

2000

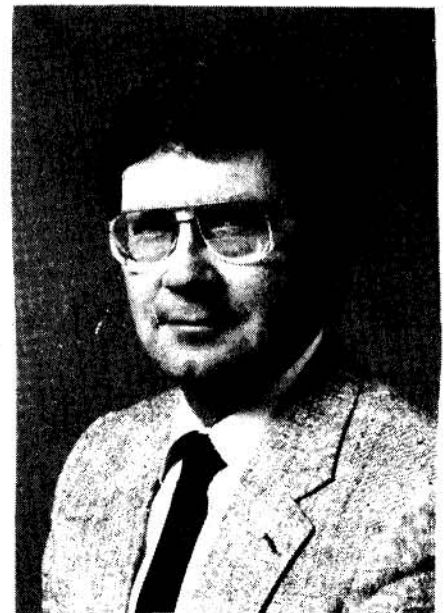
Aurora Sporealis



David W. French
November 10, 1921 - January 11, 2000



Carl J. Eide
August 20, 1904 - April 9, 2000



Richard A. Meronuck
August 1, 1941 - March 18, 2000

AURORA SPOREALIS

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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.

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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:

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FEATURE ARTICLES

In this volume of the *Aurora Sporealis* we feature articles on three exceptional plant pathologists who passed away this year. The cover story is dedicated to Drs. Carl Eide, David French and Richard Meronuck. They will be sadly missed by their families, colleagues and friends.

Check out the Old Timer News! We received a number of letters and E-mails from graduates and old timers. Please write to us with your news for the next issue of the *Aurora Sporealis*.

The department has had an outstanding year in terms of faculty hiring, student recruitment, and participation in local, national and international events. Read about these happenings in the Departmental News section. Finally, we ask for nominations for the E.C. Stakman Award to be given in 2001 (see enclosed nomination form). Also enclosed is information on the Department of Plant Pathology Endowments.

The Department is in the process of establishing an Endowed Chair in Urban Tree Health. Please join the Department of Plant Pathology in establishing this new position to protect the health of our urban trees.

We sincerely appreciate any gifts you can make to these funds and thank you for your past support and encouragement.

MESSAGE FROM THE HEAD

Dear Friends of the Department:

Greetings from Minnesota!! It's *Aurora Sporealis* time. I look forward to sharing Department news with you and the changes that have occurred over the past year. Additionally, I invite you to read the other topics in the *Aurora* to learn more of faculty, student and department activities.

As you may know, the University of Minnesota had been on the quarter system for many years. However, last year the entire University converted to semesters. Although there were a few fairly major glitches, mainly with student registration, most of the conversion went quite smoothly. The faculty spent a great deal of time revising courses and preparing for the conversion. Actually, the switch to semesters along with revision of courses and majors provided an opportunity for the department to bring plant pathology to additional undergraduate students, as some of our course offerings are now a requirement in several undergraduate majors. Thus, we now have the opportunity to introduce more students to the science of Plant Pathology than ever before.

Let me brief you on what has happened in the department this past year as well as some of our plans for the future. First, I am pleased to inform you that Dr. Brian Steffenson has accepted the Lieberman-Okinow Endowed Chair in Cereal Disease Resistance. Brian will assume his new position November 27, 2000. Brian's primary focus will be unlocking the genetic potential of disease resistance from wild relatives of small grains through cooperative research with the Institute for Cereal Crop Improvement at Tel Aviv University and the Lieberman Germplasm Bank. Additionally, Brian will be involved in our graduate teaching program. We are pleased and excited to have Brian in the department.

Dr. Hala Toubia-Rahme joined the department October 2, 2000. This position is located at the Northwest Research & Outreach Center, Crookston. Hala received her Ph.D. from Ecole Nationale Supérieure Agronomique de Toulouse, France. She then accepted a position as consultant in the Barley Pathology in Germplasm Program at ICARDA and then joined Brian's Steffenson's group as a postdoc in 1998. Hala's responsibilities include teaching and extension. Her extension responsibilities focus on developing educational programs via applied research on diseases of small grain. She will also teach an introductory Plant Pathology course at the University of Minnesota, Crookston. Hala's expertise, in the area of small grain diseases is a welcomed addition to the small grains initiative working

group as we continue our quest to effectively manage Fusarium head blight and other diseases of small grain.

As you know, Dr. Ward Stienstra, soybean extension pathologist, retired July 1, 1999. I am pleased to announce that Dr. Dean Reynolds has now filled this position and will be joining the department October 2, 2000. Dean recently completed his Ph.D. at Iowa State University where he researched the soybean cyst nematode. Dean's responsibility will include development of comprehensive educational programs on soybean diseases and their management.

This past summer I had the opportunity to visit China for 3 weeks. The purpose of the trip was to further develop faculty and student exchanges with Agricultural University of Hebei and to seek potential areas of collaboration between our faculty and faculty at Hebei. A similar objective was explored with Southwest Agriculture University at Chungqing and the Chongqing Agricultural Bureau. Future graduate student training opportunities for Chinese students would mirror the successful model that the University of Minnesota had in place with Morocco for many years. This model would require the students to take their courses in the department here at the University of Minnesota and conduct their research in China on a disease that has significant impact on a crop that is important to China's agriculture.

We have embarked on another important mission and that is the establishment of an endowment in the area of Urban Tree Health. Healthy trees are an asset to every community. To keep trees healthy and to maintain our urban tree heritage, we need to continue our research in this area. This endowed chair would provide an opportunity for the University to hire a scientist to focus research attention on the complex disease situations that continue to devastate our urban forests. To accomplish our goal, we need your help and support to raise the funds needed for this Endowed Chair in Urban Tree health. Please join the Department in establishing this new position to protect the health of our urban trees.

To the relief of many, Fusarium head blight (FHB) on wheat and barley was less severe this growing season in the Red River Valley. Yields were up, but protein down a little. There was no shortage of inoculum however; environmental conditions were less favorable for disease establishment and development. The elevated mood of the growers is evident and it's good to see a smile on their faces. With the scab epidemics in the past, there has not been much to smile about; it's good to have a break.

Increased federal funding through the National Scab Initiative along with funds from the State will assist us to increase our research efforts that will hopefully result in effective control of FHB in the near future.

As in past years, the graduate students are once again organizing a symposium. The theme of this year's symposium is **Genomics and Bioinformatics in Plant Pathology**. The students assume total responsibility for the organization of the symposium including identification of speakers and securing funding to support the symposium. They have done an excellent job and I commend them for their efforts.

This past year, the faculty continued to set the pace with regard to publications-- two books, 13 book chapters, 48 refereed articles, 61 abstracts, three patents and 27 extension articles. The proportion of external funding coming into our programs from national and international granting agencies continues to increase. Even though our accomplishments are many, we must continue to be forward in our thinking and planning if we are to remain one of the very best plant pathology departments in the world. Our goal is to maintain a balance in our research and outreach efforts that will serve our growers with effective disease management strategies and to embrace basic research and technologies that will provide fundamental knowledge to our understanding of pathogens/plant interactions.

Faculty, staff and students were saddened by the deaths of three of our colleagues this past year, Dr. David French, Dr. Carl Eide and Dr. Richard Meronuck. We will miss them dearly. This issue of the *Aurora* is dedicated to them in honor of their many contributions to the department, science and to mankind.

Each of you recently received a letter from Norm Borlaug describing a wonderful new opportunity now available to support graduate student education via Graduate Fellowship Endowment through Campaign Minnesota. Also, enclosed was a letter that describes the 21st Century Graduate Fellowship Endowment and matching gifts and a pledge card. Campaign Minnesota comes at an opportune time for the Department of Plant Pathology. Recent faculty hires in the area of disease management of various crops, molecular biology and filling the Endowed Chair for Cereal Disease Resistance have expanded our ability to educate the plant pathologists of tomorrow. Graduate students are our inspiration and our future. All contributions designated for graduate student support will be placed in the Graduate Fellowship Endowment; doing so will guarantee support of department fellowships in perpetuity.

I would like to end my letter to you by expressing my

sincere thanks for the generous contributions that each of you have made to the department and its programs. As we continue to face budget reductions, it is clear that we must rely more on the generosity of alumni and friends to support our programs. I am grateful for all that you do for the department. Your financial and moral support provides incentive to excel and hence, improve the quality of our programs. Be assured that the faculty are dedicated to continued excellence of this department and are committed to providing high quality research, teaching and outreach for our graduate students and for the citizens of the State of Minnesota.

I invite you to visit the department whenever you have the opportunity. You are always welcome. The lights are on and the coffee is hot. I would like to acknowledge the efforts of Dr. Nevin Young, the editor of this year's *Aurora Sporealis*, and to say thanks to all involved in the development and production of this important document.



Frank L. Pflieger

COVER STORY

Tribute to Carl John Eide (1904-2000)

By Thor Kommedahl



Carl Eide was born in Carrington, North Dakota, on August 20, 1904. He matriculated at the University of Minnesota, on the St. Paul Campus, and earned his B.S. degree in 1928 with a major in biochemistry. He entered graduate school with a major in plant pathology under Professor E.C. Stakman, and earned an M.S. degree in 1929 and a Ph.D. degree in 1934, both from the University of Minnesota.

His early employment was as an analyst for the Protein Laboratory of the Minneapolis Chamber of Commerce (1926) and as a cereal chemist for Pillsbury's A Mill in Minneapolis (1926-1927). In the summers of 1927 and 1928, he worked in the barberry eradication program in Minnesota. In 1929, he became a botany instructor in the School of Agriculture as well as a research assistant in the Department of Plant Pathology, at the University of Minnesota. During the academic year of 1929 to 1930, Carl was a botany instructor at Louisiana State University, Baton Rouge, then returned to the University of Minnesota where he was appointed an instructor in plant pathology (1930-1937). He continued on the faculty serving as assistant professor from 1937 to 1944, associate professor from 1944 to 1947, and professor from

1947 until his retirement in 1973. He served as Acting Head of the Department of Plant Pathology off and on from 1938 to 1971. He continued as professor emeritus with an office in the department for several decades, completing many assignments for the department.

Dr. Eide served in several capacities outside the university. For example, he was a Special Scientific Aid with the Rockefeller Foundation in Colombia and Mexico in 1955 and served as an Agricultural Officer for the United Nations Food and Agriculture Organization, in Chile, in 1960.

He was elected to organizations such as Phi Lambda Epsilon; Alpha Zeta, where he served on the Board of Trustees from 1951 to 1954; Gamma Sigma Delta, serving as president in 1951-1952; Sigma Xi, serving as secretary-treasurer from 1950 to 1952; Gamma Alpha; and Gamma Sigma Delta, where he was honored with the Award of Merit in 1972.

Carl was active in the American Phytopathological Society, serving on several committees, and as an associate editor from 1937 to 1938 and as editor from 1956 to 1958, of the journal *Phytopathology*. He was a member of the Potato Association of America and the Society of American Bacteriologists.

Professor Eide was dedicated to teaching, and taught several courses: Introductory Plant Pathology (1932-1938), Fruit and Vegetable Diseases (1935-1951), Vegetable Diseases (1952-1960), Plant Disease Control (1934-1948), Bacterial Diseases of Plants (1938-1966) Physiology of Plant Pathogens (1939-1945), Virus Diseases of Plants (1947-1949), and Principles of Plant Pathology (1954-1973).

Dr. Eide was a superb teacher and was especially skillful in the Socratic method of instruction. His course on principles of plant pathology was the last course taken by doctoral candidates as it was the capstone of teaching plant pathology in the department. It was a popular course and valued immensely by students in plant pathology and others from related departments because he brought together all elements of the discipline. He was asked to continue teaching this course for several years after his retirement.

Dr. Eide's early research dealt with diseases of fruit and vegetable crops, later he focused on diseases of potato, where he specialized in late blight caused by *Phytophthora infestans*. He sought to find the nature of resistance, analyzed racial populations of the fungus, and collaborated with horticulturists in developing resistant cultivars of potato. In recognition of his work, a potato cultivar was named after him. His research was recognized nationally and internationally for his concepts on the nature of disease resistance in plants and his applications for control of diseases of the potato. He was an adviser to 20 master's and 21 doctoral candidates in plant pathology. His publication record comprises about 50 papers; however, he refused to be an author of any paper that was the outcome of either an M.S. or a Ph.D. thesis, for he believed that the research done was that of

the student and his role as an adviser was not enough to merit authorship of that student's thesis research. Even though he played a major role in the design and planning of the research, and even in the writing of the paper, he adamantly refused authorship.

Dr. Eide was a scholar of the best type envisioned by a university and he served as a congenial, always approachable adviser to students, and ever evincing the scholarly instincts of a scientist. He was a sound thinker, an excellent writer and editor, an inspirational teacher and mentor, with a modest, friendly demeanor and a great sense of humor. He was a well-loved professor as attested by the many who came to visit with him during his tenure and in retirement. Dr. Eide died April 9, 2000 at the age of 95.

Tribute to David W. French (1921 - 2000)

by Robert A. Blanchette



Professor David W. French passed away on January 11, 2000. Dave's passing is a loss for us in the department, for the alumni and also for the people of Minnesota. The following statement by Donald C. Willeke, a shade tree advocate in Minnesota, is a tribute that reflects our feelings. "The loss of Dave French has deprived the world of a great, wise, dedicated and visionary scientist and educator. But far greater is the loss that others and I have suffered, for we have lost a wonderful, kind and patient friend".

David French was born in Mason City, Iowa, on November 10, 1921. He received his primary and secondary education in the public schools at Niagara Falls, NY, and his B.S. degree in 1943 from the University of Minnesota. He completed graduate studies in the Departments of Plant Pathology and Forestry at the University of Minnesota obtaining his M.S. degree in 1949 and a Ph. D. in 1952. He served in the U. S. Army from 1943 to 1946 and was Captain when discharged. In 1950, Dave started his career as an instructor in the Department of Plant Pathology and moved up the ranks becoming a full professor in 1963. During his tenure as professor, he was an adjunct professor in the Department of Forest Resources, served as associate director and superintendent of the University's Lake Itasca Forestry and Biological Station, and was assistant head and head of the department of Plant Pathology for 12 years. Dave retired as Professor Emeritus in 1992. For many years after his retirement he continued to serve the department as an advisor to students and was active in many projects including the American Chestnut Foundation. He continued to contribute his time and energy until his illness forced him to curtail his efforts.

As most of you are well aware Dave French was world renowned for his teaching and research in forest pathology. His work to elucidate the biology and control of Dutch elm disease and oak wilt had tremendous impact in Minnesota and throughout the nation. The control programs he initiated were successful and his guidelines are still being followed today allowing Minnesota communities to continue to enjoy millions of beautiful

elm and oak trees. In an article in the *Minneapolis Star Tribune* Dave was referred to as the father of urban forestry in Minnesota. Arborists called him "a dynamic person and wonderful teacher who really did more than be a university professor". His passing was recognized by the Minnesota Shade Tree Advisory Committee who awarded him the Lifetime Achievement Award for his career long contributions at guiding and educating citizens and citizen groups in their efforts to preserve urban and community forests.

Dave was a skilled educator and taught more than 5000 undergraduate students. He was especially successful as an advisor and mentor of graduate students. If you review the ranks of forest pathology professionals across the nation (and in other countries), his students are present in large numbers. He has made a great impact on the profession and his legacy continues with the work of his students.

As department head for many years, Dave was instrumental in the development and planning for Borlaug Hall, which dramatically increased the department's space providing new lecture and laboratory

rooms, new plant pathology library, plant growth chamber facility and other research and administrative space. In addition to his many administrative duties, Dave was always willing to give guest lectures in classes and continued many research projects that were important to him.

The Department and the University of Minnesota has decided that a fitting tribute to Dave French's accomplishments is to establish an endowed chair in urban tree health. This chair would provide for a new faculty position with a research emphasis on urban tree diseases. The position would allow the work started by Dave to be continued long into the future. The response from the alumni to help fund the chair has been excellent and we are well on the way to reaching our goal. However, we still have a long way to go to reach two million dollars, the amount needed to completely establish the endowed chair, but with the help of alumni and contributions from foundations and industry, we can make this new position a reality. How great it will be to have an endowed chair in urban tree health established in the department for a lasting tribute to Dave French's legacy.

**Tribute to
Richard A. Meronuck
August 1, 1941 - March 18, 2000**

By Sagar V. Krupa



Richard A. Meronuck was born in Minot, North Dakota, in 1941 and spent his formative years on a small-grains farm in that area. He started his college education at Minot State College (1959-1961) and received his B.S. degree in 1963 from North Dakota State University, majoring in Agricultural Education. Subsequently he taught vocational agriculture and general science for two years at Lamoure High School in Lamoure, North Dakota. He returned to North Dakota State University in 1965 and completed an M.S. degree in Plant Pathology two years later. He continued his graduate studies by moving to St. Paul and enrolling in the Plant Pathology Program at the University of Minnesota. He received his Ph.D. degree in 1971, with the late Regents' Professor Clyde M. Christensen serving as his advisor. Consistent with his upbringing, his thesis research was on problems associated with food quality and storage of grain, in particular toxins (mycotoxins) produced by microorganisms (fungi) during storage.

Richard began his employment at the University of Minnesota in 1971 as an assistant professor and Program Coordinator in the Office of Special Programs, with the

responsibility of developing short courses in agriculture and horticulture. He became an Extension Specialist in Plant Pathology in 1973, associate professor in 1982, and a professor in 1987. During much of his career at the University of Minnesota, Richard's extension and outreach responsibilities were focused on problems related to grain storage. In this capacity he continued to collaborate with Prof. Christensen and soon became recognized for his own expertise, nationally and internationally among target audiences.

During this period, Richard developed cooperative studies with his colleagues in Plant Pathology (notably Prof. C.J. Mirocha) and in the Departments of Biosystems & Agricultural Engineering and Entomology. Prof. Neil Anderson, a former member of the Plant Pathology faculty and department head, once said, this collaborative work was so successful, it essentially eradicated grain storage problems and the associated mycotoxin issues in Minnesota. Thus, in the more recent years, Richard shifted his interests to the production and processing of edible dry beans (in the last few years in collaboration with Prof. J. A. Percich in the department) and then on to the cultivation of lupine as an alternative crop in Minnesota.

Again, Richard became recognized very quickly, with participation as an expert in international agricultural programs, as in Rwanda. In addition, he served on a number of national and international advisory committees. Richard was a member of the Public Relations, the Placement, and the Post Harvest Pathology and Mycotoxicology Committees of the American Phytopathological Society. He was a member of the University of Minnesota Agricultural Experiment Station Lupine Research Team for developing cooperative efforts in Poland and Russia. In addition, he served as a technical consultant on matters of grain storage nationally and internationally to a number of industrial giants, such as the Cargill Corporation of Minneapolis.

Because of his achievements, Richard was selected as a participant in the National Extension Leadership Development (NELD) Program (1996-1998) and traveled among other places to South Africa to experience first hand the impacts of socio-cultural and economic developments on the agricultural sector. This had been a very rewarding experience for him.

Richard extended his early and continued interest in education, from extension and outreach to traditional classroom instruction. He successfully taught an advanced undergraduate level course on "Introduction to Field Crop Diseases". This was paralleled by his enthusiasm and deep interest in the application of digital technology in education. His continued obsession

for using the latest hardware and software in computer technology for education and outreach was beyond comparison with the other faculty members in the department.

He advised a number of international students with much success and collaborated with many visiting scientists. Among those are John Lacey (Australia), Flavio Lazzari (Brazil) and Mervat El Wahab (Egypt), the last two individuals graduating with Ph.D. diplomas from the department. There were and are other graduate students (both domestic and international) and individuals from Rwanda and Kenya that were in Minnesota for short periods for training in grain storage technology and mycotoxicology.

He was an avid fisherman who had many stories to tell. While some of them were likely true, others were likely true stories that needed a certain amount of imagination. Nevertheless, it was fun to listen to Richard and his fishing escapades. He was also a member of his church choir and delighted himself through singing. In moments of glee and light-headedness, he would break into an impromptu humorous song, appropriate for the occasion. Many a time, we shared these opportunities. He translated his early life on the farm to hands-on gardening. I know he enjoyed that very much, because we often compared notes (I never told him that my knowledge was purely theoretical).

Richard had many good and long-standing friends and collaborators among his colleagues in other departments and institutions. Although it is not possible to mention all these individuals, without committing the serious error of omitting someone close, I would like to mention as examples, Prof. Dale Hicks (Agronomy and Plant Genetics), Profs. Harold Cloud and Bill Wilcke (Biosystems & Agricultural Engineering) and Prof. Phil Harein (Entomology), all at the University of Minnesota and Prof. David Sauer (Kansas State University).

Clearly, those of us who knew him well will miss his honesty, humor and friendship. More importantly, he was a kind human being that frequently did not know how to say no, when approached by a colleague or a student for technical help or involvement in service activities related to the professional setting. I appreciated his frequent candor in using me as a sounding board and considered it as a compliment of our friendship.

Richard is survived by his wife Rose, two sons Keith and Christopher, brothers Donald and David and sister Kathy Kreshbach.

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

by Deborah A. Samac

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 (alumni-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	YEAR & STUDENT	DEGREE/ADVISOR
1999			
Mary E. Moberg	Ph.D. Anderson/Samac	Martinez	Ph.D. C. M. Christensen
J. Patrick Martinez	Ph.D. Groth/Young	Robert F. Nyvall	Ph.D. Kommedahl
Alan T. Dyer	M.S. Windels	Mahesh C. Pandey	Ph.D. Wilcoxson
Kathryn W. Kromroy	Ph.D. Blanchette	Timothy P. Sullivan	M.S. Rowell/Bushnell
		Sinn S. Wang	Ph.D. Anderson
1989		1959	
Mohamed Achouri	Ph.D. Stewart	Ernest E. Banttari	M.S. Moore
Jeanne A. Ciborowski	M.S. Percich	Bernardo S. Castillo	M.S. King
Zahra Ferji	M.S. Lockhart	Ronald P. Covey Jr.	M.S. Wilcoxson
Jody L. Fetzer	M.S. Kennedy	Richard A. Herrett	Ph.D. Linck
Daniel H. Gillman	M.S. Meronuck	Siriphong Intrama	M.S. Hart
David C. Linde	Ph.D. Groth	Roland F. Line	M.S. Eide
Jill D. Nauman-		Richard W. Lutey	M.S. Christensen/Fezer
Pokorny	M.S. Meronuck	Subhi A. Qasem	Ph.D. Christensen
Robert J. Pawlosky	Ph.D. Mirocha		
Mel Wiens	M Agr Kommedahl	1949	
1979		Ralph L. Anderson	M.S. Kaufert/Christensen
Dale R. Bergdahl	Ph.D. French	Mir Ahmad K. Anwar	Ph.D. Stakman/Christensen
Winston M. Hagler, Jr.	Ph.D. Mirocha	Donald J. DeZeeuw	Ph.D. Stakman
Edgardo H. Hijano	M.S. Frosheiser	Ernest P. DuCharme	Ph.D. Stakman
Ted R. Knous	Ph.D. Frosheiser	David W. French	M.S. Kaufert/Christensen
Mary E. Palm	M.S. Stewart	Syed Fakhruil Hasan	Ph.D. Stakman/Moore
Nursamsi Pusposendjojo	Ph.D. Zeyen/Stewart	Ismail Ali Ibrahim	M.S. Stakman/Hart
Scott G. Sederstrom	M.S. Kennedy	William Q. Loegering	Ph.D. Stakman
Saleh Shrief	M.S.-B Wilcoxson	Shi-I Lu	M.S. Stakman/Kernkamp
Kaselan J. Somodiryo	M.S. Anderson	Pashupati Ram Mehta	Ph.D. Stakman
Stephen D. Sunderwirth	M.S. Roelfs	Robert S. Mullin	Ph.D. Stakman
Monica Wallace	M.S.-B MacDonald	Donald E. Munnecke	M.S. Stakman
Hunt B. Wiley	M.S. Kommedahl	John B. Rowell	Ph.D. Stakman/Eide/Howard
		Waldemar E. Sackston	Ph.D. H a n n a / S t a k m a n / Christensen
1969		Harry C. Young, Jr.	Ph.D. Christensen
Darryl L. Anderson	M.S. French		
Harold E. Carley	Ph.D. King/Kernkamp	1939	
James V. Groth	M.S. Anderson	Earle E. Hanson	M.S. Stakman
Bruce E. Haissig	Ph.D. Linck	Liang Hwang	Ph.D. Stakman/Hart
Daphne A. Hoskin	M.S. Bushnell	Thomas H. King	M.S. Stakman
Thomas A. Kucharek	Ph.D. Kernkamp/Young Jr.	Paul V. Siggers	Ph.D. Stakman/Verrall
John A. Menge	M.S. French	Lawrence E. Tyner	Ph.D. Stakman/Sanford
Donald Moloney	M.S.-B King		
Ernesto Moreno		1929	
		Rayburn H. Bamberg	M.S. Stakman

Ralph U. Cotter	Ph.D.	Stakman/J. Christensen	Paul D. Peterson	Ph.D.	Stakman
Carl J. Eide	M.S.	Stakman	Bjorn Peturson	M.S.	Bailey/Bisby/Levine/ Stakman
Harold H. Flor	Ph.D.	Edgerton/Stakman	Chih Tu	Ph.D.	Stakman
Helen Hart	Ph.D.	Stakman	James M. Wallace	Ph.D.	Stakman
Charles S. Holton	M.S.	Stakman/J. Christensen/ Rodenhiser			
Lee H. Person, Jr.	M.S.	Stakman/Kightlinger	1919		
			G.R. Bisby	Ph.D.	Stakman
			Jean MacInnes	M.S.	Stakman

OLD TIMER NEWS

(Alumni Speak)

Chuck Logsdon (Ph.D. 1954) I enjoyed the 1999 issue of Aurora very much. Aurora always brings back a lot of memories. Naturally, there are not all that many folks still in the department whom I remember; but perhaps it is my memory more than anything else.

My Ph.D. was conferred on me in January 1954 in absentia, since I had to high tail it back to my job in Alaska. I had only been here for a year, so I didn't want to get myself fired.

I actually started at the University of Minnesota in 1946 after returning from World War II. Sure was nice to have that GI Bill which paid all my tuition and fees and gave me \$60 every month to live on. I spent 8 years in the department, as student and for 3 years as a Research Associate. Those three years were added to my retirement. I have been retired since June, 1978.

It was nice to see a picture of Dr. & Mrs. Eide in Aurora. He was my adviser, and I try to get back to see him every few years. I last visited him a couple of years ago in his new place in Roseville.

I was also interested in the reference to Isaac Wahl and the Lieberman-Okinow Endowed Chair. I presume you know that Isaac Wahl was Polish, and I believe he went to Israel after World War II. You may not know that he learned American profanity at the University of Minnesota from Lawrence Miller, former U. S. Marine, when both were graduate students in the department. Amazing transfer of language. Those were two of my favorite comrades there.

Then you had a nice piece about Dr. A. P Misra. It was good to see the picture of him and "Stak" arm-in-arm. I'm glad to see they were so companionable. Misra once chewed out Dr. Stakman during Thursday night seminar. People didn't normally do that, but "Stak" handled it very

well, and it is nice to see that Misra must have changed his mind.

Please keep up the good work, and you may send my next issue to Charles E. Logsdon, Box 387, Palmer, AK 99645. I am no longer in business so you needn't include the "Agrisources" in my address. Also, my e-mail address is:

cel@matnet.com

Sincerely,
Chuck Logsdon

Axel L. Andersen I was sorry to hear of the death of Dave French. Brings back memories when as a student in Forestry, and had an NYA job in your Department with Dr. Stakman, Dr. J. J. Christensen, Mr. Harrar, Eagle and others (1935-37). I even played short stop on the softball team.

Today my neighbor brought me a clipping from the Wall Street Journal of an interview with Dr. Norman Borlaug. His question was, "What do you think about organic farming?" You can imagine Norm's response to this question. Norm and I graduated from Forestry in December, 1937. Dr. Stakman offered me a job in the USDA Rust Laboratory and suggested I work towards a M.S. degree in Plant Pathology. I suggested to Norm that he join me in the Department and take Forest Pathology with Dr. Clyde Christensen. Dr. Stakman gave Norm a job in the USDA Laboratory and he too joined me in Forest Pathology. A year later Dr. Stakman had me on the way to East Lansing to work with Dr. Ray Nelson in Plant Pathology and Norm stayed on at the University of Minnesota. I made a study on "Pink Root of Onions" for my M.S. degree and started a research program on celery when the Army Draft got me into WWII. Lost all my research but luck was with me, after basic training I applied for officer training at Edgewood Arsenal, MD in chemical warfare. By accident I became acquainted with

Dr. Ira Baldwin who was heading up the program on bacteriological warfare and they were building up Camp Dietrich, Frederick, MD. We had cleared for top secret information and sent me onto Horn Island, near Mississippi, to head up the bacteriological field testing program on animals. When I got to Camp Dietrich to review the bacteriological research and get acquainted with the program the Department of Defense, I called Col. Woolpest and told him to do something about rice. He and I met with the AAAS advisory committee, President of the University of Wisconsin, Chairman, in Washington D.C. the next eight weeks. I made the original motions to develop a biological weapon to reduce the Japanese rice crop. Designed laboratories and greenhouses and then they sent me to the Rice Experiment Station, Beaumont, TX to work with Dr. E.C. Tillis while they were building the facilities. Since this was top secret I spent the winter in civilian clothing. Fortunately, I found a pathogen to which all Japanese paddy rice were susceptible and our US varieties were resistant so I could do my field testing without any concern to our American varieties. Had the engineers build us a weapon so we could inoculate the crop using high flyer airplanes.

When the war ended with the explosion of the Atom Bomb, we turned our attention to the development of other biological weapons. I was asked to remain at Camp Dietrich to head up the plant pathology program with the understanding I could do my research for my Ph.D. thesis at Camp Dietrich on a problem relating to Biological Warfare. Since wheat was the worlds most important food crop I choose a problem relating to the environmental factors that favored the development of head blight of wheat. This was approved by the plant pathology department at Michigan State University and by the Department of Defense. Dr. J. J. Christensen was very helpful and we hired Ian Tervet (U of MN) to join our program.

In 1949, the USDA asked me to join their program at Michigan State to develop resistant dry beans. Within four years we were well on the way. We increased yield from 800 pounds per acre to 1600 pounds per acre with disease resistant Navy and red kidney beans.

In 1965, I was asked by the USDA's Dr. Parker to come to Washington, DC office of the Secretary of Agriculture to serve on the Research Development and Evaluation Staff and to coordinate the research program relating to cotton, tobacco, horticultural crops, and human nutrition and consumer use research. I was the Executive Secretary for each of the USDA Advisory Committees in these four areas. I served on the "Long Range Study of the Needs of Agricultural Research." I was pleased to see the increased support for disease related programs in the

US universities and expanded USDA programs. I have always been proud of my associated with the University of Minnesota.

Kenneth W. Knutson (M.S., 1956, Ph.D., 1960). Dr. Bantari recently phoned and reported that Dr. Carl J. Eide died. As you may know he was my adviser for both my M.S. and Ph.D.

Dr. Eide was one of the finest men I have ever known. Besides being an outstanding scholar he had a sense of understanding about graduate students that was especially helpful to myself and many others. As I continued through my career at the University of Idaho (4 yrs and 4 mos) and Colorado State University (28 yrs and 8 mos) it seemed that I continually benefitted from the sage advice and down-to-earth philosophy that I acquired while a student at the University of Minnesota under Dr. Eide.

Likewise his understanding about the principles of plant pathology and how they apply to both research and the practical applications needed for disease control were a resource that served me well. His outstanding ability to make complex concepts understandable and meaningful was talent of his that I often tried to imitate but was never able to achieve the level of clarity that he did.

I'm sure the Department will be making every reasonable effort to acknowledge the significance of Dr. Eide's role as a scientist, teacher and mentor for students. If I can be of assistance, please let me know.

Flavio Lazzari (M.S. 1988, Ph.D. 1991) wrote, I received the sad news about Dick Meronuck. I was his first Ph.D. student and had him in high consideration. My wife and I had dinner with him and Rose when we visited Minnesota a couple of years ago and we sealed a nice friendship. I invited him to come to Brazil to visit and to give talks in technical meetings. But, he mentioned the heart problem and maybe one day... This day never came and now he is gone. I learned quite a lot from him and brought this knowledge with me. I am very sorry about his death.

Tarkus Suganda (M.S. 1991, Ph.D. 1995) Dear Debbie, How are you? Hopefully you still remember me. It has been 5 years since I left St. Paul in 1995. I am now one of the old-timers, but I still remember every single detail of the campus and of the city of St. Paul. My wife and myself miss the atmosphere there very much. The warm relationship between us, especially all of you at the office, your kind attention and help to everyone (but I always feel it was special for me) are difficult to be forgotten. Please say hi for me to everyone who knew me, such as : all professors, Gibb, Dann, Ann, Meg, Amar (if he still there), Brian Mc Cullough (also if he still around), Dean

Malvick, Jim "my calmest body" Kurle, Chad "Mr. "football" Behrendt, Kathy Kromroy, Kyoko, Wieping, and others who I am not sure whether they are still around. Best wishes to all of you, Merry Christmas (I believe the hallway are red already at this moment), Merry Millenium, and sincere love from my family in Indonesia.

When you have some spare time, please write to me, because everything that I heard from St. Paul is relieving my hurt feeling leaving you all.

[mailto: tarkus@bdg.centrin.net.id](mailto:tarkus@bdg.centrin.net.id)

Several notes from **Roy Wilcoxson** (M.S. 1955, Ph.D. 1957). – I was filled with saddness on learning of the death of Dave French. Thank you for keeping me informed about matters of the Department. On learning of his death, I thought of Stakman, Christensen, and Christensen, King, Hart, Dosdall, persons I regard as the pioneer founders of the Department. Now the second generation is beginning to pass away. It started with Fred sometime ago and now Dave.

Dave was one of the persons I regarded as a professional example to be emulated. I used his good example as much as possible in making decisions about my professional development, without embarassing him. He set a high standard in teaching, research, in advising graduate students, in development of the Department and the University. He was also a friend to me. He supported my professional development when he was Head of the Department, especially encouraging me when I was Director of the Morocco Project.

He often came to visit me and Thor after he retired as Head of the Department and became extension urban forest pathologist. His conversations concerned his military accomplishments, how he became a plant

pathologist, his work with Dr. Burnham on chestnut blight, oak wilt, Dutch elm disease, etc. Thor and I enjoyed his visits very much and were greatly saddened when he gave evidence of not being well.

I will write Audrey in a day or so. I am sorry not to have been able to go to the French home when friends gathered to honor a great man and friend.

Thank you for thinking of me. I was saddened to learn of Dr. Eide passing away. He was a great teacher who I admired very much. He was also a kind person who helped me a lot when I was a young professor. He lived a long useful life and made many contributions to society. I trust he will also do well in Paradise as he prepares for resurrection day.

Eide's passing makes me especially sad because now all of my old professors are gone. I learned a lot from them and tried to be deserving of their confidence.

I have sent word about Eide to Markus Andres and Mohammed Boulif.

I just received Frank's sad letter concerning the death of Dick Meronuck. I was absolutely shocked at this dreadful news. Dick gave strong support for the Department serving as our Extension Pathologist for a number of years. He was expert on diseases of stored grains. He appeared to love farmers and agribusiness men of Minnesota, serving them well.

Please tell people hello who may remember me. Can you believe I retired in November 1991?

NEW FACULTY



DR. JAMES A. KOLMER

By Kurt J. Leonard

James A. Kolmer joined the USDA-ARS Cereal Disease Laboratory on July 16, 2000 as Research Plant Pathologist working on Fusarium head blight and rust diseases of wheat. Jim is internationally known for his work on wheat leaf rust, particularly on population genetics of leaf rust and on interactions between leaf rust resistance genes in wheat. He served as Senior Editor of *Phytopathology*, 1994-1996, and as Associate Editor of the *Canadian Journal of Plant Pathology*, 1990-1993. Jim got an early exposure to plant pathology working summers in 1977 and 1978 with Bob Nyvall and Denis McGee at Iowa State University. After his B.S. in 1980

at St. John's University, Collegeville, MN, Jim earned his M.S. in Plant Pathology with Jim Groth at the University of Minnesota in 1982 and his Ph.D. in Plant Pathology with Kurt Leonard at North Carolina State University in 1985. He did his M.S. research on genetics of *Uromyces appendiculatus* (bean rust), and Ph.D. research on genetics of *Cochliobolus heterostrophus* (southern corn leaf blight). He worked one year on genetics of *Magnaporthe grisea* (rice blast) as a Research Associate with Al Ellingboe at the University of Wisconsin. From 1987 to 1998 Jim was Research Scientist at the Agriculture and Agri-Food Canada Cereal Research Centre, Winnipeg, with main responsibility for wheat leaf rust. In early 1999 he moved to North Carolina State University in Raleigh as USDA, ARS Research Plant Pathologist in the Plant Science Research Unit headed by Steve Leath. Jim served as Adjunct Professor both in the Department of Plant Sciences, University of Manitoba, and in the Department of Plant Pathology, North Carolina State University before coming to Minnesota. He was a Consultant for Canada International Development Agency - University of Manitoba wheat improvement project in Uruguay, and he served as M.S.c. and Ph.D. advisor for Dr. Silvia German, who is the primary INIA barley breeder and wheat rust pathologist in Uruguay.



DR. BRIAN STEFFENSON

By William R. Bushnell

The Department is pleased to welcome Brian J. Steffenson, who joins the Department in late November, 2000, to fill the Lieberman-Okinow Chair of Plant Pathology. This position is focused on understanding and utilizing disease resistance in wild cereals for improving small grains. Brian will combine molecular and classical genetics to define resistance genes in wild species for introduction into wheat, barley, and possibly oats. The position calls for him to "develop strategies for obtaining

resistance to major diseases of small grains from collections of wild species, based in part on knowledge of ecology, disease pressure, and genetic diversity at collections sites." The research program will include cooperative work with colleagues at Tel Aviv University, the location of the Lieberman-Okinow Germplasm Bank. Brian is exceptionally well qualified for this research. Over his career, he has worked with a broad range of cereal diseases, focused mainly on genetics of disease resistance. He began his training as an undergraduate in our Plant Health Technology program, then obtained an M.S. degree under the guidance of Roy Wilcoxson (with assistance of Alan Roelfs) working on resistance in barley to stem rust. For his Ph.D., he worked on net blotch of barley under the direction of R. K. Webster at the University of California, Davis. Later, he did post doctoral work with Bob McIntosh, at the Plant Breeding Institute, University of Sydney. In 1988, Brian joined the faculty of the Department of Plant Pathology, North Dakota State University, where he advanced to Associate Professor in 1994. There, he developed an outstanding, highly productive research program working on a broad range of barley diseases, including leaf and stem rusts, net blotch, and scald. He has combined investigation of disease in the field with genetics of resistance, including the molecular mapping of resistance loci and the search for new resistance genes in wild species. In the mid 1990s, he shifted most of his research to Fusarium head blight which emerged as a devastating disease in the Red River valley and elsewhere. We are, indeed, fortunate that Brian made the mid-career decision to join our faculty. Not only does his experience provide an excellent background for the research mission of the Lieberman-Okinow position, but Brian also has a keen interest in training students and is looking forward to participation in our teaching program. We welcome Brian's return to the department and wish him the best as he continues his career here.

DR. HALA TOUBIA-RAHME

By James V. Groth

We welcome to the Faculty of Plant Pathology Dr. Hala Toubia-Rahme. Dr. Toubia-Rahme was hired in the spring, and is assuming her duties on October 1, 2000. She will be stationed at the Northwest Agricultural Experiment Station in Crookston, where she will teach introductory plant pathology at the University of Minnesota, Crookston and Develop an extension program on small grains cropping systems for the region. As part of her extension duties she establish related research topics.

Dr. Toubia-Rahme was born in Becharre, Lebanon. She obtained her Bachelor of Science in Biology at Lebanese

University in 1985. Both her M.S. and Ph.D. degrees were obtained in France, The M.S. in 1988 in Plant Breeding at the Ecole Nationale Supérieure Agronomique de Toulouse and the Ph. D. in 1992 at the same institution as well as the Université de Paul Sabatier, also in Toulouse. Since obtaining her Ph.D. Dr. Toubia-Rahme has held several posts. Her first was as a Postdoctoral Fellow in barley pathology and breeding in the Germplasm Program at the International Center for Agricultural Research (ICARDA) at Aleppo, Syria from November, 1992 until December, 1993. Beginning in December 1994 she was Visiting Scientist at the Experimental Institute for Cereal Research in Fiorenzuola d'Arda, Italy for a year. From March, 1996 until September, 1998 she was Postdoctoral Fellow in Cereal Pathology at ICARDA, and she assumed the role of Acting Senior Cereal Pathologist for the last year there. Finally she obtained the position of Postdoctoral Research Associate in Barley Pathology at North Dakota State University in October, 1998 where she has remained until coming to Minnesota. There she worked with old-timer and (also) new faculty member Dr. Brian Steffenson.

In her duties with ICARDA Dr. Toubia-Rahme had

both research and extension responsibilities. She traveled to many of the countries in the large area around Syria served by the Center, and became familiar with diverse farming practices, diseases, and germplasm preferences. She was actively involved with breeding programs there, so she brings to Minnesota a broad international perspective on small grains germplasm that includes familiarity with ancient and wild sources from the center of origin of all of our important small grain crops. She has worked with both qualitative and quantitative resistance (including the use of molecular markers linked to quantitative loci) to a variety of diseases. Her overall approach is one that examines all facets of cropping systems in efforts to use integrated means of controlling plant diseases. In addition her extension responsibilities required that she work closely with small farmers, and she gained important insights into the process of convincing them of the value of new resistance sources or cultural practices through demonstration and example. She was also responsible for training junior research pathologists and extension agents. Among other things, this entailed classroom instruction and field and laboratory instruction. We heartily welcome Dr. Toubia-Rahme to the faculty and to the Crookston Station.

DEPARTMENTAL NEWS

DEPARTMENTAL AWARDS 2000

by Deborah A. Samac

The Department of Plant Pathology's annual awards program was held May 25, 2000. Exceptional achievements by alumni, friends, students, staff, and faculty were recognized. The following people received awards:

DISTINGUISHED ALUMNUS AWARD

Dr. Michael J. Wingfield

Dr. Michael Wingfield completed his Ph.D. in Plant Pathology under the direction of Dr. Robert Blanchette in 1983. He returned to his native South Africa and served as a Senior Agricultural Researcher at the Plant Protection Research Institute in Stellenbosch where he resumed responsibility for the Forest Pathology program that he established during 1978-1980. He joined the Department of Microbiology and Biochemistry, University of the Orange Free State, Bloemfontein, South Africa in 1988 and was promoted to professor in 1990. In 1998, Dr. Wingfield left Bloemfontein, along with 55 students and staff and moved to the University of Pretoria where he established the Institute in Forestry and Agricultural Biotechnology and acts as the director. His

research has had a major impact on forestry and industry throughout the world. His research focuses on the biology, taxonomy, and management of forest tree pathogens; other areas of investigation include the inter-relationships of insects and fungi, diseases of Proteaceae, and tree diseases (rust, root rots wilts and cankers). Dr. Wingfield is an energetic and prolific scientist with nearly 250 peer reviewed publications and has served as an advisor to over sixty graduate students. He has received numerous prizes including: FRD President's Award for Young Scientists, Merit Certificate of the South African Association for the Advancement of Science, and the Havenga Prize of the South African Academy for Art and Science. He was elected Fellow of the Southern African Society for Plant Pathology and is a member of the Academy of Science of South Africa. In 1999 he was awarded the Hendrik Christiaan Persoon medal, the

highest honor bestowed by the Southern African Society for Plant Pathology and is the third recipient of this award in 40 years.

M.F. KERNKAMP FELLOWSHIP

Ms. Silvia A. Pereyra

Silvia Pereyra received her B.S. degree in Agronomy at the College of Agriculture, University of Uruguay in 1993. In 1991 she was employed by the National Institute for Agricultural Research (INIA) at the La Estanzuela Experiment Station, a position that she retains with responsibility for barley and oat diseases. At the University of Minnesota she has conducted research under the direction of Dr. Ruth Dill-Macky. Her research has focused on understanding the role of wheat residue in the survival of *Fusarium graminearum* and its ability to generate inoculum from these residues. Silvia has demonstrated a high level of leadership, serving as a member of a number of departmental committees, an officer in the graduate student organization and assisting in the organization of the 1999 student symposium. Silvia will complete her M.S. degree this summer and return to Uruguay in the fall to embark on the research component of her Ph.D. program while also fulfilling responsibilities at INIA. Her current and future research will have significant impact on cereal disease in both North and South America.

FRED I. FROSHEISER SCHOLARSHIP

Mr. Alan T. Dyer

Alan Dyer received his B.S. degree in Plant Biology from Cornell University in 1989. He remained at Cornell for four years, first working on characterization of ash yellows and then conducting field studies on control of late blight of potato and mapping of the genome of *Phytophthora infestans*. He spent time as a program coordinator for REAP International in Latvia and Lithuania and as a truck farmer growing vegetables and cut flowers. He joined the Department of Plant Pathology at the University of Minnesota in 1996 and completed an M.S. under the direction of Dr. Carol Windels in 1999. His research focused on spatial patterns of genetic variability in the sugar beet root rot pathogen *Aphanomyces cochliodes* using RAPD and AFLP markers. He is continuing for a Ph.D. conducting research on the environmental factors influencing survival of *Aphanomyces cochliodes*. Alan has been very active on departmental committees, has been an officer in the graduate student organization, and was instrumental in organization the 1999 student symposium. In his research and service he has already demonstrated a very high level of professionalism and scholarship in plant pathology.

DISTINGUISHED MENTOR AWARD

Mr. Todd Burnes

Graduate Student Mentor of the Year

"With our appreciation to his dedication to teaching and his concern for graduate students in the department of Plant Pathology".

Todd Burnes has been working in the Dept. of Plant Pathology for 15 years. Throughout that time he has been enthusiastic about helping students. Todd is always willing to take the time from his busy schedule to sit down with people to ensure they learn the proper techniques. Since so much of pathology relies on having the proper technique, this saves the students invaluable time and yields more accurate results. Todd not only helps those he comes in daily contact with in 107 Christensen Labs, but he also reaches out and helps people through out the department. Because of his dedication to teach and help others, we would like to honor Todd with this award.

WARD C. STIENSTRA GRADUATE

STUDENT TRAVEL AWARD

Ms. Karen L. Hilburn

Mr. Jason A. Smith

This new award was established by Professor Emeritus and retired Extension Plant Pathologist Dr. Ward C. Stienstra to recognize outstanding graduate student research and to support student participation in professional scientific meetings. Two cash awards of approximately \$750 will be given each year. The first recipients of the award are Karen Hilburn and Jason Smith.

Karen is an M.S. student with Dr. Richard Zeyen. Karen's research focuses on developing an assay using cell cultures to test eukaryotic antifungal proteins for their ability to increase resistance in cereals to fungal pathogens. This assay will lead to a greater chance of success in developing whole plants with resistance to diseases such as Fusarium head blight. Karen attended the APS meeting in New Orleans in August and presented a poster on her research.

Jason Smith is an M.S. student working under the direction of Dr. Jennifer Juzwik. His research involves the etiology of Bronze-Leaf Disease of Populus. His project is the first formal study of this emerging disease. He has worked on describing symptom development, determining the causal agent of the disease and the environmental conditions leading to disease. His research

is developing a better understanding of this disease and how to manage it. Jason will also attend the APS meeting in New Orleans and presented a poster on his research. This was the first time the information about this disease was presented at a national meeting.

CIVIL SERVICE AWARD OF EXCELLENCE

Mr. Dann Adair

Dann Adair was awarded the Civil Service Award of Excellence for his outstanding work in the planning and organization needed for remodeling the St. Paul plant growth facilities. Dann has been involved in this project from its very beginnings. As one of the team of people involved in the day-to-day management of the greenhouses, Dann brings years of expertise and experience to the project. During the planning phases for the greenhouses, Dann spent countless extra hours in meetings with faculty, administrators, designers, architects, and most lately with legislators, in order to bring the new facilities closer to reality. He has found creative ways to finance re-glazing and lighting of current facilities that improve plant growth conditions and save energy. He has also taken leadership in making the plant growth facilities more secure against vandalism. Though his own personal study, Dann has become very familiar with the regulations regarding transgenic organisms and is both a local and national resource person on containment of transgenics. Dann always goes out of his way to make sure that project personnel have the best possible plant growth facilities and assistance with obtaining services from other parts of the University.

CIVIL SERVICE AWARD OF EXCELLENCE

Mr. Gib G. Ahlstrand

Gilbert (Gib) Ahlstrand was awarded the Civil Service Award of Excellence for his outstanding research and service to the department. Gib is a Scientist with the Minnesota Agricultural Experiment Station's Cooperative Electron Optics Facility however, his contributions to the department and the University go far beyond his ordinary duties. He is the unofficial departmental photographer, taking the annual group photograph and contributing to the *Aurora Sporealis*. He has taught and assisted hundreds of plant pathology students, faculty, staff and visiting scientists in the use of electron microscopes. More than 25 projects, 50 individuals, and many classes use the facilities annually. Gib has an independent national reputation as a scientist in advanced microscopy. He has participated in writing over \$500,000 in NSF and other grants and is an author or co-author on more than 20 scientific publications. He is an active member in the Microscopy Society of America and the Minnesota Microscopy Society. He has used his professional contacts to upgrade the skills of microscopists on the St

Paul Campus by coordinating workshops on advanced techniques. He has also worked with the Science Museum of Minnesota and grade schools to open children's eyes to the wonder of seeing the very small universe around them. Gib is one of those persons who enhances the excellence of any group that he is a part of. He represents all the best attributes of a Civil Service Staff member.

HONORS AND RECOGNITIONS

Robert A. Blanchette, Fellow, American Phytopathological Society, 1999

Robert A. Blanchette, Fellow, American Association for the Advancement of Science (AAAS)

William R. Bushnell, USDA-ARS, Certificate of Merit for Outstanding Performance Award, 1999

Senyu Chen, Associate Editor, Journal of Nematology, 1999

Ruth Dill-Macky, Promotion to Associate Professor

David W. French, Lifetime Achievement Award, Minnesota Shade Tree Advisory Committee (MnSTAC), 1999

Mark E. Hughes, USDA-ARS Certificate of Merit for Outstanding Performance Award, 1999

Mark E. Hughes, Civil Servant of the Year presented by Federal Executive Board of Minnesota, 1999

Roger K. Jones, Promotion to Professor

Sagar V. Krupa, Scholarly Merit Award of Recognition, Colegio de Postgraduados, Montecillo, Mexico, 1999

Sagar V. Krupa, President, Sigma Xi, University of Minnesota Chapter, 1999

Sagar V. Krupa, Associate Editor, Environmental Pollution, An International Journal, 1999

Sagar V. Krupa, Editor-in-Chief, Developments in Environmental Science, 1999

Kurt J. Leonard, USDA-ARS Certificate of Merit for Outstanding Performance Award, 1999

David L. Long, USDA-ARS Certificate of Merit for Outstanding Performance Award, 1999

Donald V. McVey, Honored by Minnesota Wheat Council as Minnesota Wheat Research Champion, 2000

Jacolyn A. Morrison, Special Service Pin and Recognition of 800 volunteer hours for Springbrook Nature Center

Jacolyn A. Morrison, Certificate of Appreciation for Outstanding Volunteer Service from the Raptor Center

Robert F. Nyvall, Editor-in-Chief, Phytopathology News, 1999

Robert F. Nyvall, Associate Editor, The Journal of Natural Resources and Life Sciences, 1999

Robert F. Nyvall, Editor, International Guide to APS Resources in Plant Pathology, 1999

Gerald Ochocki, USDA-ARS Certificate of Merit for Outstanding Performance Award, 1999

Rosalind Richards, USDA-ARS Certificate of Merit for Outstanding Performance Award, 1999

Deborah A. Samac, USDA-ARS Certificate of Merit for Superior Performance, 1999

Les Szabo, Promotion to Adjunct Associate Professor

Nevin D. Young, Associate Editor, Molecular Breeding, 1999

Nevin D. Young, Associate Editor, Molecular-Plant Microbe Interactions, 1999

Richard J. Zeyen, Distinguished Teaching Award, Graduate Students in Plant Pathology, 1999

Richard J. Zeyen, Distinguished Service Award, Department of Plant Pathology, University of Minnesota, 1999

Nominee to Sigma Xi, The Scientific Research Society
Full Member: **Alan Dyer**

Civil Service Length of Service Recognition

Debra Baden Drange, 25 years



DEPARTMENT OF PLANT PATHOLOGY

Pictured from (left to right):

- First Row: Tina Seeland, Kent Evans, Marcello Morelli, Mervat El-Araby, Saruul Purev, Ramya Mani, Jeff Miller
- Second Row: Karen Broz Hilburn, Yan Huihuang, Dariush Danesh, Laurie Brand, Ann Cooper, Karin Larson, Chris Newby, Gretchen Nettleton, Weiping Xie
- Third Row: Rebecca Walling, Linda Hanson, Adam Sands, Jon Powell, Ann Arendt, Chester Mirocha, Sandee Gould, Silvia Pereya, Andrea Morse, Jason Smith, Shawn Bernick
- Fourth Row: Debbie Drange, Dave Long, Todd Burnes, Song Dong Lee, William Bushnell, Debbie Samac, Karen Wennberg, Joel Jurgens, Alan Dyer, Mesfin Gebeyaw, Bob Blanchette, Jim Groth
- Fifth Row: Steve Cannon, Amar Elakkad, Dann Adair, Jenny Brand, Kurt Leonard, Shawn Pierce, Mark Galatowitsch, Nevin Young, Melinda Dornbush, Jim Kurle, Kurt Stromberg, Laszlo Gyenis, Ross Daml

Not pictured:

- Professional Academic: Gerald Baldrige, Alexi Balmuth, Chad Behrendt, Jason Brantner, Bruna Bucciarelli, Ganesh Dahal, Dawn Foster-Harnett, Dean Herzfeld, Charles Hu, Mark Hughes, Darryl Krueger, Joann Mudge, Miriam Newton, Liane Rosewich, Andrew Ryan,
- ASCME/Civil Service: Gib Ahlstrand, Patti Combs, Roxanne Denny, Jennifer Flor, Ben Held, Leslie Johnson, Miguel Linares, Melissa Pauna, Rodney Pettway, Shane Grivna, Mel Wiens, Ross Winberg, Jacolyn Morrison, Gerald Ochocki, Lucy Wanschura
- Faculty: Neil Anderson, Ernest Banttari, Senyu Chen, Ruth Dill-Macky, Roger Jones, Jennifer Juzwik, Corby Kistler, Thor Kommedahl, Sagar Krupa, Philip O. Larsen, Ben Lockhart, David MacDonald, Donald Mcvey, Robert Nyvall, James Percich, Frank Pflieger, Les Szabo, Carol Windels, Richard Zeyen
- Students: Charlie Barnes, Rhoda Burrows, Claudia Castell, Consuelo de Jensen Estevez, Julie Jenkins, Britt Johnson, Warren Kruger, Xiao Kun, Sharon Lewandowski, Yuhong Li, Jack Maake, Gacheri Kimathi Muriuki, Marc Neuman, Silvia Penuela, Jon Reinders, Laura Wallach, Liying Zhang

RETIREMENTS



DELORES HUEBNER

by Sagar V. Krupa

After nearly 30 years of service at the University of Minnesota, Delores Huebner retired on January 14, 2000. She was the Administrative Director in the department from December 1984 to the time of her retirement. Delores took advantage of her years of service at the University and retired early to spend more time with her husband Warren, their children and grandchildren. Nevertheless, at the College of Agriculture recognition luncheon for its latest retirees (2000), when he met Delores, President Mark Yudoff simply said to her- you are too young to retire! What a compliment coming from the top executive?

Delores received a B.A. degree in management from the Metropolitan State University (Minneapolis-St. Paul) in 1992. Prior to that, at various times she had attended University of Minnesota, Morris and University of Minnesota, Twin Cities. Before joining our department, she held a number of administrative positions ranging from senior secretary to assistant administrator in other departments and at other campuses of the University.

Prof. Phil Larsen, who was the department head at that time, hired Delores in 1984. Prof. Larsen was responsible for defining the various professional roles that Delores participated in. Thus, during her tenure in our department, she served in fulfilling a number of responsibilities. Among other functions, she managed the department's main office; she served as the facilitator for the department head; she was the department's officer for personnel, equal opportunity and affirmative action; and

she assisted the department head in planning, management and administration of matters relevant to budgets, personnel, facilities, academic programs and information technology. Beyond the department level, in addition to her participation in several campus-wide committees, Delores was the representative for the department administrators to the College of Agriculture Leadership Council (1998-2000).

Delores and I were neighbors in the department with offices across from each other. She was a tireless worker who came to the department by 7:00 AM and worked until 7:00 PM on most days. She also took work with her to her home. Thus, beyond all the other responsibilities, she served as an ex-officio member of virtually all of the faculty committees in the department, including the search committees for hiring new faculty members.

Prof. Neil Anderson (former department head for three years, before his retirement) and I (former director of graduate studies for five years) worked very closely with Delores. During our association, we found Delores to be a person offering invaluable support, a person who was willing to go the distance to provide the needed assistance and a person who seldom said "no" to doing extra work. She was equally responsive to the needs of other faculty and staff members and students. After she retired, many graduate students have expressed their sentiments about missing her presence and appreciation for her contributions.

As her neighbor in the department, I had numerous opportunities to interact with Delores in both social and professional environments. She is an exceptionally humane person. When one of our former international students and his wife (Vergel & Kerstin Concibido) needed critical and essential help after a major car accident, Delores tirelessly provided the support every time I requested her. Neither the Concibidos, Prof. Anderson, nor I can ever forget that.

Delores knew how to respond to humor. The late Prof. Richard Meronuck and I used to drink a cup of coffee every morning in my lab. Delores used to walk in to store her lunch in my refrigerator. She would stop to listen to our conversation, which invariably led to humor about some thing she said. She would stand there and laugh her guts out. Those were the good times.

I saw her recently and asked her what she is doing since retiring. Some traveling, some bridge, some reading for a book club and lot of time with family. I forgot to ask her about her singing in the church choir. While at Morris, Delores completed course work in music. However, I can not speak for her musical prowess, since I have never

heard her sing. I know for sure that she can not match my singing capabilities; I am banned at home from indulging in that activity (noise pollution).

Delores is a very dedicated person, independent of what she does. On the day of her retirement, her parting words to me were, "I love this department and the people, but I suppose every thing must come to an end." That says it all about Delores.

Independent of what she does, we wish her and her family the very best in the years to come.

Delores, thank you for all those years of service to the department.



1999 E.C. STAKMAN AWARD Awarded to Malcolm C. Shurtleff

Dr. Malcolm C. Shurtleff was awarded the E. C. Stakman Award on October 27, 1999 by the Department of Plant Pathology of the University of Minnesota. This award is granted to individuals of any country and nationality for outstanding achievements in plant pathology. Dr. Shurtleff, Professor Emeritus, University of Illinois and Adjunct Professor, Texas A & M University, is one of the most prolific writers in the history of extension plant pathology. He has written more than 1,600 manuscripts that include books, compendia, bulletins, and articles. He has produced educational slide sets, plant disease profiles, and color illustrations of nearly 1,000 diseases for aids in teaching plant pathology. He is recognized nationally and internationally for his original works, distinguished creative authorship, and outstanding service to agriculture. He led the development of the University of Illinois Integrated Plant Disease Clinic which he directed in 1984-1985. Dr. Shurtleff has given more than 40 years of outstanding service as a professor and extension specialist to Illinois and the United States. He has perhaps touched more people than any other plant pathologist with his extensive knowledge and service.



ROSALIND RICHARDS

by Kurt J. Leonard

Rosalind Richards retired in May, 2000, after nearly ten years as the Cereal Disease Lab secretary. Before coming to St. Paul in 1990, Rosalind had served with three different ARS research units at the University of Missouri. In addition, she held secretarial positions with the University of Missouri and the U.S. Army in Columbia. Since retiring, Rosalind has moved to Bend, Oregon, where her daughter and grandchildren live. Rosalind was an outstanding asset to the CDL and is well-remembered by all who worked with us or visited the CDL during the 1990s.

VANDALISM AT NEW FOREST SERVICE LABORATORY

by William R. Bushnell

The US Forest Service has a new laboratory and greenhouse facility located immediately north of the ARS-USDA Cereal Disease Laboratory (formerly the Rust Lab). The new facility houses research programs of Jennifer Juzwik (Research Leader and a member of our

faculty) and of Mike Ostry (longtime collaborator with our department).

On Friday night of March 31, 2000, the exterior of the building and six vehicles were vandalized. One side of the building was spray painted with anti- biotechnology and- Forest Service slogans, door locks were jammed or ruined, and building signs were spray painted. The vehicles were spray painted, had tires slashed, and windows were whitewashed. Fortunately, research materials were not directly disturbed. As a result of the incident, security has been tightened at both the Forest Service and Cereal Disease Laboratories and additional parking lot lighting has been added.

On the night of July 19, 2000, a similar attack occurred at the North Central Research Station Forestry Sciences Laboratory at Rhinelander, Wisconsin. In this case, some valuable trees in the breeding program were destroyed. At both research sites, tree improvement is based on conventional breeding (not biotechnology), using disease resistance and other characteristics found in natural tree populations.

These incidents of vandalism followed destruction of cereal plant materials in the Forestry greenhouse attached to Green Hall on the St. Paul campus earlier in the year. Clearly, plant research programs are at risk for further attacks. Security is being strengthened on campus but greenhouse areas are especially difficult to protect.

On a more positive side, everyone affected, including the Forest Service, ARS and the University, are increasing their efforts to publicize the benefits of plant research to the public.

NORTH CENTRAL RESEARCH AND OUTREACH CENTER

by Robert F. Nyvall

Plant pathology activities at the NCROC are performed by Dr. Robert Nyvall and senior technician, Laura Carey. The focus of research continues to be the study of diseases of cultivated wild rice and biocontrol of weeds. The main research thrust is the etiology of fungal brown spot, spot blotch and stem canker, particularly the overwintering and source of primary inoculum. Work on biocontrol is centered on the use of the fungus *Rhynchosporium alismatis* to control common waterplains, a common weed in cultivated wild rice grower's fields.

Additional activities concern research on diseases of vegetables and diagnosis of plant diseases through the University of Minnesota Extension Service. While

research continues to dominate most of the plant pathologist's time, Extension activities are growing at a rapid pace with samples and phone calls attended to daily. The administration building was enlarged the last year to permit the Itasca County Extension group to move offices and join researchers at NCROC.

SOUTHERN RESEARCH AND OUTREACH CENTER

by Senyu Chen

Farmers in southern Minnesota are expecting a bumper harvest of soybean this year in spite of the presence of the soybean cyst nematode (SCN) in the area. Based on the soybean plant growth in experimental plots, SCN damage to the soybean was less severe in 2000 than in 1999. However, good soybean growth supported a high SCN population density in fields with susceptible soybean. If you check the soybean roots in early September, you could find thousands - a high density of SCN cysts on the roots per plant in some fields.

Our research continued to focus on SCN management. Flooding early in the season damaged some plots of field experiments. Otherwise, plants in our research plots have been good. Newly initiated research projects in 2000 included investigation of SCN distribution in soybean and corn fields and their association with soybean yield, and survey of parasites of SCN juveniles in the north central region.

There were significant personnel changes in the nematology laboratory during 2000. Dr. Fajun Chen finished his research as a postdoctoral research associate in January 2000. His research focused on biological control of SCN. He did a survey of fungi associated with the SCN cysts and eggs in Minnesota and tested SCN-egg-parasitic fungi in laboratory, greenhouse, and fields for their potential as biological control agents. Fajun is currently working on biological control of fungal pathogens in the University of Guelph in Canada. Jun Jin, Fajun's wife, who worked in the nematology laboratory as a laboratory attendant, also left with Fajun at the same time. Curt Reese, a research fellow, moved to South Dakota State University in July 2000 to pursue his Ph.D. graduate training. Laura Zeilinski, a senior laboratory attendant, moved to Chicago to take a position in pharmaceutical company.

Two new employees joined the nematology team at the center recently. Daniel Miller was appointed as an assistant research scientist. Dan will assist Dr. Senyu Chen in carrying out research project in fields and laboratory. Cathy Johnson was appointed as a senior

laboratory technician with major responsibility of testing SCN soil samples submitted by farmers. Shufeng Liu, a Ph.D. student from the Hebei Agricultural University, China, started a research project on the biocontrol of SCN with fungal parasites in May 2000.

USDA-ARS CEREAL DISEASE LABORATORY

by Kurt J. Leonard

With addition of *Fusarium* head blight work at the Cereal Disease Lab, the facilities have become quite crowded. Temporary relief was provided through the generosity of Jennifer Juzwik, Research Leader, and her U.S. Forest Service research unit in their new building, which was completed early this year on the lot just north of the Cereal Disease Lab. Due to staff reductions in the Forest Service, a laboratory and several offices in the new building were not occupied. Dr. Juzwik offered to house the USDA, ARS Location Administrative Offices and one of the Cereal Disease Lab's research programs in the new building while the CDL seeks funding for an addition to the CDL building. Bill Bushnell agreed to give up his lab in the CDL building and move his research program to the new lab in the Forest Service building during this period.

Three new arrivals joined the Cereal Disease staff in the past year. Dr. James Kolmer was hired in July to fill a new scientist position for research on *Fusarium* head blight and rust diseases of wheat. Dr. Kolmer's biographical information can be found in another section of the Aurora describing new faculty members in the Plant Pathology Department. Dr. Lifeng Chen joined the Cereal Disease Lab as a Research Associate working with Corby Kistler. Dr. Chen is a Professor in the Department of Plant Protection, Nanjing Agricultural University. He has worked with management of *Fusarium* head blight, resistance of sweet potato to *Fusarium* root rot, integrated control of rice kernel smut, and etiology of rhododendron root diseases. He also has studied physiology of *Fusarium* head blight and gene expression of mycotoxin biosynthetic genes. At the CDL, Dr. Chen is characterizing effects of the *Nectria haematococca* PEP2 protein on symptom expression in the pea root rot disease. Rubella Sanyal is a new Ph.D. student from New Delhi, India. Rubella received her B.Sc. in Agriculture from Banaras Hindu University in 1995 and a M.Sc. in Plant Genetics from University of Nottingham in 1996. Her Master's research involved developing techniques for genetic transformation of ornamental plants. At the CDL she is working with Corby Kistler in a genomics project with the wheat head blight pathogen, *Fusarium graminearum*.

Alan Roelfs, who officially retired from ARS in 1994, continues his interest in rust fungi and still spends one day per week at the Cereal Disease Lab. He works on a number of data bases that are publicly accessible on the CDL web site at <http://www.cdl.umn.edu/> including a comprehensive bibliography of published research on cereal rusts (13,300 entries); a list of characteristics and sources of over 500 genes for rust resistance in wheat, barley, oat, and rye with literature citations; and a data base of rust resistance genotypes of more than 2,100 wheat cultivars and lines. Alan's current major project is a comprehensive host index for rust fungi in a searchable data base from published host indexes for the U.S., Europe, and South America, as well as individual research articles from other parts of the world. The file, which is nearly ready for release, contains records on 4,107 different species of rust fungi with 18,186 combinations of rust and telial host species and 13,941 combinations of rust and aecial host species. Also on the CDL web site, we now have yield loss estimates for all wheat, barley, oat, and rye rusts summarized by states in the U.S. for the years 1976 through 1999. In the near future, we will have annual grain production and rust loss data represented graphically on the web site for each state from 1976 through 1999.

Several scientists spent short study leaves at the Cereal Disease Lab in the past year. Dr. Ibrahim Imbaby, Ministry of Agriculture, Cairo, Egypt, worked with Don McVey for three weeks in March learning techniques for identifying pathogenic races of wheat leaf rust. Dr. Mohammed Nazim, Vice Dean, Faculty of Agriculture, Minufiya University, Shibin el-Kom, Egypt, came to the Cereal Disease Lab for one month in May to work with Don McVey evaluating crosses of Egyptian wheat cultivars with wheat lines that are near-isogenic for single leaf rust resistance genes to characterize resistance genotypes of important varieties in Egypt. Dr. Andrew Diener, Massachusetts General Hospital, Boston, spent 6 weeks at the Cereal Disease Lab with Corby Kistler in January and February on a very exciting project developing methods using *Agrobacterium tumefaciens* to genetically transform *Fusarium* species. Paul Peterson, Department of Plant Pathology, North Carolina State University, Raleigh, came to the Cereal Disease Lab in the fall of 1999 and spring of 2000 to survey active barberry sites in Minnesota and consult with Dave Long, Kurt Leonard, and Alan Roelfs on future studies of the potential impact of barberry on wheat stem rust in sites where dormant seed survived barberry eradication and have now produced new flowering bushes. Pedro Figueroa, INIFAP, Obregon, Mexico, returned to the Cereal Disease Lab for two weeks for the final revisions and defense of his Ph.D. thesis on wheat leaf rust. Pedro was the last graduate student supervised by Alan Roelfs at the CDL.

In July a review team consisting of Dr. Clemen Gehlhar, USDA, Foreign Agricultural Service, Washington, D.C.; Dr. Mohiey Batanouny, International Linkage Coordinator, Agricultural Technology Utilization and Transfer, Giza, Egypt; and Dr. Mohamed El-Nahrawy, Field Crops Research Advisor, Agricultural Research Center, Giza, Egypt visited the Cereal Disease Lab for one week to review current and future U.S.-Egypt collaboration in research on wheat rusts.

Other visitors to the Cereal Disease Lab in the past year include Jim Miller, USDA, ARS Northern Crop Science Lab, Fargo, ND; Brian Steffenson, Department of Plant Pathology, North Dakota State University, Fargo; Ann Blechl, USDA, ARS Western Regional Research Center, Albany, CA; Mohammed Boulif, National School of Agriculture, Mekres, Morocco; Kitty Cardwell and Fritz Schulthess, International Institute of Tropical Agriculture, Cotonou, Benin; Rytis Vilgalys, Duke University, Durham, NC; Yehoshua Anikster and Isaac Barash, Institute for Cereal Crops Improvement, Tel Aviv University; Tsetomu Arie and Isav Kaneko, RIKEN, Japan; Talma Katan, Volcani Center, Bet Dagan, Israel; Yaacov Katan, Faculty of Agriculture, Hebrew University, Rehovot, Israel; John Dueck, Agriculture and Agri-Food Canada, Ottawa; a Rotarian delegation from Bolivia; and a delegation of seven Chinese scientists from the Jiangsu Academy of Agricultural Sciences.

MINNESOTA HELPS: HEALTH, ENVIRONMENTAL, AND PESTICIDE SAFETY PROGRAM

by Dean E. Herzfeld

Starting March 1, 2001 after two years in development Minnesota will join Iowa, North Dakota and Wisconsin when we implement a fumigation endorsement for private certification. Farmers will need the endorsement to apply fumigants to stored grain on their farms. The endorsement requires a closed book monitored exam. We will be releasing a comprehensive private applicator stored grain fumigation manual on the web by the end of the year.

The numbers of commercial/noncommercial ag applicators has held steady to slight decline while the numbers of turf & ornamental applicators continues to grow. We now join states to the east of Minnesota by having more urban/suburban non-ag commercial/noncommercial applicators (turf, landscape, buildings, aquatic, rights-of-way, etc.) in the program than ag applicators.

This was the third year of the nationally unique Local

PAT recertification program for turf & ornamental applicators. Evaluations show extraordinary high acceptance and value for the program. Local PAT uses specially trained Master Gardener facilitators to provide prepared training modules in small group (7-20 people) in many sessions over many dates and in many places in the states.

Our program has partnered with University of Arizona, Washington State, and Virginia Tech to create a model national system for development, management, and delivery of distance education training modules utilizing the internet. We received a second year of grant funding from Agricultural Distance Education Consortium for the project. We are now partnering with US-EPA Office of Pesticide Programs in Washington, DC, various professional associations, and others to craft a practical and financial sustainable model system for other extension programs.

PLANT PATHOLOGY 5204 FIELD PLANT PATHOLOGY SUMMER 2000

by David H. MacDonald

Nine excellent students, seven from Plant Pathology and two from Agronomy, and a teaching faculty of 30 different university and USDA personnel, growers, golf course superintendents, arborists, IPM specialists, farmers and others all cooperated to help make the summer Field Plant Pathology class a success. We took a total of seven half-day trips to different metropolitan area destinations. We visited a wholesale floral greenhouse operation, two golf courses, the St. Paul and Rosemount Experiment Stations, two commercial vegetable farms, sites where Dutch elm disease and oak wilt are being treated and/or studied, the Minnesota Landscape Arboretum, and a commercial nursery. At least three of those trips became considerably longer than planned as we became patient but unwilling participants in the evening rush-hour gridlock that afflicts the Interstates in and about the Twin Cities. We followed those trips with a three-day trip across Wisconsin where we learned about cranberries, ginseng, seed potato production, the trials and stresses of extension education with emphasis on communication of information about potato diseases, and diseases of tree fruits. We followed the 1000 mile Wisconsin adventure the next week with a day and a half trip to learn about diseases of wild rice, dwarf mistletoe and other diseases of forest trees, and problems that can develop in forest tree nurseries. We finished the course with a day-long trip during which we learned more about diseases of potatoes, the soybean cyst nematode and finally, at Staples in NC Minnesota, root rots and white mold of edible dry beans.

DEPARTMENTAL SEMINARS

1999-2000

by Nevin D. Young

October 11: Jeff Gunsolus (*Dept. of Agronomy and Plant Genetics*)

Design and development of an interactive CD-ROM for agricultural professionals and undergraduate students

October 18: Liane Rosewich (*Cereal Disease Laboratory*)
Molecular population analysis of *Fusarium oxysporum* and *Rhizoctonia solani*

October 25: Yuhong Li
The role of Harpin in avirulence and pathogenicity

November 1: Gacheri Kimathi
Prospects for biological control of *Fusarium* head blight in wheat

November 8: Peter Blenis (*University of Alberta*)
Epidemiology of Western Gall Rust

November 15: James Groth
Designing a new course

November 22: Corby Kistler (*Cereal Disease Laboratory*)
Enzymatic detoxification and multidrug efflux systems as pathogenicity factors in phytopathogenic fungi

November 29: Alan Dyer
Cryptic pathogens

December 1: Dr. Andrew Jarosz (*Michigan State University*), Co-sponsored with Departments of Plant Biology and Ecology, Evolution and Behavior

January 31: Karen Broz
Parasexuality in Fungi

February 7: Jason Smith
Techniques for the Identification of Phytoplasmas in Woody Plants and Implications for Taxonomy and Control

February 14: Andrew Diener (*Massachusetts General Hospital*)
What if Plants Were High in Cholesterol?

February 21: Kurt Stromberg
Genetic Engineering of Cotton and Tobacco for Enhanced Disease Resistance

February 28: Brit Peyer
Public Perception of Genetically Modified, Disease Resistant Crops

March 6: Ganesh Dahal
Integrated Pararetrovirus Sequences of Plants that Cause Viral Infection

March 13: Senyu Chen
SCN Management Strategies -- A Minnesota Perspective

March 20: Jack Maake
The New Face of *Phytophthora infestans*

April 3: Laura Wallach
Disease Suppression Associated with the Use of Compost

April 10: Silvia Pereyra
Wheat Leaf Rust Populations and Epidemiology in North America

April 17: Ramya Mani
Blight of Rubber

MEETINGS: LOCAL & INTERNATIONAL

SYMPOSIUM: GENOMICS AND BIOINFORMATICS IN PLANT PATHOLOGY WITH EMPHASIS ON MICROORGANISMS.

By Andrea Morse

Plant Pathology Symposium: an enriching graduate student experience

It is a tradition in our Department that every two years graduate students get together to organize a symposium related to topics in plant pathology. This year's symposium focused on genomics and bioinformatics in plant pathology with emphasis on microorganisms. High throughput DNA sequencing technologies have made possible the availability of total or partial DNA sequences of microorganism genomes. Biological interpretation of gene structures and functions is allowing a better understanding of the mechanisms of pathogenicity, symbiotic plant-microbe interactions, host-pathogen coevolution, prediction of biodegradation enzymatic pathways, among others. The goal of this year's symposium committee was to provide a contemporary and comprehensive event for a diverse array of participants, including undergraduate and graduate students, researchers, educators as well as interested individuals from outside the academic community. The topic chosen

for this year's symposium had far reaching implications in many fields of study. Even though the topic focused on a specific application of new technology, information from all of the presentations is applicable to a wide spectrum of individuals.

For the graduate students, this was an enriching and challenging experience, where we learned and practiced discipline, tolerance, and acceptance of different viewpoints. In summary we learned to work as a team while achieving individual goals, an experience that we will apply in our professional careers in the near future. Thus, we are grateful to the Department of Plant Pathology for giving us this great opportunity, to the speakers for their time and kindness, to those faculty who contributed with their ideas and support, as well as to the rest of the graduate students who helped us to make the symposium possible.

As the chairperson, I am happy to have shared about fourteen months of effort with such great friends as Karen Hilburn, Shawn Bernick and Jason Smith, with the extra reward of seeing the goal accomplished due to our joint efforts.

Program Schedule

Title: Genomics and Bioinformatics in Plant Pathology
Date: Wednesday, October 18, 2000 - 8:00 am to 5:00 pm.
Place: Saint Paul Student Center (Minnesota Commons Room)

Welcome/Introduction and Presentation of Symposium

Genomics

"How Plant Pathologists Can Use Genomic Sequence Data", Dr. Nevin Young, Department of Plant Pathology, University of Minnesota

"Understanding fungal pathogenicity using genomics technologies", Dr. Olen Yoder, Novartis Agricultural Discovery Institute, San Diego, CA

"Using Genomics to Understand the Biology of *Gibberella zeae*", Dr. Frances Trail, East Lansing, Michigan State University

Coffee Break

"Corn and corn smut, a coevolutionary standstill? Dr. Georgina May, University of Minnesota

"Genetics, Genomics, and Pathogenicity of the Rice Blast Fungus *Magnaporthe grisea*", Dr. Barbara Valent, E. I. DuPont de Nemours and Co. Wilmington, Delaware.

Lunch Break

"Constructing a physical and transcriptional map of Phytophthora Genome" Dr. Brett Tyler, UC Davis

"The *Bradyrhizobium japonicum* sequencing project: Lessons to be learned from an Agriculturally Important Symbiont" - Dr. Michael Sadowsky, U of MN.

Coffee Break

Bioinformatics

"The University of Minnesota Biocatalysis/Biodegradation Database: Microorganisms, Enzymes and Prediction "

"Diagnosing the Source of Transcripts in Plant-Microbe Interactions"
Virginia Bioinformatics Institute, Blacksburg, VA.

General discussion and closure of the Symposium

We would like to thank the following sponsors:

University of Minnesota College of Agriculture, Food and Environmental Sciences
Department of Plant Pathology, University of Minnesota
Pioneer Hi-Bred International, Inc
Cargill Biotechnology Group
3 M Biomaterials Technology Center

AMERICAN PHYTOPATHOLOGICAL SOCIETY ANNUAL MEETING

AUGUST 12-18, 2000

NEW ORLEANS, LA

by Ruth Dill-Macky

Louisiana Hot Sauce. The APS meetings were held in New Orleans, Louisiana, August 12-16, 2000. The weather was hot, although in that week it differed little from the 90+ degree that St Paul enjoyed. The APS meeting was held at the Hyatt Regency New Orleans and adjoining conference facility. Except for the plenary session, awards and honors ceremony, grand reception, and the networking breakfast attendee's were able to disperse among the many smaller rooms of the spacious air-conditioned facility. One of the pleasures of our national meeting is meeting with former students and colleagues and this year the Minnesota/Wisconsin social was again well attended allowing folks to renew friendships and catch up on news. I found the poster sessions very interesting although I rarely read the posters during the time when authors attend their posters, choosing rather to chat and return later when the rooms are quieter to read and take notes. It always astounds me

to see the breadth of topics covered by oral and poster presentations at the APS meetings - Bob Blanchette presented a poster on the work he is involved with in the preservation of the historic huts in Antarctica while a few feet away other posters detailed the genomic size of geminiviruses. As this was my first time to visit New Orleans I made a point to explore the city. One evening I strolled along the river bank and watched the barges and other river traffic at the other end of the Mississippi River. I took time to explore the city's French Quarter with its narrow streets replete with gas lamps and cobblestones, clearly a district which catered to the tourist trade with its propensity of art galleries, jazz, and restaurants. One of the joys of visiting a new place is found in sampling the local cuisine and I slipped into a few of the restaurants sampling local menus which boasted crawdads, gumbo, shrimp and grits. One could also enjoy a coffee with chicory or a bienget (a kind of doughnut dusted with powdered sugar) between sessions. Next years meeting will be held in Salt Lake City, Utah - the glimpse we saw of conference facility and mountain scenery will likely encourage attendance. See you there!

GREENHOUSE ACTIVITIES

by Dann K. Adair

A request \$17.1 million was submitted to the 2000 Minnesota Legislature for renovating and replacing a large portion of the St. Paul campus greenhouse complex. This was the result of over seven years of exhaustive planning that addressed needs of twice this amount. Although the legislature was generous to the University by funding over \$100 million in capital projects, the greenhouse project received only \$5.9 million (Phase I). The remaining \$11.2 million (Phase II) will be requested in the 2002 legislature. In addition, a plan (Phase III) to build additional teaching and outreach facilities is being pursued with private funding.

Phase I consists essentially of two connected greenhouse/headhouse facilities. One will include over 8000 sq. ft. of high quality research greenhouses with 2500 sq. ft. of headhouse support. Transgenic plant breeding requiring special containment and high clearance plants such as tree crops, corn, and tropical fruit will be accommodated in this structure. Contiguous with this will be a federally-licensed insect quarantine facility. This includes a 1200 sq. ft. of air-conditioned and filtered greenhouse and a 3600 sq. ft. quarantine lab/headhouse. Room for an future greenhouse addition has been reserved. The new complex will connect to the small grains breeding headhouse which will allow for better access of large materials.

The Minnesota Department of Agriculture Biological

Control Unit will staff the quarantine facility though UMN faculty and staff will also have full access. Conversely, the state staff will have access to other UMN greenhouses.

The entire complex will be housed on Dudley Avenue directly north of the Crops Research and Service buildings. Ground breaking was scheduled to begin this fall, but will now likely be early spring 2001 to coincide with the construction of the new Microbial and Plant Genomics facility to the southwest. Occupancy is expected in September 2001.

SOCIAL EVENTS

1999 INTERNATIONAL HOLIDAY CELEBRATION

by Ross Winberg

The Annual International Holiday Soiree was a smashing success as departmental members emerged from their chrysalis-like laboratories and spread their social wings for an early evening drinking of the sweet nectar of idle gossip. Dann Adair and Company entertained the group throughout the party. A very nice letter from the Merriam Park Community Services was sent to the department thanking us for food collected for their food shelf. "Your thoughtfulness brings great comfort to those in need and helps ensure that we can continue in our efforts to serve the most needy families and individuals in our community. This support is vital to building strong families and communities." Best wishes for the New Year, Roberta Reberts, Foodshelf Coordinator

MID-WINTER BOWLING PARTY

by Ross Winberg

The hard maple lanes of the St. Paul Student Center were no match for the molecular plant pathologists who showed that they could "fill the lanes" with more than just bands of nucleic acid, if you know what I mean. Among the bowlers were the famous Strike Annie, Dead-eye Drange, Gutterball Brand, Lucky Strike Linda, Chad 5-pin Behrendt, Fast Feet Frankie, Lefty Barnes, Ross "The King Pin" Winberg, Jen "Split-Meister" Flor, and Andy "in the gutter" Ryan. Fun was had by all.

2000 E. C. STAKMAN SOFTBALL GAME

by Ross M. Winberg

The Annual E.C. Stakman Softball Game was to be held on Thursday, June 15, 2000. All I have to say is "Rain, Rain Go Away, Come Again Another Day!!" The rain however did not dampen our spirits. The food was

already purchased and cold beverages in the coolers so the party went on as planned. Dr. Miller still wants to get a game in before the snow falls. Once again, thanks to Dr. Stakman for the great party.

2000 CORN ROAST

by Ross Winberg

The Corn Roast "Autoclave" was a sumptuous feast of corn, chicken and beef cooked to perfection, thanks to Charlie Barnes and Jen Flor with the assistance of Ann Arendt. The patio behind Borlaug was filled with faces both new and old filling their faces with delectable dishes. It was a wonderful opportunity to meet those people who you had been passing in the halls, but weren't quite sure who they were. Thanks to Dann Adair for the hayride, the kids just loved it.

VITAL STATISTICS

BIRTHS

June 29, 2000. Timothy Scott born to Jeff and Shaura Miller, 9 lbs., 2 oz.

September 11, 2000. Katherine JoAnn born to Jon and Debbie Powell, 9 lbs., 14 oz, 21 ½ " long.

Bob and Sandra Nyvall Proud Grandparents - Nicolas Robert Nyvall was born to Tracey and Nathan Nyvall at 8:41 p. m., Thursday October 5 in United Hospital downtown St. Paul. Nicolas weighs 8 pounds 7 ounces with one nose and ten toes. Mother and son are doing very well, but father Nathan is coming down from a high blood pressure "anxiety attack" while caught in a traffic jam in downtown St. Paul on the way to the hospital. They made it with almost an hour to spare.

MARRIAGES

August 7, 2000. Brian Scanlon to Kyoko Shimizu in Waikiki, Hawaii. Kyoko worked for Linda Kinkel and Brian is working with the Plant Disease Clinic and Weiping Xie.

DEATHS

September 21, 1998. Eugene Saari, (M.S. 1962, Ph.D. 1966)

August 1999. H. H. Thornberry (Ph.D. 1947)

September 7, 1999. Ernest P. DuCharme (Ph.D. 1949)

February 7, 2000. Alan Beidleman, "Whistling Al", University Postman.

January 11, 2000. David W. French (See feature article)

March 18, 2000. Richard A. Meronuck (See feature article)

April 9, 2000. Carl J. Eide (See feature article)

May 7, 2000. Carl W. Boothroyd

OBITUARIES

Carl W. Boothroyd

by Thor Kommedahl

During the academic year 1956, Carl Boothroyd was appointed a visiting professor in the Department of Plant Pathology at the University of Minnesota, for two quarters to teach and work in the area of the ecology of plant pathogens. This area had been covered by Dr. M. F. Kernkamp, who had just left the department to become Assistant Director of the Minnesota Agricultural Experiment Station.

Carl was born in Woodsville, New Hampshire, on January 15, 1915. He attended high schools in New Hampshire and Massachusetts and went to Dartmouth College for his AB degree. His graduate work was taken at the University of New Hampshire, Washington State University (M.S. 1940) and Cornell University (Ph.D. 1949).

He served as extension plant pathologist at Cornell from 1949 to 1952 and then was appointed to the teaching staff from 1952 to his retirement. In 1963 he was awarded a Guggenheim Fellowship. He served as Associate Head of the Department of Plant Pathology at Cornell from 1963 to 1969. As First Lieutenant in the Army Medical Corps, he served during World War II from 1942 to 1946. He was a member of the American Phytopathological Society and American Institute of Biological Sciences. His primary research responsibility was the diseases of corn. He retired in 1980 and died May 7, 2000.

Dr. Ernest Peter DuCharme

by Thor Kommedahl

Ernie DuCharme—naturalist, teacher, citrus virologist—was born in St. Paul, Minnesota, on July 15, 1916. He attended high school at Lasalle, in Glencoe, Missouri and college at St. Mary's College in Winona, Minnesota, where he earned the B.S.c degree with a major in biology and a minor in mathematics. He then enrolled in DePaul University in Chicago, Illinois, earning the M.S. degree in 1943. His Ph.D. degree was earned at the University of Minnesota in 1949 with E.C. Stakman as adviser. His Ph.D. thesis topic was on tristeza disease of citrus.

He was an instructor at St. George High School in Evanston, Illinois from 1939 to 1940, and taught at St. Mel High School in Chicago, from 1940 to 1943. In 1946, he was a plant pathologist at the University of Florida at Lake Alfred where he worked on diseases of citrus specializing in root diseases, root ecology, and root nematodes. He married in 1947. He retired in 1981 and died September 7, 1999.

Ernie was a naturalist. Every summer, he, Bill Loegering, and Harry Young traveled to the Boundary Waters Canoe Area in northern Minnesota for an extended canoe trip and to botanize. He and Bill Loegering published a book in 1977 on "Plants of the Canoe Country", a 192-page wire-bound book with colored photos and plant descriptions of plants mainly near Big Lake, 25 miles northwest of Ely, Minnesota. Ernie was a member of the American Phytopathological Society, American Society of Naturalists, Botanical Society of America, the International Organization of Citrus Virologists, and the Mycological Society of America.

Dr. Eugene Saari

Eugene Saari, died on September 21, 1998, after a brief battle with cancer. Saari retired from CIMMYT in early 1997 after 28 years of valuable service in diverse capacities in the wheat program.

Born in Minnesota, Saari received his M.S. degree in 1962 in plant pathology and his Ph.D. in 1966 in plant pathology from the University of Minnesota. After a brief stint as research fellow at Michigan State University, he initiated his international career in 1967 as a Ford Foundation Post Doctoral Fellow working in India, where he first came into contact with CIMMYT. CIMMYT hired him in 1969, which marked the beginning of a long and fruitful association. Saari served in Asia (India, 1969-1973; Thailand, 1980-1984; and Nepal, 1994-1997) and the Middle East (Lebanon, 1973-1976; Egypt, 1976-1980; and Turkey, 1987-1990) at different times in his professional life. Between those assignments, he came back to CIMMYT headquarters in Mexico, where from 1990 to 1993 he headed the Wheat Program's crop protection subprogram.

Although a pathologist by training, he also worked as a breeder during certain periods of his professional career. But perhaps his most important contributions came when he was serving as CIMMYT representative in the regions where he worked. His professional expertise, wide experience, and exceptional people skills made him particularly well suited to working in outreach. He was well respected by his colleagues for his tireless support, genuine concern, and deep commitment to bettering conditions in the developing world. His indefatigable

optimism and good humor stood him in good stead when dealing with the complexities of life in outreach.

Saari was a member of a long list of professional associations, among them, the American Phytopathological Society, the Indian Phytopathological Society, the American Society of Agronomy, and the British Society of Plant Pathology. In 1994 he was made a fellow of the Canadian Phytopathological Society.

For Saari, working at CIMMYT was never a job, it was a calling. CIMMYT feels privilege to have been the organization to which he chose to render his dedicated service.

Dr. Halbert Houston Thornberry

by Thor Kommedahl

In addition to being a professor and a virologist, Dr. Thornberry was a self-taught violinist and he collected and rebuilt them. For 4 years he was Champion Illinois State Fiddler for persons over 70 years old. He also taught classes in violin.

Dr. Thornberry (Thorny) was born in Corydon, Kentucky on December 28, 1902. He attended high schools in Kentucky and went to the University of Kentucky at Lexington, for his B.S. degree in 1925. His graduate work was at the University of Kentucky, University of Illinois, Columbia University, and the University of Minnesota where he received the Ph.D. degree in 1934 under E.C. Stakman working on tobacco mosaic virus. He also held a fellowship at the Rockefeller Institute for Medical Research in Princeton, New Jersey, from 1931 to 1934, and this work was accepted for the thesis requirement for the Ph.D. degree in Minnesota. He was employed at the University of California, Riverside, the University of Kentucky, and the US Department of Agriculture in Washington, DC. In 1938 he returned to the University of Illinois in Urbana to become professor of virology. He helped establish the Department of Plant Pathology in Illinois in 1942. His research dealt with plant virology, chemopathology, and bacterial diseases. He retired in 1971 and died in August 1999.

He served in the US Army from 1942 to 1945. He was a member of the American Association for the Advancement of Science, American Phytopathological Society, American Society for Microbiology, and the American Chemical Society. Dr. Thornberry was given a Research Award from the Society of American Florists in 1968.

DEPARTMENTAL ENDOWMENT TRUST FUNDS:

Philanthropy Counts!

by Richard J. Zeyen

First, let me congratulate you, the alumni and friends of the department, on your past support of the Department of Plant Pathology Endowment effort. Thanks to you, the Department of Plant Pathology survived, gained strength and is transforming to educate and serve in a new era. In the words of President Mark Yudof:

"The most important measures of excellence at the University are those that demonstrate the University's ability to transform lives. In many cases, private giving is the catalyst that makes this transformation possible".

What exactly does this mean to Plant Pathology alumni and friends? It means that your gifts made and continue to make a huge difference in vitality of this Department. Without you, our ability to educate students and serve Minnesota and the world would be severely curtailed. Indeed, without support from friends and alumni, the department at Minnesota may well not have survived the horrific, devastating financial conditions of the 1980's and early 1990's. Simply put, the Department of Plant Pathology Endowments made and continue to make all the difference.

Your gifts, large and small are, in some cases, matched dollar for dollar by the U of MN or other sources. The funds are then wisely invested and the interest from them support, in perpetuity, all or parts of:

- The Plant Pathology Library, an internationally

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- Graduate Student Scholarships and Fellowships
- An endowed faculty chair (The Lieberman-Okinow Endowed Chair)

The transformation of the Department continues. The understanding of plant-microbe interactions brought about by the revolution in molecular biology and molecular genetics requires dramatic changes in our educational effort. Precision agriculture is changing the way we educate and the way we serve society. The need to have financially and ecologically sustainable agriculture and productive forests requires attitudinal as well as educational change. The information revolution and Internet technology are changing how we educate and serve society.

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

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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.

B

BASF Corporation
BASF Wyandotte Corporation
Bailey Nurseries
Bane Holtzclaw & Company
Bear Sterns & Company Inc.
Bentech Laboratories Inc.
Big Stone Inc.
Biotol 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
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 Wild Rice Council
Mobay Corporation Animal Health Division

N
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
Rhone-Poulenc Ag. Company
Ringer Corporation
Rohm & Haas Company

S
Sandoz Agro. Inc.
Seneca
Seneca Foods Corporation
Seymour & Barbara J. Leslie Foundation
Shifan Family Charitable Foundation
Simplot Partners
Standard Fruit Company - Costa Rica

T
Terra Mac Inc.
Toro 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

by Patti Combs

Dr. Lifeng Chen, Research Associate, joins us from Nanjing Agricultural University where he is a professor in the Department of Plant Protection. Dr. Chen has a diverse research program in China where he has worked with management of *Fusarium* head blight, resistance of sweet potato to *Fusarium* root rot, integrated control of rice kernel smut, and etiology of rhododendron root diseases. Additionally he has studied the physiology of *Fusarium* head blight and gene expression of mycotoxin biosynthetic genes. He joins us to work on the characterization of the effects of the *Nectria Haematococca* PEP2 protein on symptom expression in the pea root rot disease. Dr. Chen will be working with Corby Kistler in the Cereal Disease Laboratory.

Dr. Anita Davelos, (Ph.D., Michigan State University, 1999) arrived in our department on September 1. Anita will work as a post-doc with Linda Kinkel and Debby Samac in studying the community ecology and dynamics of antibiotic-producing bacteria in prairie soils.

Patricia Combs, Associate Administrator, hired March 13, 2000, has been with the University of Minnesota for 15 years. She has a B.S. from the Carlson School of Management at the U of M. She most recently worked as an Accounting Supervisor with the Department of Civil Engineering.

Ross Daml, Assistant Scientist, hired 12/13/99 to work in Dr. Jim Kurle's laboratory. He assists in field research on soybean management and soybean diseases. He earned his B.S. degree in Agronomy at the University.

C. Kent Evans, Research Associate. After a short time away from the department, Kent Evans returned to Minnesota in February 2000 to rejoin Ruth Dill-Macky's small grains pathology laboratory. Kent's research associate position is funded by the Minnesota state scab initiative and assumes responsibility for the field and greenhouse screening of wheat and barley lines for resistance to *Fusarium* for the plant breeding programs. Kent received his Ph.D. from Oklahoma State University, Stillwater in 1995.

Linda Hanson, Account Specialist, hired 2/2/2000, has been with the University of Minnesota for 14 years working primarily in accounting positions. She most recently was with the Office of the Registrar for 8 years.

Dana Larsen, Junior Scientist, hired 8/28/00. Dana, will work on the legume genomics projects currently underway in Dr. Nevin Young's lab. Before coming to the

Plant Pathology, Dana worked in the Department of Biochemistry, Molecular Biology, and Biophysics.

Dr. Soon Dong Lee, arrived in the department this past February from Korea (Ph.D. 1996) to serve as a post-doctoral scientist in Linda Kinkel's laboratory. Dr. Lee will study genetic diversity of antibiotic-producing Streptomycetes from prairie soils with Linda and Debby Samac.

Dr. Dean Reynolds, has accepted the Soybean Extension Pathology Position in the department. Dean received his M.S. in agronomy from The Ohio State University in 1980. He has a broad background and many years of field research experience working with BASF Corporation and the Iowa Department of Agriculture and Land Stewardship. Dean received his Ph.D. in the Department of Plant Pathology at Iowa State University. His thesis was entitled, "The Effect of Swine Manure Application on Nematode Populations in Soybean and Corn."

Dean will begin his duties in early October. He will be responsible for developing a comprehensive educational program on soybean diseases and their management for Minnesota's soybean growers. Dean's work will include collaboration with extension personnel in plant pathology and other academic departments to develop educational programs and materials, organizing and conducting grower and industry meetings, field demonstrations, and developing addressing inquires and requests from the public. Dean's position is funded by the soybean growers of Minnesota for 36 months. Dean will be working closely with our corn and soybean research pathologist, Dr. Jim Kurle.

Karen J. Wennberg, Junior Scientist, began working in the small grains pathology lab in April, 2000. Karen's previous experience was as a research technician at Brown Seed Farm in Wisconsin, although she worked at the University of Minnesota's soil research and analytical testing lab from 1993 to 1997. She has a B.S. in horticulture from the University of Minnesota.

Kun Xiao, received her M.S. degree in Linda Kinkel's laboratory in spring, 2000. Kun's thesis work focused on the biological control of *Phytophthora* root rots of soybean and alfalfa. Kun came to us from Hebei Agricultural University in China, where her husband, Dr. Daqun Liu (University of Minnesota Department of Plant Pathology, Ph.D., 1992) is currently University President. Kun has left to take a position in computer science, but is looking forward to returning to science in the near future.

VISITNG SCIENTISTS

Dr. Yaacov Katan, from Department of Plant Pathology and Microbiology, The Hebrew University, Rehovot, Israel, working in Linda Kinkel's Laboratory.

Dr. Jose Navarrete, from the University of Bio-Bio, Chile spent several weeks in Bob Blanchette's laboratory in July to learn techniques for biological control of wood destroying fungi.

Henry Hauvaling van Beek, Director of the Rainforest Project, Saigon, Vietnam visited with Bob Blanchette in June to learn about host defense reactions in trees.

Summer 2000, Dr. Robert Blanchette.

Price, Lisa D. HS, Oakwood Academy, Huntsville, AL; B.S., Oakwood College, Huntsville, AL; M.S., Alabama Agriculture and Mechanical University, Normal, AL. Fall 2000, Dr. Linda Kinkel.

Sanyal, Rubella. HS, Central Hindu Girls School, Varanasi, U.P. India; B.S., Banaras Hindu University, Varanasi, India; M.S., University of Nottingham, UK. Fall 2000, Dr. H. Corby Kistler

Wiggins, Barbara Elizabeth. HS, Parkway West Senior High School, Ballwin, MO; B.S., University of Missouri - Columbia, Columbia, MO. Fall 2000, Dr. Linda Kinkel.

NEW GRADUATE STUDENTS

by Patti Combs

Floyd, Crystal Marie. HS, Park Center, Brooklyn Center, B.S., University of Minnesota, St. Paul, MN.

Wilhelm, Kurt P. HS, Waubonsie Valley High School, Aurora, IL; B.S., Purdue University, West Lafayette, IN. Fall 2000, Dr. Roger Jones.

NEW EMPLOYEES



Lifeng Chen



Anita Davelos



Ross Daml



C. Kent Evans



Linda Hanson



Dana Larsen



Soon Dong Lee



Dean Reynolds



Karen Wennberg



Kun Xiao



Crystal Floyd

NEW GRADUATE STUDENTS



Lisa D. Price



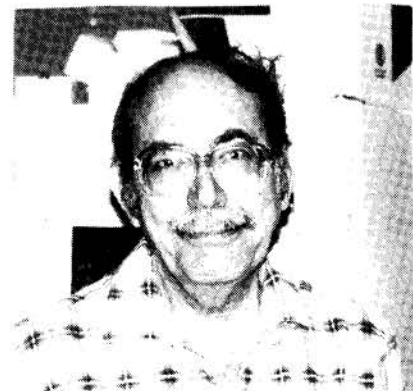
Rubella Sanyal



Elizabeth B. Wiggins



Kurt P. Wilhelm



VISITING SCIENTIST - Yaacov Katan

EXAMINATIONS PASSED

1999-2000

James P. Martinez, Ph.D., May 28, 1999. Analysis of DNA Markers and a Transposon-Like Element, *Uar-1*, in the Bean Rust Fungus, *Uromyces Appendiculatus*.

Pedro Figueroa, Ph.D., May 4, 2000. Interactions of *Lr13* and *Lr34* with Other Leaf Rust Resistance Genes, Pathogen Isolates and the Environment.

Laszlo Gyenis, Ph.D. May 8, 2000. Biological Control of Septoria Leaf Spot and Canker of Hybrid Poplar Using Suppressive Strains of *Streptomyces* spp.

Julie Jenkins, M.S., May 19, 2000. Epidemiology Traits that Influence *Phytophthora Infestans* A2 Mating Type.

Britt Johnson Peyer, M.S., October 13, 2000. Distribution, Relatedness and Variability of Beet Necrotic Yellow Vein Virus and Beet Soilborne Mosaic Virus in Minnesota.

Kun Xiao, M.S. May 1, 2000. Biological Control of Phytophthora Root Rots on Alfalfa and Soybean with *Streptomyces*.

Consuelo Estevez de Jensen, Ph.D. August 10, 2000. Etiology and Control of Dry Bean Root Rot in Minnesota.

Warren Kruger, Ph.D. August 14, 2000. Physiological and Molecular Effects of Barley Powdery Mildew Resistance Genes on Defense Responses.

Silvia Penuela, Ph.D. August 22, 2000. Physical Isolation and Sequence Analysis of Disease Resistance Gene Analogs in Soybean.

Silvia Pereyra, M.S. August 24, 2000 Survival and Inoculum Production of *Gibberella zea* (Schw.) Petch. In Wheat Residue.

RECENT PROMOTIONS

Laurie Brand, from Accountant to Senior Accountant

Ruth Dill-Macky, from Assistant Professor to Associate Professor

Roger K. Jones, from Associate Professor to Professor

Les Szabo, Adjunct Assistant Professor to Adjunct Associate Professor

DEPARTURES

by Patti Combs

Gerald Baldrige, Dr. Baldrige joined the Department as a Post Doctoral Research Associate in 1996. His expertise was in the molecular biology and molecular genetics of insect viruses. Initially he worked with professor Samac's laboratory on the host-parasite relationships of an alfalfa-nematode problem. In 1997 he

joined professor Zeyen's laboratory where for the past three years he has worked with professor Zeyen's group on the genetic engineering of cereal plants for advanced and novel fungal resistance. He is leaving the department for an opportunity to return to his primary interest, insect-viruses. He will be a Research Associate in the Department of Genetics, Cell Biology and Development working with professor Conklin on arbovirus replication in a new *Drosophila* cell culture model system.

Chad Behrendt, (Ph.D.) in Plant Pathology 1997) recently left his position as extension educator and assistant professor with the department. Chad was the plant pathologist for the Yard and Garden Line and had done a superb job in this position over the last two years. His hobby was building a log home, but once this was built he sold it and then built another. Chad decided recently to make building log homes a full time job. If you are in the market for a log home in Wisconsin or Minnesota, be sure to contact Chad. His log homes are beautiful!

Anne Cooper, left Nevin Young's lab this past summer to begin graduate studies in the Department of Fisheries and Wildlife at the University of Minnesota.

Brenda Fuchs, resigned from her position working on *Medicago truncatula* functional genomics in December 1999 to take a position in Wisconsin working for a plant diagnostics laboratory.

Shane Grivna, left Nevin Young's lab this fall to begin graduate studies in pharmacology at Duke University.

Laszlo Gyenis, completed his Ph.D. in May, 2000 and is now working in the Department of Agronomy and Plant Genetics as a post-doctoral Research Associate with Dr. Gary J. Muehlbauer and with Dr. Kevin P. Smith. His project is: Exploiting *Hordeum vulgare* subsp. spontaneum germplasm for disease resistance.

Delores Huebner, see article

Kathy Kromroy, completed her Ph.D. in June, 1999. Her thesis was titled "Studies on the identification and ecology of *Armillaria* species in Minnesota and Wisconsin". After graduating, Kathy accepted a position as plant pathologist with the USDA Forest Service, Forest Disease Research Work Unit, North Central Research Station working with Dr. Jennifer Juzwik. Her main responsibilities are to perform statistical analyses of pathogen population and plant growth data for studies to identify alternatives to methyl bromide fumigation for the control of soil-borne plant pathogens in forest nurseries. She also assists with the collection and processing of field data for current nursery and oak wilt studies.

Miriam Newton, (M.S. Plant Pathology, 1996; M.S. Statistics, 1997) completed her position as a Research Fellow with Linda Kinkel and Kurt Leonard in June of this year. Miriam also completed her course work and student teaching, and is now qualified as a teacher in the state of Minnesota. Miriam has accepted a position at Saint Olaf College in Northfield, Minnesota, where she will teach Statistics courses. We will greatly miss Miriam's excellent statistical and programming abilities.

Rodney Pettway left the department to return to Gainesville, FL where he will be working in the Department of Entomology at the University of Florida. Rodney's new job will be to study genetic diversity and pathogen specialization in the entomopathogenic fungus, *Bavaria bassiana*.

Rosalind Richards, see article.

Andrews Ryan, After eight years in our department, Andy left in April 2000 to take a position as a data manager at the University of Minnesota School of Public Health. Andy came to us in 1992 from University College in Dublin, Ireland. Unbeknownst to us until after his arrival, Andy's dad, Ted Ryan, had received his Ph.D. in our department in the 1960's! Andy received his M.S. degree in Linda Kinkel's lab in 1994, and has since worked as a research fellow with Linda. Andy's contributions in the laboratory, the greenhouse, the field, analyzing data, and on the social committee are sorely missed. However, we wish him well in his new career challenges!

Kurt Stromberg, (M.S., 1998) returned for a productive 9-month stay in the laboratory of Dr. Linda Kinkel this past year. Kurt recently completed two year's employment at the USDA Laboratory in New Orleans, Louisiana. As expected, Kurt contributed significantly in all areas of the research effort, including field, laboratory, and statistical work. He is presently pursuing an M.S. in statistics at the University of Minnesota, and hopes to become a statistical consultant upon completion of his program.

GRADUATE STUDENT AFFAIRS IN PLANT PATHOLOGY

by
Graduate Students in Plant Pathology
By Andrea Morse

If I would describe the past year of the with one word, I would have to say "Strong". The goals of the graduate students one year ago were to strengthen student

attendance, increase departmental committee involvement, increase our savings, while creating an environment that welcomes new students and enables us to get to know one another. I'd have to say the officers and the members of the organization were able to accomplish each one of these goals. Ramya Mani and Karen Hilburn produced a monthly calendar of events, which helped increase student attendance to meetings and events. Committee involvement helped the department write a cohesive statement concerning internships. A one-time membership fee put money in our bank account, and the many events, such as the New Student Picnic, Chinese New Year, Brown Bag Seminars, Webpage Workshop, and of course the happy hours organized by Charlie Barnes, helped students to get to know one another. In addition, the students hosted three ice cream socials to get to know faculty, staff, and the Agronomy graduate students better. Furthermore, a wonderful student guide produced by Consuelo Estevez-De-Jensen provided information, such as where to get an emergency loan or where to get a drivers license, for new students.

All of these efforts have spurred new goals for the upcoming school year. Shawn Bernick is developing a book of skills recording all the techniques used by members of the department. By doing so, people will have a resource guide to who can help them with their research. We believe this will create a greater sense of community and yield superior research. Also, the students are hosting an excellent symposium entitled, "Genomics and Bioinformatics in Plant Pathology" to be held October 18, 2000. Claudia Castell, Jason Smith, Karen Hilburn, and Shawn Bernick have been working hard for over a year to organize this event with guest speakers from UC Davis, University of Michigan, DuPont, Novartis, NGGR, and including our own faculty: Dr. Nevin Young, Dr. Georgina May, Dr. Michael Sadowsky, and Dr. Lynda Ellis. Brown bag seminars are continuing this year. This year the focus is on increasing relationships with private companies in order to better understand what their work responsibilities are and to determine if that is the direction we want to go following receiving our degrees. Also, be looking for the new department T-shirts designed by Ramya Mani and Claudia Castell.

By the many names mentioned here, I'm sure you can see that none of these events and activities would be possible without the dedication of the members. I would like to especially thank our past officers: Alan Dyer (President), Charlie Barnes (Vice President) and Silvia Pereyra (Secretary/ Treasurer). Their ability to encourage collaboration among the student body enabled us to have a successful and productive year. I would especially like to express gratitude to Alan Dyer for his commitment to build an active and creative organization. Thank you.

New officers include Andrea Morse (President), Claudia Castell (Vice President), and Ramya Mani and Gretchen Nettleton (Secretary/ Treasurer).

FACULTY ACTIVITIES

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

Dr. Robert Blanchette, Professor, became a fellow of the American Association for the Advancement of Science at the annual meeting in Washington DC earlier this year. The award was presented by AAAS president Stephen J. Gould. Bob has been active in developing biological control programs for blue stain fungi in New Zealand and Chile (with cooperators from the University of Waikato and the University of Bio-Bio) where field-testing is currently underway. A cooperative project to evaluate resistance in eastern white pine to white pine blister rust with colleagues in Forest Resources and with old timer Paul Zambino (US Forest Service) has also been underway. Bob's work in Antarctic to evaluate deterioration taking place in the historic huts has been given new support with a 3-year grant from NSF. He will return to the Ross Sea region in December with research associates Ben Held and Joel Jurgens to set up new investigations and develop long term conservation plans for the huts built by Shackleton and Scott. The Rainforest Project has also recently granted a 5-year renewal for research to continue in Southeast Asia to develop a sustainable production of agarwood, a valuable resin produced in *Aquilaria* trees in response to fungal invasion. Field experiments were set up this year in the highlands of Vietnam and in the rainforests near the border of Cambodia.

Dr. Senyu Chen, Assistant Professor, Southern Research and Outreach Center, attended the American Phytopathological Society Annual Meeting in New Orleans, Louisiana, on August 11-16, 2000 and presented a poster on the effect of crop sequence on the soybean cyst nematode. At the meeting, Dr. Chen also attended a scientific writing and editing short course. On July 19-20, 2000, Dr. Chen attended North Central Regional Cooperative Project (NC-215) meeting in Brookings, South Dakota. Following the meeting, a workshop on cyst nematode identification was hosted by Dr. George Bird from Michigan State University. Dr. Chen is a representative of the University of Minnesota Agricultural Experiment Station to the Southern Regional Cooperative Research Project (S-282) and attended the Joint Meeting of North Central (NC-215), West (W-186), and Southern (S-282) Regional Cooperative Projects in Springdale, Arkansas, on October 19-21, 1999.

Dr Ruth Dill-Macky, Associate Professor. This year was an eventful year in the small grains pathology lab. I was promoted to Associate Professor with tenure and graduated my first Masters student. We also had an active year in both lab and field research. Preparation of my promotion and tenure document took considerable effort, although documenting my accomplishments over five years allowed me to reflect on my past research activities and take time to consider the future direction of me research program. Silvia Pereyra completed her Masters degree in September. Silvia also completed the course work for her Ph.D. program while in Minnesota and is now beginning her thesis research in Uruguay at INIA, La Estanzuela. Dr Kent Evans returned to my lab to assume responsibilities for the field and greenhouse screening of wheat and barley for resistance to *Fusarium* head blight for the plant breeding programs. This is no small task as we tested over 7,500 rows of wheat and barley in field nurseries at three locations this summer while over 1,400 lines are planned for our fall greenhouse. Karen Wennberg joined our lab this year as a junior scientist to assist Kent in the *Fusarium* screening effort. Silvia and I attended the APS meetings in New Orleans, Charles Hu attended an international *Fusarium* meeting in Beijing, China, and Kent attended cereal pathology meetings in Kansas and Mexico City, Mexico. 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.

Roger K. Jones, Professor and Extension Plant Pathologist. The millennium arrived with lots of change. For the most part, crops fared well throughout the state but the constancy of low prices seems to be something we simply cannot get to change. Major programs in 1999 involved the appropriation of resources to continue the battles against *Fusarium* head blight, Late blight and Potato Leaf Roll Virus in potatoes. This year we welcome two new members to our faculty. Dr. Dean Reynolds will have responsibilities in Extension soybean pathology and Dr. Halla Toubia-Rhame will develop programs for small grain growers in the Northwest.

The faculty and college were greatly saddened by the sudden loss of Dr. Richard A. Meronuck. As a friend and colleague, there are few words that I can find to express my feelings as well as those of the many friends Richard left behind in Extension. Second floor Stakman will never be quite the same. Where ever you are Dick, I hope the fish are biting.

On a happier note, Ms. Julie C. Jenkins was awarded a Master's degree in Plant Pathology this summer. Julie had been working in my project for the past several years

and completed her M.S. on Late blight. I have a new student this fall. Mr. Kurt Wilhelm began studies this September. Kurt is a native of Chicago and finished his B.S. at Purdue before joining my program.

In May, I was promoted to full professor in the department and in August, I celebrated 20 years of service with the Cooperative Extension Service.

Dr. Jennifer Juzwik, Assistant Professor, USDA Forest Service, North Central Research Station. As Project Leader for the Forest Diseases Research Unit, Dr. Juzwik had many administrative responsibilities associated with the relocation of the unit to its new office/laboratory complex located near the USDA-ARS Cereal Disease Lab. The relocation occurred in early April 2000 immediately after a vandalism incident occurred at the new facility. A group opposed to genetic engineering of forest trees claimed responsibility for the damage (see related article in this issue of the *Aurora*).

Dr. Juzwik presented a paper at the Recent Advances in Forest Decline in Europe research conference held in Warsaw, Poland, in November 1999. Two new research efforts in Dr. Juzwik's research group were stimulated by her visit. She and associates at the Forest Service plus key University of Minnesota cooperators are undertaking an assessment of oak decline in seven upper midwestern states using USDA-FS Forest Inventory and Analysis data. In addition, a new effort involving GIS and remote sensing was initiated to evaluate and predict development impacts on the Oak Forest resource in selected urbanizing areas of the region. This effort is in cooperation with Drs. Gary Johnson, Alan Ek, Paul Bolstad and Marvin Bauer and graduate student Brian Loeffelholz of the Forest Resources Department, and Dr. Frank Pflieger from Plant Pathology; various staff at the Minnesota Department of Natural Resources; and Kathy Ward, Paul Castillo, Dr. Kathy Kromroy, Dr. Marla Downing and Dr. Tom Schmidt with the USDA-FS.

Research on integrated management of soil-borne diseases in bare-root forest nurseries continues as part of a larger effort to find alternatives to methyl bromide use in the nurseries. Efforts to develop new tools and guidelines for controlling the overland spread of oak wilt have continued as well. Marc Neuman, M.Sc. student in the Department of Plant Pathology, is investigating the role of *Gliocladium roseum* in the natural biological control of overland transmission of the oak wilt pathogen.

Dr. Linda Kinkel, Associate Professor. This has been a year of comings and goings in our laboratory. Andy Ryan, Kurt Stromberg, Miriam Newton, and Kun Xiao all completed projects in my program (see details elsewhere!). In addition, we have welcomed two new

post-docs, Dr. Soon Dong Lee and Dr. Anita Davelos to our program, and will be welcoming a visiting scientist, Dr. Yaacov Katan, starting later in September. On the research front, we initiated our NSF Microbial Observatories Project at Cedar Creek Natural History area, and have collected substantial information on the indigenous antibiotic-producing bacteria in prairie soils. In particular, we have found that individual phenotypes are quite widely dispersed in the soil. We are currently studying the genetic relatedness among individuals of the same and different phenotypes from distinct soil locations. Our work on the potential for green manures to control soilborne plant pathogens continues in the field and the greenhouse; we have promising disease control results on alfalfa! I continue to enjoy collaborating with Drs. Debby Samac, Jeff Miller, and Jim Kurle on various aspects of this project. During May-June, I spent 3 weeks in the lab of Dr. Cindy Morris in France, funded by the French Organisation for Economic Development. During this time, we focused on analyses of microbial biodiversity on plants. In August, I presented an invited paper (Microbial Aggregation in the Phyllosphere: Origins and Implications for Population and Community Dynamics) at the Seventh International Conference on the Microbial Ecology of the Phyllosphere in Berkeley, California. This paper summarized collaborative work performed with Dr. Kurt Leonard. I hope to continue work on quantitative modeling of phyllosphere populations as part of a larger group of scientists that I have recently organized from throughout the country. Finally, I am just beginning to teach a part of a new course in Ecology, 'Plant Interactions with Animals and Microbes'. This course is for upper division undergraduates and beginning graduate students in Ecology and Plant Sciences. I am looking forward to communicating about plants and microbes with this new audience.

Kurt J. Leonard, Professor, USDA-ARS-Cereal Disease Lab. My most notable events in the past year involved travel. In October, 1999, I spent a week with a team of four USDA, ARS scientists visiting animal and plant disease research institutes in and around Moscow that were formerly involved in biological weapons research and development efforts. The trip was sponsored by the USDA and the International Science and Technology Center, which provides funding to redirect scientists into socially beneficial research. In December, I spent a week with another team visiting similar institutes in and around Almaty, Kazakhstan. It was sobering to see how much the former USSR had invested in animal and plant disease research for biological warfare and to see how poorly scientists in those institutes are faring now that the military funding has been cut off. For example, in its heyday, the Russian Research Institute of Phytopathology at Golitsino outside Moscow employed a staff of 250

including 69 Ph.D. level scientists in commodious laboratories. Now they have few scientists, their greenhouses are in ruins, and they can afford to operate only two of their 30+ plant growth chambers. In April, as a change of pace, I went with Dave Long to Cairo on a joint U.S.-Egypt grant on wheat leaf rust. We spent a week visiting research stations throughout the Delta Region, meeting wheat breeders and pathologists, checking wheat plots, and collecting rust samples. At the end of the week we went on to Israel to spend a few very productive days with Yehoshua Anikster, Jacob Manisterski, and others at the Institute for Cereal Crops Improvement at Tel Aviv University.

Jeff Miller, Assistant Professor. This past year I was invited to speak at the Zeneca Potato Research Meeting in Cabo San Lucas, Mexico, on my work with Dr. Carl Rosen examining the interactions between strobilurin fungicides and nitrogen fertility treatments on potatoes. This work was continued this summer. I also attended the Potato Association of America's annual meeting and presented a paper on the efficacy of various fungicide application methods in controlling potato late blight. Work on developing a late blight forecast for semi-arid potato production areas continued in cooperation with scientists from Idaho, Washington, and Oregon. In cooperation with Dr. Christian Thill in Horticultural Science, potato germplasm was screened for resistance to potato late blight, potato early dying, and common scab. Some selections are showing high levels of resistance and have good, marketable qualities. Finally, work was conducted with Drs. Pierre Robert and Carl Rosen, both in the Department of Soil, Water, and Climate using precision agriculture techniques to reduce metam sodium use for control of potato early dying. The lab grew in personnel as Julie Jenkins was hired on as a Junior Scientist. Additionally, Annabelle Perraud from Nancy, France joined the lab this summer as an intern studying the interactions between fungicides and fungal leaf epiphytes of potatoes.

Dr. Robert F. Nyvall, Professor, North Central Research and Outreach Center. Spent a nine week faculty improvement leave in January through March studying in the laboratory of Dr. Ric Cother, New South Wales Agriculture. While in Australia, I studied the fungus *Rhynchosporium alismatis* as a potential biocontrol of common waterplaintain in cultivated wild rice fields. As a devotee of Captain James Cook, my wife and I were able to visit Cooktown, Queensland the site of the repairing of the ship Endeavor after it had run aground on the Great Barrier Reef. On the way home, I and my wife stopped off on the island of Kauai and spent some time with old timer Jeri Ooka at the Kauai Experiment Station of the U. of Hawaii. Jeri is an expert on taro diseases.

Dr. Deborah A. Samac, Associate Professor, USDA-ARS-Plant Science Research. The past year has been an exciting and productive one. During the spring semester, I participated in teaching one of the new courses, *Causal Organisms in Plant Disease*. During the first 5 weeks of the Course, Linda Kinkel and I addressed the plant pathogenic bacteria with intensive lab experiments. In the area of research, my lab has developed alfalfa plants that are tolerant of aluminum and acid soil conditions. Ultimately, this will allow farmers to raise alfalfa in new locations and give them an additional tool to manage soil acidity, which is rapidly becoming a global problem. We have also developed alfalfa that produces a biodegradable plastic polymer, that will increase the value of alfalfa hay. The lab is moving further into the area of plant genomics, investigating comprehensive gene expression associated with disease resistance in *Medicago truncatula*, an annual relative of alfalfa. I was able to visit a number of interesting places to report on this research including: Norwich, England for the meeting on Molecular Biology of Model Legumes and Prince Edward Island, Canada for the International Conference on Plant Pathogenic Bacteria. Both trips afforded pleasant opportunities to increase my bird list. In November, I will attend the meeting Molecular Breeding of Forage Crops in Lorne, Victoria, Australia for my first trip "down under." I can't wait!

Carol E. Windels, Professor, Northwest Research and Outreach Center, Crookston. Increased prevalence and severity of *Aphanomyces* root rot has prompted the sugarbeet industry to be more interested in the development and evaluation of varieties with resistance to *A. cochlioides* (and cultural, biological, and chemical controls). My project (with the excellent assistance of Jason Brantner, M.S., 1995) is developing techniques to screen sugarbeet seedlings and adult plant germplasm for resistance in the greenhouse. In 1998, trials also were established in growers' fields infested with *A. cochlioides* to evaluate sugarbeet varieties for disease, yield, and quality (data not previously available). The success of this initiative resulted in the local sugar cooperatives taking over the evaluations in 1999 and we continue to assist them by rating plants for disease and by training company personnel in plant pathology techniques. In cooperation with Dr. John Weiland, USDA-ARS, Fargo, studies recently were started to determine genetic diversity in *A. cochlioides*, a continuation of research conducted by Alan Dyer for his M.S. Alan currently is doing research on factors affecting survival of oospores of *A. cochlioides* for his Ph.D. thesis. The project also is examining the epidemiology of *Aphanomyces* as well as evaluating the use of green cover crops and seed treatments to control the pathogen.

YARD AND GARDEN CLINIC (FORMERLY THE DIAL U CLINIC)

by Beth Jarvis

In June, Chad Behrendt, our plant pathologist, tendered his resignation. He is now building log homes in Wisconsin.

The search committee has selected four candidates for interviews. The interviews will be completed by the end of October and someone hired as soon as possible afterward.

Crystal Floyd, Chad's long time assistant, filled in as interim plant pathologist for much of the summer, but finally resigned to conduct research for an advanced degree in Forest Pathology. Sandy Gould, Plant Disease Clinic and Jon Powell, Extension Turf Pathology, have been terrific about helping out with pathology samples. (Thanks!!)

Calls to the Yard and Garden Line continue to increase. For the busy season of April through August, calls are up 28% in 2000 as compared to that period during the first year, 1998. The Master Gardeners are fielding a significant number of the calls as well.

To teach Master Gardener diagnostic skills, Yard & Garden Line staff started the "Bugs & Blights" workshops. In spring 2000, the traveling edition of the Bugs & Blights workshop was conducted in six Greater Minnesota and one metro sites. It was presented in seven Greater Minnesota and three metro sites in 1999. We reached an estimated 30% of state Master Gardeners over the two year program. There is keen interest, particularly outside of the metro, for such training opportunities.

In April 1999, Yard & Garden began publishing an e-journal twice a month from April through September and monthly the rest of the year. The three Yard & Garden Clinic supervisors contribute and there is generally at least one Aguest@ author. Jon Powell provided several turf disease articles this summer/fall and Rhoda Burrows, graduate research assistant, provided an article last year. (We welcome articles that would be of interest to the green industry and/or gardeners.) This newsletter is free. Each issue is archived on line and all are searchable through the Extension search engine. An e-mail new issue reminder is offered and that list grows monthly. The current month issue is at:

<http://www.extension.umn.edu/projects/yardandgarden/YGLNews/YGLNews.html>

Before they left, Chad and Crystal completed work on a website that is a photographic diagnostic key for diseases of fruit, trees, turf, shrubs and vines. The site is a diagnostic tool for green industry folk and Master Gardeners. Check it out at:

<http://www.extension.umn.edu/projects/yardandgarden/diagnostics/>

They also created a mystery disease site, featuring signs and symptoms of disease. Until Chad left, there was a new disease every month and the answers were given the following month. All of the previous issues are archived on the Yard & Garden website.

The monthly mystery disease site:

<http://www.extension.umn.edu/projects/yardandgarden/PlantPathWeb/Plpa.htm>

The archive site:

<http://www.extension.umn.edu/projects/yardandgarden/Archive-diseasewatch/mysteryarchiveindex.html> (this should all be on one line)

The Yard and Garden staff are happily awaiting the selection of the new plant pathologist and eager to see what interests and talents that person brings to the program.

PLANT DISEASE CLINIC

by Sandra L. Gould

The Plant Disease Clinic processed 3,570 samples and phone calls from commercial growers. Samples varied from Verticillium wilt on maple and catalpa to Phytophthora sp on pumpkin and virus on impatiens. Brian Scanlon and Pat Johnson, part time employees helped process samples. Grace Bucher also came in to help a few weeks.

Also, in addition to the regular samples from growers, the clinic staff worked with the Minnesota Department of Agriculture (MDA) on two projects. The first was a soil survey for potato cyst nematode. This is the third year the survey has been run in the potato production counties. The second project was a survey of plum trees from nurseries, orchards and some wild species for plum pox potyvirus. This virus was identified in the U.S. for the first time in 1999 in Pennsylvania. The MDA collected 1100 samples that were processed by the clinic using ELISA techniques. The virus was not identified in Minnesota; however, it has since been found in Canada. Another new disease to keep things interesting!

PLANT DISEASE HERBARIUM

by James V. Groth

Progress continues on combining the Department's plant disease herbarium with the fungal herbarium located in Plant Biology. The combined herbarium will be housed on the eighth floor of the Biological Science Building, where they have proper facilities for herbaria. It takes time to move some 55,000 accessions, especially since all of them must be placed in a -20F freezer for about a week before they can be carried over. This is done to destroy insects in the specimens. The combined herbarium will be part of the extended Bell Museum. In addition to combining the two herbaria, work is continuing to enter all accessions into a database. All of this is being supported by a two year grant from the state Legislative Commission on Minnesota Resources, which funds natural resource projects from state lottery profits. Movement of specimens will probably be completed by the end of the winter, but database entry and collation will go on for some time after that. Maintenance of a large herbarium is a never-ending job. Curation will be jointly by Dr. David McLaughlin of Plant Biology and me. The combined herbarium should be among the 20 largest mycological herbaria in North America.

FAIR PLANT PATHOLOGISTS

by Charlie Barnes and Karen Hilburn

August 28, 2000 was plant pathology day at the State Fair; okay, maybe only for the three hours that we volunteered at the COAFES booth. We brought examples of corn smut, root-knot nematodes on tomato, and TMV infected tomato donated by Dr. MacDonald, and two bins of wheat, one bin infected with scab and one bin with healthy wheat from Dr. Dill-Macky. Dr. Estevez de Jensen provided pictures of been root rot, infected plants and cultures of *Fusarium solani* and *Rhizoctonia solani*. We also brought brochures of the Yard and Garden Clinic, Plant Disease Clinic, and of the Plant Pathology Department. The COAFES booth was located in the U of M building, along with a number of other colleges. The School of Medicine, adjacent to the COAFES booth, had an interesting display of human brains and a stimulating (or electrifying) demonstration where they would hook up willing participants with electrodes to stimulate non-voluntary muscle contractions in their arms. There was a general University display of famous alumni, which included Norman Borlaug and his work that led to the Nobel Prize. Our booth was rather popular, probably because we gave away candy and prizes to people who

could answer ag trivia (we usually gave away candy whether they answered the question or not), and, of course, because of all the wonderful plant diseases!

OUR NEW LOOK TO THE WORLD

by Laszlo Gyenis

As of April 2000 the new departmental web page is posted at the URL <http://www.plpa.agri.umn.edu/>. The highly popular page has received over 2400 visits since it was posted. The information on the page was updated by a committee organized from members of the Department of Plant Pathology faculty, chaired by Dr. Jennifer Juzwik. The page was designed and organized by Dr. Laszlo Gyenis.

The new web page has a simple design for easy downloads from the web and contains information that is useful for visitors with diverse interests. The main page displays the mission statement and address of our Department. It also lists the contents of the page allowing easy access to the information listed by simply clicking on the underlined words. It is important to note that on the bottom of each page all the main links are listed allowing easy navigation through the main areas.

The visitor can find information about our history; and up-to-date information about current research areas, research facilities and resources. Clicking on the "Faculty" link, the web pages of the faculty can be accessed showing a recent photo of the faculty member, information about his or her research and selected publications.

Students can find important information about graduate and undergraduate education visiting the "Education" link. Detailed information can be found about M.S. and Ph.D. programs offered, as well as about Research Assistantships and admission requirements. The links "Undergraduate Education" and "Graduate Education" provide easy access to the list of classes in the undergraduate or graduate programs, respectively.

There are links to information about the Minnesota Extension Service, Minnesota Agricultural Experiment Stations, USDA, ARS Cereal Disease Laboratory and to the USDA, North Central Research Station and also to a list of alumni of the Department since 1905. For other sites of interest to plant pathologists use the "Related Web Sites" link.

Visit us at <http://www.plpa.agri.umn.edu/> and remember to bookmark our new departmental page on your web browser!

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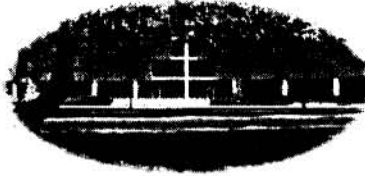
DEPARTMENT OF PLANT PATHOLOGY



Our mission is to conduct research and education, including extension and outreach in plant health science, emphasizing the diagnosis and control of plant diseases and relationships among plants, microbes, and the environment. This mission is directed to both agriculture (food production) and forestry (preservation of natural resources).

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