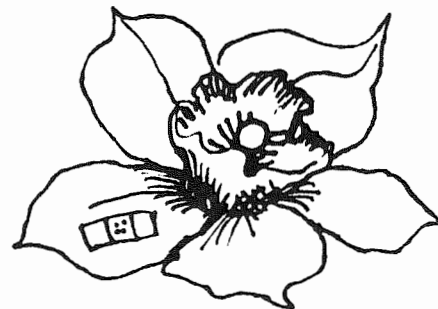


POSIES & PATHOGENS



DEPARTMENT OF BOTANY & PLANT PATHOLOGY
OREGON STATE UNIVERSITY

Third Edition

July 1991

NEWS FROM THE DEPARTMENTAL CHAIRPERSON

Dear Alumni and Friends,

Greetings from Corvallis. This year has passed even more swiftly than the last and come August 1, 1991, I will have been at OSU for three years. Three years of great challenges and great rewards that come in sometimes odd-sized packages. I am particularly grateful for the increased interactions with alumni and friends and for your generous donations that have made a wonderful difference for me. From these funds I have been able to assist students and faculty in a variety of ways, and for those individuals it has also made a great difference. Some of you have undoubtedly heard of the fiscal difficulties for all state agencies in Oregon that resulted from the passage of a ballot measure to roll back property taxes. We continue our efforts to minimize the impact of budget reductions on programs (our staff and students) but there have already been impacts that will be felt for some time to come. Donations from the outside are particularly helpful as well as encouraging to me as we continue under the cloud of further budget reductions if the state does not find substitute revenue for the property tax.

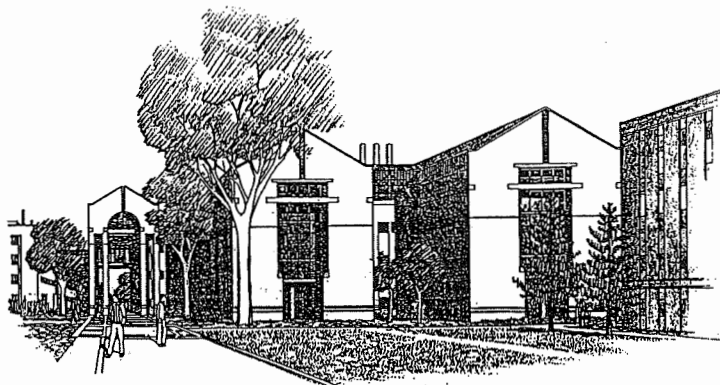
There are many bright spots though. We are getting ready to welcome our largest group of new graduate students in recent years in Fall 1991. Our students continue to "win" a variety of scholarships and recognition for their efforts. Our undergraduate enrollment is also beginning to increase steadily and we have become more involved in teaching and advising undergraduate biology students. **Itsue Pfund**, our wonderfully capable bookkeeper, was awarded a College of Agricultural Sciences Outstanding Classified Employee Award for 1990. **Terri Lomax** recently received the Phi Kappa Phi Emerging Young Scholar Award. Several faculty have received grants for sabbatical leave or scientific travel. **Norman Bishop** is spending this calendar year in Germany on a prestigious Humboldt fellowship; **Everett Hansen** is in Sweden on a NSF-sponsored sabbatical; **Don Zobel** is currently in India on a NSF cooperative Indo-American Grant; and **Fred Rickson** will leave in September for a year in Sri Lanka on a Fulbright Fellowship. **C. David McIntire** will also be on sabbatical next year while working on a cooperative project with the U.S. Forest Service.

On January 1, 1991, **Aaron Liston** joined our faculty as Assistant Professor and Director of the Herbarium. The focus of his research will be in molecular systematics but he is already involved in teaching lower division undergraduate courses. **Kenton Chambers** "officially" retired in December 1990, but we are trying to delay his taking much retirement by telling him we won't "toast and roast" him with a party until all his

A.P.S. ANNUAL MEETING 1991
ST. LOUIS, MISSOURI

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TO THE OSU ALUMNI SOCIAL
WEDNESDAY, AUGUST 21
5-7 PM
ROOM 47
ADAMS MARK HOTEL

students are finished. And we're not in a hurry for that to happen. **Tom Allen**, our plant virologist and artist-in-residence, is trying to follow Ken's lead as June 30, 1991 marks the official end of his career. However, Tom promises to stay on and help out since our replacement of that position is caught in the budget reduction process and we will be without a full-time practicing OSU plant virologist until those issues are resolved. Hence, we're trying to delay an official retiring of Tom, also. **Richard Converse**, USDA Plant Pathologist and Courtesy Faculty member, did manage to have a retirement party held for him in January, following his September retirement, but I understand he too continues to work. **Ron Cameron** demonstrates that volunteerism in this department continues to be welcome as he is heading up the local arrangements committee for the 1992 Annual Meeting of the American Phytopathological Society Meeting to be held in Portland. I am grateful to our Professor Emeriti whose activities and presence provide so much additional strength to our efforts. And the tales at Coffee Time are a source of much amusement. But we greatly miss Harry Phinney and his stories.

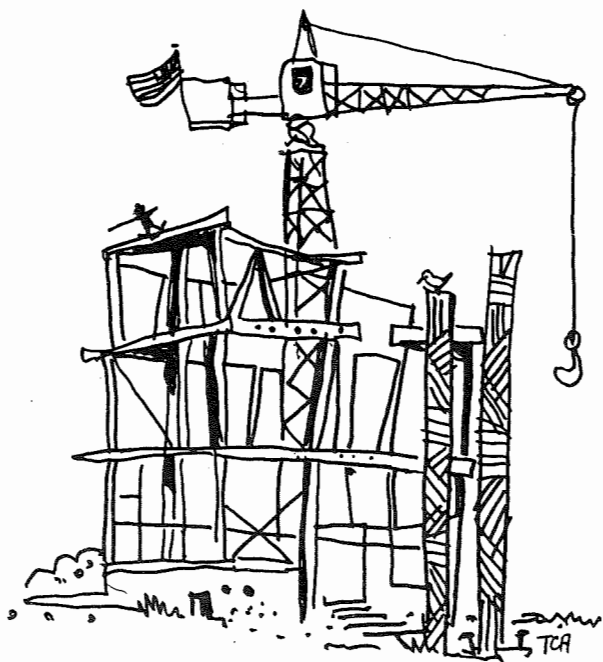


VIEW FROM CAMPUS WAY

The new Agricultural Sciences II building; the edge of Cordley Hall visible on the left, Nash Hall on the right.

Rising outside Cordley to the south (where the seed lab and old barn used to be) is the largest research building to be built at OSU. Ag. Sciences II will connect with Cordley and Nash

FROM THE ON-CAMPUS FACULTY



Tom Allen's view of the new building under construction, earlier this spring.

Halls by third floor sky bridges. We view the completion of the building in mid-1992 with excitement for two reasons. One is that it will bring almost all of the life scientists into one complex and allow closer interactions as well as the sharing of equipment between the molecular and cellular researchers. The other is that Botany & Plant Pathology will gain a significant amount of expansion space and our bulging programs will finally have desperately needed room. Unfortunately, there are no state funds for needed re-furbishment of the space being vacated, but it is hoped that private funds may be raised to help with some of the expenses.

We are planning to host an Alumni Reunion for all of our alumni in Corvallis in summer 1992, following the APS meeting in Portland. We will host a day of events (including a tour of the new building if that is completed on schedule), and then an evening of entertainment. Details will appear in the fourth issue of *Posies and Pathogens* that will be mailed earlier than usual next spring to ensure time for you to make your plans. Circle August 13, 1992 now, and contemplate a summer vacation in Oregon.

I wish you a wonderful summer. Please send in letters telling us what you are doing, and other information that we can include in the next issue of *Posies and Pathogens*; we'd be happy to help you locate old friends.

Sincerely,

Stella Melugin Coakley
Professor and Chairperson

Do you remember Bald Hill, just west of campus? Or McDonald State Forest? Both areas are being studied by the new Restoration and Plant Conservation Biology Cooperative Project. This project, a joint endeavor of Oregon State University and the Oregon Department of Agriculture, is part of the focus on environmental sciences within the Department. Faculty members **Mark Wilson** and **Elaine Ingham**, recent grad **Cheryl Ingersoll**, and continuing student **Deborah Clark** represent OSU in the project. The Department of Agriculture is represented by **Bob Meinke**, OSU doctoral candidate and head of the ODA Plant Systematics and Conservation Biology Program, and **Tom Kaye**, recent OSU grad and specialist in plant population dynamics. Together we are trying to build scientific understanding about the conservation of rare species, to restore native ecosystems, and to develop an ecologically sound basis for resource management.

The grasslands of Bald Hill, now part of the Corvallis city park system, are home to the Willamette daisy (*Erigeron decumbens*), a species listed as threatened and protected by state law. Another species, the Fender's blue butterfly, so rare it was thought to be extinct, was recently rediscovered in native grassland within McDonald Forest. The larvae of this butterfly require Kincaid's lupine (*Lupinus sulphureus* ssp. *Kincaidii*), also a rare species. The Cooperative Project is conducting ecological studies of these species and how to manage their habitats. By restoring these grassland areas, we hope to increase the vigor of their rare plants and animals.

Members of the Cooperative Project will work outside of the Willamette Valley as well. **Cheryl Ingersoll**, **Deborah Clark**, and **Lisa Lantz** will be assisting **Bob Meinke's** group with several federally-funded conservation biology studies. These include investigations into the population and reproductive biology of two rare locoweeds (*Astragalus*) near Mt. Hood and Owyhee Reservoir, the ecology of an endangered sunflower relative (*Haplopappus radiatus*) along the Snake River, and pollination research on an endemic paintbrush (*Castilleja chlorotica*) on southeastern Oregon's Gearhart Mountain.

Teaching is an integral part of the conservation and restoration activities within the Department. **Mark Wilson** regularly leads class field trips to the Bald Hill grassland. These field trips give students first-hand exposure to the complex ecological interactions that govern Oregon's rare species and landscapes. Graduate students **Deborah Clark** and **Lisa Lantz** are undertaking important studies of seed biology and plant invasion in native grasslands, while **Doug Mauck** is conducting an undergraduate research project examining tree encroachment at Bald Hill. Plans are also afoot to expand our environmental studies through a new undergraduate course in Plant Conservation Biology.

—Mark Wilson

FROM THE "AS LONG AS THEY SPELL MY NAME RIGHT" DEPARTMENT:

A check from USDA read: "Pay to order of DEPT OF BOUNTY PLENTY PATH." We cashed it.

FROM THE OFF-CAMPUS FACULTY

David Sugar:

David became an assistant professor in the department in 1990. He conducts his research at the Southern Oregon Experiment Station in Medford. His research focus is on the development of management strategies for diseases of pear, with an emphasis on post-harvest diseases. In response to the particular needs of the southern Oregon pear industry, David's position involves a blend of plant pathology and production horticulture. This arrangement also facilitates the principle research objectives of understanding the effects of cultural practices on post-harvest diseases of pear and developing cultural methods to reduce the risk of disease. Tree and fruit nutrition, wound healing, and biological control are important aspects of this approach. These methods are also being integrated with chemical control and new technology for application of post-harvest control materials.

David is also involved in the development of fruit growing in Latin America. He spent the latter half of April 1991 teaching (in Spanish) and consulting on post-harvest disease management in the Rio Negro Valley of Argentina.

FROM THE ON-CAMPUS COURTESY FACULTY

A.R.S. FACILITY

The U.S. Department of Agriculture constructed a \$3.2 million facility on the corner of SW 35th and Campus Way, the site of the old Farrier School, for the Forage Seed Laboratory (or the National Forage Seed Production Research Center, as it was named by Washington bureaucrats). Milestones along the way included a request by the Oregon Seed Council to USDA in 1967 to build the laboratory in Corvallis, a Congressional appropriation in 1983 to plan the facility, and a groundbreaking ceremony in 1985.

The facility contains 19,500 square feet for laboratories and offices, and 6,500 square feet for greenhouses and growth chambers. In February 1987, four projects moved into space designed for nine programs. Immediately after the move, new staffing of the facility began. Presently, eleven ARS research scientists are housed in the building and represent seven disciplines, including agricultural engineering (2 positions), agronomy (2 positions), entomology (1 position), microbiology (2 positions), plant genetics, plant pathology, and plant physiology (1 position each) (courtesy faculty are **Steve Alderman** and **Ron Welty**). Forty full-time and part-time employees work at the facility. The spirit of cooperation among research scientists, extension personnel, growers, administrators, and private companies in the seed industry contributed to the success of this project.

Ron Welty:

"So what's new with the pathology programs at the ARS Forage Seed Lab? I joined the department in 1982 after spending 17 years with USDA/ARS in Raleigh, NC, studying

fungal pathogens of alfalfa and white clover. A major concern on my arrival in Corvallis was the seed-transmitted fungal endophytes of tall fescue and perennial ryegrass, *Acremonium coenophialum* and *A. lolii*, respectively. This concern led to studies on the detection and survival of the endophytes in both species of grasses. In 1983, Oregon implemented a voluntary regulatory seed testing program to establish standards for endophyte levels in Oregon-produced tall fescue seed. Seed testing is done routinely now by OSU alum (1963) **Dr. Gene Milbrath** at the Oregon Department of Agriculture in Salem. Since 1983 over 2,800 seed lots of tall fescue, representing 44 plus million kg of seed, have been tested for endophyte by Oregon Department of Agriculture. Tall fescue acreage increased from 11,500 acres in 1981 to 91,500 acres in 1990.

Another project was initiated to identify and control a complex of three leafspot diseases in orchardgrass that were interacting to reduce seed yields. Currently, research is directed towards the biology and control of the ever-present rusts in the grasses grown for seed in the Willamette Valley, especially stem rust on perennial ryegrass and tall fescue. Efforts are focused toward timely applications of fungicides to reduce pesticide usage and developing germ plasm of turfgrass and forage grasses resistant to stem rust. **Dr. Reed Barker**, ARS grass geneticist, is cooperating to determine the inheritance of stem rust resistance. The program has been bolstered by research on the fungal endophyte in tall fescue by M.S. graduate **Kathy Cook**, *Rhynchosporium orthosporum* (scald) in orchardgrass by Ph.D. graduate **Jesus Perez** (a graduate fellow from INTA, Argentina), and endophyte effects on growth responses in tall fescue by current M.S. student/technician, **Mark Azevedo**.

Alumni may recall the efficient and able assistance **Claudia Annis** provides to the USDA/ARS research team. We appreciate the many years of faithful service to her friends and colleagues. On your next visit to Cordley Hall, allow time to take the two-block walk down the hill to say hello to Claudia. You know you will receive a warm welcome from her. She might even give you the \$2 tour of the Forage Seed Lab."



Steve Alderman:

"Grass seed production is alive and well in Oregon, with 396,048 acres planted in 1990. The big concern among the grass growers is field burning. Several ballot measures were introduced last year to greatly reduce or ban field burning, although they did not pass. Many of the growers would like to stop burning and considerable research is now underway for field burning alternatives. Acreage burned has declined in the past five years to about 40% of the total acreage in 1990.

My research concerns diseases of grass seed. Reductions in field burning has renewed an interest in ergot and blind seed disease. Surveys conducted in 1988 and 1990 indicated that except for ergot in Kentucky bluegrass, ergot and blind seed are still at very low levels. We have developed methods for monitoring ergot and blind seed and I will be watching the industry closely over the next few years. We are trying to understand the dynamics of disease development and spread within and among fields, especially with regards to host and environmental factors."

FROM THE GRADUATE STUDENTS

Currently, about 40 students from around the globe make up the graduate group in Botany and Plant Pathology. In the past year, we have been attempting to integrate our diverse interests. One way we can do this is by inviting seminar speakers who are working in "crossover disciplines," for example, ecologists who study pathogens. Grant money from the American Phytopathological Society and Entotech, a biotechnology company, helped defray costs involved in inviting our first speaker, Dr. Helen Miller Alexander (Univ. of Kansas). She presented a seminar entitled "An ecological genetics approach to the study of plant-pathogen interactions in natural systems." We are planning to sponsor another seminar in the fall as part of a series on novel approaches to plant protection.

OUR NEWEST ALUMNI

Congratulations to those who have completed their degrees in B&PP during the last year! For all of you who are curious, I've compiled a list of recent graduates and where they are working now:

Receiving the M.S.: **Maricio Lolas**, Instructor at Escuela de Agronomia, Chile; **Kathy Merrifield**, Research assistant with Russ Ingham, B&PP; **Elizabeth Knott**, Research Associate, University of Idaho; **Thomas Pflieger**, Research plant physiologist, USEPA, Corvallis; **Carolyn Wright**, Rare plant inventories consultant; **Thomas Kaye**, Conservation biologist, Oregon State Dept. of Agriculture.

Receiving the Ph.D: **Dilantha Fernando**, Postdoc, International Rice Research Institute, Phillipines; **David Ianson**, Postdoc, Oregon State University; **Dean DeNicola**, Postdoc, University of Nebraska; **Kathy Lewis**, Forest pathology consultant, Prince George, British Columbia; **Cheryl Ingersoll**, Restoration ecology consultant, Corvallis; **Jesus Fernandez**, Research plant pathologist, Argentina INTA; **Kevin McCluskey**, Postdoc, University of Arizona; **Yuqi Zhao**, Postdoc, Columbia University, New York.

GRAD STUDENT AWARDS and HONORS

Congratulations are also due to several of our graduate students who were award recipients over the past year. **Tina Dreisbach** received a University Bayley Fellowship for 1990-91, and **Deborah Clark** received the P.F. Yerex Fellowship for 1991-92. **Glenn Hicks'** NASA grant to study a gravitropic mutant of tomato was renewed for 1991-92. **Maria Finckh** received a grant from Sigma Delta Epsilon to attend the International Conference of Graduate Women in Science, in Minnesota. **Kevin McCluskey** was the recipient of a travel grant from the National Science Foundation, to attend a NATO Advanced Studies Institute, "Molecular Techniques in Taxonomy," in Norwich, England.

—Tina Dreisbach

Novo Nordisk Biotech Challenge

The Department figured prominently in an OSU triumph at this competition (held Sept. 14-15) among grad students from several West Coast universities, sponsored by the Danish multinational corporation Novo Nordisk. **Russ Meints**, who is also director of the Center for Gene Research and Biotechnology, served as faculty advisor for the OSU team, selecting **Kevin McCluskey**, **Mike Graves** (Genetics Program, but works in Russ's lab) and **John Lindbo** (Microbiology). The competition consisted of a quiz-show format first round, answering questions in general biology, biochemistry, genetics, microbiology, etc., and a second round in which each team selected one of three questions on which to base a research proposal, which they submitted as a 15-minute oral presentation. The OSU team scored more points than all the other teams combined, and in the first round beat Cal Tech 420 to -20 (that's minus 20, folks!). The \$7500 first prize was split among the three team members, to be used for travel to scientific meetings.

FROM THE ACADEMIC SUPPORT STAFF

BLAINE BAKER:

"My number came up for this issue of the newsletter, so I thought I would provide a brief synopsis of my support mission within the department. For those of you who are unfamiliar with this position (formerly held by the late Kay Fernald), I am the Staff Biological Research Photographer and a Laboratory Technician. With the assistance of three student employees, I am responsible for providing photographic services for research and publication. We also instruct graduate students in photographic methods, and attempt to develop techniques in support of research. Currently, the service is provided through Agricultural Experiment Station funds, and individual programs do not pay directly. We also provide service to department sub-units, associates, and other life science departments.

"I am responsible for the Safety Program, hazardous waste disposal, and direct facilities renovation. I also assist the department chairperson with surplus property, physical plant, and inventory. The Station Lab dishwashing and cold room facility, operated for many years by Carolyn Paynter, has now come under my supervision, and is run with student help. In my "free time" I try to handle all of those little jobs which don't fit into someone else's job description.

"In a recent development, **Marlene Nelson** (Experimental Biology Technician at the Botany Farm) was laid off by the department. The layoff was necessitated by the new property tax limitation. She has been given a job on campus with Greenhouse Operations.

"On a happier note, **Itsue Pfund** (our Accounting Clerk) has returned from maternity leave after giving birth to a healthy daughter, Cara. Itsue was also awarded the 1990 College of Agricultural Sciences Classified Employee Award for meritorious service. We extend our congratulations and many thanks for an exceptional job."



At Christmastime last year, Kathy Merrifield provided this reminder of how vital the Classified Staff are to our success.

A CLASSIFIED CHRISTMAS

by Kathy Merrifield

'Twas the week before Christmas, and all through the dept.*
Our classifieds kept us from looking inept.

When dealing with money, we'd all say "Oh, phooey,"
If it weren't for the financial skills of Itsue.

But when having a baby became real hairy,
We'd all have no budget, if it weren't for Gary.

Our cupboards are stocked and our plants are all green, a
Result of the purchasing power of Tina.

Photography problems may drive us insane,
But we know that the height of all knowledge is Blaine.

With the patience of Job and the smile of Siddhartha,
Vacation and sick leave are noted by Marsha.

Lew keeps our experiments from coming to harm,
By keeping his watch o'er the Botany Farm.

While Joe with his shears and Marlene on the ladder
Make orchards grow gooder instead of look badder.

We may think we're laughing as hard as we can,
Until we've been talking awhile with Dianne.

Departmental documents never look tacky,
Whenever they're neatly wordprocessed by Jackie.

Displaying her humor, she answers each query,
Teresa is matchless as our secretary.

Though administration has taken its toll,
We know that Leona will be in control.

So you'll hear us exclaim as our thanks we renew,
"Merry Christmas to all—we appreciate you!"

*abbreviation for "department." You will have to note
this and then read the first line again. But ignore the
asterisk the second time, or you'll never get to the end!



Research Assistants/Associates

Phil Hamm has forsaken the green Willamette Valley to stake his claim as Umatilla County Extension Agent in Hermiston, Oregon. He has just finished building and equipping his "dream lab." He is answering growers' questions on a variety of crops and is collaborating in field studies with **Russ Ingham**, **Tom Allen**, **Mary Powelson**, and **Marlys Cappaert**.

New people:

Bob Truitt joined Drs. **Gary Larson** (Dept. Forest Resources) and **David McIntire** in 1989. He received his bachelor's in Botany from OSU in 1984 and spent several years as a marine fisheries observer before working on a master's degree in aquatic ecology from Northern Arizona University. Bob works directly for the Cooperative Parks Studies Unit collecting and identifying planktonic organisms from the PNW

Nat. Parks. **Dave Stein** joined **Carol Rivin's** lab in April 1990. After graduating from OSU in 1981, he worked for the Environmental Protection Agency and Oregon Health Sciences University before coming to OSU as a research technician. **Kathy Merrifield** joined **Russ Ingham** in the Nematology Program after completing her August 1990 master's degree in the Dept. on root-lesion nematodes under Russ' direction. After earning her 1973 bachelor's degree in Botany (so she's a "double-lumna") she worked as a photo librarian, personnel administrator, greenhouse grower, and plant taxonomist. In addition to plant-parasitic nematodes, emphases include plant taxonomy, bryophyte invertebrate communities, and population dynamics of water birds. The author of several irrelevant publications, Kathy is most famous for volumes I and II of *The Plant Parasitic Nematode Songbook* (to order yours, see page 11!).

Departures:

Julia Moore, formerly Research Assistant on Tom Moore's project, left in August 1990 to enroll in the College of Vet. Medicine. **Meghan Arbogast** left Mary Powelson's lab to home-school and spend more time with her 4-1/2 year-old daughter, Ruby. **Karen Theiling** departed June 30, 1991 for the eastern USA.

FROM THE BOTANY FARM

For the past three springs we have looked out on a small green patch on the Botany and Plant Pathology Field Lab to see a gal with a big straw hat and a wide smile, hoeing and playing mother to a strange collection of wheat plants. This is **Laura Morrison**, graduate student in Systematics and more than willing to talk about her exploration of the origins of wheat. I asked her to write a few lines on her work and I am including them below.

—Lew Tate

"For the neo-Darwinist yearning for evolutionary time travel, the Botany Farm has the *ultimate* tourist package for you! *Just a quick trip across the Willamette* can bring you face to face with rows upon rows of *Evolution-in-the-Making*. Take yourself back 12,000 years as you wander among exotic wheats from the exotic Fertile Crescent! Trade in your molecular lab coat for the sandals of a primordial geneticist! Gather a hearty basket of wild wheats for dinner! *Play the evolutionary selection agent*—select next year's seed! Calculate probabilities of mutation and hybridization events! Ponder introgression! Be a detective! Crack the great mystery of wheat evolution—identify that elusive B-Genome Donor!

Offered for a limited time only (evolution does march on, as do graduate students). Give a call to the H.M.S. *Beagle* at Saltation, Stochastics & Associates, your friendly heuristic travel agents. Or contact Lew Tate (Chief Rainmaker) or Laura Morrison (Wheat Facts Unlimited, Inc.). Don't miss this epoch-making opportunity!"

—Laura Morrison

FROM THE HERBARIUM

DEPARTMENT RECEIVES GIFT OF WILDFLOWER SLIDE COLLECTION

A large collection of photographic slides of wildflowers and other natural history subjects was recently donated to the Department of Botany and Plant Pathology, for use in the teaching and research programs in taxonomy and ecology. The gift came from the estate of H. Robert Mansfield of Grants Pass, through the generosity of his son, Dr. Chuck Mansfield, an alumnus of Oregon State University, now living in Los Alamos, NM. The elder Mr. Mansfield was a professional forester who was associated for many years with the Siskiyou National Forest in southwestern Oregon. His skills as a nature photographer were well known and widely appreciated; his photographic studies of wildflowers appeared in such books as *Wildflowers of the United States*, edited by Harold W. Rickett and published as multiple volumes by The New York Botanical Garden. The photographs in Mr. Mansfield's personal collection were taken principally in the northwest region, but also include plants that he observed on trips elsewhere in North America and in exotic areas like New Zealand, Iceland, Mexico, and Europe.

Although the collection has not yet been fully cataloged, it is estimated to include over 5,000 kodachrome slides. Wildflowers constitute the largest category of photographs, reflecting Mr. Mansfield's personal interest in botany. Other photographic subjects include shrubs, trees, mammals, birds, reptiles, insects, minerals, and rock formations. All the slides of plants are identified with their scientific name and a citation of the locality where the species was observed. Arrangement of the collection is alphabetical by the categories of family, genus, and species, making it easy for potential users to find photographs of any particular plant that might be of interest.

—Ken Chambers

FROM A FORMER CHAIRMAN

"I was complimented by being asked by Stella to describe my activities since I retired from the chairmanship in December 1986, after a tenure of 13 years.

"The highlight of my return to teaching and research on a full-time basis was the 10-month leave that Arvida and I spent in Japan in 1987-88, when I collaborated with a colleague at the University of Tokyo on some gibberellin research. As a sort of reverse foreign aid, I was awarded a research fellowship from the Japanese equivalent of NSF, which enabled us to cope with the notoriously high cost of living in Tokyo. Not only did we enjoy Japan immensely, I also regained some much needed familiarity with working in the laboratory.

"Upon my return to the department, I resumed teaching my graduate course on plant hormones and, at my request, one term of general botany. Regrettably for my part, however, I only got to teach general botany twice before I had to convert to teaching the botany portion of one term of a new general biology course. I also found time to write the second edition of my textbook on plant hormones in 1989, and to continue my long-

standing work as Editor-in Chief of the *Journal of Plant Growth Regulation*. With the generous support of the Agricultural Experiment Station, I resumed my research on regulation of gibberellin biosynthesis. Happily, all of those activities are going well.

"I am asked occasionally if I miss being Department Chairman. Of course I do, but frankly, I am relieved to be free of the huge responsibilities and problems that go with that position, and I am appreciative of the opportunity to resume, full-time, those activities that attracted me to the profession in the beginning. More than the chairmanship, I miss the many colleagues who have retired, and especially those who have passed away, during my tenure.

"As much as I enjoy my work in the department, and Arvida hers in the OSU Telecommunication Services, we both have decided to retire in 1993, after 30 and 20 years of service, respectively. We will continue to reside at 560 N.W. Merrie Drive in Corvallis."

—Tom Moore

FROM THE EMERITUS FACULTY

Charles "Chuck" Leach:

"My last few years before retirement (3 years ago) were exciting times. In attempting to prove my theory that discharge of many dry-spored fungal pathogens involves an electrostatic mechanism, I became involved in studies on electrical phenomena associated with plants, insect pollination and bees. I had intended to continue this research after retirement, and to write up five years of unpublished research, but—this hasn't happened. My electrical studies have involved a considerable amount of equipment and expensive instrumentation. As much of my equipment was wearing out, or obsolete, to continue would have required grant support. The thought of continuing to seek NSF support as a retiree was not what I had envisioned for retirement, so I finally "threw in the towel." I did try OSU's Ag. Research Foundation, but I think the topic was too "far out" for them! My note books do contain a number of significant unpublished findings on plant surface electrostatics (leaves and flowers), plant currents (microamp range), photo-induced transpiration (electrical generator?), and electrostatic charging of bees, mainly carried out under natural conditions. I am willing to share this information with anyone that might be interested. While I do miss the intellectual challenge of exploring the unknown, life is full of other interesting things and boredom is not a problem for me.

"What am I doing now? I am a member of the Board of Directors of the Greenbelt Land Trust, a local organization attempting to preserve open space near Corvallis; I continue on Corvallis' Park and Recreation Advisory Board; I do quite a lot of art, ranging from watercolors, printmaking, and cartooning; also some stained glass work and glass etching. In addition, I enjoy gardening, tennis, and an occasional game of golf; a little whitewater kayaking, and some hiking. The last three years I have hiked the 40-mile wild section of the Rogue River (one year with retired Bob Powelson). My wife and I have participated in Elderhostel programs in various parts of the country and travelled abroad a couple of times. Each year we tow our small camp trailer to Washington State, British Columbia, and Colorado, to visit our three offspring and their families.

"Periodic visits to the department to collect and answer mail, plus a cup of coffee, bring me into contact with a few of my old colleagues. I continue to try to reform the politics of my good friend **Bill Brandt**, but with little success! **Ian MacSwan** and I get together for an occasional chat and a cup of coffee downtown. I have also had a couple of enjoyable visits with **Jack and Nan Culver** on **Orcas Island, Washington**. In summary, I am enjoying myself in retirement!"

FROM FORMER GRADS

Jeffrey P. McMorran - MS Plant Pathology, 1984

"I have held two positions since completing my course study and research for a M. S. degree. I worked with **Dr. Tom Allen** for four years as a research assistant, then went on to become the quality control manager of **NU-SPUD Seed Potato Production for Calgene/Plant Genetics, Inc.**, in **Watsonville, California**. I am currently back at **OSU** to commence a doctoral program of study and research under the direction of **Dr. Alvin Mosley** of the **Crop Sciences Department**. My long-term goal is to acquire a position such as research scientist at one of **Oregon's** fine experiment stations. My research will involve the interaction of fertilizer practices and groundwater quality. After going through four years of drought, living eight miles from the epicenter of the **October earthquake**, and having to make reservations months in advance to go camping, it was great to return to **Oregon!**"

COFFEE TIME

The coffee's still perking in **Cordley 2087** and popcorn's been added. **Teresa**, our secretary, pops the fat-free non-buttered variety for the troops. **Stella** will occasionally give us a treat - the buttered variety done to a crisp! Once the smoke clears, it's not that bad. **Paul Koepsell** will eat anything, but has run tragically low on fish stories. **Mary Powelson** tries to cheer him up with stories of her fishing trips. **Lynda Ciuffetti** wants to borrow a quota (that's 25 cents in English), and **Ken Chambers** keeps trying to get all the letters of the alphabet into one ridiculous sentence. So far he has doubled up six letters. **Norm Bishop** ran off to **Germany** for a spell, and **Ron Cameron** still manages to escape from **Barbara's** nursery about once a week. **Chuck Leach** tells us about his painting and glass etching, and **Bill Brandt** continues to expand his print collection from **Sotheby's**. **Dalice Mills** is amazing! His feet go one way, his hands another, as he considers a third subject! **Fred Rickson** comes in for his fifth cup of coffee and **Al Soeldner** collapses on the table - saying something about a thermal drift. **Jay Pscheidt** watches, and **Dave McIntire** laughs a lot and states that he'll have to join us more often. Why don't you do the same?

—Tom Allen

RETIREMENTS

Ken Chambers - A Taxonomic Spectrum

As the field-trip van lumbered down **Hwy 99 W**, I tried to pick the brain of a visiting scientist. "What's the proper way to store and catalog bryophytes?" I asked.

"I'm not really sure," he answered in lilting Canadian, "but you really ought to ask that fellow **Chambers** right up there in your herbarium. He has been so helpful to me!"

And indeed, "helpful" is among the foremost of adjectives describing **Ken Chambers**, along with "competent," "expert," "diverse," "adaptable," "thorough," and, perhaps, "unflappable." He has calmly watched changes in both flora and philosophy while diversifying his expertise over four and one-half decades of taxonomic study.

Following early years in **Pasadena, Whittier, and Paso Robles, California**, **Ken** completed his **A.B.** from **Whittier College** in 1950, "discovering" botany—especially taxonomy—during a full-year **General Botany** course. **Harry Thompson**, there on leave from **Stanford University**, provided a role model, a link to **Stanford**, and field trips to floristically inspirational **Anza-Borrego State Park**.

Ira Wiggins, Richard Holm, and the Jens Clausen/David Keck/William Hiesey lab were influential in **Ken's Ph.D** work at **Stanford**. His dissertation on genetics and cytology of *Microseris* resulted in a revision of the subgeneric and sectional levels of the genus as well as a complete revision of the annual species. Other scientists using DNA techniques and genetic studies have added to this information, resulting in a large body of *Microseris* literature. **Ken** remains an informational source for both taxonomy and occurrence of this ideal research plant.

Following a post-doc at **UCLA** in 1955-56, **Ken** taught plant biosystematics at **Yale University** as an assistant professor for four years. His first graduate student, **Henrietta**, became his wife. The chance to be on the **West Coast** again enticed application for the taxonomist position open at **Oregon State**. **Albert Steward** had died, **Helen Gilkey** had retired, and **La Rea Johnston** was holding down the taxonomic fort alone. **Ken** began as **Herbarium Curator** in the new herbarium in **Cordley Hall**, well-designed by **Albert Steward**, in the fall of 1960.

The **Endangered Species Act of 1973** was a watershed in the taxonomic mission at **OSU**. "This is a lesson," says **Ken**, "that when society finally decides to do something, many things become possible." Money was available for dedicated people to become professional botanists outside of academia. The building of a work force of scientific conservationists was possible.

"The herbarium was well-positioned to be active in this process from a neutral, non-political, unbiased position," relates **Ken**. "We tried to be a source of scientific facts rather than show favoritism toward any interested parties. Data from the herbarium were extremely important in this."

One problem in this process was that herbarium collections were geographically selective: the sampling was biased toward areas easily accessible by road. "We didn't claim to have complete knowledge of the occurrences of rare plant species in **Oregon**," **Ken** says.

Many graduate students now wanted to work on endangered species. Previously, the research emphasis of the herbarium was on improving taxonomic knowledge of plants. Soon, graduate projects involved more ecological/demographic studies. **Ken** responded to student needs by broadening his scope. "Now we have more sophisticated chemical taxonomy," says **Ken**. "We are able to sponsor research on rare and endangered plants by putting together student programs incorporating these areas." A two-foot (0.67 m) row of student theses and dissertations at **Ken's desk** attests to this broad scope and to his mentorship of diverse students.

Ken's own work presently centers on two genera of the Portulacaceae. The relationship between *Claytonia* and *Montia* has been clarified by removing from *Montia* all species having a basal rosette, a pair of leaves on the naked stem, and a cyme, and transferring them to *Claytonia*.

"My period here at Oregon State spans the time when society did not care about the survival of rare plant species to a point at which federal and state money is available to study, manage, and recover endangered species," reflects Ken, perhaps recalling the bygone days of endless acres of wildflowers carpeting the rolling Paso Robles hills. "Before, professional taxonomists were the only ones who cared. We would see damage from overgrazing, cropping, urbanization, and pollution, but there was no recourse. There were no effective laws and no public consciousness in the West."

Times have changed, in large part due to people like Ken Chambers and his many students who have truly been concerned about the survival of biodiversity. And, as evidenced by extensive herbarium collections, he even cares about liverworts!

—Kathy Merrifield

Tom Allen—A Life in Science and Art

We asked Paul Koepsell to toast Tom on the occasion of his retirement. Paul promised to keep a civil tongue in his cheek, and immediately got out his rotisserie. Here is the result:

After 29 years at Oregon State University, Tom Allen has finally decided to officially retire. In that short period of time, he has claimed almost all the virology research at OSU. He apparently learned the techniques from the patent attorneys at Stauffer where he worked for three or four years. His major Professors, J.W. Oswald and B.R. Houton of UC/Davis, were said to be relieved when Tom graduated because he had also claimed Aggie Villa under an obscure clause in a 1502 Spanish land grant. Tom's claims impressed a wide variety of granting agencies and commodity groups for a year or two. As a result, his research has encompassed a wide variety of subjects on a range of food and ornamental crops. Even during his tour of duty with the Army, Tom served as part of the Agent Orange development team (I'm not making this up), which naturally received world-wide acclaim for its humanitarian service.

Besides his numerous scientific achievements, Tom has always been ready to help where needed in the Department. For example, Tom has spent hours every day protecting the Departmental coffee pot from entomologists, zoologists, and other marauders, and reporting on his colleagues (see Coffee Time). He has even used his robust frame in departmental service each year at the departmental Christmas party. Unfortunately, at one of these parties, one of his most notable utterances was lost to posterity when the secretary on his knee turned the color of his suit and rushed from the room.

Tom's numerous achievements are perhaps best summed up in a letter written by one of his colleagues and sent to the Dean when Tom was nominated for an award:

"It is with extreme humility that I undertake the awesome task of recommending Professor Thomas C. Allen

for a Distinguished Professor of Agricultural Science Award. Rarely does one see at a single location two such great scientists as Professor Allen and Linus Pauling. It is rumored that not two, but three Nobel prizes will be bestowed on Professor Allen in 1983."

PROFESSOR ALLEN'S research progress is faster than a speeding bullet, his virus-free lilies are more powerful than a speeding locomotive, and his stack of awards is higher than the tallest building with ease. A lily grower was once heard to remark that PROFESSOR ALLEN walks across the surface of the Chetco River in Brookings. Mary, his mother, relates an amazing story of his birth . . . definitely an agriculturally oriented occasion, except for the three wise men.

Students call him teacher, teachers call him master, and masters glow with envy. Had Leonardo da Vinci received ten times the support in science, he might just possibly have become another PROFESSOR ALLEN. Just three years ago, PROFESSOR ALLEN hung a painting in my office that had a glimmer of quality. Although I hesitate to discourage a sincere effort in any field, PROFESSOR ALLEN'S paintings prove that he definitely must be outstanding in some other field. Agriculture appears to be as promising as any other. His past performance in plant physiology reaffirms this conviction of mine. Last month, I enjoyed the peace during his 200-slide presentation of a trip to Scotland. Others in attendance commented on the loud bell ringing at 5:00 pm, and a new graduate student was sent to the Student Health Clinic in a coma.

As he did in his seminar . . . I could go on forever extolling the virtues of PROFESSOR ALLEN, but as they might say down home, this is the nearest to a silk purse that I can make out of the material at hand.

—Paul Koepsell

IN MEMORIAM

Elton Kay Fernald

Dec 29, 1928 - June 7, 1991

Elton Kay Fernald died in Ketchikan, Alaska at the age of 62. He came to OSU to work in Photo Services in April 1968, and was the Botany and Plant Pathology photographer from May 1969 until December 31, 1986 when he retired to Alaska.

Mr. Fernald enjoyed woodworking, photography, boating, and helping others. Many students and faculty became close friends of Kay and his wife, Evvy. Their home and hearts were always open. Kay had a deal for everyone. He was a member of the American Contract Bridge Association, The TAMS Society, the Elks Lodge in Corvallis, and the Wood Collectors Society.

Graveside services were held at Willamette National Cemetery in Portland. His family and Botany Department members were present. He had chosen a military cemetery, "So I will be supported by the government for eternity." Kay's humor will live on.

—Tom Allen

S. Conrade Head

January 12, 1922- January 8, 1991.

Dr. Head was born in Preston, Idaho. Following graduation from Baker High School in 1940 he obtained his bachelor's degree from Brigham Young University, Provo, Utah, his master's degree from Washington State University, Pullman, and then came to OSU and earned a Ph.D. in the Department under the direction of A.N. Steward, completed in 1958.

He was a research engineer of paleobotany for Pan American Petroleum in Tulsa, OK, and later went on to the California Polytechnic Institute in San Luis Obispo as a professor. He later taught at the University of the Pacific, Stockton, CA, then at Oregon College of Education, Monmouth, and finally at Eastern Oregon State College in La Grande, where he was a Professor of biological sciences from 1967 until he retired in 1987. He was a member of the State Forestry Advisory Board for 10 years, was a member of Phi Kappa Phi, and taught continuing education and elder-hostel classes, and was the author of several books: *A View from the Street* (a volume on architecture); *Exploring Northeast Oregon, Ornamental Trees and Shrubs of Eastern Oregon*; *Introduction to Plant Anatomy*; *Spring Flora of Northeastern Oregon*; *Anatomy of Western Old Houses*; and *A Guided Tour of the John Day Country*.

Don Kirby (1922 -1991)

Don Kirby died on May 24, 1991 at his home in Corvallis after a long illness. He was born in Ashland, Oregon and at his retirement in December 1983 he had 31 years of service working for OSU. He started working at the Southeastern Oregon Experiment Station for two years, then moved to Corvallis where he worked for 21 years at the Lewis-Brown Horticultural Farm and then 8 years at the Botany & Plant Pathology Field Lab.

Don had many years of field lab experience when he started work at our Field Lab and I can truly say that I tapped every bit of it and he was a good teacher and a true friend of agriculture.

—Lew Tate

Harry K. Phinney (1918-1990)

Professor Emeritus Harry Phinney died in Corvallis on Nov. 9, 1990 after a long struggle with emphysema and diabetes. Harry was born in West Virginia, and his family moved to Cincinnati when he was 11. He received a B.S. degree from the University of Cincinnati in 1941. He then went to Albion College where he completed an M.A. degree, which involved extensive fieldwork at the Michigan Biological Station, under G.W. Prescott in 1943. After obtaining a Ph.D. under L. H. Tiffany at Northwestern University (in collaboration with Francis Drouet, Curator of Cryptogams at the Field Museum in Chicago) in 1945, Harry held a brief postdoctoral fellowship at Yale University; from 1946-47 he was Associate Curator of cryptogams at the Field Museum. In 1946 he married Dr. Grace Scharf, and in 1947 they joined the faculty of the Botany Dept. at Oregon State College (now OSU). So-called "anti-nepotism" rules forced Grace to leave OSU in 1950, but Harry remained until retiring as Professor in 1983.

Harry's interests ranged widely. He taught courses in microscopy, paleobotany, aquatic plants and morphology of cryptogams, as well as freshwater and marine algae. He particularly enjoyed teaching marine phycology during summers at the Oregon Institute of Marine Biology at Coos Bay from 1948-57, and at the OSU Marine Science Center at Newport from the late '60's to 1981. He was a member of the Phycological Society of America, AAAS, the American Microscopical Society and the Torrey Botanical Club.

The breadth of Harry's interests was also reflected by the diversity of agencies that funded his research and that of his students: the Oregon Game Commission, the U.S. Public Health Service, the Dept. of the Interior, the U.S. Sea Grant Program, NSF, and the National Geographic Society. The 27 graduate students who completed degrees under him pursued a great diversity of thesis topics, including studies of the nutrient requirements of *Anabaena*, *Aphanazomenon*, *Botryococcus*, *Trentepohlia*, and food algae for oysters; pioneering studies of artificial laboratory stream ecosystems and manipulation of natural streams; floristics of inland rivers and estuarine diatom communities; studies of sewage oxidation ponds, of the effects of logging on stream periphyton, and of primary production of estuarine tidal flats and fish ponds; studies of the influence of salinity on productivity and distribution of estuarine seaweeds, and of the morphology and life histories of green, brown and red seaweeds. In addition he served on the graduate committees of an uncountable number of students, often from other departments, even after retiring, and continued despite failing health until he could no longer work. Harry also remained very active in research as Professor Emeritus after he retired. His most recent projects were research on the deepwater flora of Crater Lake and the history of microscopy.

Harry once said that he came to OSU when he became dissatisfied with spending all his time looking at specimens, and wanted to return to the classroom. He is remembered with particular fondness by those of us who were his students, for our welfare was always foremost in his mind. Harry always set high standards for us, then encouraged us to independently find our own way.

Harry was certainly one of the most colorful personalities in the Department, and his passing leaves a void in the lives of all of us who knew him. We will miss his exacting scholarship, his sharp tongue for all miscreants in positions of authority, his constant encouragement of our own work, and his boundless enthusiasm for anything relating to algae. We know that we will not see his like again.

Harry is survived by his wife Grace and their three children. A Harry K. Phinney Memorial Fund to benefit the Dept. of Botany & Plant Pathology has been established through the OSU Foundation (see **Contribution Corner**, below).

—Eric Henry and C. David McIntire

Upon learning of Harry's death, Ralph Quatrano (now at the Univ. of North Carolina at Chapel Hill) sent the following letter, intended for reading at the informal memorial gathering that was held a few days later. Ralph kindly consented to allow this very private and touching expression of his feelings to be shared with all of us who knew Harry. It eloquently expresses the fondness for Harry and the sorrow at his passing that we all feel:

A Farewell Letter to Harry

Dear Harry,

I can't be there now at your memorial, but I wanted to express some strong, close, and happy feelings that we shared over the last 22 years. We touched on all of these last summer when we spent a wonderful hour or so together. I was sad when I left you because I knew it might be the last time, but now only happy memories that I wish to share with others.

You were the first person I met in the department when I interviewed the Spring of 1968 -- and I came back to stay!! You knocked on my motel door Sunday morning to take me, along with Tom Moore, to your favorite spot (and now mine), the Oregon coast. You jumped from rock to rock, said hello to all your favorite green, red, brown and colorless friends, and made me feel as old as you were, just trying to stay upright while following your lead. After all, I was trying to impress you - it was my first (and only) job interview. After my phycology lesson and demanding physical exercise, I was put more at ease during our return to Corvallis when I realized that in our discussions about political and social issues, my northeastern liberal ideas would be cultivated and strengthened with you nearby. I fondly remember long talks with you, alone and with students, about the Vietnam war and ecological concerns of the late sixties and early seventies. These discussions often went well into the early morning hours. I also remember your

tirades, up and down the halls of Cordley, about the political and social issues of the world, nation, state, county, city, campus, college, department and/or the takeover of the Botany Department by the god damn physiologists!! The quality and intensity of these discussions never diminished over the years, just the quantity and amplitude. We never had much in common in research, but you were a true biologist and dedicated teacher. Both of these traits of yours helped keep me professionally honest many times. We only spoke occasionally since I left OSU over four years ago, but our talks always ended as if we were never apart. I was especially elated the last several times we met to see you so involved in your latest manuscript.

Nothing but great and happy memories, Harry, that's how I will remember you. Our only major disagreement (that you were not allowed to indulge in for the last few years)—you liked martinis and I liked single malt scotch!! Cheers, Harry.

Ralph Q.

Thanks are due Jackie Poppleton for typing the newsletter, Leona Nicholson for handling the mailing list, Eric Henry for collecting the contributions and doing the editing, Tom Allen for the logo, Joe Hanus for computer help, and Larry Moore for the use of his Macintosh and laser printer.

FROM THE CONTRIBUTION CORNER

The Department thanks each of its alumni and friends for the gifts received this past year. These donations have been used in a variety of ways, including assisting graduate students to attend professional meetings, contributing to a graduate student symposium, and printing *Posies and Pathogens*. Without your help, we would be less able to provide quality opportunities for our students. Please remember, no gift is too small.

Please send contributions to (envelope enclosed):
Botany and Plant Pathology Fund
E.R. Jackman Foundation, Oregon State University
Strand Agriculture Hall 122, Corvallis, OR 97331-2212

Contributions can also be sent to the Department at any time; if sent directly, 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 E.R. Jackman Foundation.**

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REQUEST FOR INFORMATION

We would love to hear from you—and so would other alumni; please send us information on your current location, job, family, etc.

Mail to: Dr. Stella M. Coakley, Chairperson
Botany and Plant Pathology
OSU -- Cordley Hall 2082
Corvallis, OR 97331-2902

AND...

Help Tom Allen and Ken Chambers recall the "good old days" by sending individual letters to them re-capping your memories. We'll bind the letters for posterity and present the collection to each when we toast and roast them this fall. Send letters by September 10, 1991, in c/o Leona Nicholson, Botany & Plant Pathology, OSU, Cordley Hall 2082, Corvallis, OR 97331-2902.

REQUEST FOR ADDRESSES OF ALUMNI

When our address file was transferred to the Alumni Office a few years back, some names were lost. We'd appreciate you asking any OSU Botany & Plant Path. alumni that you know whether they received this newsletter. If they did not, please have them contact the Department and we will add their name to the list and send a newsletter to them. Thank you for helping us find our "lost" alumni.

AT LAST!

Two new publications enable you to

ENJOY LEARNING SCIENCE THROUGH MUSIC!

THE PLANT PARASITIC NEMATODE SONGBOOK

(*Serious Music for Serious Pests*) by Kathy Merrifield

...incorporates both classical and popular themes into nine riveting selections! Seriously! Remind yourself of nematode control measures with *The Nematode Marching Song*, review a contemporary taxonomic debate with *Ode to the Ring Nematode*, and envision a unique plant disease complex with *The Yellow Head Rot* song! Educational applications abound, witness this heartfelt testimonial:

"The only way I can remember that *Helicotylenchus* is an endoparasite of banana is by singing *The Spiral Hymn of Necrosis!*" —Kathy Merrifield, plant nematologist, artist, lyricist, plagiarist, publisher, and promotor.

THE PLANT PARASITIC NEMATODE SONGBOOK, VOL. II

(*More Serious Music for Serious Pests*) by Kathy Merrifield

...uses more well-known melodies to bring over ten more vital subject areas to life. Gallop through nematode sampling with *The Ghost Worms in the Sky*, tap your feet to *The Parasitic Nematode Rag*, and review your knowledge of nematode common names with the lilting melody and lyrics of *My Favorite Worms*. Three nematode rounds and even three Christmas songs will delight singing groups (whether they will delight audiences is your problem, not ours).

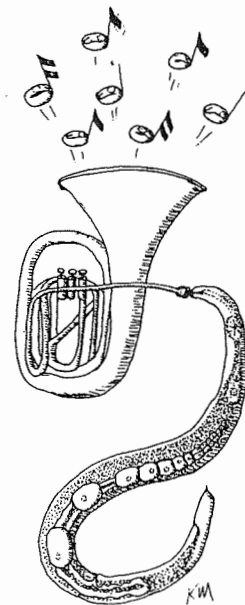
Each volume includes melody lines, guitar chords, and a comprehensive glossary to enable you to make nematode songs a deeply meaningful and long-remembered part of your life (and at least a long-remembered part of the life of anyone who hears you sing them).

Volume I: \$4.50


Volume II: 5.00

Make checks payable to The E.R. Jackman Foundation and mark them for the *Songbooks* (Profits will go to benefit graduate students in Botany & Plant Pathology).

Look for Volume III, *Camp Songs*, coming this winter!



THE NEW BOTANY & PLANT PATHOLOGY T-SHIRTS!

They're here! Available in **long** and **short** sleeves. Also, long-sleeved
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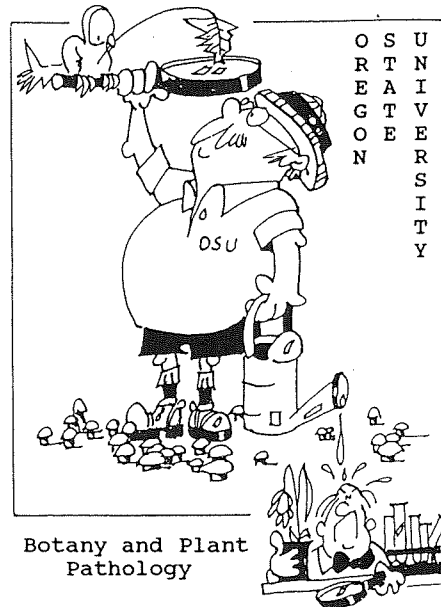
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