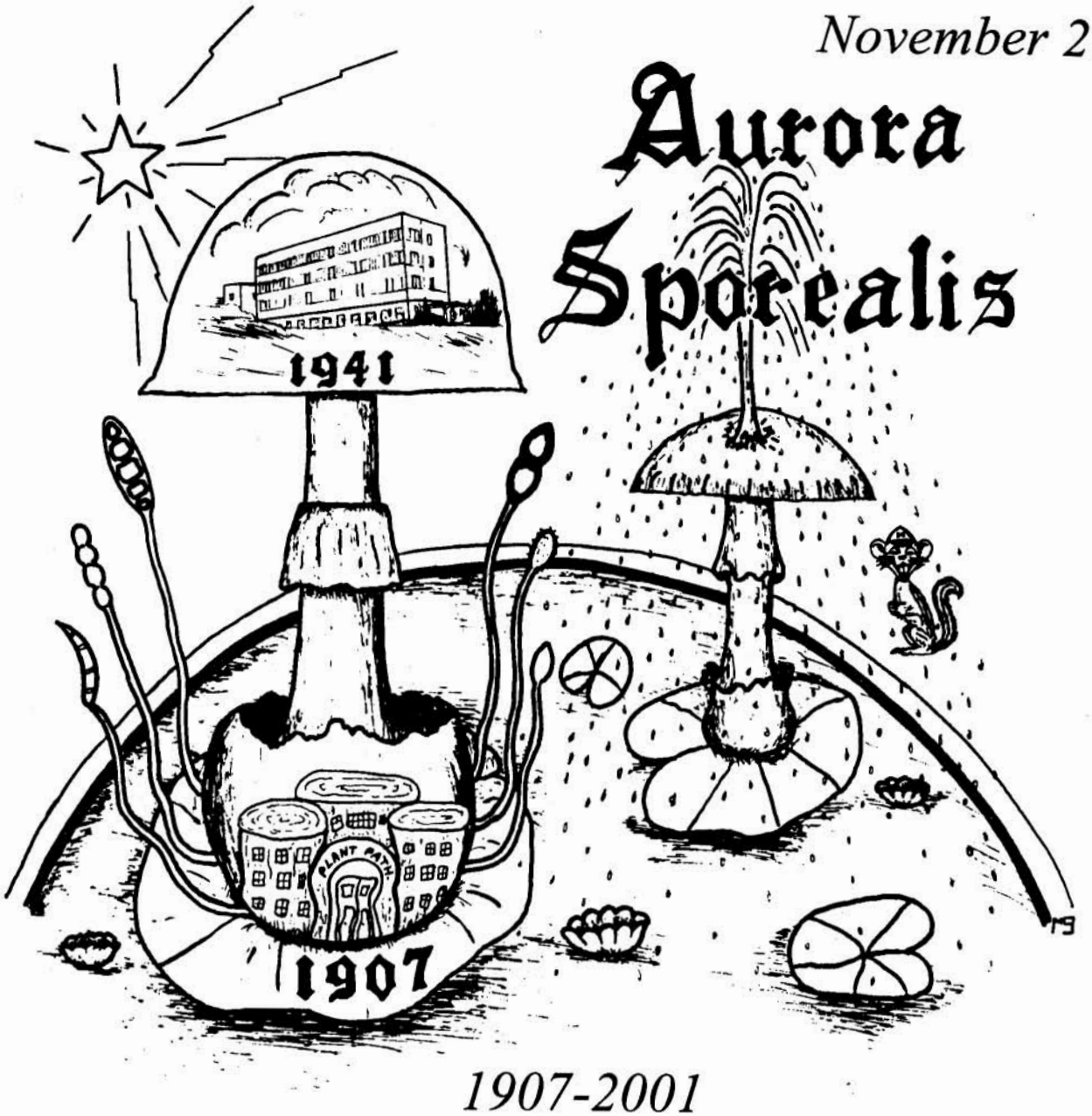
November 2001

Aurora Sporealis



1907-2001

Wherein are recorded the recollections, the ruminations and the raspirations of those who have drunk from the foaming fount of the Department of Plant Pathology of the University of Minnesota and who now spout forth in divers ways

Let the fount foam and never run dry

Let the spout squirt and never lose power

AURORA SPOREALIS

VOLUME 71 NOVEMBER
NUMBER 1 2001

The *Aurora Sporealis* is the alumni news magazine of the Department of Plant Pathology. First published in 1924, it is the oldest, consecutive departmental news magazine in the history of the University of Minnesota.

Editor
Nevin Dale Young, Public, Alumni & Institutional Relations Committee Chair

Production Editor
Debra Baden Drange

Contributors
Dann Adair
Gib Ahlstrand
Ann Arendt
Charlie Barnes
Janna Beckerman
Todd Burnes
Senyu Chen
Debbie Baden Drange
Patti Combs
Sandra Gould
James V. Groth
Dean E. Herzfeld
Jennifer Juzwik
Kurt J. Leonard
Ben Lockhart
David H. MacDonald
Robert Nyvall
Frank Pfleger
Deborah Samac
Howard Schwartz
Carol Windels
Nevin Young
Richard J. Zeyen

Photographer
Gilbert A. Ahlstrand
Ann Arendt
Debbie Baden Drange
Nathaniel Haefs

Business Manager
Laurie A. Brand

Circulation
Ann Arendt
Debra Baden Drange

Home Page
www.plpa.agri.umn.edu

Aurora Sporealis is mailed annually to former and current faculty, staff, graduate students and old timers who worked in the Department of Plant Pathology. Items for the next volume can be sent to:

Dr Frank L. Pfleger
Department of Plant Pathology
University of Minnesota
495 Borlaug Hall
1991 Upper Buford Circle
St. Paul, MN 55108-6030 USA
alumnis-plpa@puccini.crl.umn.edu

If you would like you receive your Aurora Sporealis in an electronic version in the future, please e-mail Debbie Baden Drange at debbd@umn.edu to be placed on the listserve.

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Front Page

History of *Aurora Sporealis*

By Thor Kommedahl

The first issue of Aurora Sporealis was printed (mimeographed) on August 1, 1924, and the message that appeared on that first page was continued until May 1978. A graduate student Ta Ching Loh (PhD, 1933) designed a cover that you see reproduced for this issue and which appeared first on the January-February 1933 issue. *Aurora Sporealis* was published 6 times a year in those days. The Seminar Committee that handled *Aurora Sporealis* then consisted of Helen Hart, H. A. Rodenhiser, and A. W. Henry (chair). During these times the department was housed in the old Agricultural Botany Building, referred to affectionately as *The Tottering Tower* (it was subject to vibrations because the building was set on shifting sand and clay soil--there was even a crack in the southwest corner of the building that widened over time). In the January-February 1943 issue, the cover was redrawn to show both the old and the new building (now known as Stakman Hall) but the artist was not named. Because of the new building, scientific names were coined for the buildings: *Phytobrickhaus tremuloides* for the Tottering Tower *and Phytobrickhaus concretus* var. erectus for the new building (*Aurora Sporealis* 17[4]:July-August,

1941); it was later referred to simply as *P. erectus*. In 1950 (January-March issue), graduate student Malcolm Shurtleff (PhD 1953) redrew the cover to make it neater and he added the "gopher". This drawing continued to be used until May 1978. After that, each issue had a different cover design to reflect a theme or emphasis of that particular issue.

MESSAGE FROM THE HEAD

Dear Friends of the Department:

Greetings from Minnesota!! The state legislative session for FY 2002 recently completed its business, and in my opinion, this session could be considered one of the most difficult in the history of the state. Strong differences in opinion among and between members of the Senate and the House and the Governor on what to do with the state surplus with regard to spending and/or property tax relief sparked a debate and standoff that sent the process into not only a special session, but nearly a government shut down before a compromise was reached just prior to the midnight deadline on July 15. Well, throughout all of this, how did the legislative decisions impact the University's funding requests? The university received about 45% of its request, which will result in major budgetary challenges over the next fiscal year and beyond. President Yudof presented a plan to cover this shortfall in the following manner: a) 33% will come from legislative allocations, b) 33% from increases in undergraduate and graduate tuition and c) 33% through internal reallocation that includes a tax that is to be paid by colleges and departments therein. Thus, we are currently in the midst of significant budgetary challenges; immediate and into the future. The department certainly felt the sting as the reallocation decision trickled down from central to the college and from the college to the department. The good news is that there was salary increase for faculty, staff and students.

General state support for university programs over the last 20 years reveals a pattern of steady decline. This is not unique to the University of Minnesota, but rather, unfortunately, is the reality facing the majority of major public universities throughout the U.S. Certainly, this trend will require universities to rethink on how they conduct their business. From a departmental standpoint, it will require us to make some difficult choices, but it's also an opportunity for us to redirect programs and funding and to rethink our priorities. State support is critical to department functions, and shortfalls impact our teaching, research and extension programs and for that matter, all functions and programs of the university. However, in times of adversity, we remain committed to excellence within our priorities of research, teaching and extension.

Now, let me move on to a more pleasant topic. The college has been engaged in a prioritization process to define ways to best use the College's resources to serve the needs of the citizens of Minnesota, and to develop guidelines for effective assignment and allocation of the College's human, financial and physical resources. The planning for this process emerged as a grassroots effort among department heads and faculty members. Comments and advice from students, staff members of the College, and citizens across the state have been incorporated into the priority themes to help develop a vision for the future. Five broad priorities include: **1) Promoting Safe and Healthy Foods, 2) Improving Environmental Quality, 3) Serving Urban Communities, 4) Revitalizing Minnesota's Rural Communities 5) Enhancing Agricultural Production Systems,** describe the future direction of the College. More importantly, these five priorities are connected by an over-aching commitment to education—**Emphasizing Exemplary Education** that has been identified by faculty members, students, staff members and citizens as the premier goal for the College. We are now in the process of requesting faculty groups to develop and submit 1 to 3 creative initiatives linked to each of the 5 priorities. Out of this process, at least one initiative from each priority will be selected for funding. The College will provide "seed money" to initiate the projects. Slowly, the College effort will begin to reflect the direction and vision of the 5 priorities with **Emphasizing Exemplary Education** as the corner stone. As you can see, each department within the college will provide significant contributions to each of the priority themes. Also, the broad priorities will facilitate and foster collaborative efforts with other colleges including the medical school. I will keep you informed as we move along the road of change with the priorities as our guide into the future.

Departmental News: Several new faculty have joined the department this past year. First, **Dr. Janna Beckerman**, Extension Educator/Assistant Professor, assumed her new responsibilities in the Yard & Garden Line January 22, 2001. Filling this position brings a full compliment to the Yard & Garden Line group and includes a plant pathologist, horticulturist, and entomologist. Janna's primary focus is to provide education and support for Extension Educators, Master Gardeners and the public concerned about urban plant care. Additionally, Janna will maintain and expand a web-driven disease diagnostic and

control database for public assess. Secondly, **Dr. Sally Stetina** began her tenure track position as Assistant Professor with 75% teaching and 25% research located at the University of Minnesota's Southwest Research & Outreach Center, Lamberton. Sally's tenure is in the department. Sally joins a team of three other plant and soil scientists providing instruction for degree programs offered by our college at the University of Minnesota in an institutional partnership with Southwest State University, a regional liberal arts institution in Marshall, Minnesota. For the research component of her position, Sally has chosen to direct her research efforts on soybean disease management with particular focus on soybean cyst nematode. **Dr. Sue Cohen**—joined the department April 23, 2001 and is employed by APHIS. The department and APHIS has entered into an agreement that will facilitate Sue spending 9 months at the University of Minnesota working on the following a) implementation of the on-line international workshop on risks of exotic pests and impact with global trade b) evaluation of risk management approaches for forest diseases, c) develop a pest risk assessment for Phytophthora canker and e) integration of geospatial analysis into pest risk assessment and risk management approaches. Sue's expertise brings a new dimension to the departmental activities and will support and enhance existing teaching, research and outreach programs within the department.

Dr. Jeff Miller, Assistant Professor and potato pathologist, resigned his position in the department in January 2001 and accepted a position at the University of Idaho at the Aberdeen Experiment Station, Aberdeen Idaho. I refer you to the Departures section of the Aurora for additional details regarding Jeff's decision. We were sorry to see Jeff leave but also understand his decision to seek this opportunity at the University of Idaho. Fortunately, we were successful in convincing the Dean of the importance of this position and we are currently searching for a person to continue to research potato diseases but with a different slant. The responsibilities of the person in the newly described position is integrating genetic host plant resistance with alternative management methods to minimize losses to major potato diseases using molecular and classical methods. We plan to fill the position by mid-year 2002.

Scholarly activities by the faculty have resulted in another banner year of research reporting. The following is a summary of our publications: one book, 12 book chapters, 50 refereed articles, 52 abstracts, 28 extension articles and 2 patents. Faculty success at securing external grant funds to support their research has been outstanding. Our outreach/extension and teaching programs remain strong as well. Most faculty have at some point, taken advantage of various teaching improvement workshops sponsored by either the University of Minnesota or other organizations. Involvement of faculty in these activities contributes to the excellence of our teaching efforts.

The graduate students are embarking on sponsoring and planning another symposium for spring of 2002. Last year's symposium, **Genomics and Bioinformatics in Plant Pathology**, was a resounding success. Invited speakers regarded as leaders in this area came from far and wide to participate in the event. As in past years, the students are totally responsible for planning, organizing and seeking funds to support the symposium. The students feel that this is an excellent experience and that they look forward to the challenge each year. The theme for the 2002 symposium is **New Approaches to Plant Disease and Pest Management: Alternatives to Pesticides.**

The extended cool wet spring followed by hot and dry weather conditions has resulted in an excellent growing season with diseases of little consequence on most major crops. For example, potato late blight has not been found in the state, losses in wheat and barley due to Fusarium Head Blight are minimal, and other then the usual diseases on soybean, e.g. SCN, phytophthora etc. yet no severe outbreaks have occurred. However, the cool wet spring did result is significant seed rot and in some cases, seedling and/or root rot thus affecting stands especially in pea, snap and dry bean, soybean and sugarbeet.

In this issue of the Aurora, please note that nomination forms for the E.C. Stakman Award are enclosed. I request that you give serious consideration to nominating individuals of any country and nationality for outstanding achievements in plant pathology. The award may be given for documented achievements in the areas of research, teaching, outreach, international development, or for any combination of these areas. This year's recipient of the E.C. Stakman Award is Dr. James E. DeVay at the UC Davis. Jim will be on campus October 17 to visit with students and faculty and to receive the award followed by a seminar.

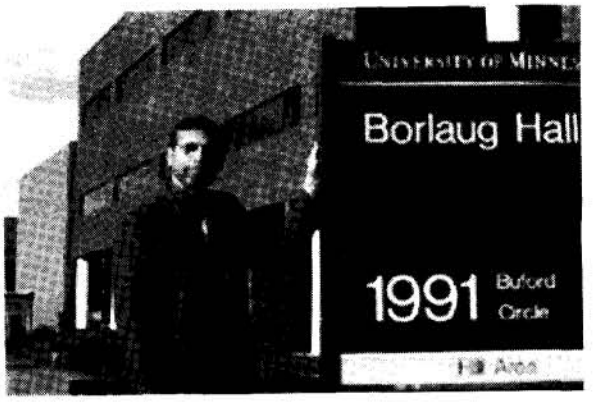
With the recent hires of young new faculty, I thought for sure that this would be our year (faculty that is) to win the annual E.C.Stakman faculty/staff vs. graduate student softball game. I attributed our losses in previous years to the fact that we had difficulty running (which was true), but I learned that some (most) of us have another limitation---we can't hit! Thus, the student reigned again by humiliating us by the score of 22 to 5. Just wait until next year.

The University of Minnesota is in the midst of a capital campaign. Many of you have received mailings from me providing you with an update of our current endowments and a summary of the university campaign. One of our goals is to achieve the $25,000 in the E.C. Stakman Plant Pathology Graduate Student Fellowship Endowment. We are close as we now have $18,900 in this endowment. Once we reach $25,000 level the university will match the interest earned from this endowment with the earnings coming to the department for graduate student support. Please see the letter from Norman Borlaug for further details. It is gratifying that many of you have contributed to this endowment as well as other departmental endowments. For this I am truly grateful. It's clear that you care deeply for this department. Your financial and moral support provides the foundation to assist us to maintain and improve the quality of our programs. The decline in state funding brings to mind even more the importance of our endowments in caring out our departmental programs.

If your travels, business or pleasure, bring you into the Twin-Cities please include a visit to the department in your plans. You're always welcome.

I want to thank Dr. Nevin Young, the editor of this year's ***Aurora*** and to all involved in the development and production of this annual departmental newsletter that we share with alumni and friends.

Frank L. Pfleger

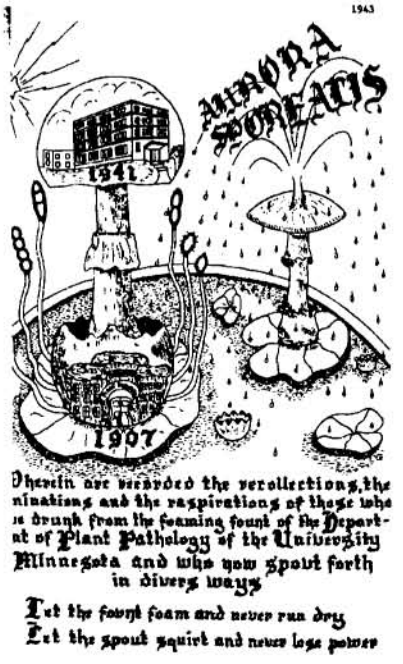


PAST AURORA COVERS

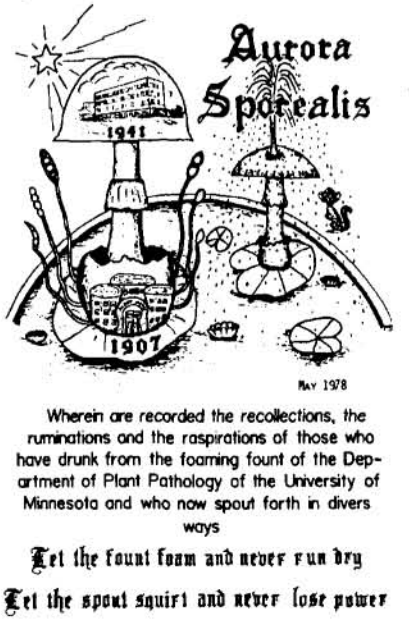
1933



1943



1978



College of Agricultural, Food, and Environmental Sciences

November 1, 2000

Dear Colleague:

I'd like to take this opportunity to address you, my fellow alumni and friends of the Department of Plant Pathology at the University of Minnesota. While many things have changed since my graduate days (MS '41 PhD '42), there is one constant—the worldwide need for education and training in plant pathology. Through education, training, and research we have hope of feeding the world.

Plant pathologists are among the most broadly educated and versatile scientists in agriculture. We play a pivotal role in the production of food and fiber for all societies. Simply put, we need to continue to educate and train plant pathologists for the challenges that face our planet in the 21st century.

We, and the entire world, have benefited from our education as plant pathologists at the University of Minnesota. Now the University of Minnesota is in a position to help us help them ensure opportunities for education and training of future plant pathologists.

The University of Minnesota has encouraged us, through the 21st Century Graduate Fellowship Endowment program, to establish the E.C. Stakman Plant Pathology Graduate Fellowship Fund because, at this time, the impact of our gifts will be doubled. Our goal is $250,000.

Some of you may have the where-with-all to establish your own named fund at $25,000. That's great, and I certainly encourage you to consider this. Others may make any size gift to the E.C. Stakman Plant Pathology Fellowship Fund as their pocketbooks and estates permit.

Please consider making a gift to the E.C. Stakman Fellowship. Your gift now will double its impact through the 21st Century Graduate Fellowship Endowment Program and create a legacy for future plant pathologists.

Sincerely,

Norman E. Borlaug

Norman E. Borlaug
Nobel Peace Prize Laureate

CALL FOR NOMINATIONS:

E.C. STAKMAN AWARD

The Department of Plant Pathology at the University of Minnesota is requesting nominations for the E.C. Stakman Award. The award is granted to individuals of any country and nationality for outstanding achievements in plant pathology. The award may be given for documented achievements in the areas of research, teaching, outreach, international development, or for any combination of these areas. Preference will be given to candidates actively engaged in these areas; only occasionally will lifetime achievement awards be considered. Nominations must include a brief biographical sketch of the nominee and received by February 15, 2000. Please send your nominations to the following address, or fax them to 612-625-9728 or E-mail them to plpa@puccini.crl.umn.edu. Dr. Benham Lockhart, Department of Plant Pathology, University of Minnesota, 495 Borlaug Hall, 1991 Upper Buford Circle, St. Paul, MN 55108-6030 USA.

STAKMAN AWARD RECIPIENTS

Dr. W.L. Waterhouse, Professor, University of Sydney, Australia, 1956

Dr. H.A. Rodenhizer, USDA, Washington, DC, (formerly Deputy Administrator for Farm Research), 1957

Dr. T. Johnson, Head, Canadian Rust Research Laboratory, Winnipeg, 1958

Dr. J.J. Christensen, Head, Department of Plant Pathology, University of Minnesota, 1959

Mr. Jose Vallega, Argentina Department of Agriculture, FAO in Rome, 1960

Dr. Norman E. Borlaug, renown wheat breeder and plant pathologist with the Rockefeller Foundation's agricultural improvement program in Mexico, 1961

Dr. Helen Hart, Professor, Department of Plant Pathology, University of Minnesota, 1963

Dr. J.H. Craigie, former Head, Canadian Rust Research Laboratory, Winnipeg, 1964

Dr. J.A. Rupert, in charge of the Rockefeller Foundation's agricultural improvement program in Chile, 1965

Dr. I.A. Watson, Dean, College of Agriculture, Sydney University, Australia, 1966

Dr. H.H. Flor, Research Plant Pathologist, USDA, Fargo, North Dakota, 1967

Sir Frederick C. Bawden, Director, Rothamsted Experimental Station, Harpenden, Herts, England, 1968

Dr. Donald G. Fletcher, former Executive Vice-President, Crop Quality Council, Minneapolis, Minnesota, 1968

Dr. George J. Harrar, President, Rockefeller Foundation, 1969

Dr. H. Asuyama, Department of Plant Pathology, University of Tokyo, 1971

Dr. C.S. Holton, Department of Plant Pathology, Washington State University, Pullman, 1971

Dr. J.C. Walker, Professor Emeritus, Department of Plant Pathology, University of Wisconsin, Madison, 1972

Dr. D.L. Bailey, Professor Emeritus, Department of Botany, University of Toronto, Canada, 1972

Dr. C.M. Christensen, Regents Professor Emeritus, Department of Plant Pathology, University of Minnesota, 1981

Dr. J.F. Fulkerson, Plant Pathologist and Microbiologist, USDA, Washington, DC, 1982

Dr. E.J. Wellhausen, Special Staff Member, The Rockefeller Foundation, Mexico, 1982

Dr. J.E. VanderPlank, Plant Protection Research Institute, Pretoria, South Africa, 1985

Dr. J.M. Daly, Department of Agricultural Biochemistry, University of Nebraska, Lincoln, 1986

Dr. Arthur Kelman, Department of Plant Pathology, University of Wisconsin, 1987

Dr. Theodor O. Diener, USDA, Plant Virology Lab, Agricultural Research Center, Beltsville, Maryland, 1988

Dr. R. James Cook, USDA, Regional Cereal Disease Research Lab, Washington State University, Pullman, 1989

Dr. Thor Kommedahl, Department of Plant Pathology, University of Minnesota, 1990

Dr. Allen Kerr, Department of Crop Protection, The University of Adelaide, South Australia, 1991

Dr. Luis Sequeira, Departments of Bacteriology and Plant Pathology, University of Wisconsin, 1992

Dr. Sanjaya Rajaram, Germplasm Improvement Subprogram International Maize and Wheat Improvement Center, CIMMYT, Mexico, 1993

Dr. Malcolm C. Shurtleff, Professor Emeritus, University of Illinois, and Adjunct Professor, Texas A&M University, 1999

Dr. William R. Bushnell, Professor, Cereal Disease Laboratory, University of Minnesota, 2000

E.C. STAKMAN NOMINATION FORM

Nominee:_____ **Date:**_____

Address:_____

_____

_____

Phone: (Business)_____ **(Home)**_____

Educational background:

Employment background:

Significant honors and awards:

Please provide rationale and documentation to explain why you believe this person is deserving of the E.C. Stakman Award:

Nominator name: _____

ALUMNI SPEAK

Alumni Speak is a column devoted to news and views from alumni. We are interested in what *you* are doing! All alumni are invited to drop us a line by regular mail (see enclosed envelope) or by E-mail (alumnis-plpa@puccini.crl.umn.edu). We are particularly interested in news from the alumni who graduated during the following decades. Send us your news and photos, tell us what you are doing, give advice to today's students or share a favored reminiscence. We look forward to hearing from you!

YEAR & STUDENT	DEGREE/ADVISOR	
2000		
Pedro Figueroa	Ph.D.	Roelfs
Laszlo Gyenis	Ph.D.	Anderson
Kun Xiao	M.S.	Kinkel
Julie Jenkins	M.S.	Jones
Consuelo Estevez de Jensen	Ph.D.	Meronuck/Jones
Warren Kruger	Ph.D.	Zeyen
Silvia Penuela	Ph.D.	Young
1990		
Necmettin Bolat	M.S.	Roelfs
Grace Z. Bucher	M.S.	French
Robert L. Hills	M.S.	Kennedy
German P. Hoyos	Ph.D.	Anderson
Kosim Kardin	Ph.D.	Groth
Flavio A. Lazzari	Ph.D.	Meronuck
Francisco Javier Placencia de a Parra	M.S.	Mirocha
Beatriz Alida Perez	Ph.D.	Roelfs
1980		
Phillip H. Berger	M.S.	Zeyen
Barbara J. Christ	M.S.	Groth
Glenn R. Furnier	M.S.	Anderson
David W. Gardner	M.S.	Krupa
Curtis B. Hill	M.S.	Anderson
Lois E.B. Johnson	Ph.D.	Frosheiser/Wilcoxson
Nilceu Ricetti Xavier De Nazareno M.S.	Roelfs	
Gregory C. Pratt	M.S.	Krupa
Gusti Sarbini	Ph.D.	Kommedahl
Rachid Sayoud	M.S.	Wilcoxson
Dale L. Smeltzer	M.S.	French
Susan Stade	M.S.	Brambl
Steven P. Swanson	M.S.	Mirocha
Herman C. Wenzler	Ph.D.	Brambl
Katherine D. Widin	Ph.D.	Kennedy
Carol E. Windels	Ph.D.	Kommedahl
1970		
Roderick R. Bevis	M.S.	Rothman
Annabell I-Pin Chang	Ph.D.	Kommedahl
Young Sup Cho	Ph.D.	Wilcoxson
Delfin B. Lapis	Ph.D.	Calpuzos
Richardo M. Mont	M.S.	Rowell
Jon M. Prescott	Ph.D.	Kernkamp
Alan P. Roelfs	Ph.D.	Rowell, Romig
Phillip J. Salisbury	Ph.D.	Kommedahl, French
John W. Schwandt	M.S.	Anderson
David P. Swendsrud	M.S.	Calpouzos
Franklin H. Tainter	Ph.D.	French
Herman L. Warren	Ph.D.	Kommedahl
William C. Woodruff	M.S-B	Kernkamp, Wilcoxson
Richard J. Zeyen	Ph.D.	Banttari
1960		
Arne S. Andersen	M.S.	Rowell
Neil A. Anderson	Ph.D.	French
George A. Bean	M.S.	Wilcoxson, J. Christensen
Bimala P. Charavarti	Ph.D.	Hart
Arthur M. Elliot	M.S.	Hart
Paul G. Gustafson	M.S.-B	Unknown
William A. Haglund	Ph.D.	King, Durbin
Thomas Kavanagh	Ph.D.	J. Christensen Wilcoxson
Kenneth W. Knutson	Ph.D.	Eide
Charles W. Miller	M.S.	Hart
Jacobo Ortega	Ph.D.	J.J. Christensen
Donald Penner M.S.	Linck	
Bobby L. Renfro	Ph.D.	Kernkamp, Wilcoxson
Richardo A. Rodriguez	Ph.D.	Eide
Eric G. Schleder	M.S.	Taylor, J. Christensen
Donald P. Taylor	Ph.D.	J. J.. Christensen
Myron E. Tumbleson	M.S.	Kommedahl
Thomas D. Wyllie	Ph.D.	J. Christensen, Taylor
1950		
A. David Baskin	Ph.D.	Stakman, Eide
Julio Bird	M.S.	Stakman, King
Alfredo Campos	M.S.	Stakman, Hart
John W. Gibler	M.S.	Kernkamp

Phillip C. Hamm	Ph.D.	C.E. Steinbauer, Landon, Stakman, Harvy
Lavanial Henderson	M.S.-B	Landon (?)
Yu-Tien Hsai	M.S.	J. Christensen, Stakman
Abrar M. Khan	Ph.D.	Stakman, Kernkamp
Shih-I Lu	M.S.	Stakman
Donald E. Munnecke	Ph.D.	Stakman
Malcolm C. Shurtleff	M.S.	Stakman, Hart, Loegering
Martin T. Tveit	M.S.	Moore
Chester A. Wismer	Ph.D.	J.P. Martin, Stakman, Hart, J.Christensen

1940

J. Lewis Allison	Ph.D.	Stakman (?)
Shan-Ming Chen	M.S.	Stakman, J. Christensen
William J. Cherewick	M.S.	Stakman, J. Christensen
Donald J. deZeeuw	M.S.	Stakman, Eide
Andrew R. Downie	M.S.	Stakman
Milton A. Petty, Jr.	Ph.D.	Stakman
Dudley A. Preston	M.S.	Stakman, R.V. Ellis
Ian White Tervet	Ph.D.	Stakman, J. Christensen
John R. Vaughn	M.S.	Eide

1930

Clyde C. Allison	M.S.	Stakman
Clyde M. Christensen	M.S.	Stakman
Lee Hines	M.S.	Stakman (?)
Elia E. Johnson	Ph.D.	Leach
E.M. Johnson	Ph.D.	Stakman(?), Leach(?)
Thorvaldur Johnson	Ph.D.	Stakman
Frank Henry Kaufert	M.S.	Stakman, Lachmund
Leonard W. Melander	Ph.D.	Stakman
Ralph M. Nelson	Ph.D.	Stakman
Louis O. Regeimbal	Ph.D.	Harvey

1920

Raymond Fogelman	M.S.	Stakman
G. F. Puttick	M.S.	Stakman(?)

1910

Robert A. Jehle	M.S.	Freeman
Jane Nisbit	M.S.	Freeman
Elvin Charles Stakman	M.S.	Freeman

OLD TIMER NEWS

(Alumni Speak)

Rosalie Beer sends here regards to the Department. She lives in Seattle with her children, Emily (college) and Jake (Jr. High). She learned electron microscopy and virology working with Dr. Richard Zeyen as an undergraduate in 1972-1975; she majored in microbiology. For years Rosalie was involved with various west coast biotechnology firms and is now an administrator of Technology Transfer at Hutchinson Cancer Research Center in Seattle. There was great excitement at the "Hutch" in October when its President, Lee Hartwell was named a 2001 Nobel Laureate for his discovery of key regulators in the cell cycle.

Beverly Bergman (Secretary 1975) Thank you for sending the Aurora Sporealis and the news from Plant Pathology. I will send some of the information to Millie Fortner as I still stay in touch with her at Christmas-time. I still work at Hennepin County. I was going to retire in June, but fate took a turn in March prior to my birthday. Therefore, I made the decision to stay at my work until "the time is right". Although I do get tired and the work is demanding, I still enjoy certain aspects of what I do. For enjoyment we keep busy with Masonic Lodge gatherings, attending church at Mount Olivet and gardening. Our best wishes for a wonderful and prosperous New Year 2001.

Tom Kucharek (MS 1965, PhD 1969) This is a letter Thor Kommedahl received: Just an update on my recent professional career. This past year I received a Distinguished Service Award from the Florida Phytopathological Society for which I had previously served as secretary, vice president and president. Also, I was awarded a first time offered, faculty step award (monetary) on a strict competitive basis. Those eligible were those at full professor level for at least 7 years. I attained full professor status in 1980. The idea was to provide incentives and at the same time try to offset salary compression. A couple of years ago I was awarded a Professorial Excellence Award which was another status thing with the monetary benefits helping a bit.

For your information, a couple of years ago, some colleagues and I successfully completed an experiment which was carried on a space shuttle. This work was published recently in the Journal of Applied Microbiology and Biotechnology. My contribution was eliminating some fungal contamination problems. This was an interesting, minimal time-consuming project away from my usual work with agronomic and vegetable crops. I will continually acknowledge you, Dr. Harry Young Jr., and Dr. Milton Kernkamp for your combined efforts in helping me through my formative graduate school years. I hope I am not over stepping my bounds when I say that

your combined efforts and that of the Plant Pathology Department as a whole at the University of Minnesota were worthwhile for me, my family and the growers in Florida.

In case you did not know, Eldon Brown retired a few years ago after becoming a world wide authority on post harvest diseases of citrus. He worked for the Florida Department of Citrus after finishing at the University of Minnesota and concomitantly was an adjunct professor with the University of Florida.

Shih-I Lu (MS 1949, Ph.D. 1952) Dear Professor Pfleger, thank you for mailing me my Ph.D. thesis. I have a deep love for my alma mater - Department of Plant Pathology; it is the cradle for intellectual refinement that enables me to serve the society through science. I would be grateful if you can mail me my MS thesis, 1950 Cultural Characters of *Ustilago zeae* mutants. This was my first piece of work that the "big boss" - E.C. Stakman liked very much, he said "this is just the way I would like to put it".

Chuck Logsdon (Ph.D. 1954) Your tribute to Boss Eide (as I called him) was great. He was certainly one of the good guys — my advisor, my boss from 1946 to 1953, my counselor, and my very good friend for many years. My new e-mail is: cel@mtaonline.net.

Tarkus Suganda (MS 1991, PhD 1995) Deb, my university has sent me to UK for 3 weeks to study university management. They hope that sometime in the future I will be positioned as the president or vice president of my university. Although for now my position is still staffing, however, I am now a staff of Vice President for Academic Affairs, of VC for Cooperation, of VC for Planning and Development. All of the university. I also am the staff of Vice Dean for Academic Affairs of my college. That's why I am so busy since I am involved in all university business. However, if I can choose (or having an opportunity) I prefer to deepen my knowledge on university management in the US university, since I know that US universities are more suitable and related with our system. I miss you all. Please send my best regards to everyone.

Kenneth "Kenny" R. Walker (MS 1957) I visited the Fountain of Knowledge on Saturday, June 30, 2001. While I greatly regretted not seeing anyone to learn about "Old Timers" of the nineteen fifties, it was a source of joy to walk through the "Plant Path" building following an absence of nearly 50 years. My address is 1 Beresford Crescent, Kingston 08, Jamaica, West Indies, phone: 876-9259278.

DR. CARLOS OCHOA RECEIVES FIRST WILLIAM L. BROWN AWARD OF EXCELLENCE IN PLANT GENETIC RESOURCES CONSERVATION

Dr. Carlos Ochoa, international potato expert, received the first William L. Brown Award of Excellence in Plant Genetic Resources Conservation in a ceremony at the National Academy of Sciences on May 9, 2001. The award reflects Dr. Brown's lifelong efforts to collect, preserve, understand and share plant genetic resources. Dr. Ochoa was chosen from a group of 30 world-class nominees by an internationally recognized selection committee of experts in genetic resource conservation. Dr. Ochoa's career has spanned more than 40 years of collecting, studying, and improving potato germplasm from his base at CIP, the International Potato Center, where he is currently senior scientist emeritus. Some of his accomplishments that were noted are: the collection and classification of more than 12,000 accessions of wild and cultivated potato species and discovered 80 wild species, about 1/3 of those known to exist. He has developed at least a dozen improved potato varieties that are now cultivated commercially on 70,000+ acres in Peru, about 20% of the country's potato growing area. Along with several published scientific articles and books on potato taxonomy and breeding. He accepted the award gratefully and will use the prize money to help underwrite publication of his lifework.

VISITORS TO THE DEPARTMENT

1999

June 16 - Kanti Patel (Ph.D. 1967), India

June 25 - Bruce Paulsrud (M.S. 1996), University of Illinois, Urbnana.

October 29 - Judy Thies (Ph.D. 1988), U.S. Vegetable Laboratory, Charleston, SC.

2000

June 16 - Moussa Seck (M.S. 1985), ENDA-SYSPRO, Dakar, Senegal.

2001

June 8 - Paul S. Teng, Monsanto Philippines

June 26 - William Anderson, Burke VA. (Ph.D. 1974)

June 30 - Kenneth "Kenny" Walker (M.S. 1957), Jamaica, West Indies

July 7, 2001 - Howard (PhD. 1964) and Karwyn Bissonnette, Florida.

July 26 - Phil Berger (M.S. 1980), University of Idaho, Moscow

August 13, 2001- Jeff Miller, University of Idaho,

Aberdeen Experiment Station, Aberdeen, Idaho.
August 17, 2001 - Daqun Liu (Ph.D. 1992), Agricultural University of Hebei, China
August 17, 2001 - Yehoshua Anikster, Israel
September 6, 2001 - Ward and Myrna Stienstra, Michigan.

NEW FACULTY



Dr. Saliana Stetina
Assistant Professor
By Frank Pfleger

The Department is pleased to welcome Dr. Sally Stetina, who joined the Department January 2, 2001. Sally is located at the Southwest Research & Outreach Center at Lamberton and is involved in the partnership degree program established between the University of Minnesota and Southwest State University at Marshall, Minnesota. Students enrolled in this program can earn a B.S. degree from the University of Minnesota while attending Southwest State. Sally, along with three other U of M faculty from the departments of Soil, Water & Climate and Agronomy & Plant Genetics are involved in teaching students enrolled in one of four majors offered, has a 75% teaching and 25% research appointment. Her research program will focus on diseases of soybean. Sally earned her B.S. and M.S. degree from Eastern Illinois University in 1988 and 1990, respectively and her Ph.D. in Plant Pathology from Louisiana State University in 1996 where she studied competition between several nematodes and the effect of soybean genotypes had on competition between select nematodes. From 1997 to 1998, she worked as a Research Associate in the Corn Pathology Program/Aflatoxin Initiative Project Rice Pathology at LSU. She then joined the Soybean Pathology Program at Southern Illinois University as a Research Associate in 1998. Sally served as an Adjunct Assistant Professor at Southern Illinois University before coming to the University of Minnesota.



Dr. Susan Cohen
APHIS
By Frank Pfleger

The faculty, staff and students extend a pleasant welcome to Dr. Sue Cohen who holds a position with APHIS and joined the department April 23. Sue recently completed her Ph.D. at George Mason University where she studied and researched her thesis on A comparative Population Ecology Study of the Fungal Pathogen, *Discula umbrinella*, on *Quercus alba* and *Quercus rubra*. APHIS has requested that Sue spend 9 months at the University of Minnesota working on the following a) implementation of the on-line international workshop on risks of exotic pests and impact with global trade b) evaluation of risk management approaches for forest diseases, c) develop a pest risk assessment for Phytophthora canker and e) integration of geospatial analysis into pest risk assessment and risk management approaches. Sue's expertise brings a new dimension to the departmental activities and will support and enhance existing teaching, research and outreach programs within the department.





Dr. Janna Beckerman
Extension Educator/Assistant Professor
By Frank Pfleger

It is our pleasure to welcome Dr. Janna Beckerman to the Department. Janna began her position as Extension Educator-Plant Pathology in the Yard & Garden Line on January 22, 2001. Janna joins a core of other educators whose expertise includes Entomology and Horticulture in the Yard and Garden Line. This faculty core group have the responsibility of providing information and education to the citizens of the state on a broad range of topics involving insects, growing of plants and plant diseases. Janna is involved with development of information on urban plant health care for the general public and development of educational workshops and short courses for Extension Educators, and Master Gardeners. She received her B.S. and M.S. degrees from SUNY College of Environmental Science & Forestry. She then went on to Texas A & M for her Ph.D. where she studied the morphogenetic and hormonal control of appressorium formation of the rice blast fungus. Upon completion of her Ph.D. degree in 1997, Janna accepted a Postdoctoral Fellow position in the Department of Genetics, Cell Biology and Development at the University of Minnesota where she studied Candida genomics and pathogenesis. The department faculty, staff and students extend a hearty welcome to Janna.



DEPARTMENTAL NEWS

DEPARTMENTAL AWARDS 2001

by

The Department of Plant Pathology's annual awards program was held May 24, 2001. Exceptional achievements by alumni, friends, students, staff, and faculty were recognized. The following people received awards:

SPECIAL GUEST AND 2000 DISTINGUISHED ALUMNUS RECIPIENT

Dr. Michael J. Wingfield

Michael J. Wingfield (PhD 1983) was present at the department's annual award ceremony to receive the Distinguished Alumni Award. Professor Wingfield is currently the Director of the Forestry and Agriculture Biotechnology Institute at the University of Pretoria, Republic of South Africa. He has established one of the most productive forest pathology research centers in the world and has been a pioneer in the application of biotechnology to the study of forest tree diseases. Some of his other awards include a Fellow of the South African Society of Plant Pathology, Fellow of the Royal Society of South Africa and he was recently elected to the South African Academy of Sciences. Another recent award was the Hendrik Christiaan Persoon Medal presented by the South African Society of Plant Pathology. This award has only been presented 3 times in the last 40 years. For a view of the wide array of accomplishments take a look at his Institute's web page at: http://www.up.ac.za/academic/fabi/index.html .



Michael Wingfield (PhD 1982) after receiving his award being congratulated by Professor Bob Blanchette and Emeritus Adjunct Professor Tom Nicholls.

2001 DISTINGUISHED ALUMNUS AWARD

Dr. Eugene B. Hayden

This award will be presented to Dr. Hayden at the 2002 Awards Ceremony. We will present this award for his dedication to plant pathology and for his leadership as Head of the Crop Quality council, an organization dedicated to cereal crop improvement and as President of the Cereal Institute, Inc. As Head of the Crop Quality Council, Dr. Hayden was instrumental in bringing University researchers and industry cereal chemists together to evaluate milling and baking qualities of wheat varieties prior to release. As President of the Cereal Institute, Inc. Dr. Hayden provided the leadership for development of materials for use by educators regarding the nutritional value of cereals. The Department of Plant Pathology is proud of his accomplishments and it is our pleasure to recognize his contribution.

DISTINGUISHED FRIEND OF THE DEPARTMENT

Tom Anderson



This award was presented to Tom Anderson for his leadership at the state and national level in successfully securing funds to support research efforts to develop effective disease management strategies to control Fusarium Head Blight on wheat and barley. Tom is a small grains grower in Barnesville, MN. The Department of Plant Pathology is appreciative of his untiring support and recognize his dedication.

DISTINGUISHED MENTOR AWARD

Dr. Ruth Dill-Macky

This year's Distinguished Mentor Award was awarded to Dr. Ruth Dill-Macky by the graduate students in Plant Pathology. Dr. Dill-Macky was recognized by the students for her dedication and commitment to students in her lab and throughout the department. At the award ceremony, the graduate students noted how on numerous occasions, Dr. Dill-Macky has provided advice and guidance to the students as they considered projects and special events, and served as a liason between the students and faculty. As a result of Dr. Dill-Macky's support, guidance, and encouragement, the graduate students feel they have become closer to her and to each other.

M.F. KERNKAMP SCHOLARSHIP

Claudia V. Castell

Claudia came to the department in 1999 and has since been working with Dr. Samac on molecular variation in the mycorrhizal fungus, Phoma medicaginis. Claudia has been very active in departmental and graduate student affairs, including being the chair of last year's highly successful symposium, "Genomics and Bioinformatics in Plant Pathology". To quote one of the nomination letters, "Claudia gives 150% to everything she takes on".

FRED I. FROSHEISER SCHOLARSHIP

Charles W. Barnes

Charlie came to the department in 1998. He has worked on two research projects during that time: "Environmental constraints on infection of big bluestem by Puccinia andropogonis" and "Importance of inbreeding on selection and gene flow for maintaining genetic variation in Ustilago maydis". Much of his work on big bluestem has taken place at Cedar Creek, while the Ustilago project took Charlie to South America where he visited Argentina, Brazil, and Uruguay. He has been a highly visible member of the department and been very active on departmental and graduate student committee work

CIVIL SERVICE AWARD OF EXCELLENCE

Amar M. Elakkad

Amar is a research plot technician on the small grains pathology project and plays a vital role in the management of the wheat and barley disease screening nurseries at St Paul. In the summer months Amar often spends weekends and evenings ensuring that our field research plots at St.

Paul , Morris and Crookston are properly maintained. Amar contributes to the general activities of the Plant Pathology department in a number of small ways that are greatly appreciated - for example in helping to move large furniture items and providing computer support to others within the department. Amar keeps his ear to the ground and likely knows as much about the facilities on campus than anyone here. He also adds to the social life of the department frequently acting as chief cook at the BBQ's (even when it is raining) and a pitcher at the softball game.

Mark W. Galatowitsch

Everyone knows Mark for his savvy advice, valued help, and pleasant personality. Mark always takes the time to get computer problems fixed quickly - and with a minimum of fuss. Mark comes in on the weekend to repair server crashes and keeps the department email, web site, and classroom computers/projectors up and running. It is difficult to imagine the department running so smoothly without the commitment and effort that Mark brings to his job.

WARD C. STIENSTRA GRADUATE STUDENT TRAVEL AWARD

Shawn C. Bernik

Shawn attended the APS meeting last summer in Salt Lake City. At the meeting, he gave an oral talk entitled, "Species specific PCR primers for the detection of American isolates of *Scloerotinia homoeocarpa*". This is the causal agent of Dollar Spot and Shawn's work helps to develop specific specific molecular markers for positive identification of putative *S. homoeocarpa* isolates.

Elizabeth E. Wiggins

Elizabeth will be attended the APS meeting last summer in Salt Lake City. At the meeting, she presented a poster on her work, "Green manures influence pathogen inhibitory potential of indigenous antagonist communities in the soil". This work has significant impact on the management of potato scab caused by *Streptomyces scabies*. At the meeting, she also attended committee meetings related to her work.

COAFES DISTINGUISHED CIVIL SERVICE/BARGAINING UNIT STAFF AWARD

Dann Adair

Congratulations to Dann Adair for receiving the College of Agricultural, Food and Environmental Sciences Distinguished Civil Service/Bargaining Unit Staff Award. This award recognizes Civil Service/Bargaining Unit staff who have made outstanding contributions to improving the working environment for members of the university community. Dann's highly effective management of the greenhouse and growth chamber facilities and his work in greenhouse energy use conservation were cited in the award.

HONORS AND RECOGNITIONS

***Robert A. Blanchette**, Associate Editor, Canadian Journal of Forest Research, 2000*

***Robert A. Blanchette**, Associate Editor, International Journal of Biodeterioration and Biodegradation, 2000*

***William R. Bushnell**, E. C. Stakman Award, 2000*

***Rhoda Burrows**, Leadership Award, Council of Graduate Students, 2000*

***Ruth Dill-Macky**, Promoted to Associate Professor, 2000*

***Roger K. Jones**, Promoted to Professor, 2000*

***Linda L. Kinkel**, Promoted to Professor, 2001*

***Linda L. Kinkel**, Associate Editor, Plant Disease, 2000*

***Linda L. Kinkel**, Immediate Past Chair, APS Biological Control Committee*

***Sagar V. Krupa**, Past President, Sigma Xi Research Society, 2000*

***Sagar V. Krupa**, Medallion of Recognition, the Royal Society of Economics, Science and Culture, Valencia, Spain, 2000*

***Sagar V. Krupa**, Associate Editor, Environmental Pollution, Elsevier Science, An International Journal, 2000*

***Sagar V. Krupa**, Chief Editor, Developments in Environmental Science, Elsevier Science, 2000*

***Sagar V. Krupa**, Co-Principal Editor, Global Systems, The Science World, 2000*

***Jacolyn A. Morrison**, Presented 4 medallions to recognize over 400 volunteer hours for the Springbrook Nature Center*

***Andrea Morse**, International Graduate and Professional Fellowship Award from the Office of International Programs to support her student exchange/internship program this fall at the University of Waikato, New Zealand, 2001*

***Andrea Morse**, Graduate Student Research Award from Sigma Xi, University of Minnesota, 2001*

***Deborah A. Samac,** Promoted to GS14, 2001*

***Deborah A. Samac**, Associate Editor, Plant Disease, 2000*

***Les J. Szabo**, Promoted to Adjunct Associate Professor, 2000*

***Carol E. Windels**, APS Presidential Award, 2000*

***Carol E. Windels**, Award of Merit, Gamma Sigma Delta, Minnesota Chapter, 2001*

***Nevin D. Young**, Associate Editor, Molecular Breeding, 2000*

***Nevin D. Young**, Associate Editor, Molecular-Plant Microbe Interactions, 2000*

Nominee to Sigma Xi, The Scientific Research Society

Associate Member: Rubella Sanyal

Civil Service Length of Service Recognition

Ann Arendt, 25 years

Sandra Gould, 15 years

Ben Held, 5 years

Joel Jurgens, 5 years

CAROL WINDELS RECEIVES GAMMA SIGMA DELTA AWARD

Congratulations to Carol Windels for receiving the Gamma Sigma Delta Award of Merit, Minnesota Chapter. The award states, "The careers described herein best exemplify the phrase, "Outstanding Service to Agriculture and the Related Sciences and Arts". Carol received this award April 5, 2001 at the Earle Brown Center, St. Paul Campus.



Pictured (Frank Pfleger, Carol Windels and John Wheaton, President of the Minnesota Chapter)

ALAN DYER RECIPIENT OF THE STORKAN HANES FOUNDATION AWARD FOR 2001

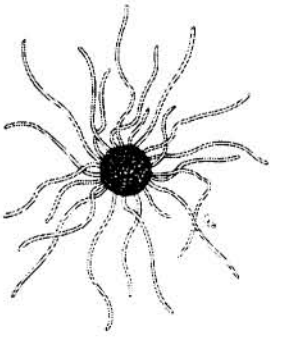
Alan Dyer was one of the recipients of the Storkan Hanes Foundation Award for 2001. Alan's advisor is Dr. Carol Windels, the title of his winning research proposal is "Oospore survival of *Aphanomyces cochlioides*". The Storkan Hanes Foundation awards are the result of a foundation set up by the founders of Tri-Cal, a fumigation company that serves the agricultural industry in California. The awards this year were $5,000 per student and can be used in any way seen fit by the recipient. Other winners were Payungsak Rauryee of Pennsylvania State University and Kirk Radewalk of the University of California Riverside. The awards were presented by Mrs. Joanne Vargas, daughter of one of the Tri-Cal's founders, Mr. J. Hanes, at a noon luncheon sponsored by the Foundation during the American Phytopathological Society's Annual Meeting in Salt Lake City.

APS FOUNDATION/APS COUNCIL TRAVEL AWARD WINNER

Andrea Morse, received the Dennis H. Hall Award. Dennis H. Hall was an extension specialist at the University of California, Davis, with responsibility for diseases of field and vegetable crops. He was noted for his contributions to teaching, research and understanding and control of vegetable and field crop diseases. Andrea, is completing her master's degree in the Department under the direction of Robert A. Blanchette. Andrea presented her work on the "Etiology of Red Stain in Living Boxelder) *Acer negundo*).

Elizabeth Wiggins, received the Stuart D. Lyda Award. Stuart D. Lyda, professor emeritus at Texas A&M University, is noted as an excellent teacher, mentor, and researcher. He guided more than 40 graduate students, served APS in several capacities, and also served as secretary and head of the National Cotton Disease Council. Elizabeth is working on her M.S. degree under the direction of Linda L. Kinkel. Elizabeth presented a poster on the influence of green manures on the pathogen inhibitory potential of indigenous antagonistic communities in soil.

Yuhong Li, is the first recipient of the John S. Niederhauser Award. John S. Niederhauser has a distinguished plant pathology degree in the area of potato diseases and production. He served with the International Agricultural Programs of the Rockefeller Foundation from 1947 to 1972 in Mexico, primarily focusing on potato improvements. In 1971, he was the cofounder of the International Potato Center (CIP) in Lima, Peru. Niederhauser was the 1990 World Food Prize recipient in recognition of his work with national programs that dramatically increased potato production in many Third World countries. Yuhong is working toward her Ph.D. degree under the direction of Senyu Chen in the Department. Yuhong presented some of her research on the effects of the soybean resistance gene rhg1 on the life cycle of *Heterodera glycines.*



Departmental Picture



DEPARTMENT OF PLANT PATHOLOGY

Pictured from (left to right):

First Row: Dave Long, Mark Hughes, Dariush Danesh, Yan Huihuang, N.S. Shekhawat, Liying Zhang

Second Row: Lori Hillman, Laurie Brand, Linda Hanson, Ramya Mani, Rubella Sanyal, Michele Grabowski, Jennifer Gilpen, Lisa Price, Karen Broz Hilburn, Kim Phoung Nguyen, Mervat ElAraby

Third Row: Stephanie Lundgren, Charlie Barnes, Ann Arendt, Debbie Drange, Bill Bushnell, Claudia Castell, Elizabeth Wiggins, Matt Rogers, Kun Xiao, Anita Davelos, Lifeng Chen, Dana Larson, Kay.

Fourth Row: Charles Hu, Frank Pfleger, Kurt Wilhelm, Jordan Eggers, Dan Lew, Jason Smith, Dale Johnson, Erika Marti, Alexi Balmuth, Nevin Young, Mesfin Gebeyaw, Karen Wennberg

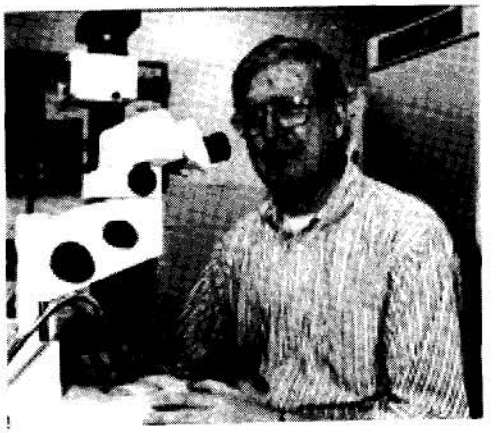
Fifth Row: Shawn Bernick, Willie Bartholome, Elissa Burk, Chris Newby, Ruth Dill-Macky, Sharon Lewandowski, Tina Seeland, Corby Kistler, Edugie, Jose Martinelli, Bacillio Salas, Darryl Krueger, Alan Dyer

Sixth Row: Don McVey, Jim Kolmer, Brian Steffenson, Amar Elakkad, Matt Culler, Kent Evans, Chris Kavanaugh, Joel Jurgens, Jon Powell, Debbie Samac, Kristen Falk, Y. Katan, Sue Cohen, Mrs. Katan, Roxanne Denny, Jackie Morrison

Not pictured:

Professional Academic:	Janna Beckerman, Jason Brantner, Consuelo Estevez de Jensen, Dawn Foster-Hartnett, Dean Herzfeld, Julie Jenkins, Kathy Kromroy, Soon Dong Lee, Joann Mudge, Silvia Penuela, Dean Reynolds, Liane Rosewich, Weiping Xie, Shaobin Zhong.
ASCME/Civil Service	Dann Adair, Gib Ahlstrand (photographer), Todd Burnes, Patricia Combs, Melinda Dornbush, Jennifer Flor, Mark Galatowitsch, Ben Held, Leslie Johnson, Laura Morales, Richard Wenkel, Mel Wiens.
Federal Civil Service:	Julie Gribble, Lucy Wanschura, Shawn Neuman, Gerald Ochocki.
Faculty:	Neil Anderson, Ernest Banttari, Bob Blanchette, Senyu Chen, Jim Groth, Roger Jones, Jennifer Juzwik, Linda Kinkel, Thor Kommedahl, Sagar Krupa, Jim Kurle, Phil Larsen, Kurt Leonard, Ben Lockhart, Dave MacDonald, Chester Mirocha, Bob Nyvall, Jim Percich, Sally Stetina, Les Szabo, Hala Toubia-Rahme, Carol Windels, Richard Zeyen.
Students:	Crystal Floyd, Gacheri Kimathi Muriuki, Marc Neuman, Silvia Pereyra, Jon Reinders.
Visiting Scientists:	Susan Cohen

RETIREMENTS



Dr. Kurt Leonard

After 13 years as Research Leader at the ARS Cereal Disease Laboratory, and 32 years with ARS, Kurt Leonard retired April 1, 2001. Kurt grew up in Iowa, went to Iowa State for his B.S. Degree, and attended Cornell University for his Ph.D. In 1968 Kurt took an ARS position as a Plant Pathologist located in the Department of Plant Pathology, North Carolina State University, later transferring to the CDL in 1988. Kurt has been highly productive throughout his career, but is perhaps best known for research in population genetics of plant pathogens. For his Ph.D. thesis Kurt examined the effects of unneeded virulence genes on fitness in the oat stem rust pathogen. Kurt was the first to consider the entire genetic background of a plant pathogen when assessing how specific virulence genes affect fitness in plant pathogens. From his Ph.D. studies, Kurt derived an equation to calculate the fitness costs associated with unneeded virulence genes. This equation has been used and cited extensively by many other researchers in later studies. Kurt also examined oat stem rust reproduction and spread in a mixture of resistant and susceptible oat lines, and later derived a theoretical model for increase of pathogen races within host multiline mixtures that has also been cited extensively in later research. At North Carolina State University, Kurt studied the genetics of the southern corn leaf blight fungus, *Cochliobolus heterostrophus,* which caused a major epidemic on corn in the US in the late 1960s. Kurt was able to show that the isolates of the fungus with the toxin gene all belonged to a single mating type, while isolates of the fungus without the toxin gene belonged to both mating types. From this and other data, Kurt was able to surmise that the isolates with the toxin gene must have been derived by mutation from the previously existing population of *C. heterostrophus*. He also derived models to examine the effects of polygenic resistance on pathogen populations. He examined taxonomy of northern corn leaf blight pathogen (now known as *Exserohilum turcicum* Leonard and Suggs) and studied the population genetics of common leaf blight caused by *C. carbonum*. At the CDL, he continued to develop mathematical models for the selection processes that govern co-evolution of major gene resistance and virulence in host-parasite systems, giving insight on how virulence in pathogen populations can be stabilized by deploying host mixtures. He also conducted the oat crown rust survey and helped to characterize oat breeding lines with adult plant resistance to crown rust. Kurt has published 130 papers including 81 refereed journal articles.

Kurt Leonard is also well known for his editorial contributions to the profession of plant pathology. He served as associate editor, senior editor and editor in chief of *Phytopathology*, editor in chief of APS press (at a time of rapid expansion of publishing activities) and also served as a member of the editorial board of the Annual Review of *Phytopathology*. In addition, he was a member of 12 different APS committees and served two terms as a member of the APS council. In recognition of his research accomplishments and his contributions to APS, he became an APS Fellow in 1983.

During his 13 year tenure as Research Leader, the mission of the Cereal Disease Laboratory (formerly the Cereal Rust Laboratory) was expanded to include Fusarium head blight which reemerged in the 1990s as a serious disease of wheat and barley. Kurt also brought in new expertise in fungal genetics and molecular biology, maintaining the laboratory's worldwide reputation as a leader in cereal disease research. Kurt now shares an office in Stakman Hall with fellow retiree, Chet Mirocha. He visits the CDL on a daily basis and is thriving in his new situation.. Best wishes, Kurt, from the many friends you have helped and encouraged so generously throughout the years.



Dr. Donald McVey

Dr. Donald V. McVey, USDA-ARS Research Plant Pathologist, Cereal Disease Laboratory, St. Paul, retired on September 3, 2001, after more than 40 years of service with ARS. Don's research has played a pivotal role in the protection of cereal crops from leaf and stem rust, especially in spring and winter wheats in the Central and Northern Great Plains. Don began his career with ARS in 1960 working in Puerto Rico testing wheat accessions for

SOUTHERN RESEARCH AND OUTREACH CENTER

by Senyu Chen

The cool and wet weather early in the season delayed soybean planting and inhibited soybean growth in southern Minnesota. After planting, a long period of dry weather did not benefit soybean growth. Due to the weather conditions, soybean growth delayed, and chlorotic symptoms associated with soybean cyst nematode (SCN) and/or iron deficiency showed up in late July and early August, later than normal years. Soybean harvest also delayed about two weeks compared to previous years.

Our research continues to focus on SCN management. This year, newly initiated research included a study of effect of diverse (16) crops on SCN population density and a survey of cyst nematodes in the Red River Valley. A heavy rain early in the season damaged a few plots in a crop rotation study. In variety trials, one of three SCN-infested sites was abandoned due to severe iron chlorosis. Field plots of other experiments have been good.

Mrs. Ruth Solyntjes and Ms. Janet Frederick were hired this year as laboratory technicians to assist in taking and processing SCN soil samples. Yuhong Li, a Ph.D. student, moved from Waseca back to campus in April this year. She conducted research on the effect of resistant gene of soybean on SCN life cycle and population development in Waseca. She will continue this research in Dr. Nevin Young's laboratory on campus. Shufen Liu, a visiting Ph.D. student from the Hebei Agricultural University, China, continues her research on biology and ecology of *Hirsutella minnesotensis*, a new fungal parasite of SCN. Other members in the nematology laboratory include Daniel Miller, assistant scientist; Cathy Johnson, senior laboratory technician; Wayne Gottschalk, field plot technician; Jeff Ballman, summer laboratory assistant; and Senyu Chen, assistant professor.

USDA-ARS CEREAL DISEASE LABORATORY

by Kurt J. Leonard

Three new employees joined the Cereal Disease Lab staff in the past year. Julie Gribble, the new program assistant, replaces Rosalind Richards, who retired in May, 2000. Julie was hired in November, 2000. Formerly she worked as a Federal employee in the Denver office of the Criminal Investigation Division of the Environmental Protection Agency. Michelle Grabowski was hired as a Biologist working in Jim Kolmer's wheat rust research program. Michelle came to Minnesota in January, 2001, after completing her M.S. in Plant Pathology at North Carolina State University. Karen Hilburn joined the staff in August, 2001, as a Biologist in Corby Kistler's research program. Karen completed her M.S. with Richard Zeyen in the University of Minnesota, Plant Pathology Department working on "A plant suspension cell assay for anti-fungal transgene efficacy." Her current duties at the CDL include functional genomics involving transformation and gene disruption in the Fusarium head blight fungus.

Two Cereal Disease Lab scientists retired; Kurt Leonard on April 1, 2001, after 13 years as Research Leader at the CDL and 32 years with ARS; and Don McVey on September 3, 2001, after 42 years with ARS, most of them in St. Paul at the Cereal Disease Lab. Don is best known for his long-term collaboration with wheat breeding programs, particularly those at the University of Minnesota and the University of Nebraska, that have been instrumental in keeping wheat in the northern Plains largely rust free during Don's tenure.

The Cereal Disease Lab hosted several visiting scientists during the year. Dr. Talma Katan, Department of Plant Pathology, The Volcani Center, Bet Dagan, Israel, is spending a year-long sabbatical working with Corby Kistler. Dr. Katan is an expert on genetics of vegetative incompatibility and fungicide resistance in fungi and is a long-time collaborator with Corby Kistler. At the Cereal Disease Lab, she is doing research on out-crossing and defining biological species of the Fusarium head blight fungus. Dr. Jose Martinelli, Fitossanidade Dept., Faculade de Agronomia, UFRGS, Porto Alegre, Brazil, is also spending a year-long sabbatical at the Cereal Disease Lab. His work is on oat crown rust resistance and virulence in collaboration with Kurt Leonard. Other visiting scientists include Drs. Yehoshua Anikster and Tamar Eilam, Institute for Cereal Crops Improvement, Tel Aviv University, Israel; Dr. Virgilio Balmas, Dipartimento-Struttura di Patologia Vegetale ed Entomologia Agraria, Università degli Studi di Sassari, Italy; Dr. Mohammed Nazim, Faculty of Agriculture, Minufiya University, Shibin el-Kom, Egypt; and Drs. Seydigapbar M. Mamadaliyev and. Shyrbolat S. Rsaliyev of the Scientific Research Agricultural Institute, Otar, Kazakhstan. Dr. Anikster visited the CDL for one month in the summer as well as for one week on two other occasions to collaborate with Bill Bushnell, Kurt Leonard, Dave Long, and Alan Roelfs on several on-going projects on cereal rust fungi. Dr. Eilam spent two weeks at the CDL working on scanning electron microscopy of protein caps induced in pycniospores of grass rust fungi by a factor in pycnial nectar from infections of opposite mating type. Dr. Balmas is a mycologist specializing in Fusarium identification and is spending the summer working with Dr. Kistler in conjunction with a continuing collaboration with Dr. Quirico Migheli, Università degli Studi di Sassari. Dr. Nazim spent two weeks at the CDL working with Don McVey and Dave Long reviewing results of cooperative research on wheat leaf rust resistance and virulence in Egypt, preparing the final report for the project, and outlining manuscripts from the research; Drs. Mamadaliyev and Rsaliyev also spent two weeks at the CDL working with Jim Kolmer to develop a new project on wheat rusts in Kazakhstan funded by the

International Science and Technology Center and the U.S. Civilian Research and Development Foundation.

In addition to these visiting scientists, Paul Peterson, Ph.D. student in the Plant Pathology Department, North Carolina State University, again made several visits to the Cereal Disease Lab in continuing his thesis research on barberry in relation to stem rust of wheat in Minnesota. Paul celebrated an important milestone with the publication of his book *Stem Rust of Wheat From Ancient Enemy to Modern Foe*, which contains several chapters by CDL scientists as well as a foreword by Norman Borlaug.

Other visitors to the Cereal Disease Lab during the past year include Peter Spencer Phillips, University of the West of England, Bristol, UK; Thomas Hohn, Novartis; Hiroshi Asao, Nara Agricultural Station, Japan; Gary Marten, University of Florida; Guihua Bai, Oklahoma State University; Chuansheng Mei, Noble Foundation, Ardmore, OK; James Fortune, Grains Research and Development Corporation, Canberra, Australia; Francis Lutzoni, The Field Museum, Chicago; Dajun Liu, Peidu Chen, and Zhengqiang Ma, Nanjing Agricultural University, China; Steve Goodwin, USDA,ARS, Purdue University; Mehrdad Abbasi, Plant Pests and Diseases Research Institute, Tehran, Iran; Olin Anderson, USDA,ARS, WRAC, Albany. CA; and Dave Matthews, USDA,ARS, Cornell University.

ELECTRON MICROSCOPY MOVES TO BIODALE

by R. J. Zeyen

After thirty years under the direction of professor Richard Zeyen, the Cooperative Electron Optics Facility (CEOF) of the Minnesota Agricultural Experiment Station (MAES) <http://biosci.umn.edu/MIC/MAES.html.> was moved. It went from its original location, a converted storeroom space in the Christensen Laboratory Building (the old Plant Sciences Phase II building), to the to the Microscopy and Imaging Center <http://biosci.umn.edu/MIC/CBS_Imaging_Center.html> inside "BioDale" http://www.cbs.umn.edu/biodale/. Biodale is located on the ground floor of the Snyder Laboratory of Biochemistry. It is a "one stop" central research services location supported by MAES, the college of Biological Sciences; the college of Agriculture, Food, and Environmental Sciences; and the college of Veterinary Medicine.

On September 1, 2001 the daily administration, accounting and supervision responsibilities were transferred by professor Zeyen to professor Paul Lefebvre in the Department of Genetics and Cell Biology. Thus, after 30 years of a three-way appointment (COEF Director, plus research and teaching in Plant Pathology) professor Zeyen moves to a traditional two way faculty appointment, teaching and research in Plant Pathology. Mr. Gilbert Ahlstrand continues his daily responsibilities as the MAES scientist of the relocated CEOF.

Since its inception, the CEOF has been administered for the MAES by the Department of Plant Pathology, which has provided all financial, administrative, purchasing, record keeping and other support behind the day to day operations of the facility. This support of the department has been a major factor in the success of CEOF and has been a valued service to MAES and the College of Agricultural, Food and Environmental Sciences in their research, teaching and outreach functions. The long line of department heads and administrative staff members of the Department of Plant Pathology down to the present day are to be commended for their consistent, dedicated support for the CEOF.

The beginnings of the CEOF occurred in 1968-69 when a transmission electron microscope was purchased by MAES for the Department of Plant Pathology. Professors E. Banttari, with administrative support from M.F. Kernkamp and Al Linck, was instrumental obtaining the first TEM. It was installed in a very small laboratory on the ground floor of the then newly constructed Christensen Laboratory Building. Mary Pelvit (Ooka) was hired to get the new laboratory up and running (1969-71). It soon became obvious that there was great demand for instrumentation time by many researchers outside Plant Pathology. Among the early users were E. E. Banttari, A. G. Richards, P. Richards, R.J. Zeyen, B. I Chevone, B. Cuttler, F. Tainter, D. Anderson and many others.

In 1971 Dr. Richard Zeyen was hired by MAES Director William Hueg to provide expertise and access to all MAES projects. Professor Zeyen proposed two objectives for the MAES supported project: 1) To support and maintain electron optical and ancillary equipment for benefit and enhancement of MAES sponsored research, and; 2) To provide scientific and technical guidance, assistance, and consultation.

In 1974-75 under professor Zeyen's leadership the MAES financed a $260,000 expansion to create the multiple user CEOF. Adjacent storeroom space in Christensen Laboratory Building was remodeled (6 additional rooms with a total of approximately 1200 sq. ft. were added). A scanning electron microscope (Philips 500X with cryostage), an EDAX 711 X-ray microanalysis unit, a preparatory laboratory, and other ancillary equipment were purchased and installed.

In 1978 Mr. Gilbert A. Ahlstrand (BS - physics and mathematics) was hired as a scientist to assist agricultural research users and to provide for daily operational needs. Professor Zeyen also assisted users, in addition to his teaching and research responsibilities in his academic unit of tenure, Plant Pathology.

In 1992 and 1993 the quality and utility of the multiple-user CEOF was recognized by the National Science Foundation through two NSF Grants to upgrade equipment (a new TEM and updated X-ray microanalysis equipment. A Graduate School Grant in Aid provided further equipment upgrade for a new ultramicrotome. In 1999 Professor Zeyen, with administrative support from former Plant Pathology Department Head Phillip Larson, obtained a new variable pressure Hitachi scanning electron microscope to be installed in Snyder Hall when the CEOF was moved.

The CEOF has been and will continue to be one of the most productive and enduring projects in MAES history. In the past 15 years alone (1985-2000) 118 different projects and more than 350 investigators used equipment and expertise in the CEOF. During that time 87 MS and Ph.D. theses were reported in which all or part of the research was done in the CEOF. Additionally, 211 referred journal articles and more than 70 abstracts were reported as published by CEOF users.

MINNESOTA HELPS: HEALTH, ENVIRONMENTAL, AND PESTICIDE SAFETY PROGRAM

by Dean E. Herzfeld

This year we concluded a two year effort funded by an A*DEC grant to explore national on-line training for pesticide applicators. The project identified many of the benefits, barriers, and other considerations for states development for states of this type of training.

In 2002 we will join a small but growing number of states that offer private pesticide applicator certification testing on-line. It will enhance our test management, security, and development. The system will be available 24 hours a day 7 days a week, provide same day scoring and feedback, and provide additional benefits for farmers.

In 2001 we issued new training manuals for Private Applicator, Private Applicator Fumigation, Forestry (in cooperation with University of Wisconsin), and Anti-microbial (in cooperation with Michigan State). Many disinfectants, sanitizers, and even some cleaning products are registered pesticides. In July 2001 Minnesota initiated Anti-microbial commercial and noncommercial pesticide applicator licensing. As of March 1, 2001 the Minnesota Department of Agriculture (MDA) began requiring Minnesota farmers who applied fumigants to there own stored grain or for other ag production uses to be both certified and take an additional closed-book monitored exam for a fumigation endorsement. The MN-HELPS program, with support from the MDA, developed the test and a new farmer fumigation manual now being used by a number of other states. The new manual is available free on-line from the programs home page: http://www.extension.umn.edu/pesticides/

As Coordinator of MN-HELPS I provide co-leadership with Jean Ciborowski, MDA, of a state level IPM in Schools working group for both indoors and grounds pest management. The group includes state agencies, K-12 schools, U of MN, industry and others. It has produced a number of new factsheets (see: http://www.mda.state.mn.us/IPM/IPMPubs.html), provided input to the state legislature, and conducted many other activities to reduce children's health concerns and to promote IPM in public places. Currently, through an MDA secured state grant, the group is designing a series of 90 IPM workshops offered in 2002 around the state for school staff.

PLANT PATHOLOGY 5204 FIELD PLANT PATHOLOGY SUMMER 2001

by David H. MacDonald

Six excellent and very cooperative students, including four who are currently graduate students in Plant Pathology, made the summer class enjoyable (at least for its instructor). We had a total of 10 field trips; 7 were" half-day" trips to locations in the seven county metropolitan area. Those trips took us to: 1) a floricultural greenhouse for instruction on management of diseases of "specialty cuts flowers" and of roses, 2) the St. Paul and Rosemount Experiment Stations for rust diseases of wheat and crown rust of oat, 3) two golf courses for detection and management of diseases affecting turfgrasses, 4) the St. Paul Experiment Station again for Fusarium head blight and then the Horticultural Research Center for diseases of strawberry and apple, 5) the State Fairgrounds for detection and treatment of Dutch elm disease and a Hennepin County Park for oak wilt, 6) a commercial nursery for diseases affecting nursery stock, and 7) the Minnesota Landscape Arboretum for detection and management of plant diseases in a very public setting. The remaining 3 trips were to "out-of-town" locations. Our 8th trip took us 1000 miles to northern and eastern Wisconsin for instruction on cranberry production and problems, ginseng diseases, production of pathogen-free seed potatoes, potato disease management and research at the Antigo "Experiment Station", and tree fruit production and disease management in Door County. The 9th trip was up Highway 10 across the Anoka Sand Plain for instruction on diseases of potato and soybeans and dry beans. The 10th and last trip was to northern Minnesota to learn about diseases of wild rice, diseases of forest trees, and diseases affecting plant production by a forest tree nursery. The students met with and were instructed by a total of 27 different plant professionals including 11 in the private sector, 7 from the U of M, 5 from the U of W, Madison, 3 from the USDA, and one from the MNDNR.

DEPARTMENTAL SEMINARS 2000-2001

by Ben Lockhart

September 18: **Deborah Samac**. Functional Genomics in Plant Disease Resistance and Environmental Stress Tolerance.

October 2: **James Kolmer** (*Cereal Disease Lab*) Genetics of Stem and Leaf Rust Resistance in Wheat: Past and Present Problems

October 9: **Dann Adair** Greenhouse Research with Transgenic Organisms: Protocols and Principles for Containment

November 6: **David R. Johnson** (Encore Technologies)

Commercial Development and Production of Biological Herbicides.

October 24: **David Wood** (*Division of Insects Biology, University of California- Berkeley)* Bark Beetle - Pathogen - Tree Interactions in California: From Ozone to Oaks"

November 13: **Mesfin Tesfaye** Enhancing organic acid synthesis in alfalfa for A1 tolerance and P uptake in acid soils

November 20: **Alan Dyer** The Role of Pyoverdine in Biological Control of *Pythium Damp*ing Off and it's Expression by *Pseudomonas fluorescens* in the Rhizosphere of Bean Seedlings

November 27: **Anita Davelos** Double-stranded RNA mediated recovery of American chestnuts from chestnut blight: a demographic analysis Borlaug Hall

December 4: **Ruth Dill-Macky** Fusarium Head Blight - developing artificial epidemics in wheat and barley

December 11: **Linda Kinkel** Microbial Community Management for Soilborne Disease Suppression

January 8: **Jeff Miller**, The Irish Potato Famine Revisited: Managing Potato Late Blight in the New Millenium

January 22: **Claudia Castell**, The Phytophthora Genome Initiative, PGI, a Model Bioinformatics Platform for Plant Pathology

January 29: **Jon Powell**, Biology and Integrated Pest Management of Dollar Spot of Turfgrasses: Current Issues and Future Directions

February 5: **Dr. Roger Hull**, John Innes Centre, Norwich, UK Transgenic Plants and Tropical Agriculture

February 12: **Shawn Bernick**, The Use of Fungicides in Plant Protection: With Emphasis on the Strobilurins

February 19: **Dr. Robert Webster**, Botanist, USDA-ARS, Beltsville, MD A GIS Analysis of Ecogeographic Variation and the Distribution of Genetic Diversity and Germplasm Needs

February 26: **Dr. David Rizzo**, Department of Plant Pathology, University of California – Davis Sudden Oak Death in California: a Devastating Epidemic of a New Pathogen.

March 5: **Marc Neuman**, Current Research on the Swiss Needle Cast Epidemic in the Pacific Northwest

March 12: **Andrea Morse**, Port Orford Cedar Root Rot: Integrating Biology, Management Public Involvement

April 2: **Jon Reinders**, The Molecular Biology of Trichothecene Synthesis

April 9: **Quinn Holtslag**, Graduate Student, University of Manitoba, Digital Fortune Telling: Design and Development of a Disease Forecast Model

April 16: **Lisa Price** Isolation and Sequencing of a Bowman-Birk Trypsin Inhibitor cDNA Clone in Peanut (*Archis hypogaea L.*)

MEETINGS

AMERICAN PHYTOPATHOLOGICAL SOCIETY ANNUAL MEETING

August 25-29, 2001

Salt Lake City, Utah

by Deborah Samac

From August 25-29, 2001 members of the three societies, the American Phytopathological Society, Mycological Society of America and the Society of Nematologists, met together in the Salt Palace Convention Center in Salt Lake City, Utah. APS President Dr. Steve Slack reported that the total attendance for the meeting was memorable 2,001 participants. Only one other APS meeting has had a higher attendance. The meeting kicked off with a joint plenary session on Sunday that included addresses by the presidents of each society on the theme of intersociety cooperation and collaboration. This theme was carried out in many of the scientific sessions. Some of the sessions I found particularly interesting included: What is a Fungal Species?; Role of Fungal Extracellular Matrix in Host Infection; Secretion in Plant-Associated Bacteria, Fungi and Nematodes; Interactions Between Different Host Defense Pathways; Genomics of Plant Pathogens; Molecular Mechanisms in Fungal Pathogenesis; and Antimicrobial Resistance: A Cross-Cutting Issue Facing Agriculture and Public Health. The scientific, social, and administrative schedules were very busy with three societies meeting simultaneously and many tough choices had to be made on which concurrent sessions to attend. A number of Minnesota faculty, staff and students presented talks or posters on their recent research, were session chairs and participated in committee meetings. Participants included: Charlie Barnes, Shawn Bernick, Jason Brantner, Senyu Chen, Anita Davelos, Ruth Dill-Macky, Alan Dyer, Mervat El-Araby, Consuelo Estevez de Jensen, Kent Evans, Jen Flor, Jim Groth, Jaacob and Talma Katan, Jim Kolmer, Linda Kinkel, Soon-Dong Lee, Yuhong Li, Ben Lockhart, Dave Long, Andrea Morse, Bob Nyvall, Frank Pfleger, Jon Powell, Dean Reynolds,

VITAL STATISTICS

BIRTHS

April 20, 2001 - Elyce Ruby born to Kasia (Duellman) and Dwight Kinzer, 6 lbs, 3 oz and 20 inches .
May 7, 2001 - Elizabeth (Ellie) Nicole born to Paul and Tracie Paulsrud, 7 lbs, 4 oz and 20 inches.
Carol Windels and John Jarman are proud grandparents - Cole Taylor Jarman was born on May 7 weighing 6 lbs, 13 oz and 20 ½ inches. Parents are Paul and Tammy Jarman.
August 1, 2001 - Cora Marie Becker Gertjejanssen born to Roger Becker (Extension Agronomist) and Wendy Jo Gertjejanssen, 8 lbs, 9 oz and 21 inches.

DEATHS

Dr. Clark Livingston (Ph.D. 1966), May 2, 2001
Robert Skiles, (Ph.D. 1952), October 24, 2000
Laddie Elling (Agronomist), August 6, 2001

OBITUARIES

Dr. Clark Livingston
by Howard Schwartz

Old Timer Doc Livingston passed away on May 2, 2001 in Fort Collins, Colorado at the age of 80. Clark retired from Colorado State University more than 10 years ago, after a distinguished 30-year career in potato research and teaching. He also did extensive consulting for the potato industry in North America, Europe and Asia. He served as scout master, was passionate about jazz, and played lead trumpet in Army bands overseas, and had his own big band in the 1940's. He taught and practiced professional photography. He enjoyed camping, fishing, sailing and working in his shop. He enjoyed spending time with his family, grandchildren and friends; and was loved for his sense of humor. Clark is survived by two children and three grandchildren.

Dr. Robert L. Skiles

Robert L. Skiles, 77, of Moscow, Idaho died Tuesday, October 24 at St. Joseph's Regional Medical Center following a sudden illness. Robert received his Ph.D. in 1952, advisors Stakman/King. Robert was the director of the Postharvest Institute for Perishables at the University of Idaho. He retired from the University in 1986. Robert's hobbies included photography and painting. Over the years Robert won different awards for his watercolors as well as his photographs. He was a member of the Moscow Elks Lodge, the Lions Club, the American Legion, the Watercolor Group and the Idaho Native Plant Society. Robert is survived by his wife, Rosemary of Moscow, four children and four grandchildren.

Dr. Laddie J. Elling

Laddie J. Elling, 84, Professor Emeritus, Department of Agronomy and Plant Genetics, died August 8, 2001 from complications of a stroke. Laddie was born in southwestern Oklahoma and grew up on a dryland, diversified farm. He attended Cache High School, received an Associate's Degree from Cameron University in 1937 and a B.S. degree from Oklahoma A&M in 1941. He worked with the USDA Sorghum Breeding projects at Lawton and Woodward, Oklahoma from 1939-1941. Following a distinguished career in the U.S. Army Air Corps during WW II, he earned his M.S. (1948) and Ph.D. (1950) degrees in Plant Genetics from the University of Minnesota working with H.K. Hayes and H.L. Thomas. He became a faculty member in the Department of Agronomy and Plant Genetics in 1950.
Dr. Elling led the University's Alfalfa Improvement project until 1965 and then assumed leadership of the forage and grass seed improvement project that provided a research and education basis for the seed production industry in northern Minnesota. In addition to his research and demonstration projects, he helped organize and support the Northern Minnesota Bluegrass Growers' Association. He was elected an Honorary State Farmer by the Minnesota FFA organization, an Honorary Member of the Minnesota Seed Trade Association and an Honorary Premier Seed Crower by the Minnesota Crop Improvement Association. He received the Merit Certificate from the American Forage and Grassland Council and was an ASA Fellow.

Laddie had a great impact on undergraduate students during his career and always found time to help a student. He was concerned for his students and encouraged them to maximize every opportunity to learn. He taught crop management and grain grading courses. He was instrumental in developing the Plant Industry Club (now know as the Gopher Crops and Soils Club) in the 1960's. Laddie coached the University Crops Judging team at national competitions in Kansas City and Chicago between 1962 and 1979; his teams won eight consecutive national contests between 1969 and 1976. Twelve students from his teams received highest individual scores in contests. He was innovative in using his research project as a learning experience for undergraduates. Laddie was recognized by the University of Minnesota as an outstanding teacher with the Horace T. Morse-Amoco

Award for outstanding contributions to undergraduate teaching.

Dr. Elling retired in 1985 after an exceptional 35-year career and became Professor Emeritus. In 1998, he received the University of Minnesota Outstanding Achievement Award-the University's highest honor for his significant contributions to teaching, research and service. A nominator of Elling for this award wrote, "I have never met another person who has as much enthusiasm and devotion to the University of Minnesota as Laddie Elling". His positive attitude and persistence led to development of the first history of the department, "Agronomy and Plant Genetics at the University of Minnesota, 1888-2000" which was published in December 2000.

Survivors include his son Joe (Kathleen) and daughters Mary Elling (Amir Chaboki) and Jean (Bob) Elgin and stepchildren Ardell (Judy) Magnusson, Dianne (Bob) Erickson, and Sharon (Michael) Hanson as well as several grandchildren. Memorial contributions can be sent to the Laddie Elling Fund for undergraduate education at the University of Minnesota.

DEPARTMENTAL ENDOWMENT TRUST FUNDS:

Be part of the process; help us make changes that transform lives through our ability to educate and service society. Support the Department of Plant Pathology Endowment efforts.

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HONOR LIST OF PAST AND PRESENT CONTRIBUTIONS TO PLANT PATHOLOGY ENDOWMENTS

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Unji Hirua
Sung Hoang
Patricia W. Hoffman
Edward Hoffman
Florence W. Holmsten
C. S. Holton
Harvey Holzwarth
Hazel Holzwarth
Hugh H. Hotson
Jane Hotson
Jo Hotson
John Hotson
Choli Hou
German Hoyos
Gene Hsu
George Hudler
Delores H. Huebner
Warren Huebner
Gary Huston
Keith Huston

I
Tadaoki Inaba
Wathena M. Ingham
Katherine L. Ingwalson
Frank Irving
Jeanne Irving

J
Barry Jacobsen
Jacob Janzen
Julie Jenkins
Jon D. Jeresek
Dehong Jiang
Barbara A. Johnson
Catherine M. Johnson
David R. Johnson
Dennis A. Johnson
Dorothy C. Johnson
E. M. Johnson
Gordon L. Johnson
Herbert G. Johnson
John R. Johnson, Jr.
Karen L. Johnson
Keith D. Johnson
Kenneth B. Johnson
Lillian V. Johnson
Leighton W. Johnson
Lois E.B. Johnson
Marvin B. Johnson
Shirley F. Johnson
Cecilia R. Jones
Roger K. Jones
Virgil L. Jons
Nina Jorgensen
Jennifer Juzwik

K
Carol C. Kamke
Frederick A. Kamke
Muhammad Kardin
Lois Kitchell
Janice W. Kaye
Yaacov Katan
Harold & Gloria Keil
Arthur Kelman
Helen M. Kernkamp
M. Carolyn Kernkamp
M. F. & Marjorie G. Kernkamp
Malvin W. Kernkamp
Bulent Kiral
Duncan Kirkwood
Jo Ann Kirkwood
Carol F. Kirkwood
Nancy C. Kirkwood
Nezha Khaless
Ted R. Knous
Keith Knowles
Kenneth W. Knutson
Hironori Koga
James Kolmer
Faye Kommedahl
Thor Kommedahl
Riley D. Konerza
Eugene G. Krenzer Jr.
Kathryn M. Warlich Kromroy
Thomas W. Kromroy
Warren M. Kruger
Sagar V. Krupa
Thomas Kucharek
Steven J. Kunde
James E. Kurle
Rita A. Kuznia

L
Steven A. Laddie
Jennifer Juzwik-Larmour
John R. Larmour
David Lang
Philip O. Larsen
Sandra L. Larsen
Thomas Laskaris
John Laurence
Martinus E. Laursen
Vivian L. Laursen
Jeannette W. Lazam
Flavio Lazzari
J. G. Leach
Jean D. Lee
Roger B. Lee
Yin Won Lee
Camille L. Lefebvre
Wanda Lefebvre
Shirley A. Legvold
Duane LeTourneau
Diane M. Levy
Jim & Judy Lewandowski
Adele Lieberman
David Lieberman
Sheila R. Lieberman
Stephen E. Lieberman
Kuochih Lin
Albert Linck
Vandora Linck
David C. Linde
Frances L. Line
Roland F. Line
Dr. & Mrs. Larry Littlefield
William H. Livingston
Daqun Liu
Stephen Liu
James A. Lyle Jr.
Caroline Logsdon

Charles E. Logsdon
David L. Long
Patricia H. Long
Jennifer M. Lorang
Mrs. Frank Lucier
Jaime Luque
Shi-I Lu

M
Anna Lea MacDonald
David H. MacDonald
Dean K. Malvick
Jacob Manisterski
Lynn M. Marasco
Helen Mariner
Luanne B. Martell
Weston J. Martin
Adalberto Martinez
James P. Martinez
Carl A. Matyac
Matthew J. McBride
Brent McCallum
Dennis McDougall
Jeffrey L. McElroy
Carolyn J. McKay
Gerald R. McKay
Mary E. McKay
Lorraine E. McPherson
David McQueen
Donald C. McVey
Louis Meltaus
John A. Menge
Richard A. Meronuck
Rose M. Meronuck
James E. Merrick
Mary Merrill
Karen R. Merth
Ardene Meshbesher
Louise Meltaus
Annabelle Mew
T. W. Mew
Helen E. Meyer
Koren M. Meyer
Yerna A. Mikesh
Monte R. Miles
Charlene P. Miller
Helen Miller Alexander
Henrietta N. Miller
James D. Miller
Jeff S. Miller
Lawrence I. Miller
Mary McBryde Miller
Philip J. Miller
Susan Miller
Chester J. Mirocha
Donna Mirocha
Ayodhya P. Misra
James Mital
Mary Moberg
Andrea M. Moffatt
Carl A. Mohn
Carolyn A. Mohn
Monica Molander
Arvid M. Monson
Ricardo M. Mont
Dorothy Moore
Richard H. Morrison
Marcia K. Morrison
Robert S. Mullin
David Mumford
Donald Munnecke
Harry H. Murakishi
Robert W. Murnane
Helen C. Murphy
Roger R. Musick

N
Shehla H. Naqvi
Alfred & Karen Nelson
Arville Nelson
Lowell Nelson
Patricia A. Nelson
Scott R. Nelson
Stephen L. Nelson
Margaret Nesgen
Beverly A. Ness
Harlan J. Ness
Marion Ness
Anne E. Newberry
Josephene Newberry
Allen G. Newhall
Miriam Newton
Tsitsi C. Ndowora
Thomas Nicholls
Mary Lou Nicholls
Robert Noble
David M. Noetzel
F. LaVonne Noetzel
Debra Noll
Catherine M. Northrup
Mary Ann F. Nowak
Piotr Nowak
Robert K. Noyd
Robert F. Nyvall
Norbert Nystrom

O
Joseph G. O'Brien
Carlos N. Ochoa
Seung H. Ohh
Sandra L. Okinow
Harold M. Okinow
Janet H. Olfelt
Philip J. Olfelt
Donald S. Olmsted
Conrad J. Olson
Jeri Ooka
Donna C. Opp
Herbert A. Opp
Anna Orellana
Benjamin Ortega
Nancy Osterbauer
Michael Ostry

P
Mary E. Palm
Louise T. Palmer
Jiwan Paul Palta
Max Partch
Bruce E. Paulsrud
Jack B. Pavike
Vivian D. Pavike
Robert Pawlosky
Annette H. Pearson
Mryna W. Pederson
Joseph N. Pedretti
Joseph C. Peisert
Susan L. Peisert
Alfredo Pelaez
Indre J. Pemberton
Silvia Penuela
Beatriz A. Perez
Jesus Perez
Clarence J. Peterson
Gloria Peterson
Dorthea Petty
Anne D. Pick
Herbert L. Pick, Jr.
Gregory C. Pratt
J. M. Prescott
Shari L. Pribble
Spencer G. Pribble
Jill D. Pokorny
Connie J. Post
Rosendo M. Postigo
David Punter

R
Kathryn A. Ramsted
Judith A. Ranheim
Keith A. Raisanen
Ned Raun
Joseph J. Reilly
Curtis D. Reese
Theodore P. Reiling
Bobby N. Renfro
Dean A. Reynolds
Susan Riley
H. D. Ripley
David M. Rizzo
Sarah T. Rizzo
Curtis W. Roane
Martha K. Roane
Lewis Roberts
Roger Robidou
Esther L. Rode
Stella D. Rodenhiser
James R. Roebke
Alan P. Roelfs
Pat Rollins
Sylvia A. Roman
E. John Rosenwald, Jr.
Dave Ross
Athalie F. Rossow
Jane E. Rothman
Paul G. Rothman

Sigrid K. Rothman
Alice Rowell
John B. Rowell
Frances M. Rudolf
Paul O. Rudoff
John K. Rutford
Donna L. Rutford
Andrew Ryan

S
Philip J. Salisbury Estate
Joseph N. Salvino
Deborah A. Samac
Parker Sanders
Gusti Sarbini
Douglas J. Sarojak
Linda Sarjune
David B. Sauer
Rachid Sayoud
Marjorie Schad
Joyce A. Schafer
John F. Schafer
Myrtle Scheiderhan
Paul J. Scherman
Laura M. Schickli
Elmer L. Schmidt
Michele M. Schoeneberger
Janet Schottel
Mark Schreiber
Maria de Los Angeles Schroeder
David B. Schroeder
John W. Schwandt
Howard F. Schwartz
Joan Schwartz
John R. Schwartz
Moussa Seck
Scott G. Sederstrom
John Sethre
Edson C. Setliff
William W. Shane
Eric Sharvelle
Bryan L. Shearer
Dixon Shelstad
Clyde P. Shumway
Malcolm C. Shurtleff
Delores Sigel
Melvin E. Sigel
Carolyn Silflow
Savel Silverborg
Larry Singleton
John T. Siwula
John Skelly
Darroll D. Skilling
Marie L. Skilling
Richard A. Skok
Pauline E. Skok
Bent Skovmand
Robert J. Slattery
Dale L. K. Smeltzer
Eric C. Smeltzer
Clair A. Smith
Frisby D. Smith
Mary E. Sorensen
Joseph W. Southern
Harry M. St. Cyr
Margaret C. St. Cyr
E. C. Stakman
Gilbert F. Stallknecht
M. C. Stanford
George Starr
Brian J. Steffenson
John Steel
Josephine K. Steele
Mark A. Stennes
Salliana Stetina
John Stevenson
Donald M. Stewart
Elwin L Stewart
Sara Stewart
Marion G. Stewart
Ward C. Stienstra
Myrna A. Stienstra
Aileen Stougaard
Ray L. Stougaard
Mary J. Strait
Richard T. Strait
Kurt D. Stromberg
Deon D. Stuthman
Judy A. Stuthman
John Steel
Theodore W. Sudia
Tarkus Suganda
Malcolm E. Sugden
Lottie Sugden
Keno Gard Skandinaviska Enskilda Banken
Subramaniam Sundaram
Stephen Sunderwirth
Sharon Sussmilch
Donald J. Swanson
Wildie J. Swanson
Mary Ann Swayze
Laura E. Sweets
Les Szabo

T
Sally Tai
Frank H. Tainter
Mouna Tajani
James Tammen
Gary L. Tankenoff
Marsha Tankenoff
Raymond J. Tarleton
Patricia A. Taylor
Morris N. Teller
Paul S. Teng
Donald H. Tennant
Janese V. Thatcher
Judy A. Theis
Walter D. Thomas, Jr.
W. H. Thornberry
H. David Thurston
A. Tjokrosudarmo
Laura R. Todd
Ester M. Tolaas
Elmostafa Toufiq
Linda M. Treeful
Joe Tucker
John C. Tucker
Laurie Tucker
Camille M. Tuite
Leon J. Tyler
Lawrence Tyner
Martin T. Tveit

U
Arnold C. Uhlig
Agnes A. Ullyot
Lloyd L. Ullyot

V
Gerald F. Vacha
Barbara S. Vance
C. Van Why
Rodney H. Vargo
James R. Venette
Gerald T. Vigue
Richard Voorhees

W
Isaak Wahl
Monica K. Wallace
Carol L. Walvatne
Paul G. A. Walvatne
Chi Shi Wang
Gloria M. Warner
Lloyd L. Wasnick
I. A. Watson
Erling M. Weiberg
Mrs. Rikka Weiberg
Richard & Gail Weinberg

Edwin J. Wellhausen
Kenneth Wermimont
Andrea M. Westergard
Wendy J. White
Dewey J. Whitmer
Ruth J. Whitmer
Melody Whittaker
Gregory Widin
Katherine D. Widin
Hunt B. Wiley
Michael J. Wingfield
Judith Widen
Mark P. Widrlechner
Margaret M. Winkel
Iva W. Wilcoxson
Roy D. Wilcoxson
Jeanne Williams-Woodward
Carol E. Windels
Chester A. Wismer
James C. Wolf
Marilyn J. Wolf
Dolores J. Wood
Elsa J. Wood

Leon S. Wood
Richard P. Woodward
William C. Woodruff
Thomas D. Wyllie

X
Kun Xiao
Weiping Xie

Y
Zhihong Yang
Diane C. Young
Nevin D. Young
Harry C. Young

Z
Robert A. Zabel
Paul J. Zambino
Richard J. Zeyen
Elverne W. Ziemke

BUSINESSES

A
Agdia Inc.
American Cyanamid
Anderson & Koch Ford Inc.
Anderson Inc.
Anheuser-Busch Companies Inc.
Area II Potato Growers
Atochem North America Inc.
Aventis Cropscience
Aventis Environmental Science

B
BASF Corporation
BASF Wyandotte Corporation
Bailey Nurseries
Bane Holtzclaw & Company
Bayer Corp
Bear Sterns & Company Inc.
Bentech Laboratories Inc.
Big Stone Inc.
Biotal Inc.
Border Corp. Consulting

C
Campbell Soup Company
Cargill Inc.
Cenex/Land O'Lakes
Cenex/Land O'Lakes Ag. Services
Chapman Forestry Foundation
Christian Services Inc.
Ciba-Geigy Corporation
City of Bloomington
City of North Oaks
Clariant Biotech Research Corporation
The Coca-Cola Company
Cook Company
Cooperating Fund Drive
Cornell University

D
Del Monte Corporation
The Dow Chemical Company

E
E.I. Du Pont De Nemours & Company
Elf Atochem North America Inc.
Executives Association of St. Paul

F
Faribault Foods
Felhaber Larson Fenlon & Vogt
Fermenta ASC Corporation
First Bank System Foundation
Forest - Ag. Corporation

G
Gargiulo, Inc.
General Foods Manufacturing Corporation
General Mills Foundation
Goodhue Canning Company
Grace-Sierra Corp Protect Company
Griffin Corporation
Grossman Founder
Gustafson Inc.

H
Horticulture Research. Inst. Endowment

I
ISK Biosciences
ISK Biosciences Corporation
International Video Entertainment Inc.

J
J.R. Johnson Supply Inc.
Janssen Pharmaceutica

L
Lakeside Packing Company
Land O'Lakes Inc.
Lieberman Enterprises Inc.
Lieberman-Okinow Foundation
Lieberman-Okinow Family Fund
Lipha Chemicals Inc.
Lipha Tech. Inc.

M
Mallinckrodt Inc.
Micro Flo Company
Midwest Food Processors Association
Midwest Regional Hosta Society
Miles Inc. Ag. Division
Minnesota Barley Research
Minnesota Area II Potato Research
Minnesota Crop Improvement Association
Minnesota Flower Growers Association
Minnesota Golf Course Superintendent Association
Minnesota Hosta Society
Minnesota Mining 3M
Minnesota Turf and Grounds Fdn
Minnesota Wild Rice Council
Mobay Corporation Animal Health Division

N
Natural Fertilizer of America
Nor-Am Chemical Company
Northharvest Bean Growers Association
North Oaks Co.
Northern Illinois Hosta Soc.
Northrup King Company
Novartis Crop Protection, Inc.

O
Olivia Canning Company
Owatonna Canning Company

P
PBI/Gordon Corporation
Pennwalt Corporation
Pennwalt Agchem.
The Pillsbury Company
Piper Jaffray & Hopwood Adv. Fd.
Piper Jaffray Companies Inc.
Pitman-Moore Inc.
Plant Health Associates Inc.
Potato Chip Snack Food Association

Q
The Quaker Oats Company
The Quaker Oats Foundation

R
The Rainforest Project Foundation
Red River Valley Potato Growers Association
Rhone-Poulenc Ag. Company
Ringer Corporation
Rohm & Haas Company

S
Sandoz Agro. Inc.
Seneca
Seneca Foods Corporation
Seymour & Barbara J. Leslie Foundation
Shiftan Family Charitable Foundation
Sigma Xi Society
Simplot Partners

Standard Fruit Company - Costa Rica

T
Terra Mac Inc.
Toro Company
Truax Company
Turf Supply

U
Union Carbide Ag. Products Company
Uniroyal Chemical Company Inc.
United Agriculture Products
United Foods Inc.

V
Veteran Fire Fighters Association

W
W. A. Cleary Chemical Corporation
W.K. Kellogg Foundation
Westbridge Ag Products
West Central Regional Airshed Zone
Management Society
Wilbur-Ellis Company

Z
Zeneca Agricultural Products, Inc.

NEW EMPLOYEES

Kristen Falk, Junior Scientist, hired October 17, 2000 to work on Forecasting Potato Late Blight with Jeff Miller, Roger Jones, and Mark Seeley. Her primary responsibilities include construction of an integrated weather monitoring network for the state of Minnesota, modeling of weather data for prediction of late blight, and dissemination of information to potato growers and consultants throughout the state. Kristen earned her BA in Biology from Hartwick College in Oneonta NY in 1999. She served as National Science Foundation intern at Hartwick for 1 year, team teaching an integrated science class for non-science majors. Her field experience includes work as a field technician and field supervisor at Iowa State University in the Dept of Plant Pathology. She enjoys photography, music, meeting new people, and of course, eating potatoes!

Julie Gribble, Program Assistant, was hired in November 2000. Formerly she worked as a Federal employee in the Denver office of the Criminal Investigation Division of the Environmental Protection Agency.

Chris Kavanaugh, joined Brian Steffenson's Cereal Disease Resistance Project in April 2001 as a Junior Scientist. She grew up in the Brainerd area of Minnesota and received her B.S. (Science in Agriculture 1998) and M.S. (Plant Biology in 2000) degrees from the University of Minnesota. Chris will be working on exploiting disease resistance genes from the progenitors of cultivated small grain cereals.

Kathy Kromroy joined the Department in November 2000 as a Postdoctoral Research Associate under F. Pfleger's supervison. She is working cooperatively with the North Central Research Station (J. Juzwik) on oak decline and mortality in rural and urban areas of the Upper Midwest USA. One effort involves exploration of USDA FS, Forest Inventory and Analysis databases as a means of assessing levels of oak decline and mortality based on individual tree data from two cycles of the inventories conducted in individual states of the Region.

Laura Morales Laura Morales, began as head of the Plant Pathology Library on Monday, February 19th. Laura has been working at the Legislative Reference Library in St. Paul. Prior to that she worked at the Madison Public Library in Wisconsin. She has experience in various library functions, including circulation and reference, and has experience in designing and creating web pages.

Gacheri Muriuki, joined Brian Steffenson's Cereal Disease Resistance Project in September 2001 as a Postdoctoral Research Associate. She grew up in Meru, Kenya and completed her B.S. (Botany and Biochemistry 1989) and M.S. (Mycology 1993) degrees at the University of Nairobi. Gacheri completed her Ph.D. degree in 2001 at the University of Minnesota under direction of Dr. Chet Mirocha. Gacheri's research project will involve studying the resistance of barley to spot blotch and Septoria speckled leaf blotch and mapping resistance genes in barley.

Bacilio Salas, Research Associate, arrived in the department in December 2000 to work on a project examining the effect of cultural practices on the survival of *Fusarium* species in the residues of cereal crops. Bacillio will be working with Dr. Ruth Dill-Macky. Bacillio has considerable experience with a broad range of crops including legumes, potatoes, and small grains. His research on these crops has involved study of pathogen occurrence and variability, cultural control practices, and fungicide resistance. Bacillio obtained his M.S. and Ph.D. degrees at North Dakota State University where he was working as a Research Associate prior to his move to St. Paul.

Hilda Salas, joined Brian Steffenson's Cereal Disease Resistance Project in August 2001 as a Junior Scientist. She originates from Plateria Puno (near Lake Titicaca) in Peru. Before coming to the University of Minnesota, she worked as an Agricultural Research Technician at the Universidad Nacional del Altiplano Puno, Peru and North

Dakota State University in Fargo. Hilda will be working on a project to study resistance mechanisms of barley to Fusarium head blight.

Shaobin Zhong, joined Brian Steffenson's Cereal Disease Resistance Project in April 2001 as a Postdoctoral Research Associate. He grew up in Ruijin, China (Jiangxi Province) and completed his B.S. and M.S. degrees (1986 and 1989) in Plant Breeding and Genetics at Nanjing Agricultural University. In 2000, he was awarded a Ph.D. degree in Plant Pathology from the North Dakota State University. Shaobin's project will be mapping disease resistance genes in barley and virulence genes in several fungal pathogens attacking barley.

VISITING SCHOLARS

Quinn Holtslag, spent Spring Semester 2001 at the University of Minnesota in Dr Ruth Dill-Macky's laboratory. Quinn, a Ph.D. candidate at The University of Manitoba, CANADA, spent the semester taking classes and working on one aspect of his thesis research. Quinn's research examined the inoculum production of *Entomosporium mespil*i on leaf lesions of Saskatoons (Serviceberry, *Amelanchier alnifolia*). Quinn concluded his time at St Paul this spring, returning to Winnipeg in time to begin the summer field research. We miss Quinns' enthusiasm and his great cooking, but wish him all the best in his graduate studies in Canada.

Evelyn Hatzenbichler, spent two months at the University of Minnesota working as a summer student with the small grains pathology and wheat breeding groups. Evelyn is a student at the University of Agricultural Sciences in Vienna, AUSTRIA. Evelyn spent most of her time in Minnesota assisting Dr Dill-Macky's laboratory with the inoculation, assessment and harvesting of the field nurseries screening for Fusarium Head Blight resistance in wheat. Evelyn spent a couple of weeks traveling in the US before returning to Vienna to continue her studies.

Ms. Mariko Yamato, a graduate student in Forest Botany at the University of Tokyo, is a Visiting Research Scholar in the Dept. Plant Pathology from August 2001 through March 2002. She will work with Drs. Jenny Juzwik and Bob Blanchette on physiological mechanisms associated with *Ceratocystis fagacearum* in oak.

NEW GRADUATE STUDENTS

by Patti Combs

Matt Culler, HS, Hudsonville High School, Hudsonville MI; B.S., Purdue University, West Layfayette, IN. Summer 2001, Dr Ruth Dill-Macky.

Alex Ellram, The turfgrass pathology lab is pleased to welcome Alex Ellram to the program. Alex started this fall semester working towards his Ph.D. degree. He is not a stranger to the University, having earned his M.S. degree in the Department of Agronomy and Plant Genetics working with Dr. Don White. While pursuing his degree, Alex is a member of the faculty at the University of Minnesota-Crookston, as an instructor and program manager of the Golf Facilities and Turf Systems Management Program. Alex's research will focus on the composition of guttation fluids produced by dollar spot susceptible and resistant varieties of creeping bentgrass.

Maria E. Ordonez, arrived from her native Ecuador at the beginning of September to pursue the Ph.D. degree. She obtained her B.S. degree in biology in Ecuador and a Master's degree at the University of Kent at Canterbury in biotechnology. Her interests and much of her research experience are in population biology and how wild disease systems interact with agricultural systems. Her advisor is Jim Groth.



Kristen Falk



Julie Gribble



Chris Kavanaugh



Kathy Kromroy



Laura Morales



Gacheri Kimathi Muriuki



Bacilio Salas



Hilda Salas



Shaobin Zhong

NEW GRADUATE STUDENTS



Matt Culler



Alex Ellram



Maria Ordonez

2001 WRITTEN PHD PRELIMS PASSED

Charlies Barnes, Claudia Castell, Yuhong Li and Silvia Pereyra successfully passed their Ph.D. written prelim exam. Congratulations!!

EXAMINATIONS PASSED 2000-2001

Jason Smith, M.S., February 1, 2001. The Etiology of Bronze Leaf Disease of *Populus*.
Rhoda Burrows, Ph.D., February 6, 2001. Does Diversity Matter? Plant Diversity Impacts on the Associated Arbuscular-mycorhizal Fungi.
Maropeng Jack Maake, M.S. Plan B, May 8, 2001.
Gacheri Kimathi Muriuki, Ph.D., June 12, 2001. Deoxynivalenol and Nivalenol in Pathogenesis of Fusarium Head Blight in Wheat.
Ramya Mani, M.Sc., July 10, 2001. Spatial and Temporal Analyses of *Xanthomonas translucens* pv. *Translucens* Colonization on Wheat Leaves.
Karen Broz Hilburn, M.Sc, August 8, 2001. A Plant Suspension Cell Assay for Anti-Fungal Transgene Efficacy.
Mark Neuman, M.S., August 29, 2001. Role of *Gliocladium roseum* in preventing overland transmission of *Ceratocystis fagacearum*

RECENT PROMOTIONS

Sandra Gould promoted to Scientist
Karen Wennberg promoted to Assistant Scientist

DEPARTURES

by Patti Combs

Rhoda Burrows, completed her Ph.D. in February, 2001 working with Dr. Frank Pfleger on plant biodiversity on arbuscular mycorrhizal fungi. This research was conducted at the Cedar Creek Long Term Ecological Research—Bethel, Minnesota. Rhoda accepted a position as Assistant Professor in the Department of Horticulture, Landscape and Parks at South Dakota State University with responsibility in research and extension in vegetables and ornamentals. She joined SDSU March 1, 2001.

Patti Combs, Associate Administrator in the department, has accepted a position in the School of Social Work at the University of Minnesota. Patti's last day in the department was September 12. We will certainly miss Patti's expertise and leadership in all the areas that she so capably served the department. We wish Patti the best in her new position.

Ganesh Dahal, August 1, 2001, left the Department to work in the Division of Gastroenterology, University of Minnesota.

Ross Daml, left his position as an Assistant Scientist with the Soybean Disease Initiative to begin an apprenticeship with the Minneapolis Plumbers Union.

Linda Hanson, Accounts Specialist in the department, is moving to Indiana. Her last day was September 17. Obviously, we will miss Linda's accounting talents and cheerful smile. We wish Linda her best in future endeavors.

Karen Hilburn (Broz), a native of Illinois (BS University of Minnesota - Biochemistry and Plant Biology) completed her MS in Plant Pathology at the University of Minnesota in August of 2001. Her advisor was Professor Richard J. Zeyen. Ms Hilburn's research involved the testing of antifungal transgenes in maize tissue culture. Her thesis was entitled "A Plant Suspension Cell Assay for Anti-Fungal Transgene Efficacy". Ms Hilburn is currently employed by the USDA Cereal Disease Laboratory where she is working on the genetics of *Fusarium graminearum* in the laboratory of Harold Costlier.

Charles Hu, (M.S. Plant Pathology, 1982) completed his position as a Research Fellow in Ruth Dill-Macky's laboratory in July of this year. His work in the department since 1994 focused primarily on the identification of Fusarium resistant genotypes using greenhouse screening techniques, although, Charles also assisted the wheat breeding program in other research associated with efforts directed to the control of Fusarium head blight. Charles was a visiting scientist at the cereal disease laboratory from 1982 to 1986 and from 1993 to 1994 where he worked on leaf and stem rust of wheat. Charles has traveled this summer to visit family and plans to settle in Hawaii. We wish him well for his retirement.

Warren Kruger, a native of Johannesburg South Africa (MS University of Witwatersrand - Biochemistry and Genetics) completed his Ph.D. in Plant Pathology at the University of Minnesota in August of 2000. His advisor was Professor Richard J. Zeyen. Dr. Kruger's research involved the native defenses of barley against *Blumeria graminis* f.sp. *hordei*, the agent of powdery mildew disease. His thesis was entitled "Physiological and Molecular Effects of Powdery Mildew Resistance Genes on Defense Responses". Dr. Kruger is currently employed

as a post doctoral associate in the Department of Agronomy and Plant Genetics at Minnesota where he is working on functional genomics of response genes transcribed during the defense of wheat and barley against the headblight fungus, *Fusarium graminearum*. The research is being conducted in the laboratory of Gary Muehlbauer.

Jack Maake, graduate student from South Africa took his final oral examination and received his M.S. (Plan B) in May. His two papers were a critique on the use of a rust fungus as a mycoherbicide and a review of the biology of the crown rust complex.

Dr. Jeff Miller left the department in January of this year to join the University of Idaho—Aberdeen Experiment Station, Aberdeen, Idaho. There were a number of considerations that influenced his decision. Jeff came to the University of Minnesota in October 1998 as an Assistant Professor with responsibility in diseases of potato and teaching. During this short time period, he developed a highly visible and effective research and teaching program. Jeff's research included late blight, scab, verticillium wilt and collaborative interactions with the potato-breeding program in the relentless search for screening and selection of disease resistant potatoes. His research program was recognized and supported by the potato growers in Minnesota and North Dakota. Jeff especially enjoyed teaching as this form provided him the opportunity to interact with both undergraduate and graduate students.

Jeff indicated to me that the decision to leave the University of Minnesota was very difficult. An important consideration for Jeff and his wife was the fact that both Jeff's parents and his wife's parents live within a short distance of the Aberdeen Experiment Station. Jeff indicated that he and his wife would always have fond memories of colleagues in the department, the University and Minnesota. We wish the Miller family the best as they move into their new environment with new challenges.

Marcello Morelli, left his position as Junior Scientist in Ruth Dill-Macky's lab in December 2000 bound for Urbana, IL. Marcelo's wife Ana Maria accepted a position as a Research Associate in the Department of Crop Sciences at the University of Illinois. Marcelo quickly found work in the Soybean germplasm program with Randy Nelson (USDA/ARS). The hard work and the humor Marcello brought daily to the lab are truly missed.

Marc Neuman recently finished M.Sc. studies with J. Juzwik. His research focused on the role of Gliocladium roseum in natural biocontrol of overland transmission of the the oak wilt fungus. G. roseum is a natural, although infrequent, colonizer of oak wilt fungal mats. Laboratory studies demonstrated the ability of G. roseum to over-grow and kill Ceratocystis fagacearum in petri dish cultures of asexual and sexual state colonies of the pathogen. In field trials, augmentation sprays of fresh oak wilt mats with three selected G. roseum isolates yielded increased colonization of mats by G. roseum (5% control vs. 12 - 21% treated) and reduced isolation of C. fagacearum from treated mats compared to controls. Marc is currently working as a Biological Technician for the Forest Disease Research Unit, North Central Research Station, USDA Forest Service, in St. Paul, MN.

Shawn Neuman worked as a Junior Scientist from late October 2000 through September 30, 2001, on a cooperative project with J. Juzwik. Shawn completed final assessment, sample processing, and data collection for an alternatives to methyl bromide project in bare-root forest nurseries in Minnesota and Wisconsin.

Saruul Purev, Dr. Saruul Purev left Minnesota in May to join finacee Dr. Aaron Kelley in San Francisco, CA. She and Aaron were married in Hawaii in June. Currently she is pursuing a number of job possibilities in biotechnology in the Bay Area.

GRADUATE STUDENT AFFAIRS IN PLANT PATHOLOGY

by
Graduate Students in Plant Pathology
By Charlie Barnes

There are three new students who joined the department this year. These students are Alex Ellram (the only student who has traveled south) from Crookston MN, Matt Culler traveled all the way from Purdue, and Maria Ordonez has come to us from Ecuador. We officially welcomed them at the annual "new student" picnic. Although it was a rainy Friday, we still had a good turnout, and a good game of wet wiffle ball. Students have been regularly going out on Fridays to unwind. For photos of a past happy hour go to http://www.plpa.agri.umn.edu/~krfalk/happyhour.htm.

The graduate students have been involved in a variety of activities over the past year. Outside the world of pathogens, we volunteered our time and money to help a needy family purchase Christmas presents, and with the Special Olympics. The Special Olympics held their Minnesota State bowling championship this past winter and student volunteers spent the day helping with the event.

Students have been honored with various awards this

year. Three students were awarded APS travel awards. Andrea Morse won the Dennis H. Hall award, Yuhong Li won the John S. Niederhauser award, and Elizabeth Wiggins won the Stuart D Lyda award. Claudia Castell and Charlie Barnes were awarded the M.F. Kernkamp Fellowship and the Fred I Frosheiser Scholarship departmental awards, respectively.

Students are organizing another symposium to be held April 1, 2002, entitled "New Approaches to Plant Disease and Pest Management: Alternative to Pesticides". Speakers include Dr. Roger Beachy, President of the Danforth Center, Dr. Harry Hoitink from Ohio State University, Dr. Joyce Loper from the USDA-ARS at Oregon State University, Dr. Frank Martin, from the USDA-ARS in Salinas California, Dr. David Andow, an entomologist from the University of Minnesota, Dr. R. James Cook from Washington State University, and Dr. Eric Nelson from Cornell University. We have received very enthusiastic responses from the above-mentioned speakers. For more information, please visit the symposium website at http://www.plpa.agri.umn.edu/plpagrads/symposi.htm. This year's April fools day should be one to remember.

FACULTY ACTIVITIES

A few highlights of faculty activities from the past year are printed in the profiles below.

Robert A. Blanchette, Professor. New funding for white pine blister rust research has allowed an expansion of investigations to screen and select resistant eastern white pine. Graduate Student Jason Smith recently started his Ph.D. and joins Todd Burnes and Joel Jurgens working on determining the histological and ultrastructural mechanisms of rust resistance. In March, Bob Blanchette traveled to Vietnam and Cambodia to continue work on "agarwood" (also called Gaharu, or aloeswood) production in Aquilaria trees. This valuable resin, used as an incense and medicine, is being produced in plantations that will provide a new commodity for rural areas. The resin is unusual since it is produced inside the tree as a host response to fungal attack. This work is now expanding and as you read this issue Bob is in Bhutan to discuss a cooperative project with the Minister of Agriculture. He is visiting several sites in the country where plantations can be established and resin produced. In July, fieldwork on a cooperative study with Parks Canada and geochemist Timothy Filley of Purdue University was done in Ellesmere Island in the Canadian high arctic. The Polar Continental Shelf Project provided transport to these remote arctic sites to access deterioration taking place at historic Fort Conger, built by Greely's American expedition to the Arctic in 1881, and Peary's huts built in 1898-1909 during his expeditions to the North Pole. This work has similar objectives to the work underway in Antarctica (mentioned in last years summary) where Benjamin Held continues to carry out NSF funded investigations on the historic huts of the Ross Sea region. Graduate student Andrea Morse, working on the etiology of red stain in box elder, is currently spending 4 months at the University of Waikato, New Zealand on a student internship program; and graduate student Crystal Floyd has started investigations on a new project testing methods of biological control to reduce the impact of Armillaria root rot in conifer forests of Minnesota.

Dr Ruth Dill-Macky, Associate Professor. This year was another busy year in the small grains pathology lab. Silvia Pereyra completed the coursework for her Ph.D. and returned to INIA, La Estanzuela in Uruguay to establish her thesis research late last year. Silvia passed her written prelims in June and returned to Minnesota in October to take her oral prelim exam and to present a departmental seminar. Matthew Culler joined my lab this summer, while he did take a couple of summer classes, he spent most of his time getting hands on experience in our summer field plots. Matt began his MS program in earnest in the fall semester. Dr Kent Evans, working in my laboratory, took much of the responsibility for the field and greenhouse screening of wheat and barley for resistance to *Fusarium* head blight in cooperation with the wheat and barley plant breeding programs. This was no small task as we tested over 7,500 rows of wheat and barley in field nurseries at three locations this summer - over 1,400 lines are planned for our fall greenhouse. Bacilio Salas joined our lab this year as a research associate. Bacilio will be working on a USDA-ARS grant investigating the inoculum potential of *Fusarium* infested crop residues. Kent and I attended the APS meetings in Salt Lake City, UT. I have undertaken a number of service activities this year including serving on our departmental faculty council and on the college faculty development committee and college curriculum committee as well as serving on the executive of the US Wheat and Barley Scab Initiative.

Roger K. Jones, Professor. The year to date has been full of changes. I am in the process of changing gears programmatically. Newer responsibilities will allow me to focus my program on diseases of sugar beets and potatoes. My prior activities on cereal diseases are now being handled by Dr. Hala Toubia-Rahme from the Crookston station. New to my project are Kristen Falk, Julie Jenkins, Dick Wenkel and Kurt Wilhelm. Julie and Dick are old timers helping me with the potato project including the Late blight nursery. With the departure of Jeff Miller, the department has brought (coaxed) Neil

Anderson out of retirement to help with the disease resistance screening nurseries for Early dying and Common scab. Julie and Dick are also providing assistance to Neil. This year marked the inaugural season of Blightcast. This integrated advisory for Late blight is being headed up by Kristen Falk. We are using reporting stations from 28 locations throughout Minnesota to provide alerts for Late blight. If you are interested in visiting our web site you can find us at: www.blightcast.coafes.umn.edu Another project that was continued this season involves head sampling of wheat and testing with PCR for inoculum potential of Fusarium and Septoria. This is a collaborative project with Syngenta and is part of a Master's project for Kurt Wilhelm. Kurt, a native of Chicago that arrived via Purdue University, has finished his first growing season having sampled 128 commercial fields in Minnesota and North Dakota. Undaunted by the distances, Kurt was able to provide some good information on the incidence and severity of FHB in Minnesota this year (incidence averaged 18% with the mean severity around 2%). Despite the erratic weather, most crops in Minnesota looked reasonably and should approach average yields. There was some stand problems with soybeans early in the season, but other crops were free of major disease problems in 2001.

Jennifer Juzwik, Adjunct Assistant Professor. An oak resource and health research program was developed as an expansion of the existing oak wilt research program conducted by me and associated staff and graduate students. USDA Forest Service concerns about severity of oak decline in Missouri, the potential for introduction of *Phytophthora ramorum* (the Sudden Oak Death pathogen) into the Upper Midwest Region, and the impact of urban development on the health of the region's oak forest cover were driving forces in this expansion of research emphasis. I toured the Santa Cruz and San Francisco Bay areas of California with other USDA Forest Service and one state Dept. of Conservation pathologist in April 2001 to gain first-hand knowledge of the Sudden Oak Death situation in that state. I also visited several locations in the Mark Twain National Forest in southeastern Missouri in May 2001 to become acquainted with the extensive oak decline problem in forests of this area.

Dr. Linda Kinkel, Professor. Our research effort this past year has been greatly enhanced by the presence of Dr. Yaacov Katan in our laboratory as a visiting scientist from Israel. We have all appreciated his energy, his knowledge, his experience, and his sense of humor over the past year. We will miss him when he departs October 13! Post-docs Anita Davelos and Soon-Dong Lee have made good progress in their research on microbial communities in native prairie soils over the past year. Graduate student Ramya Mani defended her M.S. degree and is entertaining job prospects in Connecticut and India. Elizabeth Wiggins was awarded an APS student travel grant to present results of her green manure work at the national meetings this summer. Jen Flor and Kun Xiao continue to provide excellent technical support, and were invaluable in supporting our 5 undergraduate research student projects over the past year. Co-teaching a new course in Ecology (Plant Interactions with Animals and Microbes) was a personal challenge, but it has been great to hit a new audience with the wonders of microbe-plant interactions! I am looking forward to a semester leave and time in France this next spring. I plan to use the time to acquire new technical expertise and get out some long-overdue manuscripts.

Dr. Sagar Krupa, Professor. I received the Achievement Award of Excellence from the University of Minnesota Chapter of Sigma Xi. I was also elected as a Life Member to the International Society of Environmental Botanists. In addition, Sagar is the Chairman of the Technical Committee of the USDA Multi-state Project on "Characterization and Mechanisms of Plant Response to Ambient Ozone".

I am continuing my long term basic research on mathematical modeling of the dynamic interactions between the atmosphere (particularly ozone) and crop responses. I have also been actively involved in improving the utility of passive sampling methods of air pollutants. Passive samplers are inexpensive and do not require electric power to operate. Thus, they are of much value in large-scale regional level studies and in addressing air quality issues in developing countries. In addition, I have collaborative research in Spain, Canada and Germany (air quality, climate change).

I am very active in technical publishing. I am the Associate Editor for the journal "Environmental Pollution" and the Chief Editor for the Book Series "Developments in Environmental Science" (both from Elsevier Science, Oxford, UK). I am also the Principal Editor of "Global Systems" for one of the largest electronic journals, The Scientific World: www.TheScientificWorld.com (Bicester, Oxford, UK).

Dr. James E. Kurle, Assistant Professor. Research in my lab has expanded significantly in the past year to include completion of a survey of the prevalence and severity of soybean diseases in Minnesota in collaboration with the Minnesota Department of Agriculture, a survey of *Phytophthora sojae* races present in Minnesota soybeans, and collaborative research with Dr. Jim Percich into the causes and management of root rots of irrigated soybean and dry bean caused by *Fusarium solani* and *Rhizoctonia solani*. The statewide disease survey indicated that the root

pathogens, particularly *P. sojae* and *F. solani*, and *R. solani* were present in more than 50% of fields in the state. We have also continued research into the effects of variety, row width, and plant population on the severity of white mold of soybeans in collaboration with Dr. Seth Naeve and Dr. Jim Orf of the Agronomy Department. However, the field component of this research has been frustrated by a second year of high temperatures and limited precipitation have resulted in little or no white mold at any one of nine locations throughout the state. I also assumed responsibility for teaching the undergraduate Introductory Field Crops Diseases course and, in cooperation with Dr. Ruth Dill-Macky, developed and taught a graduate level Plant Disease Management course.

Dr. Deborah A. Samac, Associate Professor, USDA-ARS-Plant Science Research. The past year has flown by in the course of absorbing research, travel and teaching activities. Last November I traveled to Lorne, Victoria, Australia to attend the meeting Molecular Breeding of Forage Crops and along with Dr. Saruul (Sagy) Purev, presented research results from the lab. My talk focused on our work on engineering aluminum tolerance in alfalfa for growth in acid soils. Sagy presented her research on engineering alfalfa to produce a biodegradable plastic polymer in alfalfa as a value-added product. In the week after the meeting, I went birding with one of the top birders in Australia and saw over 200 species. In January I attended the Plant and Animal Genome meeting in San Diego, California where the lab presented posters on our research on functional genomics in the annual relative of alfalfa, *Medicago truncatula*. During the spring semester, I again participated in teaching the plant bacteriology section of Causal Organisms in Plant Disease. To celebrate the arrival of spring, I spent a week camping in southern Texas, hiking, beach combing, and birding. During the summer we welcomed two students from Fort Valley State University in Georgia to the lab for summer research projects. One student worked on biolistic transformation of alfalfa, while the other collaborated with Dr. Kinkel's lab to quantify the population densities of antibiotic-producing *Bacillus* and *Pseudomonas* species in prairie soils. In July Dr. Silvia Penuela and I attended the Molecular Plant Microbe Interactions meeting in Madison, Wisconsin where Silvia presented a poster on her research optimizing production and use of DNA microarrays for functional genomics research in *Medicago truncatula*. Finally, Claudia Castell and I attended the APS meeting in Salt Lake City in August. Claudia presented a poster on her research into the genetic diversity of *Phoma medicaginis* and I had a poster on the host range of *Clavibacter michiganensis*. Birding in the desert and mountains of northern Utah after the meeting netted 11 new species so that now I am only 17 birds away from my goal of seeing 500 North American birds.

Dr. Nevin Dale Young, Professor. Research and teaching in the areas of genomics and biotechnology continue to be major pursuits. My lab's National Science Foundation projects in soybean and *Medicago truncatula* (model legume) genomics continue with many thousands of DNA sequence "reads" per year — leading to a deeper understanding of genome structure, molecular evolution, and the organization of disease resistance genes. Working with Jim Orf in Agronomy and Plant Genetics, our work to use DNA markers to develop better cyst nematode resistant soybeans is progressing well.. In the lab, the efforts of Roxanne Denny, Dariush Danesh, Joann Mudge, Dana Larsen, Yan Huihuang, and Eric Boehlke have been especially noteworthy. Many of us attended this year's Plant and Animal Genome conference in San Diego, where we presented several talks and posters. We were also fortunate to host an old friend, Dr. Narpat Shehkawat, as a visitor to the lab for a six month visit from Jodhpur, India. I also had the opportunity to attend workshops focused on organizing the national and international efforts in genome sequencing of legumes. It's clearly an exciting, yet challenging, time to be working in this area of research. Here on campus, I am leading a faculty group developing a new undergraduate biotechnology major, as well as serving on the steering committee of the Center for Microbial and Plant Genomics, which begins work on a new building this fall.

Richard J. Zeyen, Professor. The 2000 -2001 academic year was unusually active. During the year I attended the Nanotechnology Summit, the National Wheat and Barley Scab Conference, the 37th Nobel Conference and spent time as a visiting scientist at the Institute for Grasslands and Environmental Research in Wales. One PhD and one MS student finished and defended their theses while our laboratory underwent major changes in structure and personnel. However the year also provided occasions for reflection. There were visits with alumni; John Dueck, Robert Crow, and Bent Skovmand among others. Also, after 30 years of directing the Experiment Station's Cooperative Electron Optics Facility I oversaw its move to the Snyder Hall of Biochemistry. It is now one among several service facilities in "Biodale" (see Electron Microscopy goes Biodale). With that move an era ended. I am now freed to concentrate on research and teaching in the Department of Plant Pathology. The year 2000-2001 year also saw the end of my 5 year term as Chair of the Microscopy and Imaging Consortium for the Saint Paul Campus, my 4 year term on the Committee for Interdisciplinary Research Centers (for the Dean of the Graduate School) and a 2 year service on Agronomy's Corn Breeding and Genetics Search Committee.

My research group continued to focus on the molecular and molecular genetic nature of durable fungal disease resistance in cereals. Our knowledge of fungal disease

resistance mechanisms has been used locally and internationally. Many antifungal protein genes and advanced plasmid constructs used for genetic transformation of cereal crops were made or modified in my laboratory. These in turn were used in transgenic cereal research of Somers and Muehlbauer at Minnesota. In 2000-2001 the Sugarcane Badnavirus promoter (discovered by B.E.Lockhart et al.) was used to drive a newly designed plasmid construct with the following antifungal protein genes; (1) beta 1-3 glucanase from alfalfa, (2) chitinase from rice, (3) chitinase from barley and (4) a thaumatin-like protein from oat and several others. These antifungal genes are now integrated into transgenic oat, wheat and barley. Wheat and barley lines from G. Muelhbauer's laboratory are being tested for Fusarium Headblight resistance by Ruth Dill-Macky's group.

In 2001 I requested and was granted a sabbatical leave for the 2001-2002 academic year. During the year I will work on advancing research into durable disease resistance. My research and speaking engagements will include international collaborations in Wales, Denmark, Japan and Canada

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YARD AND GARDEN CLINIC (FORMERLY THE DIAL U CLINIC)

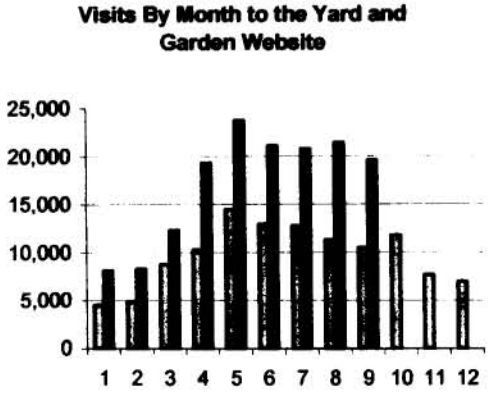
by Janna Beckerman

Phone calls, e-mails and submitted samples to the Yard and Garden Clinic (formerly the Dial-U Clinic) continue to steadily increase, with total contacts reaching 6,997 for the 2000-2001 year. The plant pathology section is staffed by Janna Beckerman, assistant professor and extension plant pathologist, and three plant pathology technicians: Jennifer Love, a graduate student working on her M. Ag degree in Floriculture; Elizabeth Wiggins, a graduate student working on her M.S. in plant pathology and Phyllis Webb, a Master Gardener, Ph. D. immunologist and part-time student.

The 2001 growing season was arguably one of the worst growing seasons on record. The first report of perenniating southern blight, caused by *Sclerotium rolfsii*, occurred at four locations throughout the state. Two of the four cases were diagnosed by Master Gardeners and sent to the clinic for confirmation. Daylily rust, introduced into the U.S. in the summer of 2000 was found in Anoka, MN, this June. The much maligned Colorado blue spruce was the subject of both an epidemic of Sirococcus blight and a new "mystery disease," possibly involving a Leptosphaeria-like pathogen. Tomato spotted wilt virus/Impatiens necrotic spot continued to be a persistent problem on bedding plants, perennials and houseplants.

Several programs are in place to keep Master Gardeners updated to new and emerging disease problems. The Disease Watch Web Page (http://www.extension.umn.edu/projects/yardandgarden/PlantPathWeb/Plpa.htm) and Info-U line are both updated on an as-needed basis. The Yard and Garden News is an e-journal that is published 18 times a year and includes information on emerging or interesting disease problems (http://www.extension.umn.edu/projects/yardandgarden/YGLNews/YGLNews.html). In addition to the Master Gardener Core Course, evening talks on emerging disease problems and diagnostics were given at several Twin Cities locations. To keep diagnostic skills sharp, we continue to introduce new mystery diseases on a month basis:
http://www.extension.umn.edu/projects/yardandgarden/PlantPathWeb/Plpa-mystery.html.
Recently, we have included pictures of disease symptoms and signs to help in the diagnostic process.

Total visits to the Yard and Garden Website continue to increase as well. 153,979 visits were tallied for the 2000-2001 year. Chad Behrendt, the previous extension plant pathologist, and Crystal Floyd, a graduate student in the department, developed a web-based diagnostic site. We continue to expand the plant disease diagnostic web page (http://www.extension.umn.edu/projects/yardandgarden/diagnostics/) to include vegetable, floricultural and houseplant diseases, and to complement the original sections on tree, turf, shrub and fruit diseases. These pages should be posted by the end of this year.



PLANT DISEASE CLINIC

by Sandra L. Gould

It was another strange year for crops in MN. A cold, wet spring that set up conditions for root rot diseases, was followed by a hot, dry month which sent plants into rapid decline. Soybeans, in particular, were submitted for root rot identification. Also, thanks to recent warm winters, a grower had *Sclerotium rolfsii* overwinter on field grown hosta plants. Unusual for our area and it will be another problem to watch for in the future.

The number of samples submitted to the clinic during the growing season was lower than usual; however, the fall sample season has begun. The clinic staff cultures grain for storage molds, processes potato soils for Verticillium sp, and nematodes and processes soils for Aphanomyces root rot and Rhizomania. Also, the clinic is working with a local company to test the phytotoxicity of fungicide products on floral crops.

PLANT DISEASE HERBARIUM

by James V. Groth

The fungal plant disease herbarium now resides on the eighth floor of the Biological Science Building (about a block south of Stakman Hall). Our herbarium is officially part of the Bell Museum of Natural History after being combined with the general fungal herbarium to make a seriously large collection of around 100,000 accessions. The Department will still be involved in curation of the herbarium through the appointment of Jim Groth as co-curator in charge of plant diease fungi. Dr. David McLaughlin of Plant Biology is curator in charge of the entire herbarium. We are still in the process of adding the plant disease specimens to the database, which may take a year of so. The new home is in a much more secure environment for collections with more consistent help with organization and upkeep. The website for the fungal herbarium is at http://fungi.umn.edu/. If you are interested in more complete access, be sure to contact Jim Groth.

THE DEPARTMENT OF PLANT PATHOLOGY AT THE STATE FAIR

by Todd Burnes

During the State Fair the University of Minnesota occupies space in a building on Dan Patch Ave near the main entrance on Snelling Ave. The College of Agriculture and Food Science (COAFES) has a booth and on August 27, 2001, our department was represented during the day by Patricia Combs, Brian Steffenson, Christine Newby, Sandra Gould, Kristen Falk, and Todd Burnes. Visitors had the opportunity to spin a wheel in which a pointer lands on the name of a department in COAFES. A question is then asked about that department or the discipline they study. If they answered correctly, the visitors could either chose a bag of potato chips or edible soybeans. Information was available about our department as well as a poster with information on turf diseases and a display demonstrating a technique to rate scabby spring wheat kernels. We enjoyed having the opportunity to talk about the work we do in our department and visiting with people from around the state and the country.
