

DECEMBER, 1975

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

Let the fount foam and never run dry
Let the spout squirt and never lose power

AS THE HEAD SEES IT

Dear Ole Timers:

As always, it is a pleasure to greet you through the pages of the Aurora Sporealis and to bring you up to date on happenings in the Department and the College. The Graduate Education, Research and Extension program review was held during the latter part of May, 1975. Drs. Durward Bateman, Arthur Kelman, Artie Browning, John Fulkerson, Charles Kingsolver and Otto Schultz participated as members of an external committee. This team spent approximately 3 days on campus visiting with various members of the Department, related Departments, and the University Administration and subsequently prepared a statement of their evaluation of programs and program needs in the Department. As a part of the preparation for this review, we polled the alumni during early 1975; the results of that questionnaire survey are included in this issue of Aurora. The Department benefited greatly from the preparation for the review and the report submitted by the external review committee should be valuable in program development during the coming years.

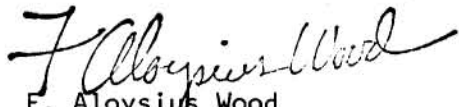
Dr. Benham Lockhart, Plant Virologist, has been a temporary member of our staff on assignment in Morocco for approximately 4 years. As of July 1, 1976, Dr. Lockhart will return to the U.S.A. and will be appointed as Assistant Professor of Plant Pathology in a tenure accuring position in the Department. Dr. Lockhart's background is in the general area of Bio-Chemical Virology and he will work with Drs. R.J. Zeyen and E.E. Banttari in the development of an overall virology research program. In addition, he will have responsibilities in the area of diseases of cereal crops and will be involved in international program development. I will be in Morocco from February 8 through February 14 to discuss the future of the Minnesota Project in Morocco and the role of Plant Pathology in that project.

Dr. M.F. Kernkamp has announced his intention to retire on June 30, 1977. Dr. Kernkamp has been in charge of our wild rice disease research program and with his retirement there will be a need to add someone to our staff to carry on the wild rice disease research. The wild rice industry is a small but important industry in the state and at the present time it is plagued by several ravaging foliar diseases. If control of these diseases is not at least partially obtained in the very near future, the industry may fold. Consequently, we are in the process of re-evaluating current faculty assignments and trying to determine how best to fill this important need.

During the annual APS meetings, the Department alumni have gathered at either a luncheon, and evening social hour or more recently an alumni suite which has been made available for three or four afternoons and evenings during the meetings. There are problems associated with any type of arrangement that one might make to bring the alumni together at our annual meetings. The luncheon or evening social hour often conflicts with other society activities and consequently many of the alumni are unable to attend. In contrast, the alumni suite approach has the disadvantage of not bringing a large element of the alumni together at a given time. In an effort to at least partially satisfy these criticisms, during the Kansas City meetings in July of 1976, we plan to make an alumni suite available as has been done in recent years, but, in addition, to identify an evening social hour which will be held in the alumni suite. Details regarding this matter will be provided in the meeting program and at the registration desk. I sincerely hope that this will provide members of the alumni with maximum opportunity for making new friends and renewing old acquaintances.

Best wishes for the new year and I look forward to seeing most of you this summer in Kansas City.

Warmest regards,

A handwritten signature in cursive script that reads "F. Aloysius Wood". The signature is written in dark ink and is positioned above the printed name.

F. Aloysius Wood
Professor and Head

P.S. If you know of any ole timers who are not receiving the Aurora, please let us know. We don't want to miss anyone!

OLD TIMERS COLUMN

I.L. Conners, who took graduate work in the Department in the early 20's, recently recalled an organization meeting of Canadian Division of APS, held in Guelph in December, 1918. There he met E.C. Stakman, H.H. Whetzel and other leading pathologists. Ira was head of the plant disease survey and Curator of the National Mycological Herbarium at Ottawa Ontario, Canada from 1929 until he retired in 1962 at age 68. He is presently working on an Index of Genera of fungi and keeps in touch with other Canadian O.T.'s J.H. Cragie, A.W. Henry, G.B. Sanford and T. Johnson.

Elsie Forbes, better $\frac{1}{2}$ to Irwin, PhD. 1935, writes to ECS that they plan to visit New York, Boston, Montreal, Maine, and other points east in October. The Forbes travel a lot, having recently been in France and other parts of Europe.

Rosemary Mcleod, Secretary in the office in the 30's, is now retired and living happily in a condominium in Clearwater Beach, Fla. During WWII Rosemary began a 25-year career with the Department of Defense and was stationed in Washington and later in Hawaii. She had a lot of responsibility and considerable opportunity for travel. In a recent letter to Dr. Stakman she wrote: "Your influence on those you taught, whether in school or in the office, was surely highly beneficial. You opened our eyes and minds to much we would have missed". Even granting Stak a certain amount of credit, Rosemary seems to be one of the more successful "graduates" of Pl. Path.

Julio Bird, MS 1950, PhD 1956, is editor (with Karl Maramarosh) of a book entitled "Tropical Diseases of Legumes", Academic Press, 182 pp, \$10.50. Julio is in the Department of Plant Pathology, Agricultural Experiment Station, University of Puerto Rico at Rio Piedras.

A.P. Misra, PhD 1947, retired June 29, 1975 from his position as Principal, Regional Director and Dean, Faculty of Agriculture, Rajendra Agricultural University, Bihar. Dr. Misra is still active and plans to write a book on plant pathology. He would "even like to serve as visiting professor in another country".

Tom Mew, PhD 1972, accepted a position as Associate Plant Pathologist with the International Rice Institute at Manila, The Philippines, effective August 1, 1975. Tom has been doing research at the Asian Vegetable Research and Development Center at Shanhua, Tainan, Taiwan since August, 1972. Mrs. Mew (Annabelle I-Pin Chang, PhD, 1970) worked for the same institution. She will be looking for an opportunity to continue her professional career in the Philippines. Tom and Annabelle have a daughter, Joling.

Chester A. Wismer, PhD 1950, wrote to E.C. Stakman in October "We often think of you but our visit to Munich provides a little more stimulation to write a note. Susi and I are on a short trip through Europe. We visited Paris, Amsterdam and the Hague and now Munich. We enjoyed the visit to see Ludwig II Castles near Fürsen, the dance of the figures on the town hall, some museums even though its been rainy. We now go to Venice, Rome, Naples, Geneva, and Nice, with a trip to Monaco, to Madrid and then return to Brasil where I still work for the Institute of Sugar and Alcohol.

Also to Stak, G.B. Sanford, MS 1923, PhD 1925, wrote: "I have passed my 85th birthday and still drive my car. Eyesight and brain both good - so says my physician. Reading several hours a day is a joy to me. I do not go to the University often although I meet the few Old Timers left frequently".

George E. Hafstad, MS 1933, and Mrs. Hafstad are living in Rockdale, Wisc. (Population, 167) in a romantic setting, complete with dam, mill pond and mill on Koshkonong creek, 25 miles from Madison. George, retired since 1967, was with Firestone in Liberia in 1933-36, did Graduate work in conservation of natural resources at the University of Chicago, and since has had a useful and rewarding career in plant pathology and conservation, being, during the last decade or so in charge of the Dutch elm disease control program in the Wisconsin Department of Agriculture. The Hafstads have two daughters, one married to a history professor and the other doing graduate work in nursing at Yale.

Womens' Libbers, Notice: Mrs. Luella Johnson Bell recalls that she was the "first female to enroll in Plant Pathology" (at Minnesota). This was in the early 'teens, before WWI and the registrar (a woman) sent Luella to Stakman to get permission to register. Stak said bluntly "the catalog doesn't say anything about sex" and signed her up. Sixty plus years later Mrs. Bell, who lives at Windom, Minn. still remembers that, because she was the only girl in the class, "Louise (Mrs. Stakman) went on the field trips too".

Dr. Dennis McGee visited the Department for a few days and presented a seminar on April 13, 1975. Dennis, who was a post-doc in the Department in 1968-69, is now on sabbatic leave from his position as Senior Plant Pathologist at the Victoria Plant Research Institute, in Melbourne, Australia. He is spending his leave studying diseases of rapeseed at the Research Station at the University of Saskatoon, Saskatchewan, Canada. Mrs. McGee and their 2 children are with him.

Leif Sundheim, PhD 1964, returned from 2 years' service in Madagascar and, as of May 1, 1975, was back at his regular work, teaching and doing research at the Agricultural University in Norway. In Madagascar he worked on a joint Norwegian-Malagasy project to develop wheat and potato production in the Antsirabe area.

Martin Tveit, MS 1950, was impressed by the picture of the Council of the Ancients in the Aurora for February 1975. So much so that he sent a box of candy and one of cigars to "the above mentioned luncheon club". The package arrived on September 18 and was graciously shared with the rest of the Department. Many thanks, Martin!

Joanne Dorsher worked her last day in the office on July 25, 1975. After about 6 weeks of vacation, Joanne will be ready to enter the University and continue her work toward an MA in Special Education. She has about 2 quarters work left. Husband Paul will finish his work in the Medical School in May 1976. April Grassel now holds the position of Senior Secretary vacated by Joanne, who was in the Department since July 1972.

D.M. Stewart, PhD 1953, is now Adjunct Professor in the Department of Plant Sciences, University of Arizona. He took optional retirement from the USDA in Dec. 1974 after 42 years of service. His early work was with the white pine blister rust campaign and later he was in the Cereal Rust Laboratory in St. Paul. Don took leave in 1969 and spent several years in Egypt, where he was FAO Project Manager. He and Marion live in Tucson. Their older daughter is married and lives in California and Bonnie, the younger, is completing her PhD in the Oriental Studies Department in the University of Arizona. Bonnie returned last summer from 2-month scholarship trip at the Bourgiba Institute in Tunis, where she was often mistaken for an Egyptian because she speaks Arabic with an Egyptian Accent.

John F. Tuite, MS 1953, PhD 1956, was on sabbatic leave from his professorship at Purdue, July 1-December 31, 1975. His leave was spent at the Potato Virus Research Laboratory (C.H. Livingston, et al), Colorado State U. The word is that he spent some of the time revising his book on Plant Pathological Methods, a highly commendable project, as the book is out of print and the copy from the PI Pa library is missing and presumed stolen.

Louise Worm, undergrad in agriculture, who kept the prep lab shining during the last 2 years, graduated and left the Department about June 1, 1975. She had many talents, not the least of which was that of being pleasantly articulate without interrupting her ongoing involvement with washing dishes and other useful tasks. In other words, she could keep on working while she talked. During the summer Louise was stationed in Owatonna with the 4-H program. While a student she had taken Dave MacDonald's course in Introductory Plant Pathology (1001), which enabled her to diagnose some plant disease problems she encountered incidentally to her 4-H job. She admits this impressed people. Louise is back on the campus this fall, getting some more education.

Early in 1975 Al Linck was appointed Associate Vice President for Academic Affairs in the U of M. This merely made permanent the job he held as "Acting" V.P. for A.A. since the fall of 1973. During that time he was on leave from his position as Dean of the College of Agriculture.

John Menge, MS 1969, was awarded the PhD by North Carolina State University on May 17, 1975.

Helen Boosalis was elected Mayor of Lincoln, Nebraska in May, 1975, defeating Sam Schwartzkopf, who had been in office for 8 years. Mrs Boosalis served as councilwoman in Lincoln for 16 years and, according to reliable sources, is doing a good job as Mayor. Her husband is Michael J. Boosalis, MS 1948, PhD 1951, and Head of the Department of Plant Pathology, University of Nebraska.

Boo's department suffered a disastrous fire in August, 1975 but, as of early December expected to be in their restored quarters again in a few months.

Wiley N. Garrett, PhD 1962, Prof. and Head, Dept. of Plant Pathology and Genetics, U of Georgia, is Secretary, APS. F.A. Wood, Prof. and Head, Department of Plant Pathology, U of M., is Councilor-at-large, APS.

KAUFERT RECOVERING FROM ILLNESS

Frank Kaufert, MS 1930, PhD 1935, suffered a partial paralysis of his left side in August. Exploratory brain surgery revealed no malignancy and he has been at home since the middle of November. He has fully recovered the use of his leg and his left arm is steadily improving. While convalescing Frank wrote a couple of papers and maintained an active interest in his work. He and Ione will go to Arizona in January, 1976 where Frank can walk 2 or 3 miles a day with no danger of slipping on the ice. Frank retired as Dean of the College of Forestry June 30, 1974.

Kaufert's tree didn't do so well. A 5 ft white pine planted on the campus in his honor in 1974 was found to have a large canker caused by blister rust on the main stem. With aecia yet. It had a brief but distinguished career as a field trip specimen for the class in forest pathology taught by French and Darryl Anderson. Then it was cut down and will serve future classes as a lab specimen.

Dr. Jacob Levitt, who was on the staff in plant physiology in 1941-42, has been Visiting Professor in the Department of Horticultural Science since January 1, 1975. Jake, a graduate of McGill University (PhD, 1935) was a post-doctorate Fellow in plant physiology in 1936-37, working with Dr. R.B. Harvey. He returned again in June 1941 and was Instructor in plant physiology for a year and a half, teaching two courses. From here he went to the University of Missouri, where he was Professor in plant physiology until he retired in June 1973. He spent 18 months at the Volcani Center for agricultural research in Israel, working on water stress in plants. Since coming to Minnesota in January, 1975 he has participated in the research on freezing injury, the area in which he worked when he was here in 1936-37.

While on vacation in California in November, 1975, Prof. M.F. Kernkamp gave a seminar in the plant pathology department at the U of C, Davis. There he also visited with Old Timers, Jim DeVay, Ed Butler, and R.N. Campbell, Minnesota Ph. D.'s of 1953, 54 and 57, respectively. In addition to doing research, Butler is spending much time in advising graduate students, Campbell has a heavy class teaching load and DeVay is obliged to spend much time on high-level committee assignments.

Last January (1975) Old Timer Clyde Allison, MS 1930, PhD 1935, wrote from Brasil that he was teaching a course in Principles and Concepts in the Escola Superior de Agricultura "Luiz de Queiroz," Universidad de Sao Paulo, Piracicaba, S. P., Brasil. He wrote to Dr. Stakman, "As you realize, my interest developed when I assisted you in Principles in 1931. You may not recognize the principles and concepts you taught but I assure (you) the post graduate students in the class thank you for your contribution to their course."

John E. (Jack) Mitchell, a native of St. Paul, was named Chairman of the Department of Plant Pathology, University of Wisconsin, on July 1, 1975. Jack graduated from the U of M in 1939 with a major in biochemistry. He took graduate work in plant pathology in 1939-40, but went to Louisiana State U. for his M.S. He resumed graduate work for about a year after that, but interrupted his career to join the navy. He continued at Wisconsin, receiving the PhD at that institution in 1948.

"I just don't want to believe it, an examinee hawking pathology at a supermarket as tho it were a melon or a joke project for a marketing course." Such was the reaction of Dr. Richard Rentz when he read of the Mobile Clinic Activities of his Old Buddy Joe Southern in Phytopath. News for March, 1975. Richard lives in Selangor, Malaysia. Our fame is worldwide. Joe is a candidate for the PhD.

VISITORS

April 1. Nancy Pitmon Gunderson, who worked for Doug Sarojak and Neil Anderson in 1971-73. Nancy was married in 1974 and lives in Rochester. She planned to take courses in education at the U and start teaching.

April 22. Dr. Charles L. Wilson, Research Plant Pathologist, ARS-USDA, and Adjunct Professor, Ohio Agricultural Research and Development Center, Wooster, talked to seminar on "Lysosomal concept in plant disease". He conferred with staff members and students on April 23.

April 24-25. Wm. Anderson, PhD 1974 and Clyde Hurst, PhD 1968 (Plant Phys), and 4 colleagues, all from the National Park Service, visited the Department on official business. Bill Anderson passed through again on July 25, after spending several days with Elwin Stewart and Sagar Krupa in Voyageurs National Park. Elwin plans to begin work on diseases of aquatic plants. On October 8 and 9 Clyde Hurst and Mark Smith, MS 1966, PhD 1968, were part of a party of 6 on official business. Clyde is Chief of the Ecological Service, NPS, at Bay St. Louis, Miss. and Mark Regional Chief Scientist, National Capitol Parks, Washington, D.C. The NPS boys come and go fairly frequently and we hope we have the record of their visitations at least partly correct.

May 9. Dick Fredericksen, MS 1957, PhD 1961, Mrs. Fredericksen, son Jonathan and daughter Kristin, flew up from College Station, Texas in their Cherokee 6. After visiting relatives in Twin Lakes and Sauk Centre, Dick left for an AID meeting in Washington, D.C. Dick is Professor of Plant Pathology at Texas A & M.

May 22. Andrew H. Downie, MS 1941, PhD 1942, and co-worker Russell Desrosiers were in the Department on Official business. Andy was in charge of research for American Crystal Sugar until 1966 and after that spent 6.5 years in India for AID. He is now Production Agronomist with AID in Washington, D.C.

May 23. Barry Jacobsen, PhD 1974, now Extension Pathologist at the U of Ill. at

Urbana and presently very busy, with co-worker Mal Shurtleff, MS 1950, PhD 1953, on leave in England. Barry is working on the relation of resistance and fungicides for controlling Alternaria spp on tomato. He was here again May 14, conferring with staff members.

June 4, Milton Petty, PhD 1940, was in Minneapolis as consultant in a lawsuit. He stated that he would take sabbatic leave this year from his professorship in Microbiology at CSU, Long Beach, and go to UCLA where he will finish some research on gibberellin.

June 25, Arthur M. Elliott, PhD 1961, visited relatives and Stakman Hall. Art is Professor of Biology, Texas Tech. U., Lubbock.

July 1, Larry Littlefield, MS 1962, PhD 1964, stopped in Stakman Hall, slightly frustrated because he couldn't return to Fargo, N.D. on account of the floods there. Larry is Associate Professor at North Dakota State U. where he works principally on flax rust and ergot of wheat.

July 8, Pat and Bill Donald, MS 1974, stopped for morning coffee on the way to Nebraska to celebrate a golden wedding anniversary. At the U of Wisconsin, Pat works for Dr. Paul Williams in the Department of Plant Pathology and Bill for a PhD in the Department of Agronomy.

July 18, Phil Hamm, PhD 1950, Plant Phys., stopped on his way to a North Shore vacation with children and grandchildren. Phil presently has the title of Distinguished Science Fellow with the Montsano Agricultural Co., St. Louis, MO. He has been with Montsano since 1944 and was largely responsible for research leading to the development of the company's herbicides. He now has considerable freedom in his research and is looking for any disease control opportunities which could be exploited by industry.

July 24, Duane Le Tourneau, PhD 1954; on vacation. Duane is Professor in the Department of Bacteriology and Biochemistry, University of Idaho, Moscow.

August 4-5, Santiago Fuentes F., MS 1958, PhD Cal. was in the Department, spending most of his time conferring with Dr. J.B. Rowell and others in the Cereal Rust Laboratory. Santiago is with CIMMYT in Mexico, working on diseases of wheat, including Septoria and Helminthosporium. Accompanying Santiago was Dr. J. Jesse Dubin, who recently joined CIMMYT and who is an old Peace Corps (Chile) buddy of Frank Tainter.

Kenneth M. Old, PhD 1964, was guest of Prof. and Mrs. Kernkamp in late August. Dr. Old had just completed about 6 months at the University of Toronto while on sabbatic leave from his position in the University of Dundee, Scotland. He returned about September 1. Kenneth's research has been on the deterioration of Helminthosporium and other fungi in the soil. He displayed some excellent EM pictures of Helminth spores with holes of then unknown origin in the walls.

September 8, Lucas Calpouzos, Professor and Head, Department of Plant and Soil Science, University of Idaho, Moscow. Before going to Idaho, Luke spent about 8 years in Minnesota, first as Research Plant Pathologist, USDA (1963-67) and then as Associate Professor (1967-71). His recent visit was for the purpose of completing a manuscript on the wheat disease research he did while at Minnesota. He spoke highly of the work being done on potato disease by Old Timers Dexter Douglas and Gil Stallknecht, both 1968 PhD's.

Norman Borlaug, MS 1941, PhD 1942, addressed a meeting called the Fall Round-up on October 18, 1975. It was held at the Ramada Inn on County Road E, about 4.5 miles north of the St. Paul Campus. It was rumored that Norm had been in the vicinity for a week or more, but he did not visit the Department and precise knowledge of his whereabouts was hard to come by.

King Olav of Norway was also in the Twin Cities for a couple of days in October. He was seen in a car traveling along Commonwealth Avenue from Como Ave. toward the fair grounds, but he didn't stop either.

Dr. Glynn Bowen, Division of Soils, Commonwealth Scientific Industrial Research Organization (CSIRO), Australia, presented a seminar October 13, 1975 on "Interactions between rhizosphere microorganisms and plant roots". The next day he spent several hours conferring with staff members and graduate students.

October 16-17, Dr. S.J. Wellensiek and Mrs. Wellensiek visited the Department, spending most of the 17th talking with staff members and students. He gave an unusually fine talk on "The Challenge of Humanity to Science" to the seminar on the 16th, in which he presented some profound and occasionally unorthodox views about research. He spent the academic year 1926-27 in the Department and so is and Old Timer. He is now Professor Emeritus at the Laboratory of Horticulture, Wageningen, The Netherlands. He and Mrs. Wellensiek had visited Michigan State University and planned to stop at Cornell also. Mrs. Wellensiek is a horticulturist by profession.

October 23, Glen Johnson and son Gary, wheat farmers from the Palouse, Washington State, and friends of Elwin Stewart. "Back East" to purchase a couple of trucks, the Johnsons attended evening seminar and were much impressed by Klara Nelson's account of the problems and progress of the disease clinic and Alan Roelfs' lucid and lusty lecture on the stem rust situation.

November 6-7, George Papavizas, MS 1953, PhD 1957, returning from a meeting in South Dakota, spent a couple of days in his old haunts and gave a seminar on his work. George is Chief of the Soil Borne Disease Laboratory, one of eight 'laboratories' in the Plant Protection Institute of the USDA. His staff comprises six Scientists and about a dozen supporting personnel. They work on diseases of vegetables (not potatoes). He says his group does a lot of their research in the field, which would please JJC. George was kept busy during his brief visit, sharing his considerable wisdom with staff and students, individually and in small groups.

December 1, Jack Mitchell, recently named Chairman of the Department of Plant Pathology at the U of Wisconsin, stopped briefly before attending a meeting of Department Heads at the National Headquarters of APS on Pilot Knob Road. Jack returned in July from 6 months' sabbatic leave spent in Australia where he worked with Glynn Bowen and A.D. Rovira, C.S. I.R.O., Division of Soils on the colonization of roots by microorganisms.

December 4, Gil Stallknecht, MS 1966, PhD 1968, attended a meeting in Boston and visited Stakman Hall on his return. Gil is on the staff of the University of Idaho, stationed at Aberdeen, where he works principally on the physiology of potato, involving such problems as yield, tuberization and internal bruising. He reports that O.T. Dexter Douglas, PhD, 1968, (also at Aberdeen with the USDA) is busy with storage rots, viruses and disease resistance in potato. Dexter still makes a few of the rodeos, as performer, and got his elk this year. Gil wasn't so lucky but his son Dave shot a mountain goat and miscellaneous other game. Regular Davy Crockett.

Eugene Saari, MS 1962, PhD 1966, appeared in the flesh in Stakman Hall early in December. It was rumored that he had been seen in Grand Rapids in July. Geno and family had been taking a vacation in Northern Minnesota. Beirut, where he has been stationed for CIMMYT has been a little exciting lately, and he expected to be transferred to Cairo.

John Kraft, MS 1962 and Bill Haglund, MS 1958, PhD 1960, dropped in just before Christmas and returned December 30 to have an impromptu conference on Fusarium wilt of peas, a disease both are investigating, John at Prosser, and Bill at Mt. Vernon, Washington.

Sherwood O. Berg, former Dean of the Institute of Agriculture at Minnesota, (1963-67) became President of South Dakota State U. on August 1, 1975. Berg is a Native of Hendrum, Minn. in the Red River Valley and got a PhD in Ag. Econ. in 1951.

THE DOSDALL SCHOLARSHIP

Lois Johnson, a graduate student in plant pathology, was awarded a scholarship supported by a bequest made by the late Louise Dosdall. Doctor Dosdall was Assistant Professor in the Department and taught mycology to many Old Timers from about 1933 to 1957. She died September 27, 1958 at the age of 64. She left a considerable fund (rumored to be about \$200,000) to the University to hold in trust for her sisters while they lived. Recently the income from the fund has been used, in accordance with her will, to provide support for women students in science at the University of Minnesota. Four scholarships were awarded in 1975, the one to Lois being the only one on the St. Paul Campus.



Louise Dosdall - 1928

Lois graduated from the University College in 1974 and is presently doing research for her MS on the resistance of non-host plants to certain powdery mildew. Until she became a graduate student she was a Senior Laboratory Technician for 4 years, doing electron microscope studies of alfalfa mosaic with Wilcoxson and Frosheiser. She is co-author of 4 papers. Lois is married and the mother of 4 children, 2 of them in college.



Lois Johnson - 1975

Incidentally, Dozzie's dough doesn't reflect high salaries paid to mycologists during her time. She was a successful investor, apparently having a talent that other local mycologists (and plant pathologists) have tried in vain to emulate.

OLD TIMER TRANSLATING BOOK

Grain Storage, The Role of fungi in quality loss, published in 1969 by C.M. Christensen and Henry Kaufman, is being translated into the Spanish by Old Timer Ernesto Moreno, PhD 1969. Date and publisher are not yet available. A Spanish edition of Molds and Man, by Christensen has been available since 1964.

The University Press reports that Molds and Man is now being translated into the Japanese and according to the scuttlebutt, the translator is having a little difficulty with some of the Christensen subtleties.

Some time ago the Department received a copy of "Molds and Man", 1951 edition, autographed by the author, along with a note from a lawyer in Jasper, Arkansas. The note read: "I am in possession of the book "Molds and Man" by former Governor and Congressman Christensen, and would prefer that someone interested in plant pathology would have the use of it. The book is autographed. I asked Congressman Christensen what induced him to write such a technical book and he told me that he needed money at the time".

It was undoubtedly a frank and honest attitude like that, that eventually got Christianson (not CMC) elected governor.

STAKMAN IS 90

Dr. E.C. Stakman was 90 years old on May 17, 1975 and the anniversary was observed by 3 events sponsored by the Department. On the morning of May 16, a birthday cake 60.9 x 91.4 cm x 10 cm thick, appropriately decorated, was served during the coffee break, which was stretched a little for the occasion. More than 50 people were present, including Mrs. A.G. Tolaas who, as a coed before WWI, took a course in Household Bacteriology from the young and hard-boiled Prof. Stakman. Stak was presented with a new pipe and several bottles of choice wine "for his stomach's sake".



On the 17 the First Annual E.C. Stakman Student-Faculty Softball game was played on the St. Paul Campus Athletic field. Graduate students defeated the staff by a lop-sided score. There were ladies on both teams (and some pretty darn good ones, too).

On the evening of the 17th there was a dinner at Nino's which was attended by

over 100 people, including Old Timers from neighboring states, friends in industry, and members of the University Administration. There were brief talks by V. P. Al Linck, V.P. Bill Hueg, Acting Dean Jack Goodding, Director Keith Huston, O. T. Earle Hanson and Clyde Smith from Wisconsin, George Knaphus of Iowa State and Al Wood. Stak expressed his appreciation with customary grace and humor. Thor Kommedahl was toastmaster.

There were messages of congratulations from numerous people, including J.G. Harrar, James Tammen, President of APS, and Mrs. Norm Borlaug, from Dallas. Norm was in Africa.

The birthday cake, a picture of which appeared on the first page of Phytopathology News for September, 1975, listed the following vital data:

E.C. STAKMAN

- Born - May 17, 1885
 - Staff - 1909
 - Head - 1913
 - One of 100 - 1952
 - Teacher of Principles
 - Hunger Fighter
 - Handball Champion
 - Softball Coach
 - Uredinologist
 - Epidemiologist
 - Pioneer in Fungus Genetics
 - Friend, Teacher and Counselor
- Not a bad record for the first 90 years.

MORE BIRTHDAYS

Aurora goofed last year by failing to observe her own 50th Anniversary. The first issue was dated August 1, 1924 and was edited by a committee consisting of Helen Hart, H.A. Rodenhiser and A.W. Henry, Chairman. Among other important items was the following:

An Editorial

Wherein is set forth a plethora of platitudes; but may we take heed of them nevertheless.

continued...

"By their fruits ye shall know them". Thus sayeth the Good Book. The best fruits of an institution of learning are the men and women who have absorbed knowledge, derived inspiration and developed mental power in it. Trite but true. The Division of Plant Pathology of the University of Minnesota is an institution. It is bigger, more lasting more important than the individuals in it; but its success is measured by the stream of individuals who make it. It is dynamic, and its power is generated by the composite intellectual stimulus of those who compose it, past, present and future. The impetus which drives it on comes from without as well as within. Some of us are officially within and some without. But we all have a common interest - progress in an intensely interesting and impellingly important branch of science. The success of the institution reflects credit upon us; our success reflects credit upon the institution. Let's all work together for the highest scientific ideals, for the greatest possible scientific accomplishment and for the richest scientific associations - may Minnesota symbolize all of them! And may the symbol help us keep the scientific faith and find our greatest joy in it. Maybe *Aurora Sporealis* will Help. E.C.S.

--From *Aurora Sporealis*, Vol 1, No.1
1924.

The first four volumes, ending July, 1928, contained 17 poems, some of epic length, and one 4-act play. *Aurora* was really more than a news sheet in those days.

RECENT GRADUATES TAKE JOBS

Doug Sarojak left soon after passing his PhD final on May 1, to begin work as Fungicide Specialist for BASF, Wyandotte Chemical Co., Parsippany, N.J. Doug and family live in a cedar log cabin on a beautiful lake at Sparta, N.J.

Bryan Shearer returned to Australia in September to accept a Research Fellowship in the Agronomy Department, University of Western Australia, Nedlands. Among other things Bryan will study *Septoria* diseases of cereals.

Craig Grau is now Research Associate in the Department of Plant Pathology, North Carolina State U. He is investigating the cause of "barren stalk" of corn, a disease especially common in eastern North Carolina.

Jim Venette will start work January 1, 1976 as Assistant Professor in the Department of Plant Pathology, North Dakota State University. His research will be principally on diseases of large-seeded legumes. Beans.

Jeri Ooka accepted a position as Assistant Plant Pathologist with the University of Hawaii at a branch station on the island of Kuai. His principal duties were to be studies of diseases of corn, but at last report he was working also on papaya, taro, cassava and *crotalaria*. Wife Mary is at present (Dec. 1975) still Associate Scientist in the Medical School U of M, but expects to join Jeri in the not-too-distant future.

James Wolf is a Post Doctoral Research Fellow in the Department of Agricultural Engineering, U of M. That's right. Engineering. Jim has a lab in the Food Science building where he is studying the factors influencing the breakdown of essential amino acids in foods during processing. This information is essential to engineers in making engineering recommendations to food processors.

Virgil Jons became, on July 1, Executive Secretary of the Crop Quality Council, which has headquarters in Minneapolis. The Council, known until 1960 as the Conference for the Prevention of Grain Rust, was organized about 1922, supported by milling and other industries interested in cereals in the Northwest. At present the Council maintains a winter nursery in Mexico to test new lines of wheat and barley developed by breeders in North and South Dakota, Minnesota, Montana and Canada, as well as having plots in the same states where new wheats are grown for milling and baking tests. The organization also sponsors educational work and meeting like the annual crop production conference. Virgil's predecessors in the position were Mark Smith, PhD 1968, Gene Hayden, PhD 1956 and, from 1925 to 1965, the late Don Fletcher, BS 1922.

HONORS

Irvine A. Watson, PhD 1941, Director of the University of Sydney Plant Breeding Institute and Head of the Department of Agricultural Botany, was recently elected a Fellow of the Australian Academy of Science. Dr. Watson is also Fellow of the Australian Institute of Agricultural Science and of the Soviet Academy of Sciences. Early in 1975 he wrote from Munich, said he would be overseas until December 3, but sayeth not what he doeth there.

John A. Stevenson received the University of Minnesota Outstanding Achievement Award March 1, 1975. According to the citation, the award was made in recognition of his contributions as mycologist, developing the National Fungus Collection and for numerous contributions to mycology, including a better understanding of tropical fungi. John also held important administrative posts, including that of Head, Division of Mycology and Plant Disease Survey, BPI, USDA. He graduated in forestry at the U of M in 1912 and then took courses in plant pathology and mycology.

Abrar M. Khan, PhD 1950, received the Rafi Ahmad Kidwai Memorial Award in January, 1975. The award, made by the Indian Council of Agricultural Research, cites Dr. Khan for his outstanding contributions in the field of nematology. Khan initiated research in nematology in India and did pioneer work in organizing courses and training programs in nematology for India and South-East Asia. In 1969 he was elected the first president of the Nematological Society of India.

Joseph Michael Daly, MS 1947, was the only Old Timer made Fellow of the APS at the Houston meeting. Mike got his PhD in Botany at the U of M in 1952 and in 1955 joined the Department of Plant Pathology at the University of Nebraska. In 1964 he became Professor of Biochemistry and Nutrition at Nebraska. Among the items mentioned in his citation was his scientific skepticism, applied to both logic and experimental proof. That's our Mike, All right.

J.C. SANTIAGO HONORED

In November, 1975, J.C. Santiago, PhD 1956, received the B.R. Sen Award, given annually by the Food and Agriculture Organization of the U.N. to FAO field experts who "have made an outstanding contribution to the advancement of the country or countries to which he has been assigned".

More specifically, the award was made for Santiago's work during 1971-74 on wheat diseases in Brazil. His control program has resulted in 2 to 3-fold increases in yields, improved quality and stabilization of wheat growing in Brazil. As a result that country expects to become self-sufficient in wheat production in the near future. This year over 300,000 hectares were treated with chemicals to control foliage diseases. He was also instrumental in the establishment of a National Wheat Research Center at the Passo Fundo Station, Rio Grande do Sul, Brazil, where 14 plant pathologists now work, in addition to 175 technicians and extension specialists whom Santiago has trained.

Santiago's earlier career has been equally distinguished. In 1957 the 4th International Congress for Plant Protection in Hamburg made him director of an international program for controlling wheat stem rust in Europe, a program that he was primarily responsible for planning. In 1959 he received the Andre Mayer Fellowship for further cooperative work on stem rust in several European countries. He also served in Angola, Morocco and Tunisia to establish disease control programs and organize breeding programs. In 1964 he was awarded the Jacob Eriksson Gold Medal at the Xth International Congress of Botany in Edinburgh.

Santiago expects to visit the U.S. in the spring of 1976, where he will be welcome at Stakman Hall in St. Paul.

VISITING SCIENTISTS

Dr. Joseph Meyer, Professor and Head, Laboratoire de Phytopathologie, Université Catholique de Louvain, Heverlee Belgium, arrived April 18 and spent about 3 months in the Department as Visiting Lecturer. During his visit he studied the effects of pollutants on the infection of bean by the alfalfa mosaic virus, cooperating with Fred Frosheiser and Sagar Krupa. Prof. Meyer has been active in a Belgian project in Morocco. His trip to Minnesota was sponsored by the Office of International Programs, U of M.

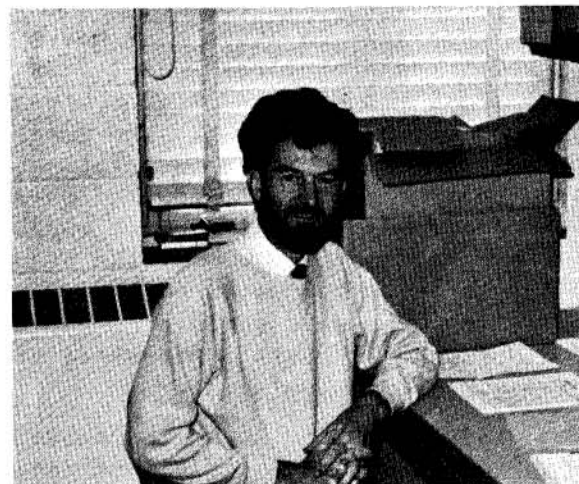
Dr. M.A. Sellam is spending a year in the Department as post-doctoral fellow. He received his PhD in 1974 from the University of Assint, where he is Lecturer in the Plant Pathology Department of the Faculty of Agriculture. Since his arrival in April, 1975, Dr. Sellam has worked with Roy Wilcoxson on foliage diseases of cereals and with C.M. Christensen on grain storage problems. His fellowship is sponsored by the Egyptian Missions Department, an agency of the Egyptian government.

Dr. David Punter arrived September 1, 1975 to spend a year working on diseases of wild rice on a split appointment in the Departments of Plant Pathology and Agronomy and Plant Genetics. Dr. Punter is on sabbatic leave from his position as Associate Professor in Botany and Plant Pathology in the University of Manitoba, Winnipeg, Canada. He is native of England and holds a B.A. and PhD degrees in botany from Cambridge University. Dr. Punter has done research on diseases of wild rice in Canada and also worked extensively on root rots of conifers. His position in Minnesota is that of Visiting Associate Professor.

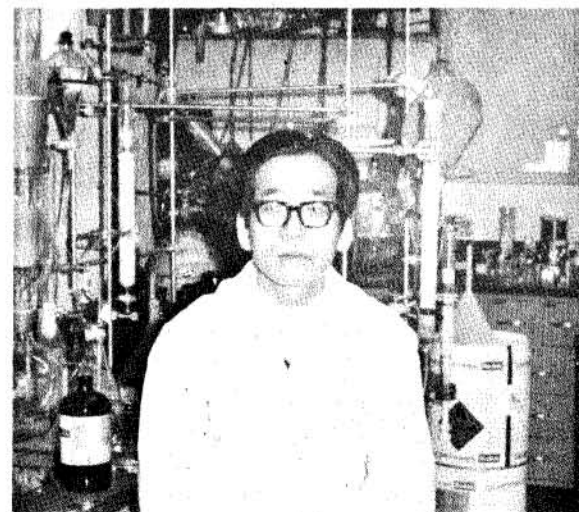
Dr. Tadaoki Inaba is spending a year (November 1, 1975 - October 31, 1976) in the Department with the support of the Japanese government. He is working in Dr. Mirocha's lab on the isolation, identification and analysis of secondary metabolites of fungi and their relation to fungus reproduction. Dr. Inaba received his PhD in plant pathology from Kyushu University in 1974.



Dr. M.A. Sellam



Dr. David Punter



Dr. Tadaoki Inaba

TOM KING RETIRES

In 1935 the Word went out that Stakman was looking for a catcher. O.T. Harold Flor at the North Dakota Agricultural College, thought he knew the man to fill the slot and so T.H. King arrived in St. Paul in January, 1936 and began his career as a plant pathologist. He was a good catcher but could play any other position on a soft ball team with a grace and competence that was marvellous to behold. In fact he was a natural athlete and excelled at nearly every game of skill. Even while in High School he played pool "for the house" in the local pool hall at Starkweather, N.D.

Tom was born August 27, 1912 and raised on a farm in the durum region of North Dakota. "Raised" in those days meant "worked". The King spread was larger than average and 30 head of work horses provided most of the power. The emissions of that much horse power far exceeded that of equivalent power provided by the despised internal combustion engine, and its control to meet the standards of the King Pollution Control Authority involved considerable human labor. Who can say what far-reaching effects this had on Tom's future?

Tom graduated from the North Dakota Agricultural College in 1934, and received the MS (1939) and PhD (1946) in plant pathology from Minnesota. In 1941-42 King was Instructor in plant pathology at Auburn Polytech. He saw active duty as Captain in the European theater during WWII. In 1946, after completing the PhD, he became Extension Pathologist at Ohio State University. In 1948 he returned to Minnesota as Assistant Professor, becoming Professor in 1956. His principal research interests were in diseases of fruits and canning crops.

Tom served on several foreign assignments and was particularly effective in this work. In 1957 he spent 9 months as adviser to the Dean of the College of Agriculture at Suwon, Korea under a University contract with the University of Seoul. In 1964-67 he was manager of an FAO project for plant protection in rice at Bangkok, Thailand, and for 4 months



in 1970 consultant in plant protection in New Delhi, India under a Ford Foundation project. During 1971-73 he was Educational Adviser at the University of Gadja Mada in Yogyakarta in Indonesia under a MUCIA project.

Tom is distinguished by his remarkably good judgement, especially in matters relating to agriculture, science and human relations. He was particularly effective as adviser to graduate students and on various missions to developing countries in both cases because of his ability to see problems in their simplest terms and to enlist the whole-hearted cooperation of others in the solution of such problems.

Tom retired June 30, 1975. He and Shirley spent the summer and fall at their lakeside estate near Grand Rapids, Minnesota where Tom experiments enthusiastically with the culture of various vegetables and fruits.

In January 1976, the Kings will be off again for foreign parts, this time to Jakarta, Indonesia, where Tom will be Project Manger of FAO-UNDP project to establish a center for plant protection in the Ministry of Agriculture. An air-conditioned villa in Jakarta will feel pretty good after a couple of months of winter in Minnesota.

INTERNATIONAL

Bob Brambl and Bill Bushnell attended a NATO Advanced Study Institute on Specificity in Plant Diseases, May 2-17, 1975, in Porto Conte, Alghero (Sardinia) Italy. Bob also visited professional colleagues at the University of Colgne, W. Germany.

Professor and Ass't Head D.W. French spent July 19-August 5, 1975 in England. He visited the Imperial College in London, The Portsmouth Polytechnic Institute, the Alice Holt Forestry Commission near Franham, in Surrey and the Richardson Wood Preservation Complex, near Winchester. His objectives were to get acquainted with English education and research on tree diseases and deterioration of wood structures and wood products. He says Dutch elm disease is bad in England but the girl watching is wonderful.

Also in Britain was Prof. Bill Kennedy, who visited England and Scotland August 26-September 17, 1975. His principal objective was to participate in a Working Group on the Ecology of Bacteria on the Aerial Structures of Plants at Wye College. He also conferred with colleagues at Edinburgh, Aberdeen and Dundee, Scotland, and at Oxford, Cambridge and the London Imperial College in England. Bill sent a card saying "Elms and beech dying in great no's; lots of bad food & beautiful wimmin".

With testimony from 2 such keen observers as Dave and Bill, there can be little doubt about the situation in England.

Professor Emeritus E.C. Stakman spent most of Aug. 1975 at the Villa Serbelloni, which is located on Lake Como in Italy, near Milan. The Villa is pretentious estate, donated by a former American woman to the Rockefeller Foundation as a retreat where thinkers could engage in intellectual activities in various fields. Prof. Stakman was an official visitor authorized by the Rockefeller Foundation and was working on a manuscript which deals with the role of hunger in agriculture and history.

Prof. R.D. Wilcoxson and R.A. Joseph Southern went to Mexico in April to select wheat hybrids resistant to stem rust in a special breeding nursery at the Mexican government experiment station at Ciudad Obregon. The new wheats will be used in a Rockefeller Foundation-sponsored project in the Department dealing with resistance to stem rust.

In June, 1975 Wilcoxson and Associate Professor Dave MacDonald spent two weeks in Morocco, conferring with students at the Hassan Agricultural Institute at Rabat and reviewing the Minnesota AID program. Dr. MacDonald also surveyed plant nematology problems in Morocco.

Wilcoxson's feet began to itch again this fall and about October 7 he left to lead a group of 5 (3 entomologists, 1 economist, 1 plant pathologist) to study plant pest problems in Bangladesh. Roy was officially consultant for the Departments of Entomology and Plant Pathology a USAID program. He was scheduled to return about November 8, but toward the end of October a couple of governments were overthrown in Bangladesh with the results that communication with the rest of the world was suspended and the airport closed. The Wilcoxson family and, to a lesser degree, the Department, spent several days of apprehension, but finally a bulletin was issued saying that Roy had called his family November 9 and that he expected to return on the 13th. And so he did.

During his stay in Bangladesh Roy saw Old Timer Syed Ali, MS 1954, who is Chief Science Officer of the Bangladesh Department of Defense and who kept Roy informed during the crisis. Roy also visited with Quazi A. Ahmed, who was an Honorary Fellow in the Department in 1963-64. Both Ali and Ahmed and their families are in no danger.

SEMINARS

Tuesday p.m. After winding up the 1974-75 academic year with papers on sub-cellular structures in fungi, nematodes and some miscellaneous subjects, the Tuesday seminar resumed in the fall of 1975 with discussions of soil-borne pathogens and phytotoxins produced by microorganisms. Occasionally two short papers were scheduled for a single period, which usually left the second speaker short of time, especially if the first paper had stimulated some discussion. It was apparent that one mark of an inexperienced speaker is the inability to shorten his discourse to fit the time available. Of course that isn't easy to do and speakers who haven't learned it are always conspicuous - and cursed - at science meetings.

Guest speakers at regular or special seminars include: Dr. Monty Harrison, 2/20/75; Dr. Charles L. Wilson, 4/22; Robert Kohut, 9/11; Dr. Glynn Bowen, 10/13; Dr. George Papvizas, 11/5; and Dr. Gary Strobel, 12/3. See "Visitors" for more details.

The committee in charge of the regular seminar for 1975-76 is: Sagar Krupa, Chairman, Frank Pflieger, Neil Anderson and Kathy Widin.

Thursday Eve. During the first half of 1975 there were a number of open sessions at the Thursday evening "literature" seminar. The time was spent more or less profitably but with very little literature reviewed. Dr. Stakman attended a couple and that helped. Outside speakers included, Mando Sheharta, Department of Horticultural Science, U of M; Dr. Robert Munson, American Potash Institute; and O.T. Dennis McGee.

In the fall a new committee took over. They are Ted Knous, Chairman, Laura Sweets, John Gronquist, Elwin Stewart and Roy Wilcoxson. Speakers, some students, some staff and some guest, have been scheduled for nearly every session. Guests included John Blackmore, Director of the Office of International Programs, U of M; Dr. S.J. Wellensiek and Virgil Jons. (See elsewhere, this Aurora).

NEW GRADUATE STUDENTS

Fall, 1975:

Scott Adams, Minneapolis, Minn. BS, 1971; MS, 1975, Botany, University of Minnesota.

Klara Nelson, Minneapolis, Minn. BA, Botany, 1961; MS Horticulture, 1975, University of Minnesota.

J. Kaselan Somodiryo, Yogyakarta, Indonesia. Graduate, 1973, University of Gadjaja Mada, Yogyakarta. Somodiryo has been on the staff in the Department of Plant Pathology in the Faculty of Agriculture at Gadjaja Mada since his graduation.

Winter, 1976:

Frederick A. Baker, Inver Grove Heights, Minnesota BS, Forestry, 1975, University of Minnesota.

Darrel J. Cox, Wayzata, Minn. Bemidji State College, 1971-74; BS, College of Biological Sciences, 1975, U of M.

Monica K. Wallace, Minneapolis, Minn. BS, Botany, 1973, University of Minn.

PLANT HEALTH COURSE POPULAR

Fifty-five students are now registered in the Plant Health Technology Program, James V. Groth, Director. A number of transfer students have been attracted from other Minnesota Institutions. The first student to complete the program was Sylvia Roman, who graduated in March 1975. She immediately went to work for the Minnesota State Department of Agriculture and is now in charge of the diagnostic laboratory in plant pathology, where much of the work is with Dutch elm disease.

Students in the program have organized a Plant Health Technology Club, which is holding its first meeting January 7, 1976. The principal speaker: Dr. E.C. Stakman.

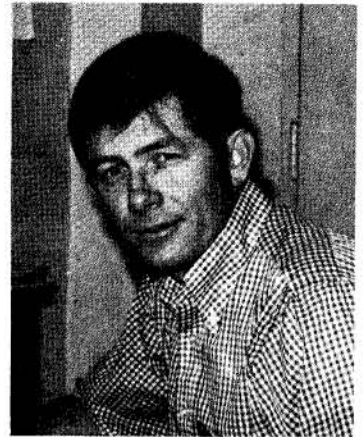
A PAGE OF PERSONALITIES



Rama R. Urs, p 20



Tom Robison, p 20



Joe Southern, p 4



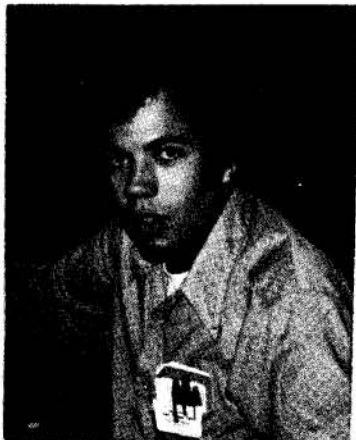
J.K. Somodiryo, p 14



*Alan Pierce, p 16



Syd Nystrom, p 20



Fred Baker, p 14



Robert Kohut, p 20



Scott Adams, p 14

*p 16, Aurora for Feb. 1975, that is, Alan is a Junior Scientist.

R.H. LANDON DIES

Dr. R.H. Landon died March 20, 1975 at his home in Minneapolis. Ray was born in Winona, Minn. He graduated with an BA from Macalaster College, St. Paul, in 1916 and was awarded the MS in 1922 at the U of M and the PhD in 1923 with a major in plant physiology. He was appointed instructor in plant physiology in 1931 and Assistant Professor in 1947. At that time plant physiology was part of the Department of Plant Pathology.

From the time he retired in 1961 until his death, Ray's principal interest was the Minnesota Archeological Society, of which he was treasurer for many years. He wrote articles for the society's publication and in general contributed a good deal to its success as an organization.

At a memorial service, a eulogy was delivered by a fellow archeologist, Mrs. J.C. Downs of Minneapolis. She emphasized his many contributions to the society and the many friends he had among its members. She concluded "Some of you found him crusty, at times irascible, capricious, frequently irritating, but withal, you will agree he was unique. You couldn't help liking the guy! "

WARD MARSHALL DIES

Ward H. Marshall, BS 1937, died unexpectedly at his home in St. Paul on May 3, 1975, at the age of 67.

Ward was Assistant State Leader for barberry eradication for 8 years, as a student and following graduation. Later he worked on a special program to develop the Russian dandelion as a source of rubber. He joined the Minnesota Crop Improvement Association in 1944 and became manager in 1957, the position he held at his death.

As manager of the MCIA Ward kept in touch with Staffmembers in Plant Path., especially those working with cereals. During the 30's he was pitcher on the Plant Path softball team, and it was in this role that he is remembered best by many Old Timers.

MINNESOTA AT THE HOUSTON MEETINGS

Minnesota was generously represented at the annual meetings of APS in Houston, Tex., by current Minnesotans and Old Timers. Thirteen staff members and 13 graduate students went by air and car. Graduate students were encouraged to go by virtue of being reimbursed for part of their expenses. Times have changed. Of those who went, nineteen authored or co-authored eleven of the papers the department presented.

The Minnesota Hospitality Room was the site of gaiety, amiability, leisure and serious discussions about plant pathological subjects. Many Old Timers and people from many parts of the world gathered there to renew old acquaintances, make new friends, and visit old friends. Refreshments were ample. No one seemed to be thirsty, except on occasions the "Kitty" would get rather dry.

Houston is a city of very diverse industrial, social and cultural characteristics. Some of our gang saw the NASA Space Center. Some looked at the industrial complex of the ship canal. There are covert reports that some of the younger set took advantage of lower forms of theatrical art in the nearby establishments where nude girls were blatantly advertised on the marquees.

All in all the meetings were, according to many people, some of the best in many years. The symposia on food and population were exceptionally well done and accepted. Nobel Peace Prize recipient and O.T. Norm Borlaug presented one of the papers.

Several members of the Minnesota gang are very active in Society affairs. Wood was elected Councilor-at-large. Representatives on committees are Kernkamp (Archives, Chair.) and Program, Wilcoxson (Plant Disease Losses), Roelfs (Epidemiology), MacDonald (Nematology), Zeyen (Placement) and Kennedy (Senior Editor). MFK

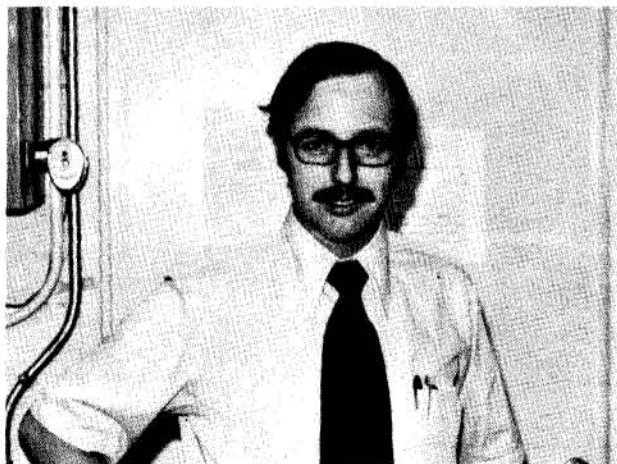
LOCAL

Prof. Thor Kommedahl and his Assistant, Carol Windels, received further kudos for their research on the control of soil-borne pathogens in a 2-page article in The Soil and Health Foundation News for August, 1975. The title of the article is "Searching for the Natural Way".

The "Natural Way" recalls that talking to plants is now in vogue as a means of promoting their health and happiness. Sagar Krupa, with a Fat Grant to study the 'impact' of emissions from NSP's Sherco power plant on vegetation, sent out an appeal for help from 'people who are conversant with the vegetation in central Minnesota'. This Department just doesn't overlook any possibilities in its search for answers.

PROGRESS

During the week of October 20, 1975, a new stainless steel sink, formica counter and genuine Sears Roebuck kitchen cabinets were installed in room 404 (coffee room). Shortly thereafter the walls were painted a shade of yellow approximating that of a school bus, stimulating pained comments by some of the more color-conscious coffee drinkers. It is rumored that the top of the long table where the "troops" eat will be refinished, a job Bill Anderson started in 1971, or 72.



Elwin L. Stewart, Assistant Professor, began work April 1, 1975. He is in charge of mycology teaching and research. (See Aurora for Feb. 1975, p 16.)



Beverly Connie Debbie Linda Sharon April
The Office Force

Births

March 15, 1974, to Ma de Lourdes de Bauer (MS, 1957) and Sr. Bauer, a daughter, Paloma. The Bauers also have another daughter named Carina, who is six years old.

October 6, 1975, to Mr. and Mrs. Syd Nystrom, a son.

EXAMINATIONS PASSED IN 1975

Elmer Schmidt	MS	February 10
James Wolf	PhD	April 2
Douglas Sarojak	PhD	May 1
Craig Grau	PhD	June 18
Virgil Jons	MS	June 27
Dereji Ahsagari	PhD	July 14
Robert Crow	PhD	July 31
Jeri Ooka	PhD	August 19
Bryan Shearer	PhD	September 22
Howard Schwartz	MS	September 26
John Laurence	Prelim	October 10
James Venette	PhD	November 5

A new course, Abiotic Diseases of Plants, Pl Pa 5108, will be offered during the Winter Quarter, 1976. It will be taught by Dr. Sagar Krupa, Pl Pa and Dr. A.C. Caldwell, Soil Science. It will cover "Effects of adverse physico-chemical factors on plants - Diagnosis, Physiology, Causes and Control." 8:30 - 10:00 a.m. Tuesday and Thursday Pl Pa 401.

BARBERRY ERADICATION ERADICATED

Eradication of the common barberry by federal agencies will be phased out in the U.S., starting in 1976, when the work in seven states will cease. In Minnesota, one of the last four states to be terminated, eradication of the bushes will continue through 1980.

Minnesota pathologists have a special interest in the barberry program because it was E.M. Freeman and E.C. Stakman, along with North Dakota's H.L. Bolley, who were most active in getting the work started. When, through the efforts of these men and a few others who joined them, federal funds were made available for the purpose, Dr. Stakman took 18 month's leave from his University position to organize the program in 13 wheat-growing states.

The program, which began in March, 1918, has continued since then under the successive administrations of several units

of the U.S.D.A., including the Office of Cereal Investigations, The Bureau of Entomology and Plant Quarantine, and others, depending upon the taxonomy and nomenclature of federal agencies at the time. Presently it is part of the animal and Plant Health Inspection Service (APHIS), which is concerned with many other programs for the control of insects and animal and plant diseases.

In recent years, barberry eradication work has been done by regular, year-around employees, state and federal, working under APHIS. Barberry surveys usually have been made during the dormant season when insect eradication and similar work have been less demanding.

During the years up to and including 1945, a total of 1,000,342 bushes were destroyed in Minnesota. In the next 24 years, through 1969, the total reached 1,022,769, and increase of a little over 900/year. The decision to phase out the



Barberry Eradication Crew - 1927

Back row: Barrett, Aakre, Kelso, Rasmussen, Detman, Franzee, LeFebvre, Melander, Dillman. Middle row: Eide, Peterson, Holton, Baumhofer, Hafstad, Person, Bamberg, Bottom row: Dawley, _____, _____, _____, Ukkelberg, Angvik, _____. If you know any of the missing names, let us know.

work was made because of the high cost per bush for eradication and because grain-growing areas are now all protected.

Back in the 1920's, when all the world was young, actual scouting and eradication was done mostly by college students, employed for three months during the summer. Under the inspiring leadership of L.W. (Tubby) Melander they set forth, attired in riding breeches and high boots and driving Model T Ford pickups belonging to the gov't. The pay was \$70-100 per month plus \$3 "per diem in lieu of subsistence", which was enough for room and board. There were 2 men per car and usually a crew of 6 or 8 at a given location.

The sleek, urbane college men, with cars sometimes used for non-official purposes, impressed some of the local females, providing opportunities not always ignored. As for the farmers, they were not always impressed but they usually cooperated; however there were occasional non-believers. Dr. Stakman sometimes went into the field in those days to keep in touch with the rust situation and cheer up the boys, and one of the non-believing type farmers called him a "damn liar" when Stak tried to explain the mysteries of heterocism.

A number of Old Timers got "experience" on barberry crews, earning money to supplement their research assistantships which then paid \$50/month. Some, who have attained distinction and power in their profession, as well as some not so powerful, may still recall wandering in the woods by day and wooing winsome waitresses in a gov't truck by night.

FROM THE LITERATURE

"The old belief that barberries produced rust in wheat has finally been laid to rest by the microscope. The two rusts are entirely different--one has nothing to do with the other. That one should follow the other is mere coincidence". --p 16, Our Northern Shrubs, by Harriet Keeler. 1969 ed.

PLANT DISEASE CLINIC

1975 was the 20th year that the Department has maintained a plant disease clinic. It was a good year. Klara Nelson, who holds a BS in botany and an MS in horticulture (1974) was in charge, under the authority of Ward Steinstra, Extension Specialist. Laura Sweets, Research Assistant and Roberta Brehmer, Sr. Laboratory Technician put in about 75% time.

An innovation this year offered training as interns for students in the Plant Health Technology Program. During the two academic summer sessions nine students registered for course 5650, Clinical Plant Pathology, spent 20 hrs. per week in the clinic, learning to diagnose diseases and methods of control. Jim Groth was in charge of the course, for which the students received 6 credits.

Klara reports that the clinic made 7000-7200 contacts during the summer season, 60% being by telephone, 28% by mail and 12% in person (walk-ins). Most of the problems were disorders of trees, including oak wilt and Dutch elm disease. The usual range of problems with fruits, vegetables and ornamental occurred.

The clinic was open on an 8 hour schedule from June 30 to September 23. Since then Klara has been on the job 3 afternoons a week. People who call the clinic number at other times hear a tape recording asking them to call during the clinic hours or to write.

Klara was highly praised by staff members for her efficient work in the clinic and her competent and courteous handling of public relations. She is now a graduate student in plant pathology working for the PhD.

The Mobile Clinic made 13 two-day stands during the summer at various places in the Twin Cities and at Duluth, St. Cloud, Mankato and Rochester. About 6000 contracts were made. Elmer Schmidt and John Laurence were in charge under Extension Specialist Frank Pflieger. Students in Course 5650 spent 2 days each with the mobil unit.

EMPLOYMENT NEWS

Ward Steinstra and Richard Meronuck were promoted from Assistant Professor to Associate Professor, July 1, 1975.

Benham Lockhart will be on the staff at St. Paul starting July 1, 1976 as Assistant Professor in the position left open by retirement of Dr. King. He will work on cereal diseases, the use of viruses as bio-control agents and the development of international projects. At present Dr. Lockhart is an Assistant Professor in the Department and is stationed at the Institute Agronomique et Veterinaire Hassan II in Rabat, Morocco under a Minnesota MUCIA/USAID project.

Ben holds a BS (1965) in crop science from the University of West Indies, Trinidad and the PhD (1969) in Plant Pathology from the U. of California, Riverside. He has been with the project in Morocco since 1971 and has published 8 papers on virus diseases of vegetables in that country.

John Mizicko accepted a position as Assistant Extension Specialist starting October 1, 1975. John will work on the program for training pesticide users in accordance with the requirements of the EPA. He resigned his job as Reserach Specialist working with Ernie Banttari on virus diseases, a position he had filled since June 1973. John holds a BS in Botany and an MS in Plant Pathology from Colorado State University.

In the main office April Grassel began work as Senior Secretary July 21, 1975 and Beverly Bergman as Senior Clerk Typist on August 7. They hold the positions vacated by Joanne Dorsher and Carolyn Clifton.

Sydney D. Nystrom has been working for Dr. Mirocha since March, 1974. Aurora's reporters were unaware of this until the Department of Vital Statistics (candy & cigars) reported the fact that Syd had become a father of a boy named Lawrence, born October 6, 1975. Syd worked out a computer-based system for the acquisition of data from the LKB-9000 mass spectrometer.

Robert J. Kohut, with a brand new PhD from Pennsylvania State U., began work as Post Doctoral Research Fellow Nov. 1, 1975. He is working with Dr. Krupa on the effect of air pollution on vegetation.

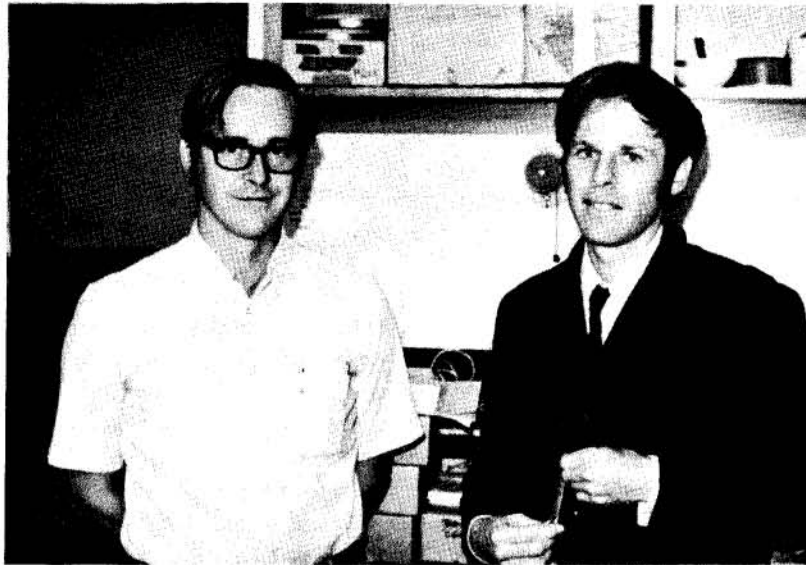
Thomas S. Robison is working with Dr. C.J. Mirocha on the isolation and structure of fungus toxins. He started September 16, 1975. Tom has a BS in Chemistry from the New Mexico Institute of Mining and Technology and an MS in Chemistry from the U. of Minnesota.

N.V. Rama Raje Urs was appointed Jr. Scientist November 1, 1975 and is working for Drs. Bob Shrum and James Groth. Born in India, Dr. Urs received the MS in 1968 from the University of Iowa and the PhD from Iowa State U in 1973.

FRENCH IS EMPLOYED -- AND HOW!

When the U of M basketball coach resigned and a committee began a search for a replacement, one sports commentator wrote, "With a plant professor and a female law student on the U of M search committee for a new head basketball coach, it is understandable how we probably arrived at some of our previous coaching choices. We'll be lucky if we don't wind up with a female scientist coaching the courtmen". Such are the rewards for "Plant Professor" D.W. French who puts in about 2 days a week (including Saturdays) on the University of Minnesota Assembly Committee on Intercollegiate Athletics, of which he is co-chairman. Among other things he wrestles with the problem of Equality for Women in sports, as dictated by Title IX and with various snafus arising from the manifestations of Nobility of Character and Good Clean Competition that sports seem to bring out in the young and not-so-young. Dave is also temporarily Big Ten faculty representative for the U of M and got a free trip to the Ohio State game in November. Minnesota Lost.

Craig Grau and Carol Windels were made full members of Sigma Xi, December 3, 1975. Dennis Johnson and Dave Lang were Made Associate members.



Bent Skovmand

Bryan Shearer

Recent PhDs



R.H. Landon
1893-1975



Barberr Truck 705 - 1928



Klara Nelson. Plant Disease Clinic



Virgil Jons - Page 9



A.R. Downie, PhD 1942 - Page 4

FUNGUS TOXIN RESEARCH MODERNIZED

A unique approach to the study of fungus toxins here is based on the use of a combination gas-liquid chromatograph-mass spectrometer (GA-MS) coupled to a computer for the analysis and interpretation of the data. The GC-MS is an L.K.B. 9000, low resolution mass spectrometer, ideally suited for separation of biological components. The computer is a Digital Equipment PDP-8E.

The equipment, costing about \$100,000 in 1970 when it was purchased, was acquired largely as a result of the efforts of C.J. Mirocha who, working with Clyde Christensen, has made Minnesota the leader in research on mycotoxins harmful to domestic animals. Armed with the impressive accomplishments they had already made, Mirocha was able to convince the university administrators of the value of the spectrometer for his own research as well as that of other departments in the University. He also raised part of the cost from private sources. The GC-MS is officially under the administration of the Agricultural Experiment Station, which pays the salary of Tom Krick, the Operator. Syd Nystrom, working on Dr. Mirocha's project, does the computer programming and is able to use the entire complex.

The mycotoxicology research keeps the equipment occupied about half of the time. Using microgram samples, the GC-MS is able to separate and identify organic components in materials such as feed samples, which may be suspected of causing illness in livestock. If the presence of specific toxins must be detected in a sample, the computer is programmed to select as many as 9 characteristic masses, while remaining "blind" to all others. This is the only mycotoxicology laboratory in the country with this competence, which is known as selected ion monitoring.

Besides the mycotoxicology research, investigations are being made of toxins and other metabolites produced by plant pathogens. As part of a still broader objective, Dr. Mirocha is compiling a computerized library of the mass spectra of natural products of fungi, as well as standard compounds and unknowns. This permits an understanding of the vast metabolic activities of fungi undreamed of a few years ago.

TREE DISEASE SURVEY TAKES TO AIR

A combination of urgent control measures and research has been under the direction of Dave French for several years in a number of metropolitan communities where Dutch elm disease and oak wilt are prevalent. In North Oaks, a community north of St. Paul and in Hopkins, west of Minneapolis, two men worked during the summer of 1975, surveying for the diseases and supervising procedures to slow the spread of the pathogens. The work is financed by grants from the communities to the University. Part of the job is the systematic study of the diseases to improve control methods. As a result of the 1975 campaign it was decided that future surveys would be made by air, using photography. In addition to planning and supervising such studies, French is consultant to a number of other communities where efforts are being made to protect oaks and elms. Among other projects, his crew has surveyed and initiated control measures around the National Headquarters of APS and AACC at 3340 Pilot Knob Rd., St. Paul. Neither Ceratocystis ulmi nor C. fagacearum respect the sacred premises.

KOMMEDAHL REVISITS ICELAND

Professor Thor Kommedahl was in Iceland April 18-May 6, 1975 surveying pastures where grass was winter-killed. He collected samples to study in the laboratory. The trip was sponsored by the Office of International Programs, U of M. and the Nedri as Research Institute, a private philanthropic organization in Iceland supported by Gisli Sigurbjörnsson. This was Thor's third trip to Iceland to study grass diseases.

DINGHY

Professor M.F. Kernkamp, who abhors wet feet, solved the problem of taking notes in his wild rice paddys by buying a polyethylene dinghy 7ft long by 3ft wide. Thus the Professor is able to float like a duck amongst his investigations without getting wet or losing professional dignity.

NEW ALFALFA PAYS OFF

One weakness that afflicts alfalfa is its tendency to "drown out". Prolonged wet spells frequently result in stand reductions which make a crop unprofitable and rob humanity of just that much valuable protein. It is now known that most of the "drowning" is actually Phytophthora root rot, a fungus disease favored by wet soil.

Fred Frosheiser, Research Plant Pathologist, ARS-USDA and Professor in the Department, together with Donald K. Barnes, Research Geneticist, ARS-USDA and Professor in Agronomy, released the variety Agate in 1973 and which is presently in great demand because it is resistant to Phytophthora root rot. Frosheiser made the first selection in 1968, in an irrigated plot at St. Paul, where the lines that went into the new variety originated subsequently.

Agate was a revelation to alfalfa growers and many agricultural workers. Its use showed that Phytophthora root rot was much more widespread than once supposed, throughout humid US and even in the drier areas of Montana, Wyoming and the Dakotas. In those areas over-irrigation, hillside seeps, hard pans and other situations which retained water, were ideal for the development of Phytophthora.

When the news got out about Agate the demand for seed increased rapidly. Fortunately the variety is a good seed producer, but even so seed companies were soon sold out. Naturally the companies were pleased.

In 1969-73 Frosheiser and Barnes released a number of lines ('germ plasm pools') which, like Agate, had been selected for resistance to Phytophthora root rot. Commercial seed breeders immediately started using this germ plasm to increase root rot resistance in their own varieties.

These germ plasm pools will eventually prove to be of greater benefit to agriculture than the variety Agate. Frosheiser says that, except for resistance to root rot and bacterial wilt, certain other varieties of alfalfa are superior to Agate in certain respects and that private breeders will no doubt soon introduce root rot resistant varieties that

will exceed Agate in yielding ability and other agronomic characters. However, where the disease is likely to occur, root rot resistance will give Agate a clear superiority until seed of better commercial varieties is available.

GRANTS

The following grants for research in the Department have been made since Mar. 1975: U.S. Forest Service, \$26,000, for 3 years starting July 1, 1975, for investigations on "The Impact and Control of Melampsora Leaf Rusts on Tree Species Used for Intensive Sylviculture," F.A. Wood, leader; U.S.D.I. National Park Service, \$100,000, renewed for one year, starting July 1, 1975, to study "The Role of Disease in the Environmental and Ecological Management of National Parks", F.A. Wood, leader; U.S. Forest Service \$3,300, for the period April 21, 1975 - August 31, 1976, for evaluation of the "Mycorrhizal Development in Red Pine at Toumey and Eveleth National Forest Nurseries," S. Krupa and E. Stewart, leaders; Public Health Service, H.E.W., \$26,000 (First year), for 5 years, starting June 1, 1975, to study "Biosynthesis and Action of F-2 Esterogenic Hormones," C.J. Mirocha, leader; State of Minnesota Department of Agriculture, \$30,950, for 3 years starting March 1, 1975, for "Development and Maintenance of Disease Tested Potato Seed Stocks," F.I. Lauer (Horticulture), E.E. Banttari and Neil Anderson, leaders; NASA, \$15,000, for 3 years, starting July 1, 1974, for "Study of Minnesota Forests and Lakes Using Data from Earth Resources Technology Satellites," D.W. French, leader; Northern State Power Company, \$400,500, for the period April 15, 1975 - December 31, 1978, to study "Impact of Stack Emission from the NSP Sherco Power Plant on Vegetation", Sagar Krupa, leader.

The program for the Regular Seminar for Fall, 1975 announced a series of papers on phytotoxins 'elucidated' by microorganisms. Microorganisms do some remarkable things, and elucidating should not be impossible. On the other hand, maybe the Seminar Committee meant "illicited".

RESULTS OF THE ALUMNI ASSESSMENT QUESTIONNAIRE

The Graduate Education Program Review, required by the Board of Regents was made in the spring of 1975. As part of this review, questionnaires were sent to 200 old Timers who graduated within the last 20 years. Ninety-seven responded. They were asked to rate each statement on a 1-5 scale, 1 being most favorable and 5 least so. The results are in the following tables.

Table 1. Current affiliation of respondents and distribution by year of graduation.

Affiliation	Number	Year of graduation	Number
College or University			
teaching and research	42	1955-60	18
Industrial or gov't research	37	1961-65	30
Extension	4	1966-70	37
Administration	3	1971-75	12
Other	12		--
Total	<u>97</u>	Total	<u>97</u>

Table 2. Average ratings of instructional areas by alumni

Area	Year of Graduation				Mean
	1956-60	1961-65	1966-70	1971-75	
Course offerings and content					
Variety of course offerings					
in Plant Pathology	2.1	1.6	1.9	1.9	1.8
Depth of coverage in courses	2.4	2.0	2.3	2.8	2.3
Breadth of coverage in courses	<u>2.6</u>	<u>2.1</u>	<u>2.2</u>	<u>2.3</u>	2.3
Totals	<u>7.1</u>	<u>5.7</u>	<u>6.4</u>	<u>7.0</u>	
Faculty					
Teaching competence of faculty	2.4	1.9	2.1	2.4	2.1
Motivation and enthusiasm	2.2	1.4	2.3	2.5	2.2
of faculty					
Quality of instructional					
methods	2.9	2.3	2.7	2.9	2.6
Testing and grading procedures	2.0	2.0	2.2	2.5	2.1
Student-faculty relations					
concerning instruction	<u>2.3</u>	<u>2.0</u>	<u>2.0</u>	<u>2.4</u>	2.1
Totals	<u>11.8</u>	<u>9.6</u>	<u>11.3</u>	<u>12.7</u>	
Instructional facilities					
Adequacy in space and design					
of classrooms	1.8	2.2	2.6	2.5	2.5
Adequacy in space and design					
of teaching laboratories	2.5	2.6	3.1	2.6	2.8
Greenhouse space and usage					
for instruction	2.5	2.1	2.8	2.3	2.5
Adequacy of laboratory					
equipment for instruc-					
tional use	2.7	2.8	3.0	2.6	2.8
Library facilities	<u>1.6</u>	<u>1.5</u>	<u>1.6</u>	<u>1.6</u>	1.6
Totals	<u>11.1</u>	<u>11.2</u>	<u>13.1</u>	<u>11.6</u>	

Table 3. Average ratings of research areas by alumni

Area	1956-60	1961-65	1966-70	1971-75	Mean
Total faculty relative to research					
Scientific competence	2.2	1.6	1.8	2.1	1.8
Technical competence	2.0	1.7	2.0	2.1	1.9
Direction and focus of research programs	2.5	1.8	2.3	2.3	2.2
Innovativeness and creativeness	2.6	2.0	2.4	2.6	2.3
Use of supporting facilities and personnel	2.3	1.8	2.5	2.5	2.2
Ability to convey research results to scientific community	<u>2.2</u>	<u>1.5</u>	<u>2.0</u>	<u>2.2</u>	1.9
TOTAL	13.8	10.4	13.0	13.8	
Faculty as advisers of student research					
Ability to direct and guide student research	2.5	1.9	2.2	2.7	2.2
Ability to stimulate student research	2.5	1.6	2.2	2.4	2.1
Ability to inspire confidence in students and develop their potentials as professional researchers	2.8	1.6	2.1	2.3	2.1
Ability to provide relevance to student research	<u>2.7</u>	<u>1.8</u>	<u>2.3</u>	<u>2.4</u>	2.2
TOTAL	10.5	6.9	8.8	9.8	
Research facilities and equipment					
Library facilities	1.7	1.4	1.6	1.5	1.5
Student-faculty laboratory space	2.6	2.5	2.2	2.1	2.4
General laboratory equipment	2.8	2.6	2.5	2.1	2.5
Specialized departmental equipment for research	3.1	2.7	2.9	2.4	2.8
Greenhouse quality and space	2.3	2.0	2.4	2.2	2.2
Greenhouse equipment	2.5	2.0	2.6	2.3	2.4
Field plot space and design	1.8	1.4	1.6	1.9	1.6
Field equipment and utilization	<u>2.1</u>	<u>1.8</u>	<u>2.1</u>	<u>2.0</u>	2.0
TOTAL	18.9	16.4	17.9	16.5	

Comments, tables 2 and 3. Judging from the totals of each group of questions, opinion of the faculty as teachers, advisers and researchers improved in 1961-65 and then declined again.

Scores for equipment and instructional facilities fluctuated, but improved over all with time, possibly because more funds became available for such purposes.

Field space and library high in all periods. Library facilities seemed to satisfy the Old Timers better than any other item in the questionnaire.

Table 4. Average ratings of overview items by alumni

Area	1956-60	1961-65	1966-70	1971-75	mean
Overall ability of the graduate program to prepare you for your personal professional career	2.3	1.8	2.0	1.8	2.0
Value of the Thursday Night Seminar Series	2.3	1.5	2.0	1.9	1.9
Relations between graduate students and faculty	2.2	1.6	1.7	2.3	1.8
Value of formal student seminars	2.2	1.7	1.6	2.7	1.9
Minnesota as a choice of a graduate department for aspiring plant pathologists	2.2	1.7	1.8	1.9	1.9
Relations among graduate students, relative to the total graduate experience	1.9	1.5	1.4	2.1	1.6
In general, what is your evaluation of products (alumni) of the Minnesota program relative to other Institutions of similar size	2.1	1.6	1.7	2.2	1.8
Total	<u>15.2</u>	<u>11.4</u>	<u>12.2</u>	<u>14.9</u>	
How would you rate the value of the Minnesota program relative to preparation for:					
Extension Plant Pathology	2.1	2.1	2.1	1.8	2.1
College or University teaching	2.5	1.9	2.4	3.0	2.3
University teaching-research	2.5	1.7	1.9	2.4	2.0
Industrial and related research	2.6	2.4	2.5	2.4	2.5
International agricultural programs	1.9	2.0	2.0	2.0	2.0
Administration of scientific programs	2.4	2.6	2.9	2.6	2.7
Totals	<u>14.0</u>	<u>12.7</u>	<u>13.8</u>	<u>14.2</u>	
National ranking of Minnesota relative to other programs that you know in the United States	4.0	3.2	3.1	2.2	3.3

Comment, Table 4. Opinion of the Department in general improved in 1961-65 and then declined. Its national ranking continued to improve, however. So, in the opinion of Old Timers, other institutions seemed to have deteriorated more than Minnesota.

(Note: Aurora makes no claims as to the statistical significance of these data).

OLD TIMERS SHARE THEIR THOUGHTS

In addition to returning the questionnaire, several Old Timers enlarged on their answers. Quotations from a few letters are given below.

On the Overall Picture

"In about 1963-64, I felt that a very pronounced shift occurred in the research emphasis of the department. This shift, away from field and applied research, and toward basic research was probably in response to availability of research funds. I feel that the shift was unfortunate for two reasons: (1) Minnesota was the best at training extension and field researchers, and lost their dominance in the change, and (2) the faculty, who are very good at what they had been doing, had very little competence in basic research (with a couple of exceptions) and were left in the position of supervising and directing research in basic areas in which they lacked technical competence. Minnesota should have stuck more closely to what it was best at and left the basic research to those who were best at it."

"My own experience at Minnesota was one in which scientific creativity was totally discouraged. This situation, however, was probably due to a noticeable personality clash between myself and my major professor, and was why I left Minnesota. Additionally, in the department as a whole, I felt that undue emphasis was placed on having the student learn a multitude of facts and mechanical operations, and too little emphasis was placed on the single most important function of a scientist - asking answerable questions of nature and then finding the answers."

"I'm very pleased that I'm a graduate of Minnesota - I'm not sure that any school would rank much higher on information gathered through a similar questionnaire. However, there is always room for improvement, therefore -

- 1) Enthusiasm, motivation by instructor, and stimulation of students for teaching was poor.
- 2) Broad research stimulation was excellent - a basically sound overall research philosophy existed. Utilization of intergration of sophisticated techniques was non-existent.
- 3) Individual guidance by staff markedly variable between people.
- 4) Major strength resided in interesting diverse backgrounds of graduate student populations.
- 5) Inbreeding of staff a serious problem. Diversity of research programs too limited."

"I feel that the scientific/technical preparation of Minnesota remains at a fairly high level. One that adequately prepares a student for the profession. However, I do feel that the amount of practical/applied preparation at the present time is not adequate. In other words, the approach has become more basic. One of the strong points of Minnesota in the past has been a very satisfactory balance of applied and basic. Today I feel that a definite shift toward the basic side has occurred. This has a direct bearing on the training of future pathologists, particularly for international agriculture."

"When I was in graduate school at Minnesota, we had the benefit of many years of grass root experiences of the staff which they shared with us. They were not highly skilled in biochemistry and related fields. I do not think this is a disadvantage since the University of Minnesota had a tremendous faculty of support staff in other departments. Therefore, the pathology staff were able to drill the principles and application to the problems of general overall plant pathology into the students. I believe it would be well to hold the type of staff that will continue to give a student this depth of knowledge." (continued, p. 28.)

Of Seminars and Such

"The Thursday Night Seminar, although it may have been inconvenient because of the time it consumed, was very valuable in promoting unity, community and esprit among the members of the department, in giving needed speaking experience to the students, and to some extent, in increasing our knowledge of the field.....

"In contrast, the formal seminar, which was held on Tuesday afternoons, was a terrible waste of time, except that, again, the speakers gained much needed experience. But my retention of information from those seminars was practically nil, and I remember them as being totally boring, unenjoyable, and uneducational. I think the nature of the assigned topics was the main reason for this."

"Most scientific information of value and methods of problem attack were disseminated among graduate students at coffee breaks, bull sessions and Thursday night Seminars. Classes and formal seminars were of less value in this regard. I disliked Thursday Night Seminars while I was there, but realized their value soon after my departure. They were especially valuable in teaching a student to handle himself in front of any kind of audience - paper presentations at meetings are easy by comparison, and the only thing that does compare is a prelim exam. They were also great in building comradery among students and alumni - all who have endured those Thursday Nights feel a certain oneness. I have since found that visitors to the department come away from Thursday night "blood lettings" with their minds boggled. With this praise of Thursday Night Seminars, it might be well to note that more than I disliked Thursday Night Seminars, I thoroughly disliked alumni who wrote back junk like this praising them".

"Looking back on my experiences, having attended two Universities and currently being in charge of an industrial research and development program, I feel that Minnesota affords the student and adequate opportunity to develop. I honestly feel that the experiences given the students through the Plant Disease Clinic, and particularly the varied exposure of Thursday Night Seminar aids in providing better plant pathologists through experiences and invites thought outside of the students' given area of specialization."

"One aspect of training that was in effect at Minnesota while I was there, was the Clinic. This was not covered by your questionnaire, and I felt that it should have been. The Clinic (one week of half-time service during the summer) was a controversial activity among the graduate students. There were two opinions of the clinic prevailing at the time. One group felt that the clinic was next to worthless, the other felt it was completely worthless, and both agreed that it had a high nuisance value.

"My own activities centered around cereal rust and little else, which gave me a very narrow experience base. The clinic, which I considered to be a nuisance at the time, actually was time well spent for me, as I have not worked with cereal rusts since I left Minnesota. I sincerely believe that for students in narrow, specialized areas of plant pathology, such as air pollution, virology and even rustology, some activity such as the clinic is needed."

"The responses may seem rather hard, but I left with the firm impression most research-class type learning occurred among graduate students (and you did not evaluate them here) and most students became good researchers in spite of classes and professors. I also recognized that many things have improved in 18 years and my current comments would differ from the above (for better)."