

AURORA SPOREALIS

June, 1985



Borlaug Hall

Conrad Buhr Photo

Department of Plant Pathology
University of Minnesota St. Paul, Minnesota

LETTER FROM THE DEPARTMENT HEAD

As I write this, I will have been in the position of Head of the Department of Plant Pathology at the University of Minnesota for a little over four months. As the first non-Minnesota alumnus to be appointed to this position, I believe it is important to continue to maintain the traditions that are so much a part of this department while looking for opportunities for us to take advantage of the new technologies that will move us forward aggressively into the future of agriculture. My arrival at Minnesota is accompanied by a nearly complete change in administrators in the College of Agriculture including a new Dean and new Heads in the Departments of Agronomy & Plant Genetics, Entomology, Horticulture, and Soil Science within the past three years. Dr. C. Eugene Allen is the new Dean of the College of Agriculture and Associate Director of the Minnesota Agricultural Experiment Station. Dean Allen was a faculty member in the Departments of Animal Science and Food Science & Nutrition, prior to becoming Dean. Dr. Orvin Burnside, a weed scientist from the University of Nebraska, is the new (April 1, 1985) Head in Agronomy and Plant Genetics. In Entomology, Dr. Richard Jones is now the Department Head. Dr. Jones was on the Entomology faculty at Minnesota prior to becoming Head. Dr. James Bartz came to Minnesota from private industry and has been Head of Horticultural Science and Landscape Architecture for the past three years. The Head of Soil Science is Dr. William Larson who held an Agricultural Research Service position in the Soil Science Department prior to becoming Head. It truly is a new era at the University of Minnesota and an excellent opportunity to establish new cooperative ventures among the departments. I am extremely optimistic about this happening.

I believe the major items of news that should be mentioned should include the institution of a new organizational structure within the department; the completion of the first phase of the new building addition about July 1, to be named Borlaug Hall that will house our administrative offices, classrooms, the plant pathology library and growth chamber facilities; and the initiation of a new integrated pest management undergraduate curriculum in the fall of 1985 that will be administered by Plant Pathology.

The new organizational structure has facilitated initiation of some extremely important activities in the department. Five standing committees have been appointed. They are: Education, Research, Extension, Public Alumni and Institutional Relations, and Physical Resources. Each of these committees has been charged with a total review of all facets of our departmental operation and has been requested to make recommendations with respect to new directions that we should be taking in each of these areas. The effect has been that faculty, students, and staff have all become aware of how our department functions within the context of their committee assignments. Each committee is currently developing a long range plan that will be incorporated into a total departmental document that will be used in determining departmental direction and resources needed to accomplish the stated objectives. Deadline for completion of the long range study is June, 1985. The next challenge before us is to effectively use the results of this report in a meaningful way that will allow us to move into the future in a thoughtful but aggressive manner that will ensure that we maintain a leadership role in plant pathology at the University of Minnesota and continue to provide services to the people of Minnesota and beyond.

The opportunity to move into new teaching facilities in Borlaug Hall comes at a time when we are making a renewed commitment to teaching at Minnesota. We want to be certain that we are incorporating the new methodologies in biotechnology into our instructional programs that are now influencing the direction of plant pathology as well as providing attention to the instructional needs that allow our students to respond to immediate problems facing agricultural producers relative to plant disease management. As we phase out the Plant Health Technology undergraduate curriculum and initiate the Integrated Pest Management curriculum in fall of 1985, we look forward to the challenge of providing a quality up-to-date curriculum that will continue to provide qualified graduates at the Bachelor's level that will compete effectively for employment in plant pest management and related occupations.

I am pleased to report to you that our present graduate students are an outstanding and enthusiastic group of young people that will represent the department well as they move into employment after graduation. As has usually been the case at the University of Minnesota, there are a number of international students among the ranks who are a source of enrichment for us all. In addition to their academic and research endeavors, the graduate students have been leading the way in social activities within the department. As an example, the annual E. C. Stakman Softball Game is still alive and well and took place on May 17th of this year.

Finally, let me say that the need is greater than ever for the support of our alumni and friends. We hope that the Aurora Sporealis will continue to serve an important role in providing you with current information regarding the Department. We ask that you continue to serve as ambassadors for the department wherever you may be and invite you to stop in and see us whenever you have the opportunity.

Kindest personal regards.

Sincerely,



Philip O. Larsen
Department Head

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OLD TIMERS COLUMN

ARVID MONSON, MS 1964, and his family are back in Minnesota. Arvid is taking course work in Higher Education Administration at the U of M. His son, Alan, is a freshman at Bethel College.

LOIS JOHNSON, Ph.D. 1980, says she has "finished her stint on primary screen and is now doing research instead of logistics and trouble shooting." (with DuPont at Wilmington, Delaware). She spent the summer (1984) in the field working with diseases of peanuts and sugar beets.

STEIN TELNESET, Ph.D. 1963, recalls an "exchange of opinion with Matt Moore about multi-line breeding methods in Mexico." Stein calls himself "a general practitioner in potato production, certification and variety description." He reports that in 1984, there was no ring rot in the potato seed crop in Norway. Stein has been fighting the disease for many years.

SHIH-I-LU, Ph.D 1952, Professor, Academic Sinica, Beijing, China, lectured on genetics of filamentous fungi at the Chinese University of Hong Kong. Lu has established a mushroom production and research center at Beijing.

JERI OOKA, Ph.D. 1975, confesses that after 10 years, he feels nostalgia for Minnesota and would like to attend the opening of the new plant pathology addition if it is during a warm time of the year. Mary's work with the Air Force keeps her in Honolulu. Jeri is pathologist at the University of Hawaii Experiment Station at Kapaa.

PAUL FRIDLUND, Ph.D 1954, says he is resisting retirement, but his work on stone fruit viruses at Prosser, WA is

still fun. Some of the fun apparently are his trips to Europe-Romania and Italy in 1984. He expects to go to France and Italy in 1985. (National Academy of Science Exchange - 3rd trip).

Minnesota Old Timers DEXTER DOUGLAS, Ph.D. 1968, and ROLLIE LINE, Ph.D. 1962, report that Midwest diseases are increasing in the West. Dexter found late blight on potatoes in Idaho in 1984, for the first time (so far, as he was aware). The seed potato business keeps Dex busy.

ROLLIE LINE, USDA, Pullman, WA says stem rust of wheat is increasing; barberries apparently are the primary source of inoculum. Rollie's principal effort has been on the epidemiology, host resistance and chemical control of stripe rust and leaf rust. Rollie was in France at a rust meeting last summer (so were Minnesota's Alan Roelfs and Jack Schafer). He and Fran drove through Ireland, visiting Ted Ryan and Tom Kavanagh.

ART SCHIPPER, JR., Ph.D. 1968, recently transferred from the USDA Forest Service Washington office to the Forest Service Pacific Northwest Forest and Range Experiment Station (PNW). Art will be an Assistant Station Director with administrative responsibilities for the research program in parts of Oregon and Washington.

E.P. (ERNIE) DuCHARME, Ph.D. 1949, was called out of retirement in November, 1984, to test experimental drugs as possible controls for citrus canker. The tests are being done in Argentina because the disease is endemic there. In 1984, it was discovered in Florida for the first time in more than 30 years. Early in his career, Ernie spent several years in Argentina working on citrus disease.

JOHN HILL, MS 1966, spent three weeks during the spring of 1984 in Morocco, sponsored by a USAID dryland project. He expects to make a couple more trips in the next 2-3 years. John was interested in the plant virus laboratories in Morocco. He recently shared in a grant of \$118,810 from the Iowa High Technology Council to study the use of monoclonal antibodies for detecting and analysing plant viruses. John is Professor in the Department of Plant Pathology, Seed and Weed Sciences, Iowa State University.

WILLIAM MERRILL, Ph.D. 1963, recently performed what was claimed to be the first forest pathology folksong at the 1984 Northeastern Forest Pathology Workshop at the University of Maine. The subject of the song was Dutch elm disease. We have not been able to determine if Bill accompanied himself on the guitar, but he probably did. As for being a first, there is room for doubt. Certain Ancients will recall that a feature of past meetings of the APS was home talent entertainment. Minnesotans composed and sang on occasions, but perhaps their efforts could not be called folksongs. They certainly haven't been perpetuated by the plant path "folk".

M.J. BOOSALIS, Ph.D. 1951, resigned his position as Head of the Department of Plant Pathology, University of Nebraska, in 1984. Boo had the job since 1964, the longest tenure in the history of the department. He is now devoting his entire effort to research, teaching and extension work. The new Head is Anne K. Vidaver.

MARK A. SMITH, Ph.D. 1968, has been appointed AID Project Manager to WARDA (West Africa Rice Development Assn.) headquartered in Monrovia, Liberia. WARDA is one of 13 international agricultural research centers in different parts of the world which are supported by the consultative group on International Agricultural Research. Before accepting the position, Mark was

with the Bureau of Science Technology, AID, Washington, D.C.

DR. PATRICK BORICH, MS 1963, was appointed Dean and Director of the Agricultural Extension Service, University of Minnesota, October 1984.

ARNE SKYTT ANDERSEN, MS 1930 (Plant Physiology), is one of the leading plant physiologists in Denmark. He is professor in the Department of Physiology Botany, University of Agriculture, Copenhagen. Dr. Andersen's principal research interest is in plant hormones.

For this information, we are indebted to Merete Hansen, an exchange student who spent the period July - November, 1984 at the University of Wisconsin at River Falls. Merete worked for Arne as a student. She visited the Department in St. Paul October 30, 1984.

KANTILAL P. PATEL, Ph.D. 1967, is presently associated with the Gujarat State Fertilizers Co., Ltd., Baroda, India. He is especially interested in seed inoculants. Recently, he wrote "I very much miss the Thursday Night Seminar, a unique feature of the department. Say 'hello' to all the members...".

CHUCK LOGSDON, Ph.D. 1954, now retired at Palmer, AK, reports the consulting business is slow but he is still "willing to make a buck if anyone is interested in contracting for my services". He painted the house last summer and felt proud of himself. No one who has never painted his house really knows the joy of accomplishment.

TOM MEW, Ph.D. 1972, and ANNABELLE, Ph.D. 1970, of the International Rice Research Institute, Los Banos, Laguna, Philippines, report that the Plant Pathology Department there is increasing its computer facilities. Tom kept busy traveling in 1984 to Asia, North America and Africa.

BILL ANDERSON, Ph.D. 1974, writes, "I find that I can administer the program for which I am responsible with reasonable effectiveness...Dutch elm disease and maintaining vegetation in a hostile, heavily used environment (Washington, D.C.) are continuing problems." Bill then becomes philosophical: appreciates the criticism he had from C.M.C., Stakman, and others. "Without criticism, we often neglect the necessary reflection on circumstances that lead to decision-making situations. This goes for scientific as well as administrative decisions." The newspaper, USA Today, March 22, 1985, carried a picture of Bill inspecting the blossoms of the famous cherry trees in Washington, D.C. and predicting full bloom April 1-4.

CURT ROANE, Ph.D. 1953, was made a Fellow of APS last summer. He writes, "I can soon join the ranks of the inspired, productive retired; (Virginia Polytech, etc.) I have a lot of projects lined up."

DEVI URS, Crookston, became a naturalized citizen of the United States before a federal judge in Detroit Lakes, MN last summer (1984). Devi is a laboratory technician with Dahlgren & Co., Crookston. Her husband, DR. RAMA URS, is pathologist with the same company. Rama was Jr. Scientist in the Department during 1975-77.

CHET WISMER, Ph.D. 1950, who is retired and living in Hawaii, spent most of October, 1984 in Bangladesh with a team of scientists on a sugarcane project which was sponsored by the World Bank.

ALBERT W. (WILLIE) FELDMAN, PhD 1947, retired October 31, 1983 from his position with the University of Florida, IFAS Agricultural Research and Education Center, Lake Alfred. Willie had been with the University of Florida for 25 years and had an international reputation for his work on various diseases of citrus trees.

THE STAKMAN CENTENNIAL

May 17, 1985 was the 100th anniversary of the birth of E.C. Stakman. The annual Stakman Memorial Softball Game was played (students 15, staff 6) followed by a feast of beer and bratwurst. If there were any prayers, parades or other manifestations of public rejoicing in Minnesota that day they probably were in honor of Syttende Mai, a national holiday in Norway.

One hundred years. And Stakman lived nearly 94 of them, 92 in good health. He was lucky. After beating the tremendous odds against being born at all (a scary thought) he spent his boyhood near the edge of the frontier, where the Big Woods and the Long Grass Prairies met. The Frontier was officially terminated (1890) while he was young, but the environment that moulded American character (F.J. Turner) was still dominant. Here young Stakman found rich opportunities to study nature while learning Greek and Latin in school and soaking up the attitudes of industry and independence that we like to think are American.

As a man it was his great good fortune to help build a vigorous, growing University in the days when the department head hired the help and then let them do their work while he assumed the onerous task of traveling abroad as missionary and advertising agent.

It has been said that "Wise men should lead. But wise men rarely have the strength; strong men rarely have the wisdom." Stakman was one of the "rare" exceptions. He was wise. He was a scholar who loved knowledge for its own sake. But he also had strength. He was willing and able to defend his wisdom against the assaults of ignorance and stupidity. He loved a good fight as much as he loved wisdom. These characteristics, with perhaps a touch of cussedness, made his life a joy to himself and a blessing to his fellow humans. We still enjoy that blessing. It was a good 100 years.

OBITUARIES

R.C. ROSE. Aurora has learned that R.C. Rose (MS 1915) died in Florida December 11, 1982 after a long illness. He was 92. Ray was Extension Pathologist for Minnesota from 1920 until 1956. The position was created in 1916 and held first by A.G. Tolaas and then by Frank Frolich. Ray was a pioneer and had to develop his own methods of making scientific plant pathology useful and profitable to Minnesota farmers. He was remarkably successful. Although he had to cover disease problems of all crops as well as ornamentals, his principal emphasis was on potato diseases and cereal smuts. He owned a farm near Forest Lake, Minnesota where he raised potatoes for many years. Ray resigned from the extension service in 1956 and took a position in San Salvador. When he retired he and Mrs. Rose bought a home in West Palm Beach, Florida where Mrs. Rose is still living.

Ray was born in St. Paul April 22, 1890. He attended high school in Brainerd, Minnesota and graduated from the University of Minnesota College of Agriculture, Forestry and Home Economics in 1913 with a major in horticulture.

ESTHER FROSHEISER. Mrs. Fred Frosheiser died February 12, 1985. She had suffered a paralytic stroke several years ago and had been a resident in the Lyngblomsten Health Care Center since then. She was born in Ellsworth, Minnesota July 20, 1913. Fred and Esther had no children. She is survived by four sisters.

W.J. CHEREWICK, PhD 1943, died October 14, 1983 after a long illness. Cherewick was born February 15, 1904 in Saskatchewan, Canada. His parents were from the Ukraine. Opportunities for elementary education were poor and his schooling was interrupted when he finished the fifth grade. At age 23 he resumed his education entering the tenth grade. In the face of almost insurmountable difficulties he graduated from the Manitoba Agricultural College

in 1933. This was during the Great Depression and life was very difficult until he was offered a temporary job by Dr. Craigie at the Dominion Laboratory of Plant Pathology in 1936. He borrowed money to come to Minnesota to take graduate work where he spent seven months that he described as "the happiest ever since I left the farm." After further work at Minnesota he received the MS in 1940 and the PhD in 1943. He was employed most of his professional career at the Dominion Laboratory at Winnipeg, Manitoba, Canada, where he became Agricultural Scientist in 1944. He retired in 1969.

GEORGE H. STARR, PhD 1931, died of cancer November 13, 1982 at Fort Collins Colorado. George was born at Bismarck, Illinois November 24, 1898. He graduated from South Dakota State College in 1925 and took an MS at the University of Nebraska before coming to Minnesota in 1928. Starr joined the University of Wyoming as pathologist in 1931 and became Director of the Agricultural Extension Service there in 1952. He retired in 1964 but was recalled twice to serve two-year half time appointments in plant pathology. After retirement he and Mrs. Starr moved to Fort Collins where he was engaged in the real estate business. His principal research interests included bacterial blights of beans and diseases of potatoes.

KENNETH G. McINDOE died May 24, 1984. Mac was born July 30, 1903 in Dunedin, New Zealand and earned the BSc and MSc degrees at the University of New Zealand. He came to Minnesota in 1929 and was granted the PhD in Agronomy and Plant Genetics in 1930. At the suggestion of E. C. Stakman he accepted, in 1931, a research position with the Firestone Plantations Company where he continued, except for a brief period during World War II, until 1958. He became Director of the Research Department which grew from one man (himself) to a staff of 15 during his tenure. Although his principal interest was in rubber, McIndoe started an active

policy of plant introduction of several tropical crops and eventually imported cattle, all of which was of great benefit to the native population. He retired to Florida in 1958 but continued as an adviser to the Firestone Company for several years.

BILL JILES ROBERTS. Dr. Roberts (PhD 1962) died March 19, 1984 at Fort Collins, Colorado. Bill was born in Olton, Texas February 15, 1927. He attended High School in Oklahoma City and received the BS in Botany and Plant Pathology (1951) and the MS (1953) at Oklahoma A & M.

He came to Minnesota in 1953 to work for his PhD. While here he was Agent and later Research Plant Pathologist with the USDA from 1954 to 1967. During this time he worked on rusts of cereals, principally oats, and contributed extensively to this field. He was adjunct Assistant Professor in the Department of Plant Pathology, University of Minnesota. Bill left the USDA early in 1967 to go with CIMMYT in Mexico as wheat pathologist and breeder. He left there to take a similar position with Cargill, Inc. in Fort Collins in 1969.

BENJAMIN ORTEGA C. died in April, 1985 after suffering with leukemia for several years. Ben was awarded the degree Ingeniero Agronomo in 1944 by The Escuela Nacional de Agricultura, Chapingo, Mexico. He earned the MS in plant pathology at the University of Minnesota in 1946.

Ben worked with the Ministry of Water Resources in Mexico for many years, being in charge of the Torreon district. Later he was in charge of the plant protection unit in the Ministry of Agriculture. He became Secretary of Agriculture in 1978.

Ben was born in Coyoacan April 16, 1919. He and his wife Giovanina had three daughters and a son.

MINNESOTANS AT APS

Minnesota Old Timers, faculty and students were endemic at Guelph--the Canadian city named after King George Guelph III of England. At least, they made up 7% of those registered and authored 11% of the abstracts published in PHYTOPATHOLOGY.

Minnesotans, past and present, served, as of August 1984, on various boards and committees of APS: 2 on Council, 14 on editorial boards of the two journals, and 43 on 34 Society committees.

Four Old Timers were elected Fellows of APS: Cereal rust pathologist Bill Bushnell, former Minnesota professor Rick Durbin, Minnesota graduate Curt Roane, and former College of Agriculture Dean at Minnesota Jim Tammen. Also, Publication Coordinator Thor Kommedahl received the Distinguished Service Award.

Old and New Timers gathered at Dave French's dormitory suite to make or renew friendships, count gray hairs, and recount past experiences since graduation from either Phytobrikhaus tremuloides (the Tottering Tower, now extinct) or from Phytobrikhaus erectus (currently developing pseudopodia)--and, of course, to quaff some of Canada's best beverages.

- Thor Kommedahl

LATE NEWS. M. F. Kernkamp, PhD 1941, died at Sun City, Arizona, July 5, 1985, after a long illness. Dr. Kernkamp was born near St. Paul, Minnesota, September 16, 1911. He was Head of the Department from 1961 to 1971, and retired June 30, 1977.

LATE NEWS. Matthew B. Moore, a faculty member since 1929, passed away July 10, 1985. Matt was born in St. Paul, Minnesota, April 11, 1905. He retired June 30, 1973.

HONORS

DR. J.E. VANDERPLANK of the Plant Protection Research Institute, Pretoria, South Africa, will receive the 1985 Elvin Charles Stakman Award. Vanderplank was chosen for his innovative approaches to epidemics, resistance and pathogenesis in plant disease and the stimulus he has provided for research in these fields.

The Stakman Award was established in 1953 by students, colleagues and friends of Stakman. The award is made to individuals in any country for outstanding contributions to the field of plant pathology in research, extension or international affairs. It consists of a medal, citation and honorarium.

Vanderplank will be the twenty-second person to receive the award which, with a few exceptions, is made annually. Fourteen of the past recipients have been students or visiting scientists at Minnesota.

Because of the illness of Mrs. Vanderplank, Dr. Vanderplank will be unable to come to Minnesota to receive the award.

THOR KOMMEDAHL, professor of plant pathology, was awarded the Distinguished Service Award by the American Phytopathological Society at its meeting in Guelph, Ontario, August 12-16, 1984. He was cited for his 16 years of service on Council held through various offices: councilor (NC Division), editor-in-chief PHYTOPATHOLOGY (4 years), president, and Publications Coordinator (2 terms), and for other contributions to the Society over a 26-year period.

PROFESSOR NEIL ANDERSON will be President of the local chapter of Sigma XI for 1985-86.

WILLIAM H. LIVINGSTON was initiated into Sigma Xi, May 16, 1985.

Several OLD TIMERS and PRESENT MINNESOTANS were made Fellows of the APS at the meeting in Guelph, Ontario, August 12-16, 1984. They are:

WILLIAM R. BUSHNELL for his "significant contributions to our understanding of the physiology of the interaction of the rust and powdery mildew fungi and their hosts". Bill has been in the Cereal Rust Laboratory since 1960. He is Research Pathologist, USDA and Professor of Plant Pathology, University of Minnesota. He received the Ph.D. in Botany at the University of Wisconsin in 1960. Recently, he received an Alexander von Humboldt Foundation Senior U.S. Scientist Award to do research at the University of Konstanz in Germany.

JAMES R. TAMMEN was Professor of Plant Pathology and Dean of the College of Agriculture, U of M, from 1976 to 1981. He received the Ph.D. in Plant Pathology at the University of California, Berkeley in 1954 and joined Penn State in 1956 where he became Head of the Department of Plant Pathology in 1965. Dr. Tammen is noted for his work in plant disease control by developing pathogen-free propagating stock. He had a distinguished career in research and academic administration, and, on leaving the University of Minnesota in 1981, became President of Oglevee Associates, Connelville, PA., an international producer of pathogen-free stocks of several horticultural crops.

RICHARD D. DURBIN was Assistant Professor of Plant Pathology at Minnesota from 1958 to 1962 and is now leader of the Plant Disease Resistance Research Unit, USDA, at the University of Wisconsin. His APS Award cites his work on many phases of plant disease physiology, especially the role played by toxins. He edited a treatise on Toxins in Plant Disease. Rick received the Ph.D. from the University of California-Berkeley, in 1957.

CURTIS W. ROANE, Ph.D. 1953, is Professor of Plant Pathology at Virginia

Polytechnic Institute and State University. His major contributions have been to knowledge of host-parasite interactions, fungus and virus etiology and breeding for disease resistance. His work has led to the production of high yielding, healthy small grains, corn and soybeans, including one oat, eight barley and five wheat cultivars, as well as seven corn hybrids, 15 corn inbreds and four corn germ plasms.

The Oat Newsletter for 1984 (Volume 35) is dedicated to PROFESSOR MATTHEW B. MOORE. The article cites Matt's major role in the development of 17 oat cultivars released by the Minnesota Agricultural Experiment Station. It also emphasizes his considerable influence on the thinking among plant pathologists about resistance to disease and his ingenuity in devising equipment for research. Matt's ability and influence as a teacher are recognized as well as his interest in nature and his wide knowledge of growing things that helped to make him a famous teacher. The Newsletter, which is sponsored by the National Oat Conference, also carries a picture of Matt pushing one of his belt planters.

Two students received funds for travel in 1984 under the Thomas French Travel Award. They were: PETER BEDKER, who attended a U.S.-Japan Conference on the Pine Wood Nematode in Hawaii and CARL MATYAC, who went to Las Vegas to a Western Soil Fungus Conference.

The Department of Plant Pathology at Kansas State University named the departmental library and reading room the "Earl D. Hansing Conference Room" in honor of PROFESSOR EMERITUS EARL D. HANSING. Earl is an Old Timer who got his start as an undergrad in Plant Pathology, F 1930. This was the last quarter that Stakman gave the lectures in the course. Earl got an A. He received the BS at Minnesota in 1933, MS, Kansas State, 1937 and Ph.D. at Cornell in 1941. He was on the faculty at Kansas State University from 1935 until his retirement.

COLEGIO DE POSTGRADUADOS 25 YEARS OLD

During 1984 the Colegio de Postgraduados at Chapingo-Montecillos, Mexico, observed the 25th anniversary of its establishment in 1959. The Colegio recently occupied a new campus about 2 km from the old location at Chapingo.

The Centro de Fitopatologia has its own new building and comprises about 10 faculty members and 25 graduate students. Dr. Ma de la Isla de Bauer, Minnesota MS 1957, is Head of the Department since 1983.

E.C. Stakman was intensely interested in the graduate program at Chapingo and gave its founders all the encouragement he could. The plant pathology library is named in his honor in recognition of his interest.

As part of the anniversary programs in plant pathology a conference was held in December 1984 on diseases of corn, beans and pepper. Professor James Groth of Minnesota presented an invitation paper on bean rust and population genetics.

The first Doctorate awarded by the Colegio was received by Leopold Fucikovsky in 1975. Dr. Fucikovsky is presently (1984-85) E.C. Stakman Visiting Professor at Minnesota.

COURSE

Dr. P.S. Teng was organizer of a training course on "Crop Loss Assessment to Improve Crop Production and Pest Management" held on the St. Paul Campus July 9-20, 1984. About 30 scientists from 16 countries participated. The course was sponsored by the University of Minnesota, FAO, USAID and the ISPP Committee on Epidemiology, Crop Losses and Production Constraints. A book is being prepared from lectures given during the course.

NEW PERSONNEL

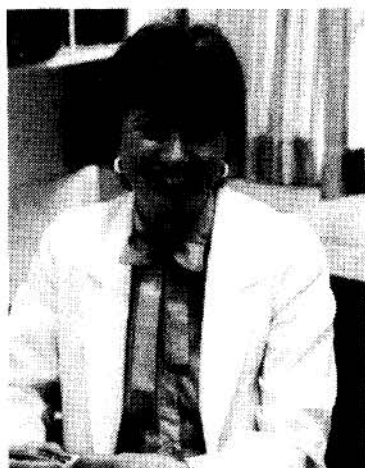
DR. PHILIP O. LARSEN assumed his duties as seventh Head of the Department on January 1, 1985. Phil is a native of Iowa and received his B.S. degree in botany at Iowa State University. He earned the M.S. and Ph.D. in Plant Pathology at the University of Arizona. Before coming to Minnesota he was Professor of Plant Pathology at Ohio State University where he had been on the faculty since 1968. His principal research interests are in the areas of bacterial diseases and diseases of turf grass.

Dr. Larsen shares with E.M. Freeman, the first Head of Plant Pathology, the distinction of not having a degree from the Department. All the other Heads were alumni. Freeman got his Ph.D. in botany at the University of Minnesota in 1905. He was Head for 33 years. Furthermore, Phil shares with J.J. Christensen, Head, 1953-1961, the distinction of having Danish ancestors. Thus the signs point to a bright future for Phil Larsen and Plant Pathology.

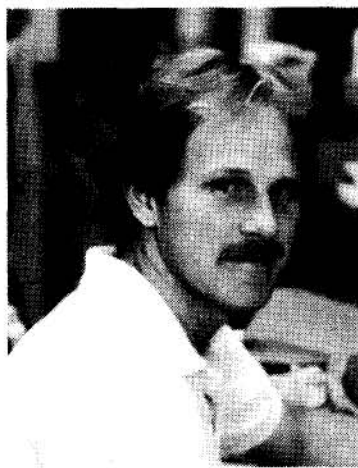
NEW HEAD



Dr. Larsen



Delores
Huebner



Todd
Burnes



Sue
Grayden

DELORES HUEBNER became Assistant Administrator in the Department on December 10, 1984. Delores held a similar position in the Community Public Health Program on the Minneapolis Campus before coming to Plant Pathology.

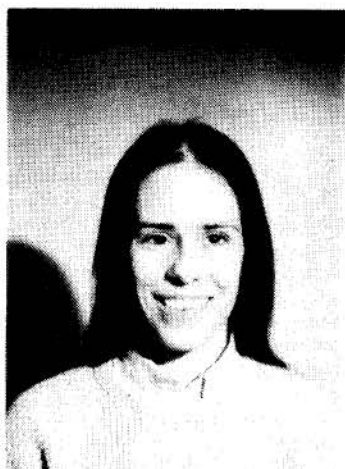
SUSAN GRAYDEN is Secretarial Assistant in the Plant Pathology office since January 26, 1984. Susan is a

graduate of Alexander Ramsey High School, St. Paul.

TODD A. BURNES was promoted to Junior Scientist January 16, 1985. He started working in the laboratory of Professor Blanchette as Laboratory Technician June 8, 1982, later as Sr. Laboratory Technician. Todd holds the BS (1983) in forestry, University of Minnesota.



Catherine Huot



Lucille Wanschura



Kriste Ericsson

KRISTE ERICSSON is Laboratory Technician in the laboratory of Professor Elwin Stewart. She started work May 9, 1984. Kriste holds a BA in biology from Bethel College, (1979), and the MS in botany from the University of Minnesota, Duluth.

CATHERINE HUOT assumed the position of Research Fellow January 1, 1984, working in Professor Percich's laboratory. She was awarded the BS in

botany and plant pathology by the University of New Hampshire in 1981 and the MS in plant pathology by the University of Massachusetts, February, 1984.

LUCILLE A. WANSCHURA is Laboratory Technician in the Cereal Rust Laboratory. She holds the BS (1983) in agriculture from the University of Minnesota. Lucille started work February 1, 1984.

PROMOTIONS

From Senior Secretary to Principal Secretary:

Debra Baden-Drange, February 16, 1984
Ann Arendt, February 16, 1984

From Laboratory Technician to Senior Laboratory Technician:

Lucy Wanschura, January 16, 1985
Dave Johnson, February 16, 1985

From Laboratory Technician to Junior Scientist:

Scott Enebak, March 16, 1985

From Senior Laboratory Technician to Junior Scientist:

Roxanne Denny, September 1, 1984
Todd Burnes, January 16, 1985

From Scientist to Assistant Professor:

Carol E. Windels, May 1, 1984

From Assistant Professor to Associate Professor:

Robert Blanchette, July 1, 1984

From Associate Professor to Professor:

Richard J. Zeyen, July 1, 1984
Alan Roelfs (Adjunct), July 1, 1984
Frank L. Pflieger, July 1, 1984
James V. Groth, July 1, 1985
Sagar V. Krupa, July 1, 1985
Elwin L. Stewart, July 1, 1985

VISITORS

1984

March 29. Dr. Robert Shrum, former Assistant Professor in the Department, is again a resident of St. Paul, working with the real estate division of Merrill Lynch, Pierce, Fenner and Smith. Bob allowed that he was glad to be out of plant pathology, and enjoyed his present work very much. May 11. Bob and Linda dropped in for coffee. February 12, 1985. Bob's picture appeared in the St. Paul Pioneer Press and Dispatch as one of Merrill Lynch Realty's "\$1,000,000 Class". Congratulations, Bob.

June 6. Ted Reiling, Ph.D. 1957, stopped for morning coffee. Ted was here to attend a meeting elsewhere on the campus.

May 14. Rollie Line, Ph.D. 1962, was in town for a cereal rust meeting. Rollie, Research Plant Pathologist with the USDA at Washington State University, is a high authority on stripe and leaf rusts of wheat. He and Fran visited relatives in northern Minnesota.

June 22. Ernie Rinke, agronomist who minored in plant pathology, left a note of greeting for Matt Moore and Eide, bringing greetings from M. F. Kernkamp of Sun City, Arizona. Ernie is also retired and a resident of Sun City.

June 27. H. David Thurston, Ph.D. 1958, visited the Department briefly. Dave is professor of plant pathology at Cornell University.

August 10. John Kraft, MS 1962, Prosser, Washington, and Bill Haglund, Ph.D. 1960, Mount Vernon, Washington stopped briefly on their way to the APS meetings in Guelph.

August 11. Patti Sebesta and husband, Steve, were in town where Steve was attending a meeting. Patti was on the plant pathology secretarial staff circa 1982-83. They now live in Fort Collins, Colorado.

November 19. Gil Stallknecht, Ph.D. 1968, stopped at Stakman Hall on his way back to Montana. He had attended a conference on intensive crop management at Toronto. Gil has been Superintendent of the Southern Research Center of the Montana Agricultural Experiment Station since July 1981. Before that, he did research on vegetable seed crop production with the University of Idaho at Parma. Still earlier, he worked on potatoes and is author of two review articles on growth regulators, nucleic acid metabolism and tuberization. Gil wears a broad-brimmed hat and reports that the hunting in Montana is wonderful. The Southern Experiment Station is located near Huntley.

1985

January 24. David Punter, Visiting Associate Professor, 1975-76, was here to attend a meeting on wild rice. He is Professor of Plant Pathology at the University of Manitoba.

April 17. Dr. Subhi A. Qasem, Ph.D. 1958, was on the campus to attend an International Research Policy Seminar. Subhi is Dean of the Graduate School in the Faculty of Science, University of Jordan, Amman.

May 16. Dr. Martin Tveit, MS 1950. Martin was enroute to China, Indonesia and Japan in the interests of the Fifth World Productivity Congress, to be held in Jakarta in April, 1986. The Conference is sponsored by the World Confederation of Productivity Sciences, of which Martin is President. In Minneapolis he conferred with Professor Tor Dahl, local member of the Advisory Council. Professor Shi-I-Lu, PhD 1952 is the council member for China. Lu and Martin were office mates in plant pathology circa 1950.

May 22. Roger V. Anderson, MS 1957, had coffee in 401 Stakman Hall. Roger was in town to attend a wedding and visit his parents who live in St. Paul. He is Senior Research Scientist at the

Biosystematics Research Institute, Agriculture, Ottawa, Ontario, Canada.

May 28. Dr. John Neiderhauser arrived in time for morning coffee and turned the meeting into an intensely interesting seminar on the subject. "Should APS adopt an official policy on the moral obligation to increase food production to reduce starvation in the world?" John and Mrs. Neiderhauser, who live in Tucson, Arizona were in the Twin Cities to get acquainted with a new grandson.

June 24 and 25. Norman Borlaug, PhD 1942, stopped to visit in Stakman Hall.

Among visitors who spoke at seminars and other groups were:

1984

S. P. Raychaudhuri, New Delhi, India 4/6.
 Gary F. Leatham, Forest Products Laboratory, Madison, Wisconsin 4/17.
 A. Tantaoui, Institut Hassan II, Rabat, Morocco 4/19.
 Steven A. Slack, University of Wisconsin 4/25.
 Earl Platt, Harvest States (GTA), St. Paul, Minnesota 4/26.
 Paul Reinecke, Bayer Division of Mobay Chemicals, West Germany 6/1.
 Hitoshi Kunoh, Mei University, Japan 6/29.
 Brian C. Clifford, Welsh Plant Breeding Station, Aberystwyth 8/13.
 Alex Shigo, U. S. Forest Service, Durnam, New Hampshire 10/17.
 Alex Diner, Michigan Technological University, Houghton 11/5.

1985

K. Raman, International Potato Center, Lima, Peru 1/31.
 John Lockwood, Michigan State University 3/4.
 W. R. Sharp, DNA Plant Technology Corp., Cinnaminson, New Jersey 3/28.
 D. A. Evans, DNA Plant Technology Corp., Cinnaminson, New Jersey 3/28.

Milton Zaitlan, Cornell University 5/8.
 James Cook, USDA, Washington State University 5/7.
 P. Jatala, International Potato Center, Lima Peru 5/16.
 John E. Cross, Asgrow Seed Co., Kalamazoo, Michigan 5/30.
 B. C. Joyner, ChemLawn Co., Columbus, Ohio 6/4.

Other Visitors, who signed the Book were:

1984

Rama Urs, Crookston, Minnesota 1/18.
 Monica Wallace, Madison, Wisconsin 3/20.
 Eugenia Schieber, Antigua, Guatemala 4/11.
 George A. Zentmeyer, University of California, Davis 4/11.
 Larry Littlefield, North Dakota State University 4/20.
 Vernyl Pederson, Forrest W. Nutter, Jr., North Dakota State University 5/7.
 Jim and Cindy Mital, Moscow, Idaho 5/16.
 Larry W. Moore, Oregon State University, 5/24.
 Helen Miller Alexander, University of Louisville, Kentucky 6/1.
 Di Yuan bo and Xy Xiachua, Beijing Agricultural University 6/25.
 Lois and Wally Sackston, McGill University, Quebec, Canada 8/12.
 James R. Burleigh, Rabat, Morocco 9/14.
 Ezzahauri Thami, Rabat, Morocco 9/14.
 Shin C. Doo, Forest Research Institute, Yezin, Burma 10/26.
 Nyan Htun, Forest Research Institute, Yezin, Burma 10/26.
 Merete Hansen, Copenhagen, Denmark 11/13.

1985

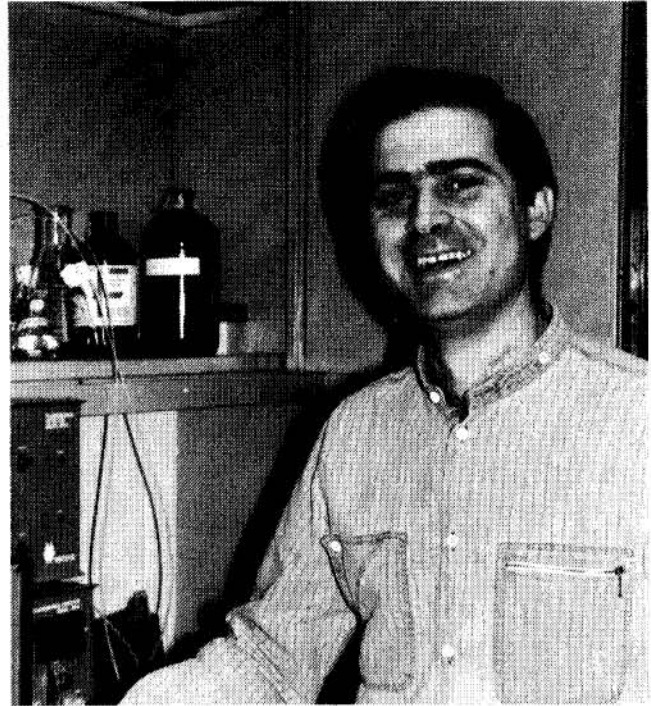
Stephen Sunderwirth, Froisey, France 1/16.
 Craig Grau, University of Wisconsin 3/18.
 Mark Andrews, Oklahoma State University, 4/30.
 Egunjobi Oberfunke, University of Ibadan, Nigeria 4/18.

VISITING SCIENTISTS

DR. ANGELO VISCONTI arrived in St. Paul October 1, 1983 and has been working in Dr. Mirocha's laboratory on the metabolism of *Fusarium* toxins in animals, with emphasis on the identification of T-2 metabolites by using computerized gas chromatographic and mass spectrometric methods.

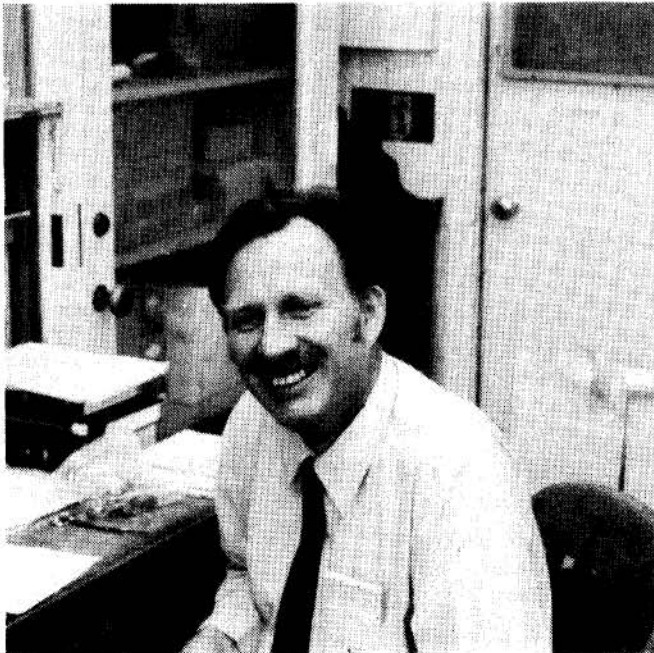
Dr. Visconti is a Research Chemist at the Instituto Tossine e Micotossine da Parassiti Vegetali of the Italian National Council for Research (C.N.R.) in Bari, Italy. His visit to the Department was supported by a NATO fellowship and a C.N.R. fellowship.

A farewell tea was held in Dr. Visconti's honor on March 22, 1985 before his return to Italy.



PROFESSOR ISAAK WAHL of the University of Tel Aviv, Israel, worked in the Department from September 25, 1984 to January 24, 1985. It was his fourth visit here as Visiting Scientist, besides several shorter visits. Isaak shared his vast knowledge of the rusts

with several local investigators, but spent a majority of his time on a cooperative project with Professor R.D. Wilcoxson having to do with slow rusting of *Hordeum spontaneum* by *Puccinia hordei*. He also gathered material for a book he is writing.



DR. LEOPOLD FUCIKOVSKY arrived August 23, 1984 to spend a year studying bacterial diseases in the Department. Dr. Fucikovsky was born in Czechoslovakia, is a citizen of Canada, but has lived in Mexico since 1965. He holds the position of Professor of Plant Pathology in the Colegio de Postgraduados, Chapingo, Montecillos, Mexico. He received the MS in plant pathology at the University of Windsor, Windsor, Ontario, Canada and the Doctorate at the Colegio de Postgraduados where he was the first candidate when the Doctors program was started there in 1972 and the first to receive the degree, in 1975. Dr. Fucikovsky holds the E.C. Stakman Visiting Professorship at Minnesota. Mrs. Fucikovsky and their four children are with him in St. Paul.

DEPARTURES, NEW JOBS

GREG PRATT, PhD 1982, started work November 1, 1984 in his new position as Pollution Control Specialist, Minnesota Pollution Control Agency. His headquarters are in Roseville, MN. Greg resigned from his position in the Department as Research Fellow in the air pollution project.

MARY PALM, PhD 1983, accepted a position as Mycologist/Plant Protection and Quarantine Officer with USDA/APHIS. She is located at the USDA Mycology Laboratory in Beltsville, MD. Mary was Research Associate in the Department before leaving for the new job.

ROD VARGO, PhD 1984, left February 18, 1985 to take a position with Mobay Chemical Corporation, agricultural Chemicals Division, Davis, CA. He will be Field Research and Development Representative for the N.E. third of California, primarily the Sacramento Valley. Rod will work with nut and non-citrus fruits, rice and tomatoes.

CHARLIE GUY left at the end of October, 1984 to assume the position of Assistant Professor of plant physiology and biochemistry at the University of Florida, Gainesville. He started work December 3, 1984. Charlie will be in the Department of Ornamental Horticulture doing research on heat, cold, and saline stress in ornamental plants. He received the PhD in the Department of Horticulture, U of M and has worked in Dr. Brambl's lab since September, 1983. He is a native of Florida.

KATHY ZUZEK, Jr. Scientist with the forest pathology project, left June 1, 1984. She entered the graduate school at the University of Wisconsin.

PHYLLIS (RAE) MONTGOMERY resigned her position as Jr. Scientist on Dr. Teng's project March 30, 1984. She is now Assistant Extension Computer Specialist in the Department of Agronomy and Plant Genetics.

DR. CAROL E. WINDELS joined the staff of the Northwest Experiment Station, Crookston, Minnesota May 1, 1984, where she will work with diseases of crops in that area. Carol will remain on the faculty of the Department of Plant Pathology in St. Paul with the rank of Assistant Professor. She has the distinction of being the first person to hold a position in a department at St. Paul but stationed permanently at one of the sub-stations. Carol has been equipping her laboratory and getting acquainted with disease problems in the Red River Valley. She admits there will probably be enough to keep her busy.

FRED BAKER, PhD 1981, left July 25, 1984 for Logan, Utah where he is now Assistant Professor in the Department of Forest Resources in the College of Natural Sciences, Utah State University. His job involves half time research and half time extension work. Fred has been back in St. Paul a couple of times since he left, complaining about the high humidity here.

BILL LIVINGSTON, PhD 1985, has accepted a position as Assistant Professor of Forest Pathology at the University of Maine, Orono. He will start work September 1, 1985.

DR. JAMES S. BAUMER accepted a position as plant pathologist with the Land O' Lakes Company effective July 1, 1984. His headquarters is at Fort Dodge, Iowa. Land O' Lakes, known to most people as a milk and butter company, is based in the Twin Cities. Jim said the company has been breeding alfalfa and selling seed for about 20 years and started a soybean project eight or nine years ago. The company employs several plant breeders but Jim is the first plant pathologist on the staff.

As the Company's first plant pathologist, Jim rated the cover story in Land O' Lakes Mirror, the company's magazine for April, 1985. Colored pictures on the cover and in a two page article show Jim busily selecting

soybean and alfalfa seedlings for resistance to disease.

Jim was Assistant Professor in the Department from July 1, 1979 until he went with Land O' Lakes.

ROBERT DIETRICH, who passed his MS final on June 17, 1985, will leave in August to become a candidate for the PhD in plant pathology at the University of California, Davis.

YIN-WON LEE, who passed his PhD final 10/25/84 accepted a post-doctoral position at the University of Maryland.

BARBARA EDSTROM, Assistant Administrator, resigned from her position in February 1984. Barbara and her husband moved to New Jersey where he had accepted a new position with 3M Company. Barbara had worked in the Department since the fall of 1978.

NEW JOBS

DR. RICHARD T. ZINK has accepted a position with the Minnesota State Department of Agriculture as Director of seed potato certification. Dr. Zink was recently awarded the PhD in plant pathology at Kansas State University. He will be stationed at the University of Minnesota Northwest Experiment Station at Crookston instead of at St. Paul, as previous directors have been. Potato certification in Minnesota was established by the legislature in 1919, the original laws being largely formulated by E.C. Stakman and A.G. Tolaas. Tolaas was the first director. He retired in 1958.

ROBERT NYVALL, PhD 1969 has been appointed Superintendent of the U of M North Central Experiment Station at Grand Rapids and will assume his duties in June 1985. Bob is a native of Thief River Falls, MN and got a BS in forest management at the U of M. He has been at Iowa State University most of his professional career, where he was subject matter leader for extension workers in plant pathology.

JUDY THIES, MS 1982, assumed the duties of Plant Pathologist, USDA, ARS on April 1, 1984. She cooperates with Dr. Donald Barnes, USDA, in testing new lines of alfalfa for resistance to several diseases. This continues the work done by the late Fred Frosheiser. Judy is a candidate for the PhD.

DR. A.J. (AL) LINCK became Provost and Vice President for Academic Affairs at Colorado State University September 16, 1984. Al came to Minnesota in 1955 as Research Fellow in Plant Physiology, which was then a section of the Department of Plant Pathology and Botany. He moved into administration as Assistant Director of the Agricultural Experiment Station in 1966 and became Dean of the College of Agriculture in 1971. In 1973 he became Assistant Vice President of the University and was Associate Vice President when he accepted the position in Colorado.

LARRY J. LITTLEFIELD, PhD 1964, became Head of the Department of Plant Pathology, Oklahoma State University on April 15, 1985. Larry was Professor of Plant Pathology at North Dakota State University before going to Oklahoma.

Steve On Leave

Dr. Steve Johnson, Research Associate on the Epidemiology Project, was on leave January 15, to April, 1985. While on leave Steve was Visiting Assistant Professor in the Department of Botany and Plant Pathology, Oregon State University, where he taught a course in epidemiology (B.T. 453) to a class of about 20 students.

GRADUATE STUDENT ACTIVITIES

The principal concerns of graduate students, of course, are getting an education and serving as scientific hewers of wood and drawers of water. In the past they have also had other responsibilities such as serving on the Thursday night seminar committee (appointed by the Head), attending APS meeting (at their own expense) and playing winning softball. Social gatherings, usually arranged by the seminar committee, in the fall and at Christmas, have been traditional for many years.

With the passage of time and decreasing paternalism by the faculty there has been a need for better organization. The students are even now in the process of adopting a constitution which will help avoid some of the inevitable snafus that have developed during a period of transition from a small and simple department to the present large and complex organization. The following is a summary, in more or less outline form, of recent accomplishments and present conditions.

Meetings

The students have a meeting once or twice a quarter. Academic, social and organizational problems are discussed. Committees are elected. Peter Bedker has chaired these meetings in recent months. He has also been student representative at faculty meetings.

Seminar Committee

The Thursday Night Seminar Committee finds speakers for the evening seminars, arranges for hosts at the "roast the host" session and attends to other details. It is a big job. Personnel of the committees, which serve from June to June, were, in 1983-84: Kenneth Johnson, In Sung Hoang and Philip Graham; for 1984-85: Frisby (Tad) Smith, Dave Johnson and German Hoyos. An

account of the seminars in 1984-85 is given at the end of this article.

The seminar committee also has had the responsibility for arranging the corn roast at Rosemount each fall and the annual Christmas party. The corn roast was held on September 25 in 1984 and included barbecued pig as well as corn and other refreshments. Dave Johnson and German Hoyos, assisted by Jim Rowe and Cheri Olson (who raised the corn and roasted the pig) made it a successful event. (Some difficulty was reported in collecting from some of the guests).

The annual Christmas party in 1984 consisted of a pot luck dinner in the St. Paul Student Center. A live band was hired for dancing after the dinner. Tad Smith was the principal planner for this event which was highly successful. This committee also arranges the annual Stakman Memorial softball game. In 1985 the score was Students - 15: Staff - 6.

Special Projects Committee

To relieve the seminar committee of some of its miscellaneous jobs, a Special Projects Committee was organized, largely through the efforts of Bill Livingston, in 1981. Originally its functions, as stated by Carl Matyac in Aurora 54: 12-15, were: 1. Make a departmental photo board (pictures of everyone on the wall near 304). 2. A student orientation program. 3. To sponsor guest speakers. 4. Contribute to Aurora Sporealis. In 1983 this committee was co-chaired by Linda Treeful and Mary Sortland, in 1984 by Bob Dietrich and Lewis Otjen and in 1985 by Bob Dietrich and Margaret Stahler.

The photoboard has been in place for several years and is very useful. Bill Livingston has been responsible for keeping it up to date.

Guest Speakers

The Special Projects Committee has been especially successful in securing

outstanding guest speakers. In 1984, May 17 and 18, Dr. Gary Leatham of the Forest Products Laboratory, Madison, WI, visited the Department and presented talks on growing a cultivated mushroom (Lentinus edodes) and the enzymes produced by the same fungus. On May 30-31, 1985 the guest speaker was John E. Cross (PhD 1966) who discussed legal implications of seed borne pathogens and disease resistance labelling of commercial seeds. John is Quality Consultant with Asgrow Seed Company, Kalamazoo, MI, a job that involves considerable dealings with the law and lawyers. The committee has promoted *gemutlichkeit* among the faculty, students and guest speakers by having pot luck dinners in the seminar room before evening meetings.

Fund Raising

Engaging guest speakers takes money and the Special Projects Committee has been successful in this respect also. To gain access to other University Funds the committee registered with the Student Organization Development Center. This permitted proposals for funding which were submitted to the Minnesota Student Association and the St. Paul Board of Colleges. This resulted in grants of \$200 (SPBOC) and \$180 (MSA) for the speakers fund as well as \$200 (SPBOC) for a copy stand.

To help students learn how to use the copy stand and prepare better presentations for the 1985 APS meeting, Bill Livingston and Dr. Phil Larsen arranged for Dr. Bobby Joyner of ChemLawn Company, Columbus, Ohio, to visit the Department on June 4, 1985. Dr. Joyner conducted an excellent two hour session on how to make "visuals" for technical presentation.

In March, 1985, after months of effort by Carl Matyac and Linda Treeful, the Department purchased an IBM-PC computer for student use. To help introduce novices to personal computing, Bill Livingston, Joe O'Brien and Bill

Shane held sessions on how to use the IBM-PC as a text processor, data organizer and graphics generator.

Other activities of the Special Projects Committee included a beer sampling party in the seminar room at 4 PM, November 16, 1984. Munchies, beer and cider were provided. The principal feature was home made beer provided by Monte Miles, Ken Johnson, Steve Johnson, Carl Maytac, Bob Dietrich and Lewis Otjen. Aurora's reporter sampled Bob Dietrich's brew and found it highly satisfactory. It had a wonderful beer taste and a sufficient kick. We heard no complaints about any of the other entries except Professor Groth's wine.

On April 12, 1985 a similar event was held with the addition of bratwurst on buns which sold for \$1.50, any profits going to support the speaker fund. Beer and bratwurst were also sold at the Stakman Memorial Softball game, adding a German touch to the affair that must have gladdened the soul of the Professor on his 100th birthday.

Further fund-raising efforts during Spring, 1985 have included the sale of doughnuts, bismarcks, sweet rolls and bagels at 10 AM Tuesdays, in time to catch the morning coffee break. Sales have been brisk. Bill Livingston is handling the service.

Perhaps the gala event sponsored by the Special Projects Committee was the observance of the Chinese New Year. This is Marty Stahler's account:

The Chinese Lunar New Year was celebrated at Tam's Rice Bowl on February 16, 1985 by 75 festive individuals including faculty, staff, students and friends. The celebration included a sumptuous and bountiful menu of traditional dishes such as winter melon soup, rainbow shrimp and flaming chicken. After dinner a cultural presentation on Chinese New Years and a slide show were presented by Zhangjang Liu and Cheng-Go Wang. Co-sponsoring the

event with the graduate students in plant pathology were Mr. Wang and Mr. Liu, Mei-Li Yuan, Dong-Ya Gao, Weiping Xie and Chang-Cheng Hu. A good time was had by all!

Student Constitution

During 1985 a Constitution of the Students of Plant Pathology has been drafted and is in the process of adoption. Bill Livingston has been a leader in writing the document.

Briefly, the constitution provides the usual rules for electing officers, calling meetings, amendments, etc. The by-laws provide for the election of individuals who would be recommended to serve on one of the five departmental committees. (See elsewhere, this Aurora).

The by-laws also create three standing committees and define their functions. These committees are:

1. The Academic Committee, to be responsible for the Thursday night seminar, visits of scientists invited by the students and special workshops.

2. The Students Resources Committee which will maintain and establish guidelines for student equipment, kitchen facilities, photoboard and office space.

3. The Social Committee will organize or encourage social hours, raise money, and conduct intramural sports and traditions such as the Stakman Memorial Softball game and the Rosemount Corn Roast.

This constitution reflects the commitment of the students to enrich their own educational experiences and support the efforts of the faculty to maintain a strong, growing department. It certainly will help to systematize efforts which, in the past, have often lacked coordination.



Professors Larsen and Fucikovsky celebrate the Chinese New Year.

Thursday Evening Seminar

During 1984 and the first five months of 1985 the Thursday evening seminar met 49 times. (The Seminar meets every week except during the summer, holidays and inter-quarter breaks). Speakers were scheduled for all meetings except four, which were devoted to introductions and open discussions. Of the scheduled speakers, 13 were departmental faculty or staff members, six students, four visiting scientists, 12 University personnel from other departments, six from other institutions in the USA and three from other countries.

The subjects covered were diverse: The disease clinic, extension, consulting, control, acid rain, grain quality, statistics, the library, IPM (integrated pest management), computers, viruses, mushrooms, ecology, host-parasite relations, mycotoxins, specific diseases, breeding for disease resistance, wood decay, geographically related problems and the evolution of pathogens. (What about "physiological specialization"? See "evolution of pathogens").

Attendance averaged 20 per meeting, ranging from 9 to 40. Dr. Paul Teng drew the 40 crowd with his sermon on "Integrated Pest Management."

RECENT GRADUATE STUDENTS



Tad Smith



Margaret Stahler



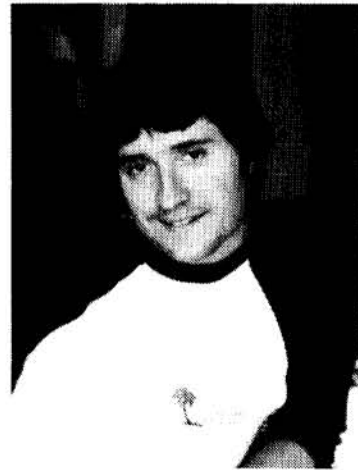
Zhanjiang Liu



Catherine Philips



Weiping Xie



Scott Enebak

Name, Academic Background
Starting Date; Adviser

ENEBAK, SCOTT. BS, University of
Minnesota, Forestry, 1984.
S, 1985; Blanchette

LIU, ZHANJIANG, BS, N.W. College of
Agriculture, Wugong, Sharaxi, China,
Plant Pathology, 1981; MS, Graduate
School of Beijing, Agricultural
University, China, 1984.
Su 1983; Bushnell

PHILIPS, CATHERINE MARY. BS, University
of Chicago, Biology, 1981.
F 1984; Mirocha

SMITH, FRISBY D. (TAD). BS Lawrence
University, Appleton, Wisconsin.
Biology, 1983.
F 1983; Banttari

STAHLER, MARGARET. BS University of
Wisconsin, Nutrition-Dietics, 1977.
University of Massachusetts, Pla Pa,
1983-84; Arizona State, Pla Pa, 1982-83.
F 1984; Roelfs

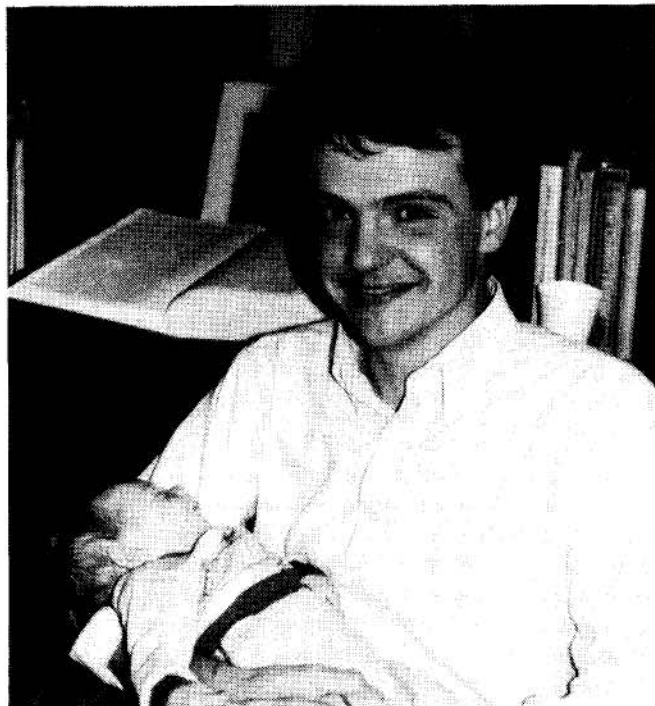
XIE, WEIPING. BS, Southwest Agricultural
College, Chongqing, China. Plant
Protection 1982.
F 1984; Mirocha

ORAL EXAMINATIONS PASSED**1984**

March 30	Mohamed Achouri	PhD prelim
May 3	Rod Vargo	PhD final
May 8	Carl Matyac	PhD prelim
May 25	William Macheel	M. Agric.
May 30	Indre Bildusas	MS final
June 22	Kosim Kardin	PhD final
June 27	Laura Schickli	MS final
July 9	Paul Zambino	MS final
August 10	Monte Miles	MS final
September 14	Ross McQueen	PhD prelim
September 26	Clint Kohls	PhD prelim
October 25	Yin-Won Lee	PhD final
November 19	Carl Matyac	PhD final
December 7	David Gardner	PhD prelim
December 17	Lewis Otjen	MS final
December 19	Linda Treeful	PhD prelim

1985

January 11	Clint Kohls	PhD final
January 25	Joe O'Brien	PhD final
February 11	In-Sung Hoang	PhD prelim
February 12	Bill Livingston	PhD final
April 15	Kenneth Johnson	PhD prelim
June 17	Robert Dietrich	MS final



Ken Johnson minds Cale Henry Drange while Mama Debbie socializes at the tea for Dr. Isaak Wahl, Jan. 1985.

MARRIAGES

March 31, 1984. Hamed K. Abbas and Jean Marie Baker.

July 7, 1984. Indre Bildusas and Brent Pemberton, at Chicago, Illinois. They will live in Tyler, Texas.

BIRTHS**1984**

January 30. Kathleen Doyle to Suzie Lannan and Tim O'Hara. 6 lb, 15 oz.

April 21. Janelle Claire to Bill and Gretchen Shane. 8 lb, 13 oz.

April 29. Matthew Eric to Kenneth and Susan Johnson. 8 lb, 11 oz.

May 7. Annalisa Marie to Bob and Pat Pawlosky. 8 lb, 11 oz.

May 24. Robert William to Mr. and Mrs. Bill Macheel. 8 lb, 15 oz.

June 27. Erin Lynn to Kurt and Lynn Ault. 6 lb, 12 oz.

August 2. Joan Marguerite to Kathy and Greg Widin. 7 lb, 12 oz.

August 4. Julianne Leigh to Mark and Dianne Stennes. 9 lb, 0 oz.

August 24. Janna Robin to Steve and Jennifer Johnson. 6 lb, 7 oz.

October 12. Theodore Ernest to Hunt and Gail Wiley. 8 lb, 11 oz.

November 5. Elise to Dann and Jean Adair. 6 lb, 13 oz.

December 17. Cale Henry to Debbie Baden and Chuck Drange. 7 lb, 2 oz.

1985

January 8. Henry McGuffey "Harry" to Timothy and Susan Huberty. 8 lb, 8 oz.

February 28. Clara Lee to Yin-Won and Won-Me Lee. 7 lb, 4 oz.

March 2. Anna Kristine to Tom and Kathy Kromroy. 9 lb, 0 oz.

March 29. Daniel James to Meg and Jim Clemens. 7 lb, 4 oz.

June 1. Noah Abbas to Hamed and Jean Abbas. 8 lb, 6 oz.

PUBLICATIONS

During 1984 the departmental editorial committee read 72 manuscripts submitted by members of the Department for publication in refereed journals or as chapters in books. Fifteen of these were on cereal rusts, 12 on tree diseases and 12 on mycotoxins. Most of the rest were on pathogens of various crops, and practically all of them emphasized one or more of such aspects of plant pathology as genetics, resistance, molecular biology, soil borne pathogens, viruses, pathogenesis, epidemiology or computer modeling. During the first four months of 1985, 28 manuscripts were processed.

Dr. Sagar Krupa made a statistical study of numbered publications of the Minnesota Agricultural Experiment Station for the academic year, 1983-84. He summarized the data as follows:

Department	Number of publications	
	Total	Per faculty member
Plant Pathology	68	3.2
Entomology	42	2.8
Horticulture	51	2.5
Agronomy	79	2.0
Soil Science	50	1.5

THERE WERE A FEW BOOKS

Ma de Lourdes de la I. de Bauer. Fitopatologia. Colegio de Post-graduados. 1984. 377 pp.

H. David Thurston. Tropical Plant Diseases. American Phytopathological Society. 1984. 208 pp.

C.M. Christensen and Richard A. Meronuck. Maintenance of Quality in Cereal Grains and Oil Seeds in Storage and Transit. University of Minnesota Press. Fall, 1985.

Authoring technical papers or review articles and books is only part of the job of disseminating scientific knowledge. Among other duties is that of editor; an essential, onerous and often thankless task. Here are some recent editors and their products:

Editors of Newsletters

Sagar V. Krupa, Editor. Newsletter of the Upper Midwest Section: Air Pollution Control Association.

Carol E. Windels, Editor. Fusarium Notes. An International Newsletter.

Thor Kommedahl, Editor. ISPP International Newsletter in Plant Pathology.

Editors of Books

Carol E. Windels and S.E. Lindow, Eds. Biological Control on the Phylloplane. American Phytopathological Society. June, 1985. 175 pp.

William R. Bushnell and Alan P. Roelfs, Eds. The Cereal Rusts. Vol. 1. Origins, Specificity Structure and Physiology. Academic Press. 1984. 546 pp. (Volume 2, covering Diseases, Epidemiology and Control will be forthcoming soon).

A.H. Legge and S.V. Krupa, Eds. Air Pollutants and Their Effects on the Terrestrial Ecosystem. John Wiley & Sons. October, 1985.

MERCHANDISING

The American Phytopathological Society publishes more than 50 books, some hard bound, on plant pathology. Most of these are for sale in the Department. The arrangement is convenient for the buyer and saves APS shipping and most of the handling expenses. In 1984 \$2,238.00 worth of the publications were sold. Through April, 1985 the total sales were \$955.00. Big sellers are the disease compedia.

INTERNATIONAL RELATIONS

In 1984 Professor C.J. Mirocha spent about six weeks in New Zealand and China studying mycotoxin problems and sharing his broad knowledge of the field. During the month of August he was at the Raukura Agricultural Research Center, Hamilton, New Zealand in the laboratory of Dr. Margaret Di Menna where he evaluated the role of *Fusarium* in pastures on infertility in sheep and collected *Fusarium* specimens in cold stressed regions.

In Beijing, China, September 2-8, he taught analytical methods for mycotoxins in the laboratory of Dr. Hsia, Chu-Chieh and lectured on *Fusarium* toxins. He lectured in Harbin (September 8-13) and conferred with Dr. Yang, Jian Bo where bone diseases of humans have been associated with *Fusarium* contaminated grains. In Shanghai (September 13-14) he lectured at a workshop sponsored by the Chinese Medical Association.

Dr. Mirocha also was guest of Dr. C.S. Wang, PhD 1937, at Fudan University where Wang was Head of the Department of Biology, 1962-82.

During September 16-19 he was in Taiwan where he is cooperating with Dr. Tseng, Tsung-Che of the Department of Botany, Academia Sinica in a study of metabolites of *Fusarium moniliforme*. He lectured in the Academy of Sciences in Taipei and visited with Professor Lin, Jen-Kun of the College of Medicine, National Taiwan University. While in New Zealand, Mirocha developed a computer communication system from available technology and systems which allowed him daily contact with his laboratory in Minnesota. The actual string of communication went via satellite to Australia, Belgium, Cincinnati and finally St. Paul. Mass spectral data were transmitted as well as day-to-day communications.

Dr. Paul Teng was abroad in the

interests of plant disease control from February 17 to March 15, 1985. In Rome, Italy (2-17-22) he participated in an ad hoc session with FAO personnel on a plan for plant protection in Africa. At the Mt. Makulu Research Station, Zambia (2/23-3/4) he participated in a workshop on the control of epidemics. This meeting was attended by personnel from nine African countries. On March 5-10 he visited the International Rice Research Institute, Los Banos, The Philippines, bringing greetings from Old Timers, Tom Mew, PhD 1972, and Annabelle Chang Mew, PhD 1970. At Kuala Lumpur, Malaysia (3/12-15) he visited with scientists from the Malaysian Agricultural Research Development Institute and the Ministry of Agriculture. The subject of the visit: Plant Protection.

Dr. Bill Kennedy went to Simion, Greece April 22-27, 1984 to attend a meeting of the International Working Group on Plant Pathogenic Bacteria, sponsored by ISPP and the Greek government.

Dr. William R. Bushnell of the Cereal Rust Laboratory left in December, 1984 to spend six months at the Universitat Konstanz, Federal Republic of Germany, where he will continue his work on the use of microscopic methods for the study of plant disease. Bill spent three weeks in the spring of 1984 visiting research laboratories in Great Britain. He was sponsored by the British Society of Plant Pathology.

Jane O'Laughlin, Research Assistant, spent April 6-17, 1985 at CIMMYT as one of a student delegation including students from Plant Pathology, Plant Breeding, Crop Physiology, Soil Science and Agricultural Economics. The trip was sponsored by CIMMYT and the University of Minnesota International Agricultural Programs with the objective of encouraging young scientists interested in international agriculture. Arrangements were made by Dr. Ron Cantrell, the new Director of CIMMYT's maize program and Dr. Delane Welsh, Dean

of the International Agricultural Programs. The focus of the trip was the maize improvement program, partly because the wheat harvest was under way in Ciudad Obregon. Jane brought greetings from Bobby Renfro, a Minnesota Old Timer, who is back at El Batan after many years in Thailand.

Dr. Thor Kommedahl spent 10 days in March 1984 in Brazil, collecting samples of soil and of the roots of a shrub, Baccharis spp. The shrub causes sickness in cattle that eat it and the active agents are suspected to be trichothecenes, which are often produced by Fusarium spp. and other fungi but by no known higher plants. Because Baccharis spp. in the USA are not toxic to animals, it was theorized that the Fusaria or other fungi growing on the roots produced the toxin which was then taken up by the plant.

Thor was accompanied by Harold Kurtz of the Veterinary College, University of Minnesota and by George Bean, PhD 1963. The trip was sponsored by the University of Maryland, where George is Professor and investigates fungus toxins. Thor has isolated a number of Fusaria and other fungi from the material he collected and Chet Mirocha is testing them to determine what toxins they produce. There is still much to do before the hypothesis can be considered valid.

Dr. Elwin Stewart went to Morocco February 15-March 5, 1985 where he consulted with Mohamed Achouri on Achouri's PhD thesis research. The thesis deals with the Endogonaceae of South Morocco. Stewart also made field and laboratory studies of fungi, principally Hyphomycetes, and presented a seminar on mycorrhizae. His visit was sponsored by the Minnesota-USAID project.

Dr. Sagar Krupa devotes 25% of his time to his position as Science Coordinator for the Government/Industry Acidic Deposition Research Program of

the Government of Alberta, Canada. Sagar is on leave for an equivalent fraction of his time in the Department. He spends approximately one week in eight at Calgary.

Howard and Karwyn Bissonnette were in China May 30-June 16, 1985. Howard's mission was to help residents of Shenxi province establish a potato processing industry. He was assisted by Shih-I Lu, PhD 1952, who is a member of a Chinese National Committee to help develop food processing in China. The project was sponsored by Shenxi Province.

Dr. Alan Roelfs of the Cereal Rust Laboratory was in Morocco April 8-May 1, 1985. Alan worked with Brahim Ezzahiri, PhD candidate, on his thesis investigations on the resistance to leaf rust in wheat and made a survey of wheat diseases in Morocco. He also assisted Ezzahiri and Dr. James Burleigh in holding an International Workshop on methods for estimating crop losses caused by insects, diseases and weeds. The course was sponsored by the Institute of Agriculture and Veterinary, Hassan II and the Institute of Agricultural Research of Morocco.

Drs. J.F. Schafer and Alan Roelfs attended the Sixth European and Mediterranean Cereal Rust Conference at Grignon, France, September 4-7, 1984. The conference was also attended by Santiago Fuentes F., MS 1958, R.F. Line, PhD 1962, James Miller, PhD 1971, S.D. Sunderwirth, MS 1979.

INTERNATIONAL SERVICE - MOROCCO

Professor Roy Wilcoxson was put on half-time service to the Department in September, 1983. The other half of his time he is Director of the Minnesota AID Project in Morocco, a job that took him to Africa three times in 1984, conferring, planning and coordinating the efforts of the Minnesota team on the project. Presently this group includes Jim Burleigh and Ben Lockhart, Plant Pathology, Kent Crookston, Agronomy, Aly

Lasheen, Horticulture and Don Johnson, Veterinary Medicine. All of these people teach (in the French language) in the Institut Agronomique et Veterinaire Hassan II, which eventually will become a College of Agriculture. The undergraduate program has functioned for some time and an MS program started in 1984. Graduate students from Morocco study abroad and often do their thesis work in Morocco. To date there have been 21 students in the MS program, most of them studying at Minnesota. Seven are in the PhD program, three at Minnesota. These are Mohammed Boulif, Mohammed Achouri and Brahim Ezzahiri.

Professor Wilcoxson has prepared the following summary of International activities by members of the Department during 1979-84:

International Research and Publication: Eleven faculty have done research in 30 countries. Twelve faculty were authors or editors of eight books and 36 foreign journal articles. Four faculty have served on the editorial boards of five foreign journals.

Foreign Students at Minnesota: Ten faculty have taught an average of 90 foreign students per year in regular classes. Ten faculty have advised 35 MS and doctoral students from 15 countries.

Classes and Lectures Outside the USA: Four faculty have presented four courses in three countries. Three have organized International workshops and conferences held in the USA and 16 gave 62 speeches in 18 countries.

Sabbatic Leaves and Foreign Society Membership: Seven faculty spent sabbatic or quarter leaves in eight countries and four faculty belong to nine foreign societies. All are members of APS and ISPP.

In addition his survey showed that three people in the Department are Adjunct Professors in the Agronomy Institute in Morocco, two have served on USAID review teams in underdeveloped

countries and two have organized two International Fusarium Workshops. One person in the Department (not necessarily the same one) has served in each of the following ways: in Morocco five years; administrator in Morocco; board member of USAID consortium and an FAO panel; ISPP officer and editor of ISPP newsletter; editor of Fusarium newsletter; advisor to the government of Alberta; Adjunct Professor of Uppsala University, Sweden; recipient of the Alexander von Humboldt Award; and U.S. representative on the International Poplar Commission. Several of these items are noticed elsewhere in this Aurora.

OLD TIMERS GIVE BOOKS

Students and staff alike were pleased and surprised in the spring of 1984 by a gift of three books, specifically "to the students of the Department of Plant Pathology." The books were: Webster's Third New Dictionary, The Times Atlas of the World and Capitol's Concise Dictionary of Seven Languages. They were presented by Old Timer's John Laurence, PhD 1976 and Dave Lang, PhD 1978. The presentation letter stated "In recall of our days in the Department, we find memories of discussions and sometimes arguments whose fruition and resolution are held within these pages. We also think fondly of one (ECS) who regularly opened and closed such proceedings without the aid of these sources. With new times, we hope the students will find these books useful."

After about a year in the seminar room, the books have been well used by the students and even by the august faculty who take coffee at 10 AM and occasionally hear a word they don't know or news of a place they haven't been.

CROP QUALITY COUNCIL TERMINATED

The organization known for the last two decades as the Crop Quality Council was dissolved August 31, 1983. Vance Goodfellow, President of the organization since 1968, retired at that time. Since his retirement Goodfellow, who lives in Minneapolis, has been consultant to CIMMYT, a job that involves occasional travel to Mexico.

The Crop Quality Council was a successor of the Conference for the Prevention of Grain Rust, a service organization formed in 1922 by representatives of industries, interested in agriculture, specifically in the control of black stem rust. Their first objective was the promotion of barberry eradication. E.M. Freeman wrote "The Conference was and is a living tribute to the extraordinary debt which the (barberry) eradication campaign owes to the late Franklin Crosby of General Mills, Minneapolis. He was the prime mover and organizer of the Conference of business men, chiefly of the Twin Cities, for providing financial backing totaling hundreds of thousands of dollars and the staunchest moral support from the business world."

Such men do not form such organizations without some convincing. It came from a master salesman. Freeman continues with an account of one of the early meetings: "We were sitting in the back of the hall when Mr. Crosby opened the meeting and called immediately on Stakman. 'Stak' jumped up and with that semi-belligerent air of eagerness to enter a fray of discussion and wits, strode solidly down the center aisle. Before he reached the speakers' platform he pulled one of his little speaking tricks - he began his speech on the march - and continued on the platform for an hour with a veritable barrage that held the intense interest of every man in the audience --."

If the beginnings of the Conference for the Prevention of Grain Rust can be credited to Crosby and Stakman, its

success in achieving its goals over a period of more than 40 years was the result of the talent, knowledge and personal dedication of Donald G. Fletcher. He became Secretary of the Conference in 1924 and retired in January, 1966. He was followed by Eugene Hayden, who served until December 1, 1968. At that time Vance Goodfellow was named President. The Board of Directors, which changed with the years, were men of puissance and importance in the grain, milling, seed, railway, machinery and other industries in the Midwest.

Besides supporting barberry eradication, the Conference/Council made crop and rust surveys, held conferences, issued timely bulletins on rust and crop conditions and sponsored test plots and winter seed increases in Mexico. They also lobbied in Congress and state legislatures for financial support of all crop research.

This included convincing Congress of the need for adequate quarters for the Cereal Rust Laboratory which, largely through the efforts of Don Fletcher, was ready to occupy in 1972. Fletcher was also given credit for helping to get appropriations for research and teaching buildings in Minnesota, North and South Dakota as well as in Colorado and Texas. He also helped to get increased appropriations for agriculture in both Congress and state legislatures.

Don died October 14, 1968 at the age of 70, a credit to the organization he represented and a priceless servant of agriculture and society as a whole. He received many well-deserved honors.

In addition to the numerous building and other facilities which the Conference/Council helped to secure, the original and principal objective of the organization was realized. By a combination of barberry eradication, plant breeding and studies of the origin and annual distribution of races of Puccinia graminis tritici, plant

pathologists and plant breeders in the USDA and several state experiment stations have been able to halt the devastating epidemics of stem rust on spring wheat. In fact there has not been a major outbreak of wheat stem rust in the spring wheat area of the U.S. and Canada for about 30 years.

Although the Crop Quality Council continued its surveys, conferences and interest in wheat quality and other cereal diseases, its support of the stem rust program became less essential in recent years. Public support for ongoing research to protect past gains seems assured. Accordingly the Council was disbanded. A related group continues its more limited interest in wheat quality under the title of Spring Wheat Quality Advisory Council.

LOST OLD TIMERS

Copies of Aurora sent to the people listed below were returned last year. We assume they have moved and forgotten to let us know. If you know where any of them are living, will you please send the address to Aurora?

Ralph Anderson
 Mohammad Ashraf
 Don Christoferson
 George Fales
 T.W. Graham
 S.F. Hassan
 Mrs. J.E. Hermansen
 Kurt Hubert
 Rosemary McLeod
 R.C.F. Macer
 P.R. Mehta
 Wesley C. Miller
 Louis T. Palmer
 Jose Ing. Rodriguez
 Parker Sanders
 Charles L. Schneider
 D.H. Smith, Jr.
 Ming-Ysien Sun
 Shoichi Tanaka
 Ruth Waterhouse

IT'S BORLAUG HALL!

The new addition to the Plant Pathology, Agronomy, and Soil Science Buildings has officially been named Borlaug Hall in honor of Norman E. Borlaug, an alumnus of the Department of Plant Pathology (MS-1941, PhD-1942) and 1970 Nobel Peace Prize Laureate. The official dedication of Borlaug Hall is scheduled for 20 September, 1985; and all alumni and friends of the Department are invited to attend these ceremonies. Borlaug Hall and the associated new space for Plant Pathology represents the most significant enlargement of plant pathology facilities since the 1940 construction of Stakman Hall.

The 17 million dollar, 5 story, 100,000 sq. ft. building is the culmination of 8 years of effort by the 3 departments, higher administration, and many friends and support groups in Minnesota. Former Dean of the College of Agriculture and Professor of Plant Pathology, Dr. James Tammen, and former Plant Pathology Department Head, Dr. Al Wood, were instrumental in including Plant Pathology in this building program during the early planning stages of 1976-78. The detailed architectural planning for Plant Pathology's portion of the building involved many faculty and students; however, former Department Head, Dr. David French, and Dr. Richard Zeyen were the faculty members who represented the Department through all phases of university approval, legislative approval, design, and equipping of the building.

The total building program, including some "exchange space" with other departments, gives the Department of Plant Pathology approximately 25,000 sq. ft. of new space; which is the equivalent of 1.3 X old Stakman Hall. The new space translates into:

-10,000 sq. ft. of high quality "wet lab" research space located on floors 1 and 3 of the current Plant Science Building. Thus, the current Plant Science Building becomes totally

occupied by the Department as a Plant Pathology Research Laboratory Building.

-A new 1,500 sq. ft. growth chamber facility equipped with 11 new growth chambers, located on 1st floor of Borlaug Hall.

-A new 2,400 sq. ft. Plant Pathology Library with modernized information retrieval capabilities, located on 3rd floor of Borlaug Hall (ground floor west entrance). The Plant Pathology Library has an Annex that can be used for small courses and for autotutorial approaches to learning. This replaces the old 680 sq. ft. library area in old Stakman Hall, and is supported in part by the Department of Plant Pathology Library Endowment Fund.

-A new media preparation laboratory and glasswashing room, located on 2nd floor of Borlaug Hall, immediately adjacent to the 3 new Plant Pathology Instructional Laboratories. The media preparation laboratory has 3 modern autoclaves, cold room storage of media used in classroom teaching, an ice machine, hoods and modern glass washing equipment.

-3 fully equipped, high quality Instructional Laboratories designed exclusively for Plant Pathology courses, located on 2nd floor of Borlaug Hall. Two of the laboratories have chemical hoods and full wet laboratory capabilities, all of them have projection and closed circuit television capabilities and all are equipped with new teaching microscopes. These Instructional Laboratories replace the old teaching laboratories on ground floor of Stakman Hall.

-A new 800 sq. ft. Plant Pathology Colloquium Room with full projection and closed circuit television features, located on 4th floor of Borlaug Hall immediately adjacent to the Plant Pathology Administrative Area. This partially replaces the function of the old Seminar room (401) Stakman Hall,

which will become graduate student office space.

-A new 1,500 sq. ft. modernized and fully equipped administrative area with a new Department Head's Office and Conference Room, located on 4th floor of Borlaug Hall. All administrative areas for Agronomy, Soils, and Plant Pathology are on 4th floor of Borlaug Hall.

-A new 45 student Plant Pathology Lecture - Seminar Room, located on 3rd floor of Borlaug Hall. The new room has projection and television equipment built into its function. This facility essentially replaces the lecture room 103 on the ground floor of Stakman Hall.

-Access to a jointly used 150 student capacity lecture room on 3rd floor of Borlaug Hall.

-A new teaching greenhouse with associated Plant Pathology teaching laboratory in the headhouse area. This building is being constructed on Gortner Avenue immediately adjacent to the south end of the existing Plant Pathology greenhouse-headhouse complex. It replaces the old glasshouse that was attached to the west end of old Stakman Hall and was destroyed because Borlaug Hall was constructed on that site.

-R.J. Zeyen



Courtyard between Stakman Hall and the agronomy building. Plant Science in rear.

INTERNAL REORGANIZATION AND CONSTITUTION

The University of Minnesota and the Department of Plant Pathology have grown in both size and complexity in the past 25 years. For example, the Department now has 28 graduate faculty housed in 6 buildings on the St. Paul Campus and 1 member at Crookston, 1 in Grand Rapids and 2 in Morocco. The Department also has both undergraduate and graduate degree programs, and a wide range of special facilities and service staff. The size, spread out nature, and complexity of the Department gradually led to a very common organizational problem, the proliferation of committees and a general feeling that communication was too slow and inexact.

By 1983 the Department had 16 standing committees and several ad hoc committees. Many of these had narrowly defined subject areas, did not meet on a regular basis, and had unclear functions. Were these committees for policy, planning, implementation, or advisory in nature, and to whom did they report? There was a general feeling that there must be a simpler way to approach departmental obligations and operations.

In 1984 the Department held a faculty retreat specifically for improving organizational structure and communications. A working group of Drs. Pflieger, Roelfs, Wilcoxson, Meronuck, and Zeyen (Chairperson) were asked to form an organizational model for the Department and were provided the services of Dr. James Connally from the Rhetoric Department to assist in this effort. The result was a reorganization of Departmental structure. The working group first defined the duties and responsibilities of the Headship and Faculty of the Department, and then reduced the number of departmental committees to 5 multiple purpose committees with definite charges. After several modifications and spirited discussions the faculty voted its approval (26 to 2) for the new organizational model. Under this plan,

the majority of faculty serve on only a single committee in any given academic year. The 5 standing committees and their charges are:

1) Education - Responsible for graduate and undergraduate curriculum development and evaluation, class scheduling, graduate student admission standards and screening, Ph.D. and M.S. written qualifying examinations, and scholarship awards. This committee includes the Director of Graduate Studies as an ex officio member.

2) Research - Responsible for policy concerning intro- and interdisciplinary research internal or external to the University, establishing and maintaining information on state and federal granting and contracts, development of state of Minnesota legislative specials relating to new technology, and editorial function for manuscripts originating in the Department.

3) Extension and Commodities - Responsible for approaches and policy concerning the role of extension in the Department, commodity Board relations, state of Minnesota legislative specials directed at specific commodity areas, general agribusiness relations, coverage of field days, the Plant Disease Clinic, and communication and relations with State and Federal regulatory agencies.

4) Physical Resources - Responsible for St. Paul Field Plots, Rosemount Farm and field plots, greenhouses and headhouses, building spaces (laboratories and offices), departmental resources like general field equipment, herbarium, and other physical resources not specifically charged to other committees.

5) Public, Institutional and Alumni Relations - Responsible for alumni relations, the Aurora Sporealis, Departmental endowment fund raising, endowment disbursement policy, press releases for Departmental Programs, Plant Pathology Library relations with U

of M Central Library, relations with visiting scientists, and student recruitment.

The chairpersons of these 5 committees are faculty-elected and serve 2 year terms, the remaining committee members are appointed by the Head of the department for either 1 or 2 year terms. Head-appointed members include faculty, staff, and students. In addition, the chairpersons of the 5 standing committees form a Faculty Council that works directly with the Head of Plant Pathology and also serve as a tenure and promotion review panel. The Faculty Council also assists the Head in establishing criteria for faculty salary increases, and acts as an ad hoc committee for special needs not covered by standing committee charges. In times of emergency the Faculty Council is also empowered to call faculty meetings for informational purposes.

The new organizational structure was formalized by the writing of a Departmental Constitution and by-laws, ratified in 1984. The Departmental Constitution contains a Mission Statement and clarifies a variety of items necessary for an organized, unified, and responsible approach to departmental operations. The total reorganization and Constitutional effort represents one of the finest of Minnesota traditions, the ability to simplify and solve complex problems.

- R.J. Zeyen

DEPARTMENT ENDOWMENTS

As resources for higher education dwindle, endowment efforts are making a critical difference in many universities. In 1978 the Department established a formal endowment policy based on privately contributed philanthropic gifts prudently invested as trust funds. The interest generated from these trust funds is used to carry out the objectives of the gifts in perpetuity. The Department takes great pride in its alumni, faculty members,

and friends who have realized this vital need throughout the years and their support has assisted the Department in its efforts to maintain and build excellence in its academic endeavors. Currently the Department had established trust funds for student scholarships, educational enrichments including the Plant Pathology Library, achievement awards, and other aspects of its academic program that are difficult to fund by other means. The Department greatly appreciates the past, current, and future interest and contributions of its alumni and friends toward these efforts. The following is a synopsis of the intents, purposes, and financial conditions of the endowment funds so far established, whose total market value now exceeds \$900,000.

The Plant Pathology Library Endowment Fund was established in 1980 to assist in the maintenance of this valuable educational resource. This fund has enabled the Department to not only keep this resource but to gain a much needed new library area in the newly completed Borlaug Hall portion of Plant Pathology. At present the fund contains slightly over \$40,000 in assets and is one of the funds that has a high priority for fund raising now and in the future.

SCHOLARSHIP FUNDS

The M.F. Kernkamp Endowment Fund was established in 1983 and the income from this fund will be used for graduate fellowships for students demonstrating outstanding qualities of scholarship, research and other aspects of graduate studies in the Department of Plant Pathology. The current market value of this fund is approximately \$10,000.

The Fred I. Frosheiser Endowment Fund is in the process of being established from a pledge of \$22,365 from the estate of Fred and Esther Frosheiser. Income from this fund is to be used for scholarships in Plant Pathology, although exact details have not yet been relayed to the Department.

AWARD FUNDS AND OTHERS

The Elvin Charles Stakman Award Fund was established in 1955, and the income from this fund goes to individuals of any country for outstanding contributions in the field of Plant Pathology in research, teaching, extension, or international affairs. The 1985 winner of the Stakman Award is Dr. J.E. Vanderplank of the Plant Protection Research Institute in Pretoria, South Africa, for his many and varied contributions to the theoretical aspects of plant disease. The current market value of this fund is approximately \$55,000, a portion of which was augmented by the estate of E.C. Stakman in 1980.

The Helen Hart Endowment Fund, created in 1972 is a general endowment fund whose interest has been used to finance the Aurora Sporealis publication and mailing expenses and other needed aspects of departmental endeavors. The current market value of this fund is approximately \$20,000.

The E.C. Stakman Visiting Scientist Fund was established in 1980 from a generous estate contribution made by Dr. Stakman. The interest from this fund is used to bring visiting scientists to the Department and is a tremendous asset to educational and program development. To date 3 scientists have been brought to Minnesota for 2 to 12 months as E.C. Stakman Visiting Scientists. Dr. Jeremy J. Burdon, Division of Plant Industry, CSIRO; Dr. John Gay, Imperial College of Science and Technology; and Dr. Leopold Fucikovsky, Centro de Fitopatologia, Coleigo de Postgraduados, Chapingo-Montecillos, Mexico. Several other scientists have also been brought to the Department for lesser time periods, primarily as colloquium and seminar contributors. Portions of the interest from this fund have also been used for Plant Pathology Library Fund augmentation since that fund is still insufficient for its designated purpose. The current market value of the E.C.

Stakman Visiting Scientist fund is approximately \$625,000.

The Thomas W. French Memorial Fund was established in 1981 and provides support funds for Plant Pathology graduate students to attend scientific meetings that they would be unable to attend without this assistance. The current market value of this fund is approximately \$15,000.

The Stakman Annual Softball Fund established by Dr. Stakman in 1977 provides funds for refreshments during an annual student-staff softball game. This endowment provides for a different type of enrichment, social exchange between students and staff. The market value of this fund is approximately \$1,200.

The Bausman Research Fund was established in 1946 and has been used sparingly over the years. This fund is currently being looked at as a potential nucleus for or augmentation towards the establishment of an endowed chair for the Department. The current market value of this fund is approximately \$115,000.

- R.J. Zeyen

Contributors to Plant Pathology Endowment Funds:

Geoffery Ainsworth
 Axel and Mrs. Anderson
 Markus Andres
 Mark Andrews and Sharon Sussmilch
 Yehoshua Anikster
 H. Asuyama
 Henry D. Barker
 Fred and Gertrude Battell
 Eldon Behr
 Mrs. Kim G. Bovee
 A. M. Boyce
 Robert Brambl
 L. A. Brinkerhoff
 Campbell Soup Company
 Edwin Carley

J. J. Castano
 C. M. and Katherine Christensen
 Ho-Sup Chung
 Mrs. R. U. Cotter
 Mrs. Sarah S. Conklin
 J. H. Craigie
 James E. de Vay
 R. S. Davidson
 Eduardo Casas Diaz
 William Donald
 Alicia Drage
 Carl J. Eide
 Albert Ellingboe
 Marshall Evans
 H. H. and Iva Flor
 D. W. and Audrey French
 Fred and Esther Frosheiser
 Leopold Fucikovsky
 Hiroshi Fujii
 David Gardner
 Kazuo Goto
 George Hafstad
 Margaret Hanish
 Earl D. Hansing
 Earle Hanson
 J. George Harrar
 J. E. Hermansen
 Lee Hines
 Unji Hirua
 C. S. Holton
 Hugh H. Hotson
 Tadoki Inabe
 Manuel R. Villa Issa
 Jacob Janzen
 E. M. Johnson
 Lois Johnson
 M. F. Kernkamp
 T. Kommedahl
 Thomas Laskaris
 John Laurence
 Camille Lefebvre
 Duane LeTourneau
 R. F. Line
 Charles Logsdon
 James A. Lyle
 Shih-I Lu
 Mary Merrill
 William Merrill
 T. W. and Annabelle Mew
 John Menge
 L. I. Miller
 Ayooha P. Misra

M. B. Moore
 Donald Munnecke
 David Mumford
 Anne E. Newbery
 A. G. Newhall
 Mrs. William T. Nielsen
 Robert Noble
 Seung Hwan Ohh
 Mrs. R. G. Orellana
 David Punter
 J. M. Prescott
 Louis Palmer
 Ned Raun
 Curt and Martha Roane
 Lewis Roberts
 Stella D. Rodenhiser
 Alan P. Roelfs
 Sylvia A. Roman
 Athalie C. Rossow
 M. C. Sanford
 Marjorie Schad
 John F. Schafer
 Paul J. Scherman
 Myrtle Schneiderhan
 Savel Silverborg
 John Skelly
 Clyde Shumway
 Bent Skovmand
 George H. Starr
 John Stevenson
 Donald M. Stewart
 Deon Stuthman
 Theodore Sudia
 James Tammen
 Ray J. Tarleton
 Thomas Hernandez T.
 Morris N. Teller
 A. Tjokrosudarmo
 W. D. Thomas
 W. H. Thornberry
 H. D. Thurston
 Esther M. Tolaas
 Laurence Tyner
 Gerald T. Vigue
 Isaak Wahl
 Monica K. Wallace
 I. A. Watson
 Ed Wellhausen
 Kenneth Wernimont
 Kathy Widin
 Chester Wismer
 Robert Zabel

CORRESPONDENCE - First hand news of Old Timers, with a few pertinent quotes.

Mike Wingfield, PhD 1983, was in Stellenbosch, Cape Province, on October 25, 1984 and sent us a post card: "Dear Friends in Stakman Hall: I have intended to write a decent letter for ages - now on the verge of another 6 weeks away from home - resort to a card. The advantage is that you get to see a picture of Stellenbosch. We are settling down slowly - surprisingly slowly and I now believe that it will take years to get Minnesota out of our blood. On the work side there are many challenges for us both. Many are positive and of course there are the difficult ones. Research is going quite well with lots of exciting data on insect/pathogen interactions. We think of you often and wish you a Great Thanksgiving.

---Mike and Brenda Wingfield

Carl Matyac, PhD 1984, is a post doc in the Department of Plant Pathology at the University of North Carolina. With his Christmas greetings he wrote: "To my friends, enemies, colleagues, graduate students, alumni, research fellows, civil servants, secretaries, department head and emeriti: Greetings from Raleigh! The transition from grad student to post doc has been successful. . . At first I automatically arose at 6:30 AM and began to search for a thesis or manuscript to write or edit. Without luck, I experienced withdrawal symptoms until my friends began an acclimatization program including extra hours of rest, food, drink and various social activities. . .

P.S. I miss all of you but the excitement of a new job, a new (warm) location and reunion with my spouse has been wonderful. Please write. See you in Reno!"

L.J. Tyler, PhD 1934, and chairman of the committee that publishes the "Cornell Plant Path Newsletter", shares some thoughts, on the subject: "You people certainly turn out an excellent

Newsletter (thanks John). Apparently you have a group of dedicated people to help. I have two pure Cornellians on my committee and, except for two graduate students, the rest of us are 'foreigners'." Dave Thurston, PhD 1958, is also on the Cornell committee.

T.C. Loh, PhD 1933, at the Guangdon Microbiology Research Institute, Guangzhan, China, no longer does research but goes to his office to work with graduate students and edit manuscripts. T.C. was always an enthusiastic athlete and kept "in shape". He would find many friends in the Department now because his routine calls for "a little running each morning around 6 o'clock." Loh got his MS in plant pathology at Louisiana State University in 1930. There is a legend in the Department that one reason he chose Minnesota to take the PhD was to have a chance to beat E.C. Stakman at hand ball. Stak was once champion of the St. Paul campus. It is not known if he and Loh ever met on the court. Stak delighted in worthy competition, but he also used good judgement.

From Coral Berge, Administrative Assistant, University Press: "Thanks for sending the July '82 and Special 75th Anniversary issue of Aurora Sporealis. . . I always enjoyed remembering the people I met at Plant Pathology. The job was my first student job at the University and I've always been grateful for my supervisors' patience and encouragement. I certainly was a greenhorn." Coral was a student typist (15 hours per week) during 1965-66.

Dr. S.J. Wellensiek writes from the Netherlands that next year he will commemorate the 60th anniversary of his post graduate year in the Tottering Tower. The year with Doc Stak has had a profound influence on his scientific career. He still continues his research on Flower Formation and is still active as Editor of Scientia Horticulturae. He sends his best wishes for the Department under its new Head and in its new quarters.

Dr. Karl F. Manke, born and raised in St. Anthony Park, graduated from the College of Agriculture, F & H. E. in 1935 and later took a PhD in Agronomy and Plant Breeding. During his career he had many contacts with people in plant pathology and minored in the Department as a graduate student. He recently sent some of his reminiscences to Aurora:

"I was particularly interested in discovering that the old Plant Path building had been torn down. Some old timers may miss it; I can't say that I do. I had always thought of it as something built and rebuilt by a faculty committee. When I was an undergraduate I invariably became lost in it just trying to find the library or the seminar room. As an adult (and now as a senior citizen) it has haunted countless dreams. Now, at last, it has been excoriated from my subconscious and I sleep more soundly.

"You see I was not obligated to worship at the Tottering Temple; my fidelity was to another architectural wreck on the campus - the old farm house which was made of a weird collection of tunnels and cells for the use of the Department of Agronomy and Plant Genetics. Really, where else could one find a stairway occupying what had formerly been a small closet? I only 'minored' in Plant Pathology. I did not aspire to a degree or career among the fungi, viruses, bacteria, nematodes and the like; I suppose that makes me a half-aspirant, uh, Plant Pathologist.

"This second-class role does not, however, detract from the store of memories nor the admiration I have for those who walked down the phytopath. For example, my earliest memory of Dr. Stakman was that he was some sort of 'Prof' up at the University Farm and lived on Hythe Street where I delivered groceries from my Dad's store. The store was located in what is now Milton Square. I may even have sold the Stakmans the Liberty Magazine; in those days magazine peddlers, grocerymen and Doctors made house calls. Later I became

aware of an intense man who came out among the wheat plots and argued long and loudly with Dr. H.K. Hayes. It was not surprising that the new rust-resistant spring wheat variety was named 'Thatcher' rather than 'Haystack' as some wag of that era suggested.

"But it was only in my Senior year that I came to appreciate what a giant this man really was. I was permitted to enroll in his Seminar which met in what can best be described as the garret Tottering Towers. Unfortunately, many of the principles and fine points of the art and science of plant pathology to which I was exposed at this man's seminars escape me, but one experience does stand out.

"The names of the supporting actors in this mini-drama (Stakman always played the lead, believe me) are perhaps best forgotten, but I recall that one of them had an irritating propensity for falling asleep once Seminar began. 'Wake him up!' Stakman demanded of the young man sitting next to the somnolent fellow. 'Wake him up yourself; you put him to sleep,' replied the young fellow. All the rest of us held our breath. Finally, seeing the humor of it, Stakman grinned and said, 'You know, it's just lucky for you that you've got a job waiting for you. Elsewhere,' he added.

"In spite of my bad judgement in not having become a plant pathologist, I did begin to appreciate rather intimately just how you might begin. I pulled armloads of foxtail, sandburs, thistles and purslane out of the small grain plots over by Mr. Eagle's nest along side the Intercampus tracks. I sprayed gallons of rust spores suspensions on plant rows in the muslin tents near the blacksmith shop, I planted thousands of 4-inch pots to segregating progeny of oat hybrids when D.C. Smith was working out the genetics of resistance to crown rust. We grew and inoculated the seedlings in the greenhouses behind the old building. Smith 'read' the disease reactions and I wrote down pages of notes."

Professor Alan Gemmell, O.B.E., B.Sc., M.S. (Minn., 1937), Ph.D. F.R.S.E., F. Inst. Biol., F.L.S., wrote to Debbie Baden-Drange to give his new address, which is:

Ashbrook
Corriegills
Brodick
Isle of Arran KA27 'BL
Scotland

He added: "I have retired from the Chair of Biology at Keele University in England and come back to my roots in the West of Scotland. I am, however, very busy as I am consultant to two gardening companies, am now recording my third series of radio programs called Gemmell's Garden for the BBC, as well as TV programs for commercial TV in England. I also am in the middle of helping to write computer programs about gardening as well as lectures and broadcasts. My life is very full, but happy with work, gardening and golf. What more could one ask?"

C.S. Wang, PhD 1937, is Professor in the Department of Biology, Fudan University, in charge of the virus research group. After leaving Minnesota Wang became Professor at Honan University where he was Chief of the Department of Agronomy and Plant Pathology, 1939-45 and Dean of the College of Agriculture, Honan U., 1945-49. After two years at Suchow University, 1949-51, he joined the Sahnghai Fudan U. where he was Head of the Department of Biology from 1962 to 1982.

Although he had administrative responsibilities, Wang published more than 90 research papers. Most of his research was with virus diseases, but he also worked with mycorrhizae, grain storage and plant protection. He is now working on a manuscript entitled "Symbiosis, a general tendency of evolution in the living world."

Wang received many honors and traveled a good deal during his career.

He was one of a group that spent three weeks in the United States in 1979, but he didn't have a chance to visit Minnesota. In his position as professor, Wang currently has five graduate students. His teaching duties include a seminar and a literature seminar "as in the old Tottering Tower." Professor Wang has three sons, three daughters, six grandsons and six granddaughters.

Eldon Behr is a naturalized Old Timer, having had his PhD in the College of Forestry in 1948. While he was at Minnesota he spent much time in the Department of Plant Pathology, with considerable benefit to the plant pathologists and, presumably, to himself.

Eldon worked for the Chapman Chemical Co., Memphis, Tenn. from 1947 to 1959 as Head of the technical department. The principal products were wood preservatives and Eldon had six US patents for processes he developed. He admits that at least one was very successful.

In 1959 he joined the Forest Products Department of Michigan State University, teaching and doing research on distribution of oily preservatives in wood and related areas. He retired in 1980 and moved to Anderson, South Carolina.

Eldon writes: "Since I retired I have done very little professional work for pay. People in the wood industry seem to think that advice ought to be free, and the lawyers aren't much better. I've had my chances but the jobs have too much traveling by highway as a part of the duties, and I don't care for driving anymore with all of the trucks to dodge. I study financial news 1 or 2 days a week and apply what I read to managing what funds I have been able to accumulate over the years. While still at Michigan State several on the Forestry staff sought my aid in financial management, but there were no offers of pay. I did get a lunch or two."

Tim Huberty, Word Processor, 1979-1980, wrote in December, 1984 that he and Susan were "expecting" soon after the first of the year. (see Births). "Of course we are very excited about the prospect of having two future presidents from one family. (Well, maybe one president and a plant pathology professor). . . This has been an eventful year for me. I was hired back at the agency which fired me 18 months previously. . . However, rather than doing marketing research, I am now a Media research Supervisor. I am in charge of advising a department of 200 people on the pros and cons of investing our clients' money in radio and cable television. I am also in charge of gathering info on "new electronic media" (VCRs, home computers, etc.) and edit a newsletter. It is a nice job, pays well and has an office overlooking Lake Michigan. It is hard to believe that we have been gone from Minnesota for over four years. We continue to miss it very much. . ."

From Chen Tong Tsiang, PhD 1947, in Shanghai: "Dr. French and Old Timers: Recent issue of Aurora Sporealis was received with thanks. She had refreshed my unforgettable memories of Good Old Minnesota. Although many inspiring teachers such as The Big Chief, Chris, Dodsall, Hart and Laura have left us, yet their kind, attentive, inspiring, charming attitude toward their students will live with me forever. Please extend my best regards to my good old pals in Minnesota, especially Drs. Kernkamp, John Rowell, Thor, etc."

From Modest Jim Lyle, Head Emeritus, Plant Pathology, Auburn U. (PhD 1953): "At some point in time a gross misconception about my enthusiasm for race horses has occurred. I have never played the ponies per se, nor do I contemplate doing so in the future. However, during my sojourn in Minnesota and since then to some degree in Hawaii and Alabama, I placed friendly wagers with Minnesota staff (faculty as well as

graduate students) and others on the outcome of sporting events in football, basketball, horse racing, etc. Since retirement I seldom have those opportunities now because of my astuteness and caginess in winning much more often than losing. While at Minnesota my modus operandi in friendly wagers was 'Don't ever give a sucker a break'. I surely wish that those Minnesota patsies were still available for those friendly wagers. Touche, Buster.

"Minnesota plant pathology must be tough on department heads. I was head at Auburn University of botany and plant pathology for 25 years. At my retirement we had the best and one of the most diverse and large departments, staff-wise (55 plus), at Auburn University."

Beverly Bergman, Sr. Clerk-Typist, 1975-76, is one of the most faithful of Old Timers. She writes: "Thank you again for sending the Aurora Sporealis to me. I read it from stem to stern. . . I am so pleased to learn that Carol Windels is at Crookston now. As you will remember, Crookston is my hometown. . . Greetings to all who remember me. What ever happened to Sagar Krupa?" Beverly, we are happy to report that Professor Krupa is still with us. He is leader of the project on air pollution on which subject he is an international authority. Beverly is now in her eighth year at the Hennepin County Medical Center. She lives in St. Louis Park.

NEWS WANTED

NEWS WANTED

Have you been promoted? Married? Honored? Has anything happened to you that readers of Aurora would like to know about? Don't be too modest. Or, if you have news of any other Old Timers or any other news,

Please send it to Aurora

Remember the news writers' rules: Give the facts on Who, When, Where and Why. Send your contributions to:

Aurora Sporealis
495 Borlaug Hall
University of Minnesota
1991 Burford Circle
St. Paul, MN 55108

SEND US YOUR CORRECT ADDRESS. We are again trying to update the Aurora mailing list. Many graduate students leave the Department without giving us their new addresses and Old Timers move without informing us. If your address has changed, please fill out the form below and return to:

Debbie Baden Drange
Department of Plant Pathology
495 Borlaug Hall
University of Minnesota
1991 Buford Circle
St. Paul, MN 55108

NAME: _____

ADDRESS: _____

STATE: _____ ZIP CODE: _____

COUNTRY: _____

TELEPHONE NUMBER: _____