of the Douglas-fir swiss needle cast pathogen *Phaeocryptopus gaeumannii*.

WHAT AN OSU FOOTBALL PLAYER SAYS ABOUT OUR BOTANY CLASSES !!!!!!!!
Taken from The Sporting News, May 7, 2001

"He came to Oregon State four years ago as an undersized, under-recruited tailback whose better sport was baseball. He'll likely leave as the second-leading rusher in the history of the Pac-10. Meet Heisman hopeful Ken Simonton, the only player in Pac-10 history to run for 1,000 yards in each of his first three seasons.

Before he showed up in Corvallis, Ore., the Beavers had endured 27 straight losing seasons. With Simonton leading the way, they've been to two straight bowls, including last year's Fiesta Bowl rout of Notre Dame. In the first installment of a weekly series of chats with college football personalities, TSN talks "One-on-One" with Simonton …….

TSN: What's the most interesting class you've taken in college?
KS: One was a botany class. Now, you would never expect to see a black man sitting in a botany class learning about plants. But it's one of the most interesting classes I've ever taken. I've been just amazed walking around Oregon ever since that class, saying, "Oh, that's a conifer." Really breaking it down……"

ABOUT OUR ALUMNI

Amy R. Tuininga (M.S 1996) is Assistant Professor at Fordham University, Armonk, NY. Her Ph.D. was completed at Rutgers University.

Shannon Clery (B.S. 1996) is a graduate student in environmental education at Southern Oregon University. Her thesis is on the ecology of the center of the Siskiyous. She was recently hired as the program coordinator for the Siskiyou Field Institute (SFI) and has an article in the SFI's Quarterly Journal of the Natural History for the Klamath-Siskiyou Region, Winter 2001 (Volume 2 No. 1) "Journey to the Center of the Siskiyous".

Peter Ryan (B.S. in Botany, 1982; M.F. in Forest Science, 1989)
Natural Resource Consultant with Mason, Bruce & Girard, Inc. (MB&G), Portland, Oregon. Since completing his Botany. degree at OSU, Peter spent 5 years in Africa with the Peace Corps, and 7 years working as a field biologist with the U.S. Government. For the past 5 years, Peter has worked for MB&G. As a consultant in Oregon, Washington, California and Alaska, Peter performs wetland assessments, rare plant surveys, and noxious weed inventories.

Of his time at OSU Peter says "Oregon State provided me with excellent foundation in botany and forestry, and I am deeply indebted to the fine professors I had the privilege to study with there... including **Ken Chambers, Don Armstrong**, and John Tappeiner."

LETTERS FROM ALUMNI

From Anne M. Bangs (B.S. 1998)
"Dear Richard Halse,

Long time no communication!! I hope you remember me...I came to OSU in Fall of 1995 and you were my advisor and I was in the botany club and you were one of my favorite people at OSU.

Part of my inability to keep in touch has been an intermittently reliable email system. Anyway, I have been busy, and I think about you (and everyone in the botany department) so much more than you would know by my frequent communication. I hope all is well in the department and that the undergraduate club is still going strong, and that the herbarium hasn't burned down or anything.

Chris (my husband) and I have had many things change in our life. Chris went back to school and got his Master's degree in teaching. His first year he taught at Scappoose High School, and when they didn't renew his contract he found a job at Canby High School (smallish town about 10 miles from where we both grew up). I have been working in the immunology lab at the VA Medical Center until this last May. We bought a home in Canby this spring and moved in in June. We had our first child, a baby boy (Lincoln Christopher Bangs), on May 17. My job at the VA was a great one and I learned a lot, but the grant it was being funded through was terminated on June 30 and was not renewed.

How is everything going? Is everyone still there? **Aaron Liston, Dr. Ciuffetti, Dallice Mills**, you, **Stella Coakley, Dr. Armstrong**, and all the others?
How is the herbarium doing? I miss OSU so much sometimes--I guess it is true that the college years are some of the best. "

From Grant Mitman (M.S. 1983)
"I imagine some of the faculty may have thought of me as a pathogen when I was around the Botany Department, but here is an alumni newsletter for you anyway. Upon receiving my degree with **Dr. Harry K. Phinney** for unraveling the life cycle of *Halosaccion landiforme*—a red marine alga (the one that squirts)-I loaded up my orange VW microbus and headed east for Halifax-Nova Scotia-finished my PhD degree-on *Porphyra* (Nori) another red alga -the one on sushi - eventually in 1992 but I had already been teaching as an Assistant professor for 4 years-mostly at St. Francis Xavier University in Antigonish-after a brief stop in Springfield MA-to teach at American International College for a year-I headed back west to Butte,Montana and Montana Tech where I am now an Associate Prof in Biology. Oh yes, it seems to me I did

get married to a nice Nova Scotia girl Kim in 1985 and we still are married and enjoying the wilds of Montana.

My current research interests are algal remediation of Mine waste and I am well funded and always have funded openings for masters students. I recently had an article published on my work in "Discover" magazine, Vol. 21, No.12 (Dec 2000)."

From Douglas Ripley (PhD 1984)

"Dear Stella,

I got your letter yesterday and wanted to thank you for thinking of me and checking up on my situation! I had moved to a new job last June so was not anywhere near the Pentagon on the 11th of September. Actually, I was attending an environmental meeting at the Air Force Academy in Colorado so I was a long way from the tragedy. Even before the tragic events of the 11th of September, I had decided that it was time for me to move on from my position at the Headquarters Air Force Environmental Division. An opportunity occurred for me to move to the Headquarters of the Air National Guard where I could continue managing natural and cultural resources conservation programs but with considerably less stress than I had been encountering at the Headquarters Air Force. So, in June I moved to this new job that is located at Andrews AFB, about ten miles east of the District of Columbia. Since I live much closer to Andrews than the Pentagon, my commute has vastly improved as well. As you may know, the Air National Guard has at least one unit in every state and territory so there are many interesting programs in which I have become involved. There are even two units in Oregon (Kingsley Field near Klamath Falls and Portland) with which I have been working on several programs so I hope I will be able to get out to Oregon in the not too distant future. I am still representing the Air Force on a number of national issues in which I had a particular interest and which I hope will continue for the two years I have remaining before my retirement. Thanks for the update on the Department, Stella. It's always nice to hear how things are going and I certainly hope to get by for a visit soon.

Best wishes,
Doug"

J. DOUGLAS RIPLEY, Ph.D.
Air National Guard
Natural and Cultural Resources Program Manager
ANG/CEVP
3500 Fetchet Avenue

From Laine Young (B.S. 1990)

"While completing courses in the Botany/Plant Pathology Department from 1988-1990, I pursued minor studies in Political Science. Plant Pathology remained a primary interest

though political science classes revealed a need for deeper linkage between policy decisions and scientific logic and knowledge. In 1991 I broadened my pursuits in education to include environmental policy by obtaining a Master of Environmental Studies degree from The Evergreen State College. During my studies at both colleges, I spent four summers as seasonal research biologist in the offices of Washington State Forest Pathology (Department of Natural Resources, Washington). I spent an additional four years with planning agencies in the City of Salem and Polk County. I am now an environmental planner with Herrera Environmental Consultants and serves as project manager for Oregon and Southwest Washington regions. Now with 15 years experience in environmental and land use planning, my projects include natural resource assessments, watershed assessment and restoration, wetland delineation and mitigation, environmental permitting, NEPA/Washington SEPA compliance, and policy analysis in water quality. My Master's thesis focused on the effectiveness of Total Maximum Daily Load policies in pollution reduction within watershed management strategies, and other alternatives for watershed restoration."

To contact me:
Laine Young
Land Use Planner and Environmental Scientist
Herrera Environmental Consultants
322 NW Fifth Avenue, Suite 309
Portland, Oregon 97209
(503)228-4301 or lyoung@herrerainc.com

BARBARA AND BOB SHERMAN ARE MOVING!

"The moving van is due here on February 7, if all goes well with the final stages of the sale of our house. We're hoping, of course, that we're not in
the midst of a blizzard or a sub-zero cold snap on that day, but in February anything can happen.

After April 1, we will be in North Stillwater, MN. We plan to live in our 5th wheel on site from April 1 until we can move into the new house.

Our e-mail address will stay the same: roberts497@aol.com

We're looking forward to hosting family and friends once we are settled in!
If you've never spent time in the Twin Cities, there's a lot to see and do, and we'd love to show you around."

From Paul C. MacMillan, (M.S. 1964)
"Hi Stella,

I have an M.S. in Botany from OSU (1964). I then went to Rutgers for a Ph.D., and taught Botany at Hanover College, Hanover, Indiana for 32 years.

I have enjoyed Posies & Pathogens for many years. My wife and I recently retired and moved to Bend.

I'd like to volunteer to help with the Oregon Flora Project.
Thanks."

From Julius Heinis (PhD 1954)
"Hello:

Thanks for your reply and the visit. We, too, met several distinguished and important folks. First you, Dr. Stella, then **Dr. Roy Young** who is a real gentleman.

We also drove through Crater Lake National Park where we went 49 years ago on our honeymoon.

In Salem, where I worked between 1954 and 1960, we met another distinguished person and real gentleman, **Dr. Gene Milbrath**.

We also located our former farm south of Salem and were very sad how things get overbuilt there.

Our last night in Oregon was spent at the Ramada Inn which has a good shuttle services to the airport.

At home in Florida things are fine.

I also got your Posies News-sheet. It is good that your Plant Science Department starts work in Genetic Engineering and such. In 1978 I was on sabbatical in Saskatoon trying to do tissue and protoplasm culture with the idea of making a methionine-rich peanut.

I also like to follow what goes on respective the Flora of Oregon. Good show.

We visited the Oregon Gardens in Silverton…apparently several Oregon State hort grads got employment there.

I might have liked to spend more time in Oregon, visited the plant science labs and other former colleagues. But all went very well. Thanks for your attention and good luck. Sincerely."

HONORS AND AWARDS TO STUDENTS

Undergraduates

Jay Well received a Howard Hughes Medical Institute summer fellowship to work in Terri Lomax's laboratory. He also received the C & H Fulton Memorial Scholarship.
Jonathan Reed received the College of Science Dean's Scholarship. He also received a Howard Hughes Medical Institute summer fellowship to work with Valerian Dolja.
Heather Carpenter received a Jean L. Siddall Memorial Scholarship, and a Katherine R. Pamplin Scholarship from the Portland Garden Club. She also received a Howard Hughes Medical Institute summer fellowship to work with Mark Patterson.
Christopher Ellison received a Jean L. Siddall Memorial Scholarship.
Joseph Gilbuena received the Excellence in Science Scholarship.
Peter Stocking received a Katherine R. Pamplin Scholarship from the Portland Garden Club.

Graduates

Carolyn Menke received a Katherine R. Pamplin Scholarship from the Portland Garden Club
James Zanzot received the Leighton Ho Memorial Field Botany Award from the Native Plant Society of Oregon.

IN MEMORIUM

Excerpts from Los Angeles Times 2/5/02

Dr. Bonnie C. Templeton, a pioneering female botanist who served as curator of botany for the Los Angeles County Museum of Natural history from 1929 to 1970, has died. She was 95. Dr. Templeton, a Los Angeles resident, died of a heart attack and kidney failure Jan29 in a Glendale hospital.

Dr. Templeton's botanical accomplishments ranged from discovering a rare plant on the El Segundo sand dunes in the 1930s to assembling botanical evidence from La Brea Tar Pits in the 1960s that proved that the climate of Southern California during the Pleistocene era was much cooler and wetter than previously believed.

"She was a trailblazer for women scientists at a time when there were basically no women in science," said Stella Coakley, head of the Botany and Plant Pathology Department at Oregon State University, where Dr. Templeton received her doctorate.

Born in Newman Grove, Neb, Oct 23, 1906, Dr. Templeton moved to Los Angeles alone at the age of 16. She stumbled into botany by chance. After a variety of jobs that included working as a waitress and a secretary, she was sent by an employment agency to the home of a hobbyist who needed help classifying and mounting specimens in his extensive collection of dried plants. From what had simply been a means to pay the rent, Dr. Templeton found her vocation.

By 1928, she had learned enough about plants to become Assistant Botanist at the California Botanic Garden in Los Angeles. A year later, she was named Curator of Botany at the County Museum of Natural History where she remained for 41 years. Dr. Templeton earned her bachelor's degree in botany in 1941 and a master's degree in 1947 both from the University of Southern California. She earned her doctorate in 1964 from Oregon State University, writing a thesis on the fruits and seeds of the Rancho La Brea Pleistocene deposits.

While working as Curator of Botany at the County Museum of Natural History, Dr. Templeton served as an on-call forensic botanist for the Los Angeles Police Department, as well as being on call for the poison center. After retiring from the museum in 1970, she founded the California Botanical Science Service, a private consulting business in Glendale, which she operated for about 20 years.

Dr. Templeton is survived by her husband of 59 years, Chester Weiche, and a sister, Matie Till, of Corpus Christie, Texas.

A memorial coffee for Dr. Templeton was held in the Department of Botany and Plant Pathology, Oregon State University at 10 a.m. on Friday, May 3.

The first annual lecture, in a series established in Dr. Templeton's name, was on Thursday, May 2 at 4 p.m. in the department, with Dr. Sarah R. Grant of the University of North Carolina at Chapel Hill, speaking on "Genetic control of sex determination in dioecious plants".

Contributions to the Dr. Bonnie Templeton Endowment fund may be made using the enclosed envelope.

POSIES & PATHOGENS
Department of Botany & Plant Pathology
Oregon State University
2082 Cordley Hall
Corvallis, OR 97331-2902

ADDRESS CORRECTION REQUESTED

THANKS
For this issue of *Posies and Pathogens*, thanks are due to **Sue Jepson** for collecting the information, proofreading/editing and handling the mailing list; **Tom Allen** for the logo; **Ken Chambers** for the name, and **Bonnie Hall** for the flower print.

Contributions may be sent to (envelope enclosed): OSU Foundation, Oregon State University, Foundation Building, 850 SW 35th Street, Corvallis, OR 97331

CONTRIBUTION FORM

Contributions can also be sent to the Botany & Plant Pathology Department at any time; if sent directly to us, please be sure to indicate that your check is a donation and how you want the donation used. **Please make all checks payable to the OSU Foundation**. Please indicate on this form where you would like your donation used:

_____ Where need is greatest	_____ Endowment for student group trips
_____ Posies and Pathogens Newsletter	
_____ Student support (to benefit research and travel)	_____ Bill and LaRea Johnston Fund for Undergraduate Education
_____ Oregon Flora Endowment	_____ Larry Moore Endowment Fund
_____ Bonnie Templeton Endowment Fund	

NAME _____

ADDRESS _____