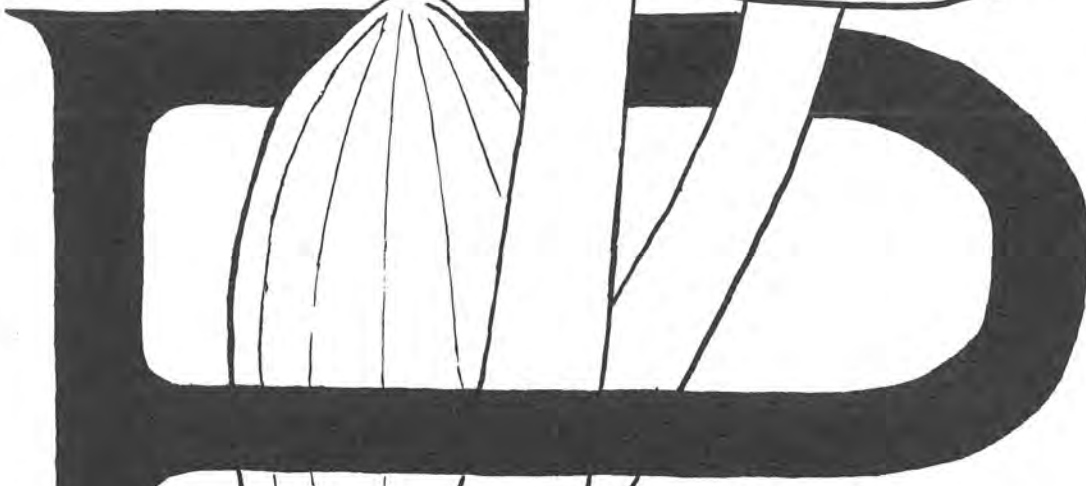


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PATHOGEN

THE PATHOGEN

1974-1975

Dedicated with fondness to Miss Audrey Dunlap, who has served the Department of Plant Pathology faithfully for 26 years and who remains an important part of the Department's tradition.

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EDITORS' NOTES

Apologies to all for the belated arrival of the 1974-75 PATHOGEN, which we are sure all of you have been anxiously awaiting. This issue (a co-operative venture between the two Colloquium Councils, 1973-74 and 1974-75) may not be a landmark in the annals of journalism, but we hope you will enjoy reading it; perhaps it will bring you up-to-date on the goings-on (research-wise and socially) in Russell Laboratories.

Much thought (perhaps more thought than action) went into the production of this issue with the intention of improving the format of the PATHOGEN, but, unfortunately, our ideas were a little slow in materializing and some of them were too late for this issue. One of our intentions was to include pictures of students and staff doing their thing in laboratories, classrooms, social gatherings, etc. This and other ideas will be passed on to the future editor of the PATHOGEN. In the meantime, we solicit from all our readers, far and near, ideas on what kinds of things you would like to see in future issues of the PATHOGEN. If you have any suggestions you wish to transmit to us, please send a postcard or letter to:

Editor, The PATHOGEN
Department of Plant Pathology
1630 Linden Drive
University of Wisconsin-Madison
Madison, Wisconsin 53706

We wish to thank those who have graciously given their time and efforts in writing articles for this issue, Steve Vicen for the photography, the secretaries for the typing, Drs. Kelman and Mitchell for their unwavering persuasion and encouragement, and Drs. Hanson and de Zoeten for putting up with us and surviving through the last two years as Faculty Advisors to the Colloquium Council.

Wayne Nishijima
Solke DeBoer
Patricia Delwiche

Co-editors

CHAIRMAN'S MESSAGE

Arthur Kelman

The academic years 1973-75 have been ones of change and adjustment to the continued pressures affecting all phases of the University of Wisconsin. During 1973, the Legislature finally approved the Merger Bill which has resulted in unifying all the state universities with the university at Madison and Milwaukee into one state-wide system. Although we in the College of Agricultural and Life Sciences have been buffered by the efforts of Dean Pound and his staff against "fiscal exigencies", financial restrictions have become a part of all program decisions. However, we are now fortunate to be able to look with some degree of optimism in the period ahead to the prospect that additional faculty and staff appointments can be made.

One major faculty change resulted from the acceptance by Professor J. D. Moore of an important administrative appointment in the College. On September 1, 1974, he assumed the post of Director of Experimental Farms for the College of Agricultural and Life Sciences.

A long-range plan for the department has been submitted to the faculty with recommendations for implementing a number of program changes which will occur following impending retirements. We face the prospect that the department will need to recruit 12 or more new faculty members by 1985 if normal retirement patterns are followed.

The major event of 1973 involved the post-Congress tour to the department. Over 200 visitors from 39 countries were provided with an opportunity to review all phases of the departmental research and were hosted at various social activities. Jim Kuntz and his committee were faced with many difficult logistic problems complicated by unexpectedly large student enrollment and the scheduling of a major football game on the weekend of the Open House. It was wonderful to have such a large attendance, including so many former students as well as distinguished leaders in the field of plant pathology.

From July, 1974, to August, 1975, Dr. R. D. Dubin took a leave of absence from his duties as Scientist-in-Charge of the USDA Laboratory to work on plant disease resistance in the lab of Dr. G. Ercolani at the University of Bari, Italy. Dr. John Helgeson assumed Dr. Durbin's responsibilities during his absence.

On July 1, 1974, Dr. Mitchell assumed responsibilities in the newly-created post of Associate Department Chairman. From January to July, 1975, however, he spent a well-deserved six-month sabbatical leave in Adelaide, Australia, where he worked on a soil microbiology project in the laboratory of Dr. Rovira.

On January 3, 1975, Miss Audrey Dunlap retired from her position as Departmental Secretary. Miss Dunlap had devoted her energies and thoughts to this department for almost three decades; we have been fortunate as a department to have had a person with her conscientious commitment and personal loyalty over such a long period of time. It was difficult to envision departmental operations without her presence, but Miss Marleen Steinmetz, the daughter of the late Al Steinmetz, has succeeded Miss Dunlap, and has continued a tradition of service to the department that extends over many years, indeed.

We were deeply saddened by the death on February 16, 1975, of Emeritus Professor Gerald G. Thorne, who had been with the department since 1956. For those of us who knew him and remember his enthusiasm, friendliness, and sincere concern for everyone he knew, as well as his excellence as teacher and researcher, his name will continue to evoke the pictures of a full, active and productive life.

We have been fortunate during the past two years to have had a number of talented visitors on postdoctoral appointments--from Germany (Gerd Hänssler and Peter Kraus), Mexico (Leopold Pucikovsky), Spain (Fernando Laborda), Iran (Ziaeddin Banihashemi), Taiwan (Lung-Chi Wu), Yugoslavia (Husnija Festic), and England (Angela Thomas and Barbara Lund), as well as the United States (John Steele, Daniel Schadler, James Percich, Charles Powell, and Lynn Graves). Our visitors enhance the professional quality of the department and provide a cosmopolitan spirit which is much appreciated.

DEDICATION: MISS AUDREY DUNLAP

It is very fitting that this issue of the PATHOGEN be dedicated to Audrey Dunlap, who served for 26 years (1948 to early 1975) as the head secretary of the department. The length of this tenure of service is reflected by the fact that her beginning salary in the department was \$2,340 per year!

The department had had only two head secretaries prior to Miss Dunlap (the first one being Alma Steinmetz, Marleen Steinmetz's aunt, and the second was Clara Sleicher), so, as a new staff member in 1948, I was more than a little interested in who our new "leader" would be. Would she continue the very high standard of clerical leadership the department had come to take for granted? Would she be able to manage a growing and somewhat physically separated stenographic pool, an expanding faculty, and an exploding graduate student enrollment?

Could she keep the "Big 4" (Keitt, Walker, Riker, and Dickson) happy, at peace, and pulling together? Could the department possibly obtain the services of a top-flight administrative secretary in view of the very poor housing that we had?

We quickly learned that our new round-faced secretary would give us a yes to all of these questions. She was top-flight. With previous experience as a departmental secretary, in the Department of Veterinary Science from January 1947 to December 1948 (and from previous experience in the State Board of Health, General Motors, and Commonwealth Telephone Company), she was able to keep the "Big 4" happy, each running his own empire.

She did manage the secretaries, with both love and firmness. She required punctuality; she engendered neatness, courtesy, and good grooming; she provided an equitable workload.



If these things didn't fall in place with normal relationships, she would bring them about by a casserole lunch in the office.

Audrey Dunlap rendered, perhaps, her highest service to the graduate students, and particularly those from foreign lands because of the extra problems they had. She was their counselor, banker, medical adviser, and friend.

In regard to our crowded, run-down housing situation, Audrey Dunlap had a few lessons to teach. Poor people did not have to be dirty! So the hallways and offices got a going-over with regularity. (It must be admitted that she was not able to get all the professors to keep clean desks.) Old furniture was traded in for later models when possible. Garden and greenhouse flowers added sunshine and beauty. Wally and Al were called on for bits of carpentry, and Dewey Moore for electrical services. Her numerous petty cash accounts bailed out many needs. She kept an eye on gift account balances and was able to convert small balances to uses in the office. Her excellence at juggling accounts was no small feat, making sure we used all our Hatch money on time and stayed out of trouble with the Director's office. We kept growing in number and became increasingly overcrowded, but we were respectable and productive.

Audrey Dunlap is known and respected for her candor. She didn't pussyfoot around in her communications. She was forthright and direct. She called a spade a spade, but she did it with a smile on her face and a twinkle in her eye, and she was believed.

Glenn S. Pound

Among those who knew Audrey Dunlap, or "Lil Audrey" as some called her, it is perhaps the students who remember her the best, for they were the ones who received the greatest portion of her attention and concern. Says one former student, "I do remember her very well from 20 years ago when she was mother to a number of graduate students. Special relationships always existed . . ."

To the new student, her sternness was at first a little disconcerting, if not intimidating, but we soon learned that under her business-like approach lay a heart of gold, always ready to offer personal assistance, or to pitch in with the organization of social functions. (Indeed, more than one Colloquium Council picnic was rescued by her suggestions and her offers of help.) It wasn't long before a new grad student learned that "going to the top" to get something done meant going to Audrey Dunlap.

Upon hearing of Miss Dunlap's pending retirement, another former graduate student reminisced, "She had the sense of humor, plus the strength of character, to put up with all the nonsense a band of 30 graduate students--many older war veterans--could dish out during my stay at Madison. She surely had our love and respect.

"It is with a retirement such as this that one comes face to face with his own short stay on this earth. If we reach any immortality, it is through the kind remembrances of friends we have made, and Miss Dunlap will have many such friends."

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PLANT PATHOLOGY COLLOQUIUM COUNCIL 1973-75

The past Colloquium Councils presented a varied social activities program. Our mandate, as we saw it, was to foster and promote an interaction among students, faculty, and staff apart from strictly academic pursuits and classroom situations. During our terms of office we had quite a number of parties which provided a break from studies and an opportunity to discuss diverse subjects in an informal, relaxed atmosphere. Certainly some were more successful than others, but, looking back, they were good times. The diligence with which Bob Ehr and Dave Webster kept the Commons Room stocked is certainly noteworthy. Not only was it pleasant for the "coffee breakers", but it also gave a tidy income to cover many of our events--some accomplishment in times of soaring prices!

It was fortunate that we had an opportunity to visit with some of the foreign scientists to exchange views and ideas during the Open House. Especially from the graduate students' point of view, this was an invaluable experience. For this occasion, the responsibility of the Colloquium Council was primarily to encourage student participation and to recruit and coordinate student assistance for tours, transportation, and displays.

Taking advantage of the presence of our foreign graduate students and post-docs, we solicited a number of noon-hour slide presentations. During the year, Miguel Porto gave an excellent show on Brazil, Sanchai Tontyaporn on Thailand, and Gerd Hänssler on Germany. In addition, Dr. Fulton showed us two of his fishing movies and Bob Ehr introduced us to the ins and outs of speleology. In the winter of 1974, the Colloquium Council began what it was hoped would become a tradition of evening colloquia featuring speakers from within and outside the department.

We took advantage of the chilly Wisconsin winters with skating and tobogganing parties; other sports activities included tennis (the Golden Racket Trophy going again to Larry Hansen, our resident bacteriologist), and spring and summer softball games (promise a case of beer and you're sure to get enough players for a game!).

These are only some of the highlights of the past years' activities. (Details are found elsewhere in this issue of the PATHOGEN.) It is crucial to remember that, while the Colloquium Council has assumed the responsibility of fostering social interaction within the department as one of its primary goals, that goal cannot be realized without the conscious cooperation and eager encouragement from the entire department. This social and personal interaction is mandatory for a group of people to work together successfully and harmoniously; we hope that our Colloquium Council activities helped attain that state.

PLANT PATHOLOGY COLLOQUIUM COUNCIL 1973-74

President	Solke DeBoer
Vice President	Robert Fries
Secretary	Robert Ehr
Treasurer	David Pinnow
Odd Job	Wayne Nishijima
Publicity	Lemma Kifle
Faculty Advisor	Dr. Earle W. Hanson

PLANT PATHOLOGY COLLOQUIUM COUNCIL 1974-75

President	Edward Halk
Vice President	Cleora D'Arcy
Secretary	David Webster
Treasurer	Steven Lindow
Program Chairperson	Patricia Delwiche
Publicity Director	David Pengelly
Faculty Advisor	Dr. Gustaaf de Zoeten

COLLOQUIUM COUNCIL ACTIVITIES

September 21, 1973 The secretarial-staff-sponsored Fall Welcoming Picnic was held in Room 187, Russell Laboratories, due to inclement weather. This unorthodox location did not deter anyone from their "quota" of brew, however.

October 12, 1973 Dr. R. W. Fulton showed and narrated two films, "Trout Fishing in the Ungava Bay District" and "Fishing in Scotland" which he produced, directed, edited, and co-starred with Dr. Hagedorn.

November 6, 1973 Dean G. S. Pound presented a seminar on the "Pound Report".

November 21, 1973 Bob Ehr presented a slide presentation on "An Introduction to Speleology".

December 15, 1973 The Annual Colloquium Council Plant Pathology Christmas Party was held at the Rimrock Hills Clubhouse.

January 31, 1974 A skating party was held at Vilas Park. Free hot chocolate was served in the shelter house.

February 1, 1974 Dr. Gerd Hänssler gave a slide presentation on Germany.

February 9, 1974 A starlight tobogganing party was held on the hill behind Cherokee School. It was followed by a party at the Rimrock Hills Clubhouse.

February 22, 1974 Sanchai Tontyaporn gave a slide presentation entitled "Tour Around Bangkok".

March 27, 1974 Miguel Porto gave a slide presentation on Brazil.

May 31, 1974 The Annual Spring Picnic was held at Hoyt Park under a beautiful clear blue spring sky.

September 13, 1974 The secretarial-staff-sponsored Annual Fall Picnic was held at Burrows Park and was a great success, thanks to the fine weather and the special assistance of Sue Loesch, Marleen Steinmetz, and others.

November 6, 1974 Dr. Arthur Kelman presented a special evening seminar on "Education and Research in Agricultural Sciences in the People's Republic of China" to a large audience of faculty, staff, students, and spouses.

November 20, 1974 Jonathon P. Ela, Midwest Representative of the Sierra Club, presented an evening seminar entitled "Our Midwest Public Lands: A Mandate for Citizen Action".

- February 8, 1975 A skating party was held at Vilas Park; hot chocolate was served.
- March 4, 1975 Dr. Kelman presented a special seminar on "Plant Pathology in the People's Republic of China".
- March 14, 1975 Dr. Army presented some slides of his recent trip to Kenya.
- April 22, 1975 Drs. Army, Boone, and Moore showed slides of wild flowers.

The following people have been elected as the Colloquium Council executives for the 1975-76 year:

Faculty Committee	Margo Daub
Curriculum Committee and Sports	William Fett
Commons Room	Barbara Holroyd
Slide Sets	Vincent Otoide
Treasurer	Richard Reeleder
Speakers and Seminars	Jorge Victoria
Faculty Advisor	Dr. John D. Kemp

PLANT PATHOLOGY OPEN HOUSE

J. E. Kuntz

Following the International Plant Pathology Congress at Minneapolis, the department sponsored an "Open House" (September 13-15, 1973), hosting over 200 foreign (from 39 countries) and stateside visitors. The program began with a conducted bus tour southward from Minneapolis through Wisconsin, with a stop-off at the Arlington Experimental Farms. In Madison, exhibits in all laboratories provided guests an illustrated resumé of our research, teaching, and extension programs. Conducted bus tours through the biotron, greenhouses, Forest Products Laboratory, and other special facilities expressed the interdepartmental and interagency approach to many programs. Of course, special group luncheons, a formal banquet at the Wisconsin Center, coffee-tea breaks, campus "hikes", a woman's program, and numerous small discussions provided opportunities for meeting old and new friends and for exchanging ideas. The weather cooperated magnificently: clear, sunny, and crisp with a touch of fall coloration. Excellent University dormitory and dining facilities added to comfort and enjoyment. At the banquet, Emeritus Professor J. C. Walker was presented the E. C. Stakman Award for outstanding service and contributions to plant pathology.

PLANT PATHOLOGY IN IRAN

Ziaeddin Banihashemi
Associate Professor in Plant Pathology
Department of Plant Protection
College of Agriculture
Pahlavi University
Shiraz, Iran

Plant pathology is a young science in Iran, perhaps younger than you think. Although some European mycologists traveled to Iran 30 or 40 years ago, they were interested only in collecting fungal specimens without regard to

plant pathogens. Plant pathology in Iran started 15 or 20 years ago, when the teaching of plant pathology started in agricultural colleges. At that time, three or four Iranian mycologists, educated in France, were doing some work on diseases caused by fungi. In most agricultural colleges, very little attention was given to plant pathology, but entomology was emphasized. The result is now seen among older graduates in Iran, who know very little or nothing about plant pathogens. Agricultural colleges in Iran opened plant protection majors to students about 16 years ago when the Department of Pest Control was established, with plant pathology as a small section of this department. In about 1958, the only university which offered a Bachelor's degree in plant protection was the University of Tehran, the oldest in Iran; by 1965, this university also offered a Master's degree, and, by 1974, a Doctorate, in plant protection. The universities at Shiraz and Tebriz did not offer Bachelor's degrees in plant protection until about 1965. At the present time, plant pathology is taught in all agricultural colleges and institutions. All colleges established a Department of Plant Medicine or Plant Protection which combines both plant pathology and entomology. Two universities in Iran expanded the field of plant pathology and entomology: the Department of Plant Medicine at the University of Tehran and the Department of Plant Protection at Pahlavi University in Shiraz, where I work. Both Tehran and Shiraz offer Bachelor's and Master's degrees with orientation toward plant pathology as well as entomology. Students normally complete the B.S. degree in four years and, if accepted, spend two more years to complete the M.S. degree.

The Plant Pathology Section's staff at Tehran University was educated in Europe and classes are taught in Persian (Farsi). On the other hand, all of the plant pathologists at Pahlavi University were educated in American universities and, consequently, classes are taught in English. Thus, the two major universities are oriented toward different systems.

Teaching is the most important responsibility in most institutions. Due to limited numbers of faculty members in each department (usually four or five), heavy teaching loads, and limited budget and personnel, very little research can be accomplished.

The Department of Agriculture also has a very well financed institute for studying plant pests and pathogens in Iran. Unfortunately, most of the activities are centralized in the capital, Tehran, and very little attention has been given to other parts of the country. Only occasionally do the experts travel beyond the city. Several experiment stations with plant pathologists and facilities are needed throughout the country.

The Iranian Journal of Plant Pathology is published at irregular intervals by the Iranian Phytopathological Society and is financed by the Department of Agriculture. Some colleges also have their own journals which deal with all aspects of agricultural sciences including plant pathology. Three years ago, Pahlavi University started to publish a scientific journal, the Iranian Journal of Agricultural Research, which also accepts papers from other universities and from foreign countries. This is the first well prepared scientific journal in agricultural sciences in Iran.

The Iranian Congress of Plant Medicine is held every two years in Iran. Papers dealing with plant pathology, entomology, nematology, and related areas are presented. All agricultural colleges and governmental institutions participate.

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A PLANT PATHOLOGIST IN THE PEOPLE'S REPUBLIC OF CHINA
Arthur Kelman

During the period from August 27 to September 23, 1974, a Plant Sciences Delegation from the United States traveled to the People's Republic of China. The trip was under the sponsorship of the Committee on Scholarly Communication with the People's Republic of China of the National Academy of Science. Included in the delegation were 10 plant scientists representing expertise in various crops, plant genetics, taxonomy, and soils. The objectives of the delegation were to assess the status of agricultural sciences in China as they relate to crop improvement, to explore prospects for the exchange of germplasm useful for the improvement of food and feed, and to establish contacts with Chinese agencies and scientists for the purpose of initiating exchanges of information. During our four weeks of extensive travel, we visited one agricultural college, many agricultural research institutes, communes, and various institutes of the Chinese Academy of Sciences in the following provinces: Kwangtung, Kirin, Hopei, Shensi, Kiangsu, and Shanghai. Major cities visited included Canton, Kung-Chuling, Peking, Sian, Nanking and Shanghai.

Like other scientific societies related to agriculture, the Chinese Phytopathological Society was disbanded after the Cultural Revolution. Scientists at agricultural colleges and the academies or institutes for research, including plant pathologists, are now members of an all-inclusive society, the Association of Agriculture of the People's Republic of China.

One responsibility of the Association of Agriculture is to foster the advancement of the specific scientific disciplines in agriculture that are included in its membership. A directory of plant pathologists and their areas of specialization was not available for China. In most colleges and agricultural research institutes, plant pathologists and entomologists now work in Departments of Plant Protection. Since many plant pathologists are engaged in broader programs in the general area of plant protection, it is difficult to designate certain individuals specifically as plant pathologists. In view of the total numbers of individuals assigned to disease control problems in the colleges, research institutes, county plant protection units, and communes, it is likely that more individuals are now directly concerned with disease control problems in China than in any other nation in the world. One approximation was that about 50,000 persons are currently involved wholly or in part in plant pathology-related programs.

The Chinese Journal for Plant Pathology discontinued publication about 1966. Articles on plant virology and other areas in pathology are being published in *Scientia Sinica* and *Acta Botanica (Sinica)*. It was possible to obtain as gifts from the Association of Agriculture (Peking) a series of very fine extension-type manuals with color illustrations of the major diseases and insects affecting key crops. Although these were apparently designed for use at the communes, the illustrations usually include drawings of the reproductive stages of the causal fungi as well as details of the key stages in the life cycles of the major insect pests. A manual of the chemicals that can be used for control of insects, weeds, and plant pathogens describes the chemical structure and properties of various pesticides and lists the recommendations for proper use. These pamphlets are now deposited in the library of the Department of Plant Pathology, University of Wisconsin-Madison.

Students at agricultural colleges who will become plant protection staff members are enrolled in a Plant Protection Curriculum and are supposed to master both entomology and plant pathology at the basic level, as well as spend one-third of their time in studies under field conditions. The specific programs of study are still undergoing evaluation and development. No new revised printed (published) teaching manuals or textbooks specifically for plant pathology are available as yet. However, each instructor may have some material available in duplicated form for the students, and texts previously in use can serve as references. In one teaching laboratory, many large posters were displayed showing excellent color paintings of symptoms of disease and reproductive structures of important fungal pathogens.

Advanced training in plant pathology is limited to individuals selected by teachers and fellow students as worthy of further training; these individuals receive appointments as assistants and are trained by senior staff. The persons selected must be approved by the revolutionary committee of the college before being given an appointment as an assistant.

As indicated earlier, most agricultural colleges are in a transition period as they are now in the process of completing the moves from urban to rural areas. The Northwest College of Agriculture, initially established at Wu-kung (at some distance from Sian, the major city in the province), is one of the institutions that did not have to undergo this relocation process. It is not possible at this time to make any definitive statements as to the organizational or administrative patterns that will be followed for all plant pathology units in agricultural colleges. The likely model for most colleges is a Department of Plant Protection with two divisions--one of plant pathology and one of entomology. Weed science is usually considered to be the responsibility of one or more members of the plant protection group, but research on weed control may be under study in other departments as well.

The primary research emphasis in the groups visited is directed to the development of practical, inexpensive control methods. Because of close working relationships between colleges, research institutes, and provincial research stations, information on disease control is promptly utilized and tested in the communes. Most plant pathologists have spent one or more years working at a commune. In addition, they continue to work closely with their students on field problems and projects.

The major thrust of the current effort is in the development of varieties with improved disease resistance and use of cultural practices to reduce disease losses. The results of ongoing research in plant protection are disseminated in the following manners:

- Scientists, extension workers, and farmer groups visit the commune and brigades as well as various experiment stations at which a specific practice or advance in a control practice has been found to work effectively.
- Radio broadcasts are used extensively to disseminate specific information on controls.
- Meetings of workers on plant protection are held frequently and the relative merits of new practices are discussed and evaluated.
- A telephone network permits one call to alert a large number of communes to the prospect of a critical disease or insect problem.

Because of rapid rotation sequences, use of organic fertilizers, alternation of many crops with rice which involves flooding of fields, care in selection of disease-free planting material, strict quarantine regulations, careful roguing of diseased plants, and use of improved varieties, many common diseases have been either brought under control or reduced in severity. However, certain foliage blights of rice and leaf rust of wheat (to name a few examples) continue to be a cause of concern. Relatively little research is in progress on basic aspects of disease physiology or biochemistry, virology, and nematology. It was difficult to determine whether the limited amount of research (basic or applied) on nematodes indicated a lack of nematode problems or the lack of scientists with depth of training in nematology.

We were impressed by the efforts being made to utilize fully the available knowledge in plant pathology as well as in related fields in agriculture. In contrast to certain other countries faced with heavy population pressures, it is apparent that the Chinese have become able to feed their own people well for the present. Opportunities exist to improve the production in many areas and to share our technology, however. We, in turn, have much to learn from the management practices and effective information transferral systems that have been developed. Seed of certain crops which will be of value to plant breeders in the United States was given to us and this has been forwarded (following proper quarantine procedures) to Beltsville. Arrangements were made for future exchanges. In all the places we visited, our group was welcomed in a most hospitable and friendly manner with every possible effort being expended to make our visit rewarding from a professional standpoint and pleasant and enjoyable on a personal basis.

THE "DEUTSCHE PHYTOMEDITIEISCHE GESELLSCHAFT"

Peter Kraus

Upon my return from the APS-CPS meeting in Vancouver, I thought about the activities of the corresponding German phytopathological society, the "Deutsche Phytomeditische Gesellschaft" (DPG). With almost 800 members, it is one of the largest phytopathological societies in the world, yet it is relatively small in comparison with the 2,775 members of APS. Within recent years the DPG intensified its international relationships, largely due to the fact that the Chairman, Professor F. Grossman, is Vice President of the International Society of Plant Pathology.

The DPG organizes annual national meetings for the whole field of plant pathology, which, in Germany, includes entomology and weed science. With the flood of presented papers, these meetings become more and more gigantic, and people normally stay in pre-chosen sessions instead of doing the more exhausting "session hopping".

Though nobody wants to give up the big annual DPG meeting (personal contact is one of the reasons), the consequence is that meetings which deal with broad phytopathological aspects more often have a regional character, whereas meetings with a specialized program are organized on national or international levels. For example, there are the so-called "European Discussion Groups" (EDG) founded by 10 European phytopathological societies. Scientists who actively contribute to a special subject or research program can join such an EDG. A maximum of 40 scientists per group keeps these groups functional, and the relatively short distances within Europe

contribute to the highly active exchange of ideas. For example, in the summer of 1974, an EDG meeting was held in Kiel, Germany, on the subject of cereal root and stem diseases (eye spot, take-all, and blackleg).

All the activities initiated by the DPG are started in 11 so-called "Arbeitskreise" committees which comprise the whole plant pathology spectrum. They are open for every interested member who is willing to contribute to the efforts of the group.

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IN MEMORIAM

Gerald G. Thorne died at Methodist Hospital in Madison, Wisconsin, on February 16, 1975, at the age of 84. He was an international authority on plant parasitic nematodes and Emeritus Professor of Plant Pathology and Zoology at the University of Wisconsin-Madison.

Jerry, as he preferred to be called, was born in Vernal, Utah, on July 6, 1890. He obtained a B.S. degree in Entomology and Zoology from Utah State Agricultural College at Logan in 1918 and an M.S. degree in Zoology from the University of Utah at Salt Lake City in 1925.

He saw his first nematode, a sugar beet cyst nematode, in June, 1917. At that time, nematodes were a major problem in sugar beet production in the western states. Jerry became interested, and, in 1918, he joined the Nematology Section of the Bureau of Plant Industry of the U. S. Department of Agriculture. He worked in this organization until 1956. During this period of 38 years his official headquarters were the Regional U.S.D.A. Laboratory at Salt Lake City, Utah.

At the same time, however, he also spent considerable time as a consultant regarding agricultural problems of underdeveloped countries, and as a consultant for specialized agricultural problems.



In addition, he carried out nematode surveys and served as lecturer and consultant at Cornell University and the University of Nebraska. By the end of his term with the U.S.D.A., Jerry Thorne had become one of the world's most knowledgeable and experienced nematologists, and his services were in constant demand.

It was not surprising, therefore, when the Department of Plant Pathology at the University of Wisconsin needed an established nematologist to organize and direct a program of teaching and research in nematology that it turned to Jerry Thorne. He came to Wisconsin in 1956 and served on its University faculty until June 30, 1961, when he reached mandatory retirement age.

Subsequently, he served as a visiting professor and consultant in other universities and research organizations, including Purdue University, Michigan State University, the Intermountain Range Experiment Station (U. S. Forest Service), West Virginia University, and the University of California (Riverside). He also visited Guatemala and investigated nematode problems in Puerto Rico, and, when he was 80 years old, attended the International Congress of Nematologists at Pescara, Italy, visiting Belgium, The Netherlands, Egypt, and Greece on the same trip. Throughout his "retirement" years he kept his office and laboratory at Madison, and whenever he was in town, he spent much of his time in his laboratory doing research, consulting students and staff, or writing. He was a person of extraordinary energy and dedication. He continued working until just a few weeks before his death.

Jerry Thorne was interested and knowledgeable in all aspects of nematology. He believed that nematodes rank among the most important crop pests, and that they are a constant threat to crop production in many areas. He was thoroughly familiar with the use of crop rotation, soil fumigation, resistant cultivars, natural enemies, and other methods of control. He was a firm believer in the need for accurate diagnosis of any pest before attempting to control it, and was himself an expert on nematode identification and taxonomy. While at Salt Lake City, he assembled and catalogued a collection of more than 34,000 specimens representing some 2,000 species. After coming to Wisconsin, he assembled another collection of the nematodes common to the North Central states. He described the following new taxa: one order, three superfamilies, 20 families, 21 subfamilies, 70 genera, and 441 species. His taxonomic papers included approximately 2,000 original drawings. While he spent much of his time in the field, particularly during the first part of his career, he published more than 70 technical papers, including several monographs, and a textbook.

He was a member of the Society of (American) Nematologists, the Society of Tropical Nematologists, the Helminthological Society of Washington, the American Society of Sugar Beet Technologists, the American Phytopathological Society, the American Association for the Advancement of Science, the Utah Academy of Sciences, Arts, and Letters, and Sigma Xi. He was also a 32nd Degree Mason.

Among his many honors were a Distinguished Service Award from Utah State University in 1956, a 40-year Service Award from the American Society of Sugar Beet Technologists in 1960, and a 50-year Outstanding Service to Nematology Award from the Helminthological Society of Washington in 1967. He was elected a Fellow of the American Phytopathological Society in 1965.

Jerry was also an excellent teacher. His boundless enthusiasm for his subject, his broad knowledge and experience, his ability to organize, his earthy style, and his patience made him a favorite with students. It is unfortunate that he did not have the opportunity to do more formal teaching. The students he did train became leaders in the field of nematology. He was very proud of them, and considered them to be his greatest contribution to society.

He loved life and people, and was a most interesting and delightful person. He had a rare sense of humor, and few could excel him in the telling of stories. As a boy, he herded sheep, climbed mountains, and befriended Indians. He owned many Indian relics. He loved to fish and hunt. He was skillful with his hands and made his own bows and sometimes his arrows. He was truly a man of many talents and interests. He was modest, compassionate, and generous. He was a person of integrity and high standards.

He is survived by his wife, Zelda; two sons, Marion F. of Pacific Palisades, California, and Gerald B. of Hinsdale, Illinois; and two grandchildren. A memorial service was held in Madison on February 18, 1975. Burial was in Vernal, Utah.

E. W. Hanson
H. M. Darling

ALUMNI NEWS

Over the past few years, correspondence from alumni in such distant places as Australia, England, and Nigeria has kept us up-to-date on their activities.

Bill Rathmell (Visiting Professor, 1973) writes from Surrey, England, that he is developing a project on the uptake and efficacy of seed treatment fungicides at the Lilly Research Center, Ltd. Also in Surrey, England, is Margaret J. Mence, a former student with Dr. Hildebrandt, who reports that she is continuing her work with the Royal Horticultural Society, mostly in extension work.

Elizabeth (Betty) Schofield (M.S., 1957) has written of her marriage (in December 1972) to Dr. Robert Taylor, a plant pathologist in the Agricultural Development and Advisory Service. Mrs. Taylor is no longer a working plant pathologist, but remains interested in it and in the agriculture of the Berkshire region of England, where the Taylors live, and she invites anyone who is visiting England and is interested in renewing her acquaintance or in learning some field plant pathology in that area to visit them.

Peter H. Tsao (Ph.D., 1956), Professor of Plant Pathology, University of California-Riverside, has returned from an 11-month sabbatical leave in Thailand and England. Accompanied by his wife Pamela (Ph.D., 1962) and son Fritz, Pete spent six months in Bangkok where he was a United Nations/FAO Consultant for the Thai Government on Phytophthora diseases of black pepper, citrus, durian, and rubber trees. Pete and Pam enjoyed the professional cooperation as well as the reunion with three Wisconsin alumni, Anong Chantarasrikul (M.S., 1957), Riksh Syamananda (Ph.D., 1958), and Slearn Wasuwat (Ph.D., 1960), all ranking members in the Thai Department

of Agriculture. Pete also conducted cooperative research on corn downy mildew fungi with another Wisconsin alumnus, Udom Pupipat (M.S., 1961) of Kasetsart University in Bangkok. From Thailand, the Tsao family traveled to Europe and England where Pete spent three months studying Phytophthora with Grace Waterhouse and Jean Stamps at the Commonwealth Mycological Institute in Kew, Surrey, near London.

Ivan J. Thomason (Ph.D., 1954) is also at the University of California-Riverside as a Professor of Nematology and Plant Pathology. He was recently elected Vice President and President-Elect of the Society of Nematologists. He writes, "I had an opportunity to participate in a NATO-sponsored study institute on Nematode Vectors of Plant Viruses in Bari, Italy, for two weeks in May-June, 1974. Much excellent work is going on in Europe and I believe more will be done in the United States in the years ahead."

James B. Kendrick, Jr. (Ph.D., 1947) is continuing his involvement with the administrative hierarchy of Land-Grant Agricultural Programs at the University of California-Berkeley. In addition to his position as Vice President of the Agricultural Sciences Division, he is Director of the California Agricultural Experiment Station, and, in 1973, was elected to a three-year term on the Executive Committee of the National Association of State Universities and Land-Grant College's Division of Agriculture.

James C. Horton (Ph.D., 1956) is an Academic Village Dean at California State College at Bakersfield. Regarding that position, he relates, "When I left Iowa State to come out here, I did so because I would have an opportunity to experiment with new methods of teaching. I have been given an opportunity to pursue the innovative teaching ideas in a much broader direction. My position here corresponds to that of a Lower Division Dean and my responsibilities require the construction of interdisciplinary, integrative, innovative courses throughout the entire college at the freshman-sophomore level."

From Australia, Robert J. Friend (Ph.D., 1968) reports that after a year at King's School, Parramatta, teaching agriculture and science, he accepted a position at Mitchell College of Advanced Education, a small college west of Sydney. About that position he says, "This job has been largely one of teaching science and teaching how to teach science to elementary school teacher trainees. I should have found it very useful to have fitted in a few science education courses at the University of Wisconsin. However, I am sure my time spent doing a Ph.D. in plant pathology gave me valuable experience in organizing material, in critical scientific thinking, and in general biology, all of which have been valuable in my present position."

Peter Onesirosan (Ph.D., 1973), in the Department of Plant Science at the University of Ife, Nigeria, is working with Dr. J. L. Ladipo on the development of high-yielding cowpeas for the Southern States of Nigeria. Peter's wife, Ruane, gave birth to a baby girl, Tozitse, on May 2, 1974.

Closer to home, James B. Sinclair (Ph.D., 1955) is keeping busy as a Consultant in Plant Pathology in Urbana, Illinois. His recent travels included a three-week trip to Europe in May, 1974, and another three weeks in Ethiopia, Egypt, and Iran in October, 1974. In addition, he is serving on the University of Illinois INTSOY (International Soybean) Program and is taking part in a cooperative program between the University of Illinois and the University of Puerto Rico.

Two Wisconsin alumni, Raymon E. Webb (Ph.D., 1952) and R. A. (Pat) Kilpatrick (Ph.D., 1951), are currently with the U.S.D.A.-A.R.S. at Beltsville, Maryland. Ray Webb is Chief of the Vegetable Laboratory there which is primarily involved in the breeding, genetics, pathology, and physiology of potatoes and tomatoes, and cultural research on mushrooms. Two entomologists carry out an array of research activities on host resistance in vegetables and the biology and chemical and biological control of vegetable insects. Ray has been recently honored with the U.S.D.A.'s Superior Service Award, an award from the Vegetable Growers Association of New Jersey for outstanding service to the vegetable industry of New Jersey, and a citation from the New Jersey Agricultural Experiment Station's Board of Managers for his work on machine-harvested tomatoes and disease resistant spinach. Pat Kilpatrick, also at Beltsville, has been coordinating travels in the Mid-East, Eastern Europe, and South America with his plant pathology research at Beltsville. Coordinating the International Rust Nurseries for wheat and oat breeding, thereby promoting international cooperation, he reports "is a challenge I am finding frustrating at times, but satisfying".

Juergen Hansen (Ph.D., 1959), from the Research Station in Summerland, British Columbia, spent the year of 1974 with his family in Germany. They took advantage of the opportunity and did extensive traveling to Turkey, Poland, East Germany, Czechoslovakia, and Hungary.

Correspondence from India reveals more news of Wisconsin alumni. K. S. Thind (Ph.D., 1948) continues his research in the Botany Department of Punjab University in mycology, specifically the nutrient requirements of many fungi causing diseases on crops and fruit trees. He was a member of the Council of National Academy of Sciences of India for the year 1974. G. P. Singh (Ph.D., 1958) is in the Department of Plant Pathology of the newly created Rajendra Agricultural University of Bihar, India, and reports that he will soon be involved in teaching and in virus research. Formerly a postdoctorate with Dr. Hildebrandt, T. M. Das is at the Calcutta University organizing the Life Science Centre. R. K. Grover (Ph.D., 1960) at the Haryana Agricultural College, was Head of the Department of Plant Pathology from February, 1973, until July, 1974, at which time he relinquished the position in order to write a book on Diseases of Vegetable Crops in India.

Kohei Tomiyama, formerly a joint plant pathology and biochemistry student here, is now a Professor of Plant Pathology at Nagoya University in Japan where he is working on the physiology of disease resistance.

J. LaMar Anderson (Ph.D., 1961), Plant Scientist with the Utah Agricultural Experiment Station, made the news for his research team's recent success in delaying the blossoming of fruit trees to avoid fruit destruction by spring frosts.

F. L. (Fred) Wellman (Ph.D., 1928), Emeritus Professor of the Department of Plant Pathology, North Carolina State University at Raleigh, was made a Fellow of APS at the 1974 Vancouver meeting.

L. M. Blank (Ph.D., 1930) retired in February, 1974, after many years of service in the U.S.D.A. Cotton Research Division.

Earl M. Hildebrand (Ph.D., 1931), long a plant pathologist with the U.S.D.A., is now retired and resides in Sun City, Arizona. He and his wife were recently featured in the Sun City News along with others who attended the annual convention of retired Federal employees in Portland, Oregon.

Plants and People
T. J. Wacek

What is a plant.

What does it know
of sorrow and grief,
of misery and woe.

It cannot move.

It cannot elude
the elements of fear
nor the folly of fools.

It cannot see or hear.

It cannot laugh or cry.
It cannot love.
It doesn't even know why.

They are imprisoned by roots,
by their stems and leaves,
by their gentleness,
and by thieves--such as we.

But with truth,

Are we the ones imprisoned
by the very movement
we call our freedom.

Are we tied to our
gaiety and sorrow
by the constriction of speech and sight,
and the fear of tomorrow.

Is there a difference

between them and us,
or between us and them.

Are their prejudices unspoken,
jealousies unknown,
pleasures avoided because
they are they
and we are we
and love and sight and sentiment
cannot find the common way.

Or are we all children

of the same fabric and design.
Some with roots, some with legs,
some with smiles, some with flowers.

Are we them, and them us--
and equality felt and known because
it is the truth.

Yes, children we are all,
and yet only the children (the babies)
understand that light is light,
that touch is touch,
that smiles are smiles,
that love is love--and that
all possess it whether
they move or stay still,
whether they talk or remain silent,
whether they inhale or exhale,
whether they breathe all--or do not.

Yes, children we are all
and common to one another
just as we are dependent on one another,
just as we are forgetful of one another.
Children of the same light.
Children who must share and understand
our love, our equality--and
the wealth of plants and the plight of man.

RELATIONSHIP BETWEEN HOMO SAPIENS AND PERIPLANETA AMERICANA
IN RUSSELL LABORATORIES

Ed Reob

INTRODUCTION

It is common knowledge that the chief inhabitants of Russell Laboratories located on the Madison campus of the University of Wisconsin are Homo sapiens and Periplaneta americana. In the past 20 months, the author has observed some interesting interactions between these two species. Because the casual observer would fail to take notice of such significant phenomena, this paper attempts to record and analyze some of these observations.

MATERIALS AND METHODS

Although observations were made from time to time throughout the entire Russell Lab building, the investigation was concentrated on Room B70. Most of the data was collected by direct observation through concave lenses. However, some significant information and insight was obtained by verbal communication with a random sample of H. sapiens.

RESULTS AND DISCUSSION

Much of the data must be interpreted in light of the life styles of the two species involved in the study. For example, H. sapiens tends to be present in Room B70 only at specific times during the week. Mondays through Fridays from 10:00 a.m. to 11:00 a.m. and from 3:00 p.m. to 4:00 p.m. appear to be popular hours. Exceptions, however, do occur at a relatively high frequency. P. americana, on the other hand, tends to spend its entire life cycle, from egg to adult, in Room B70.

One of the most significant discoveries was the mutual fear (or abhorrence) the two species have for each other. Notwithstanding this fact, the two appear to exist without a great amount of interference. This has been attributed to an apparent unwritten agreement: when the lights come on, P. americana runs for cover and H. sapiens can do as he pleases without interference; when the lights go out, P. americana has complete freedom. Disaster may strike, especially for P. americana, when this agreement is broken. In one instance, a female member of H. sapiens almost went into hysterics when an exceptionally large member of P. americana partook of sucrose granules when the lights were on. In this case, the author was compelled to liquidate this beautiful specimen of P. americana.

In addition to physical liquidation, H. sapiens presents several other hazards to P. americana. H. sapiens regularly prepares large quantities of a heated extract from the seeds of Coffea arabica. Occasionally, P. americana in its search for nourishment falls into this extract and perishes.

On a few isolated occasions, H. sapiens has presented grave threats to the survival of P. americana. This occurred during fumigation of P. americana's living quarters. However, due to the ingenuity of the P. americana species, a significant number survived and re-established a large population in a surprisingly short period of time.

Despite these adverse effects of H. sapiens on P. americana, the latter species also benefits from the former. H. sapiens supplies large quantities of edible organic matter to Room B70 and distributes it well around the room. This organic matter serves as almost the sole nutrient source for P. americana.

H. sapiens appears to derive little benefit from the presence of P. americana. One questionable advantage is the removal of undesirable organic matter.

Taking all factors into account, the relationship between H. sapiens and P. americana in Room B70 of Russell Laboratories can probably be best described as one of commensalism (1).

ACKNOWLEDGMENTS

The cooperation of the research subjects in Russell Laboratories is gratefully acknowledged.

LITERATURE CITED

1. Concepts of associations between organisms. 1973. Plant Pathology 601 Notes.

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FACULTY AND THEIR PROGRAMS

- P. J. Allen (Joint with Botany) - Fungus Physiology. Physiology of spore germination; control of development in rust fungi; host-parasite interaction with rusts and powdery mildews.
- D. C. Arny - Diseases of Cereal Crops. Epidemiology of diseases of small grains and corn. Breeding for resistance, soil fertility and disease; seed treatment.
- J. G. Berbee - Forest Pathology. Forest tree diseases with emphasis on nursery problems; virus diseases of forest trees; high-yield forestry based on tissue-cultured hybrid black poplars; virus-like diseases of cassava.
- D. M. Boone - Microbial Genetics; Diseases of Small Fruits. Genetics of fungal pathogens; genetic factors controlling pathogenicity of the apple scab fungus; diseases of cranberries and strawberries.
- H. H. Burdsall, Jr. (U. S. Forest Products Laboratory) - Mycology. Systematics and biology of wood decaying and other forest fungi, especially the resupinate Homobasidiomycetes (Corticaceae, Auriscalpiaceae, Hericiaceae, Lachnocladiaceae, etc.).
- H. M. Darling - Potato Diseases; Nematology. Virus and fungus diseases of potato; potato seed certification; control of soil-borne pathogens; nematodes.
- G. A. de Zoeten - Plant Virology; Ultrastructure. Ultrastructure of plant viruses in their plant and insect hosts; metabolic and cytological changes following virus infection of host cells.

- R. D. Durbin (USDA) - Disease Resistance and Physiology. Physiology and biochemistry of plant pathogen interactions, especially as related to naturally occurring fungitoxicants and microbial toxins; plant responses to disease involving growth, differentiation and production of pathotoxic compounds.
- R. W. Fulton - Plant Virology. Characterization of unstable viruses, particularly those infecting woody plants. The relation of nucleoprotein components of plant viruses to infection and genetic variation.
- D. J. Hagedorn - Diseases of Vegetable Crops. Diseases of vegetable crops, especially beans, pea and lima beans; disease control through cultural practices and breeding for disease resistance; ecology of soil-borne pathogens; legume virus investigations.
- E. W. Hanson - Field Crop Pathology; Extension. Epidemiology and control of diseases of forage legumes and small grains; legume viruses; disease diagnosis.
- J. P. Helgeson (USDA, Joint with Botany) - Plant Physiology. Physiology of plant growth and development, involvement of plant growth substances in host-pathogen interactions, particular emphasis on the physiology, metabolism and chemistry of the cytokinins. Development of tissue culture model systems for studying disease resistance.
- A. C. Hildebrandt - Cell and Tissue Culture; Diseases of Ornamental Plants. Mechanism of plant gall induction by insects, nematodes, bacteria and fungi; plant virus diseases. Tissue culture used to clarify plant disease induction; growth and differentiation in cultured cells, protoplasts and plants; somatic hybridization.
- Arthur Kelman - Bacterial Diseases; Disease Physiology; Potato Diseases. Ecology of soft rot bacteria on potatoes and other vegetable crops, influence of environmental factors and cultural practices on development of bacterial soft rot of potatoes in transit and in storage; mechanisms of pathogenesis by bacterial pathogens; physiological and biochemical aspects of resistance in plants to wilt and soft rot pathogens.
- J. D. Kemp (USDA) - Biochemistry. Biochemical aspects of normal and abnormal plant development with emphasis on the molecular mechanisms which regulate protein and nucleic acid synthesis both in tissue culture and in vivo.
- T. K. Kirk (U. S. Forest Products Laboratory) - Plant Tissue Degradation; Biochemistry. Chemistry and biochemistry of wood deterioration, especially lignin biodegradation; wood pathology, bioconversion of lignocellulosics; fungus physiology.
- J. E. Kuntz - Forest Pathology. Diseases of forest and shade trees with particular emphasis on vascular wilt diseases, especially host-parasite relations of oak wilt; stem cankers and heart rots of northern hardwoods; tree improvement through selection and breeding; the use of herbicides in forest practice; and noninfectious diseases of forest trees.
- M. J. Larsen (U. S. Forest Products Laboratory) - Mycology. Taxonomy, ecology, and nomenclature of wood-inhabiting fungi, particularly the Polyporaceae; fungal ecological responses as they relate to forest management practices, and speciation in the genus Phellinus.
- D. P. Maxwell - Fungus Physiology; Mechanisms of Pathogenesis; Diseases of Forages. Ultrastructure and physiology of fungal spore germination and penetration. Function of fungal microbodies. Localization of areas of secretion of extracellular enzymes by fungal hyphae and germ tubes. Genetics of resistance in red clover to major viral and fungal pathogens.

- J. E. Mitchell - Soil Microbiology. The physiological and environmental factors affecting ecology of soil-borne plant pathogenic fungi and the resistance of roots to disease; the relation of these factors to control by biological, cultural or chemical means.
- J. D. Moore - Fruit Tree Pathology; Plant Virology. Epidemiology and control of tree fruit diseases. Seed and pollen transmission of tree fruit viruses; chemical control of fruit diseases; effects of fungicides on fruit quality.
- R. F. Patton - Forest Pathology. Forest pathology, with particular emphasis on diseases of conifers, especially in forest plantations; nature, mechanisms, and expression of resistance to white pine blister rust; forest plantation root diseases; needle diseases and rusts of conifer plantations.
- Luis Sequeira - Disease Physiology; Vegetable Pathology. Physiology of host-parasite relationships in plants with particular emphasis on growth regulator metabolism and biosynthesis of aromatic compounds; nature of disease resistance in plants; breeding for disease resistance in vegetable crops; bacterial diseases.
- S. A. Slack - Potato Diseases; Plant Virology. Virus diseases of potato; biology and structure of plant viruses; potato seed certification.
- E. B. Smalley - Mycotoxins; Shade Tree Pathology. Mycotoxins and causal fungi associated with deterioration of stored plant products; nature and control of Dutch elm disease.
- C. D. Upper (USDA) - Plant Biochemistry. The processes which control plant growth, differentiation and development at the molecular level; measurement of cytokinins by gas-liquid chromatography; mechanisms of disease resistance to bacteria and fungi.
- E. K. Wade - Fruit and Vegetable Pathology; Extension. Extension pathology program on vegetable and fruit crops; evaluation of chemical control for diseases of potatoes, beans, cucumbers, cherries and apples.
- P. H. Williams - Breeding for Disease Resistance, Disease Physiology; Vegetable Pathology. Genetics of Brassica, cytochemical and EM studies of host-parasite relations; breeding for disease resistance in cabbage, cucumber and radish; vegetable pathology.
- G. L. Worf - Ornamental and Field Crop Pathology; Extension Pathology. Extension program on ornamentals, turf and field crops; evaluation of cultural and chemical control of diseases of corn, turf, ornamentals and shade trees.

GRADUATE STUDENTS IN PLANT PATHOLOGY, 1974-75

- Mostafa Abo El-Nil, from Alexandria University, Egypt. Major Professor: A. C. Hildebrandt. Research interests: host-virus interaction, differentiation of cultured cells and protoplasts, and production of virus-free plants by stem tip, meristem and anther cultures.
- *Zaydan Abul-Hayja, from Jordan via the American University of Beirut, Lebanon. Major Professor: P. H. Williams. Research interests: methods of screening for disease resistance in cucumbers.
- *Michael Albers, from the University of Wisconsin, Madison. Major Professor: J. G. Berbee. Research interests: mycorrhizae of conifers.
- *Vivienne N. Armentrout, from Park College, Missouri (originally from Oklahoma). Major Professor: D. P. Maxwell. Research interests: fungal cytology and microbodies of Helminthosporium turcicum.

*Presently a Graduate Student in the department.

- *Luigi R. Ciampi, from Valdivia, Chile, via North Dakota State University.
Major Professor: L. Sequeira. Research interests: inheritance of resistance to Pseudomonas solanacearum in potato.
- *Helen Constantinidou, from the University of Thessaloniki, Greece. Major Professor: T. T. Kozlowski (Forestry). Research interests: role of growth regulators in cotyledons.
- Luis J. Corcuera, from the Catholic University of Chile, Santiago, Chile.
Major Professor: C. D. Upper. Research interests: involvement of cyclic hydroxamates in disease resistance in Graminae (corn).
- *Barbara J. Cours, from the University of Wisconsin-Madison. Major Professor: P. H. Williams. Research interests: plant breeding for disease resistance; plant genetics.
- *Diane Cuppels, from Rutgers University, New Jersey (originally from Massachusetts). Major Professor: R. Hansen (Bacteriology). Research interests: bacterial plant diseases, bacterial genetics, microbial ecology.
- *Cleora D'Arcy, from Radcliffe College. Major Professor: G. A. de Zoeten. Research interests: virology, ultrastructure, insects in relation to plant disease.
- *Margo Daub, from College of Wooster (Ohio). Major Professor: D. J. Hagedorn. Research interests: disease resistance in beans.
- *Solke DeBoer, from the University of British Columbia, Vancouver, British Columbia. Major Professor: A. Kelman. Research interests: ecology of Erwinia atroseptica.
- *Patricia A. Delwiche, from the University of Wisconsin-Madison. Major Professor: P. H. Williams. Research interests: disease resistance, interspecific hybridization in crucifers.
- Robert Ehr, from the University of Wisconsin-Madison. Major Professor: P. H. Williams. Research interests: foliar blights of carrots, seed transmission of bacterial diseases.
- *Andris Eimanis, from the University of Wisconsin-Milwaukee. Major Professor: G. A. de Zoeten. Research interests: cytosynthesis of plant viruses; identification of cytopathological structures of virus infection.
- Patrick Fenn, from Syracuse University, New York. Major Professors: R. D. Durbin and J. E. Kuntz. Research interests: host-parasite physiology, diseases of trees and perennials.
- *Enrique Fernandez-Northcote, from the University of California-Davis. Major Professor: R. W. Fulton. Research interests: tomato and pepper viruses.
- *William Fett, from the University of Illinois. Major Professor: L. Sequeira. Research interests: plant disease physiology of bacterial diseases.
- Robert Fries, from Racine, Wisconsin, via Iowa State University. Major Professor: E. W. Hanson. Research interests: forage crop viruses.
- Thomas German, from the University of Wisconsin-Madison (B.S.) and Michigan State University (M.Sc.). Major Professor: G. A. de Zoeten. Research interests: replication of pea enation mosaic virus.
- *Asimina Gkinis, from Aristotelian University, Thessaloniki, Greece. Major Professor: E. B. Smalley. Research interests: resistance of elms to Dutch elm disease.

Alan Gotlieb, from Eastern Nazarene College (B.S.) and the University of Wisconsin-Madison (M.Sc.) (originally from Massachusetts). Major Professor: J. G. Berbee. Research interests: viruses in forest trees, the identification, epidemiology, and effect of apple mosaic virus in white and yellow birch.

Gustavo A. Granada, from National University of Colombia, Colombia. Major Professor: L. Sequeira. Research interests: plant bacteriology, Pseudomonas solanacearum in tobacco, variation in isolates in pathogenicity.

Soetrisno Hadi, from Institut Pertanian Bogor, Bogor, Indonesia. Major Professor: J. G. Berbee. Research interests: Cylindrocladium root rot, stem canker, and needle blights of conifers in nurseries.

*Edward L. Halk, from the University of Arkansas-Fayetteville. Major Professor: R. W. Fulton. Research interests: plant viruses, multi-component virus systems.

*Larry Hansen, from the University of Illinois-Urbana. Major Professor: R. S. Hansen (Bacteriology). Research interests: bacterial physiology.

*Ruperto F. Hepp, from the University of Concepcion, Chile. Major Professor: G. A. de Zoeten. Research interests: viruses of potatoes.

*Barbara Holroyd, from the University of Missouri-Columbia. Major Professor: J. D. Kemp. Research interests: role of the bacterial genome in crown gall tumor production.

Ronald J. Howard, from the University of Saskatchewan, Saskatoon, Saskatchewan. Major Professor: P. H. Williams. Research interests: lateral root dieback and taproot forking in carrots caused by Pythium spp.; extension plant pathology.

Hasib Humaydan, from the American University of Beirut, Lebanon. Major Professor: P. H. Williams. Research interests: breeding for multiple disease resistance in vegetable crops; diseases of vegetables.

*Mushtaq Ali Khan, from Agra University, India. Major Professor: D. P. Maxwell. Research interests: virus diseases of red clover and breeding for disease resistance.

Lemma Kifle, from the Institute of Agricultural Research, Addis Ababa, Ethiopia. Major Professor: D. C. Arny. Research interests: Septoria on wheat.

*Wa-Lee Lim, from the University of Malaya, Kuala Lumpur, Malaysia. Major Professor: D. J. Hagedorn. Research interests: aphid transmission of pea seed-borne mosaic virus.

*Steven Lindow, from Oregon State University, and Hillsboro, Oregon. Major Professor: C. D. Upper. Research interests: physiology and biochemistry of frost sensitivity in corn.

Loretta Sue Loesch, from Washington State University, Washington. Major Professor: R. W. Fulton. Research interests: plant viruses.

*Carlos Alberto Lopes, from Federal University of Vicosa, Brazil. Major Professor: D. J. Hagedorn. Research interests: virus diseases of beans.

*Robert Martin, from the University of Wisconsin-Madison. Major Professor: J. G. Berbee. Research interests: virus diseases in poplar.

Kiyoshi Matsuoka, from Tottori University, Japan, and later Brazil. Major Professor: P. H. Williams. Research interests: black rot of cabbage, detection of the bacteria in seed, breeding for disease resistance in vegetable crops.

- Phyllis McCabe, from Rutgers University, New Brunswick, New Jersey. Major Professor: A. C. Hildebrandt. Research interests: pathology of ornamental plants.
- Donald J. Merlo, from the University of Nebraska-Lincoln. Major Professor: J. D. Kemp. Research interests: fate of bacterial genome in sunflower crown gall.
- Gordon M. Murray, from the University of Sydney, Australia. Major Professor: D. P. Maxwell. Research interests: fungal ultrastructure; germination of spores and infection by Helminthosporium turcicum.
- *Lois A. Nadolny, from Colorado State University. Major Professor: L. Sequeira. Research interests: physiology of disease resistance; peroxidases in the hypersensitive reaction of tobacco.
- *Wayne T. Nishijima, from Hawaii via the University of Washington. Major Professor: E. B. Smalley. Research interests: chemical control of Dutch elm disease; culture of Panulirus spp.
- *John Omuemu, from Nigeria via Cornell University. Major Professor: J. G. Berbee. Research interests: mosaic diseases of cassava.
- *Vincent Otoide, from the University of Ibadan, Nigeria. Major Professors: J. E. Mitchell and R. F. Patton. Research interests: root diseases of tree crops and their control.
- *David Palzkill, from the University of Wisconsin-Madison. Major Professors: P. H. Williams and T. W. Tibbitts (Horticulture). Research interests: internal tipburn of cabbage.
- *David Pengelly, from Missoula, Montana, via Carleton College, Minnesota. Major Professors: R. D. Durbin and J. E. Kuntz. Research interests: water relations and vascular wilts.
- *Jane Ann Phillips, from the University of Wisconsin-Madison. Major Professor: A. Kelman. Research interests: bacterial diseases of vegetables, soft rot of potatoes.
- David Pinnow, from Miami University, Ohio. Major Professor: D. J. Hagedorn. Research interests: soil-borne root-rotting pathogens of snap beans.
- Miguel D. M. Porto, from UFRGS, Brazil. Major Professor: D. J. Hagedorn. Research interests: soybean mosaic virus.
- Robert G. Pratt, from Beloit College, Wisconsin. Major Professor: J. E. Mitchell. Research interests: taxonomy, ecology, and pathogenicity of species of Pythium and Phytophthora.
- *John Pronos, from the University of Illinois-Champaign. Major Professor: R. F. Patton. Research interests: Armillaria root rot.
- *Richard Reeleder, from Fredericton, New Brunswick, via the University of British Columbia, Vancouver, British Columbia. Major Professor: D. J. Hagedorn. Research interests: root rot of beans.
- *Maria Ignez S. D. Ribeiro, from the Rural University of Rio de Janeiro State, Brazil. Major Professor: G. A. de Zoeten. Research interests: plant viruses.
- *Raul de Lucena D. Ribeiro, from Brazil via the University of Wisconsin-Madison (M.Sc.). Major Professor: D. J. Hagedorn. Research interests: a new bacterial bean disease in Brazil; resistance in beans to Fusarium wilt.
- Ronald M. Sushak, from Minnesota via Lawrence University, Appleton, Wisconsin. Major Professor: A. C. Hildebrandt. Research interests: viruses of gladiolus, tissue culture, and protoplast culture.
- David O. TeBeest, from Wisconsin State University, Stevens Point. Major Professors: J. E. Kuntz and R. D. Durbin. Research interests: vascular wilt diseases and forest tree diseases.

- Sanchai Tontyaporn, from Kasetsart University (B.S.), Bangkok, Thailand, and the University of Arkansas (M.Sc.). Major Professor: D. M. Boone. Research interests: Exobasidium vaccinii on cranberry.
- *Chuan-tze (Charles) Too, from National Chong-hsing University, Taiwan. Major Professor: D. C. Army. Research interests: corn diseases; soil microflora.
- *Omar M. Tortolero, from Universidad Centro Occidental, Venezuela. Major Professor: L. Sequeira. Research interests: diseases of lettuce and field crops; chemical control of plant diseases.
- *Jorge Victoria, from Palmira, Colombia, via Cornell University. Major Professor: A. Kelman. Research interests: bacterial diseases; corn stalk rot.
- Frank C. Vojtik, from the University of Wisconsin-Madison. Major Professor: L. Sequeira. Research interests: environmental effects of disease development; bacterial wilt of potato, effects of air pollution on plants.
- Thomas J. Wacek, from the University of Wisconsin-Madison. Major Professor: L. Sequeira. Research interests: mechanism of resistance in tobacco leaves to bacteria.
- *David Webster, from Antioch, North Carolina, via Kalamazoo College, Michigan. Major Professor: L. Sequeira. Research interests: disease physiology, bacterial ecology, and plant breeding.
- *Gregory J. Weidemann, from the University of Wisconsin-Madison. Major Professor: D. M. Boone. Research interests: biological and integrated control of plant diseases.
- *David Willis, from the University of Wisconsin-Madison. Major Professor: J. E. Mitchell. Research interests: soil-borne diseases, ecology of soil-borne plant pathogens.
- *Michael D. Woodward, from Iowa State University-Ames. Major Professor: J. P. Helgeson. Research interests: bacterial stalk rot of corn.
- James C. Zalewski, from the University of Wisconsin-Madison. Major Professor: L. Sequeira. Research interests: physiology and genetics of bacterial disease resistance in plants.

ARRIVALS

New Students:

- Michael Albers, January 1974 (B.S., University of Wisconsin-Madison). Forestry and Plant Pathology major; with Professor Berbee.
- Luigi R. Ciampi, March 1975 (M.Sc., North Dakota State University, 1975). From Florence, Italy; with Professor Sequeira.
- Helen A. Constantinidou, July 1974 (B.S., Forestry, University of Thessaloniki, Greece, 1972). Plant Physiology major; with Professors Kozlowski (Forestry) and Upper.
- Barbara J. Cours, July 1974 (B.S., Plant Pathology, University of Wisconsin-Madison, 1973); with Professor Williams.
- Cleora Jo Richardson D'Arcy, August 1973 (B.A., Radcliffe College, Massachusetts); with Professor de Zoeten.
- Margaret E. Daub, July 1974 (B.A., Biology, College of Wooster, Ohio, 1974); with Professor Hagedorn.
- Patricia A. Delwiche, August 1973 (B.S., Molecular Biology, University of Wisconsin-Madison, 1973); with Professor Williams.

- Andris Eimanis, June 1975 (M.S., Zoology, University of Wisconsin-Milwaukee, 1975); with Professor de Zoeten.
- Enrique Fernandez-Northcote, January 1975 (M.Sc., University of California-Davis, 1968); with Professor Fulton.
- William F. Fett, July 1974 (B.S., Botany, University of Illinois, 1974); with Professor Sequeira.
- Barbara J. Holroyd, August 1974 (B.S., Physics, University of Missouri, 1973); with Professor Kemp.
- Steven E. Lindow, August 1973 (B.S., Botany, Oregon State University-Corvallis, 1973); with Professors Upper and Army.
- Carlos A. Lopes, June 1975 (B.S., Agriculture, Federal University of Vicosa, Brazil); with Professor Hagedorn.
- Robert Martin, June 1975 (B.S., University of Wisconsin-Madison, 1975); with Professor Berbee.
- Phyllis Nieradka McCabe, August 1973 (B.S., Plant Science, Rutgers University, New Jersey, 1973); with Professor Hildebrandt.
- Lois A. Nadolny, June 1975 (B.S., Plant Pathology, Colorado State University, 1975); with Professor Sequeira.
- Vincent O. Otoide, August 1974 (B.S., University of Ibadan, 1971); with Professors Mitchell and Patton.
- David L. Pengelly, August 1973 (B.A., Biology, Carleton College, Minnesota, 1973); with Professors Durbin and Kuntz.
- Jane Ann Phillips, June 1974 (B.S., Bacteriology, University of Wisconsin-Madison, 1972); with Professor Kelman.
- Richard D. Reeleder, June 1974 (B.S., Biology, University of New Brunswick, 1974); with Professor Hagedorn.
- Maria Ignez Sobral D. Ribeiro, March 1975 (B.S., Agriculture, Rural University of Rio de Janeiro State, Brazil, 1969); with Professor de Zoeten.
- Raul de Lucena Duarte Ribeiro, March 1975 (M.Sc., University of Wisconsin-Madison, 1969); with Professor Hagedorn.
- Chuan-tze (Charles) Too, August 1974 (B.S., National Chung Hsing University, Taiwan, 1972); with Professor Army.
- Omar M. Tortolero, August 1974 (B.S., Agronomy, Universidad Centro Occidental, Venezuela, 1969); with Professor Sequeira.
- Jorge Victoria, August 1974 (M.S., Cornell University, 1972); with Professor Kelman.
- David Webster, August 1973 (B.A., Chemistry, Kalamazoo College, Michigan); with Professor Sequeira.
- Gregory Weidemann, June 1975 (B.S., University of Wisconsin-Madison, 1973); with Professor Boone.
- David Willis, June 1974 (B.S., Political Science, University of Wisconsin-Madison, 1971); with Professor Mitchell.

New Staff:

- Elizabeth Allan (B.S., Chemistry and Mathematics, University of Wisconsin-Madison) is a specialist with Dr. Kelman.
- Elizabeth Ann Barlow began working in February 1975 as a project specialist with Dr. Sequeira.
- Karen H. Beach began working in August 1974 as a specialist in Dr. Boone's laboratory.
- Allen D. Budde started work in July 1974 as a specialist with Dr. Helgeson in the Pioneering Laboratory.

Dr. Harold H. Burdsall, Jr., joined the department in July 1974 as an Adjunct Assistant Professor (Forest Products Laboratory). Patricia A. Donald began September 1974 as a specialist in the department.

Josephine M. Gullings is a specialist working with Dr. Kelman. She obtained her undergraduate degree in Bacteriology and will be working on a special project funded by the Food Research Institute concerned with the possible role of soft rot and related bacteria in the conversion of nitrate to nitrite in carrots.

Connie Haas joined the secretarial staff in June 1973.

Mary Ann Hickey began working in January 1975 as a technician with Dr. Berbee.

Dr. Michael J. Larsen joined the department in July 1974 as an Adjunct Assistant Professor (Forest Products Laboratory).

Bernard Vincent Lease (B.S., University of Wisconsin-Platteville, 1974) joined the Plant Pathology Extension staff in April 1975 as a Natural Resources Technician.

Dan C. Opgenorth arrived in August 1974 to join the Plant Pathology Extension staff as a specialist. Dan was previously working on a fire blight research project in New York State.

Robert J. Slattery (M.S., University of Illinois) joined the department in November 1974 and is working as a specialist in the Potato Seed Certification Program.

Russell N. Spear is a specialist working with Dr. Patton on studies of the brown spot needle blight of pines.

Marcella Stuntebeck joined the secretarial staff in June 1974.

Gregory J. Weidemann (B.S., University of Wisconsin-Madison, 1973), a specialist in Dr. Boone's lab before becoming a graduate student.

New Postdoctoral Fellows:

Lynn Graves, Jr. (Ph.D., Botany, University of Wisconsin-Madison) began working with Dr. Maxwell in August 1974 on the isolation of microbodies from fungi. Dr. Graves has isolated and characterized microbodies from Euglena sp.

Peter Kraus (Ph.D., Universitat Hohenheim, Germany, 1973), a project associate with Dr. Sequeira.

Fernando Laborda (Ph.D., Pharmacie, University of Santiago de Compostela, Spain, 1972) to work with Drs. Maxwell and Sequeira on the influence of fungal pathogens on membrane function. Prior to coming here, Dr. Laborda was a Postdoctoral Fellow at the Long Ashton Research Station in Bristol, U.K., working with Drs. Byrde and Hislop on the production and localization of arabinofuranosidase in Sclerotinia fructigena.

Loretta Sue Loesch (Ph.D., University of Wisconsin-Madison, 1975), a postdoctoral fellow with Dr. Hagedorn. Sue obtained her doctorate in virology under Dr. Fulton.

James A. Percich (Ph.D., Michigan State University, 1974) arrived here in January 1975 to work with Dr. Mitchell on a Verticillium problem on horseradish in Wisconsin and on the soil ecology of Aphanomyces and Phytophthora oospores.

Charles A. Powell (Ph.D., University of Nebraska, 1975) arrived in January 1975 to work with Dr. de Zoeten on the localization of the replicative form of pea enation mosaic virus.

Daniel Schadler (Ph.D., Cornell University) with Dr. Durbin to work on phytoalexins.

John Steele (Ph.D., University of Minnesota) is working with Dr. Durbin on phytoalexins.

Angela Thomas (Ph.D., University College, Cardiff, Wales) is with Drs. Boone and Upper exploring the possibility of controlling the apple scab disease by manipulating the genetics of the pathogen Venturia inaequalis.

Visiting Professors:

Ziaeddin Banihashemi (Ph.D., Michigan State University, 1968), with Dr. Mitchell from September 1973 to September 1974, on the isolation from soil of Phytophthora cactorum and the factors affecting the germination of its oospores. Dr. Banihashemi is a member of the Department of Plant Protection, College of Agriculture, Pahlavi University, Shiraz, Iran.

Dr. Husnija Festic, from Sarajevo, Yugoslavia, in Dr. Fulton's laboratory to study plant viruses.

Dr. Leopold Fucikovsky (Department of Fitopatologia, Escuela Nacional de Agricultura, Chapingo, Mexico) arrived in December 1973 for a six-month sabbatical leave to study a bacterial disease of sunflower with Dr. Kelman.

Dr. Barbara M. Lund, from the Food Research Institute, Norwich, England, arrived in May 1975 for a six-month study leave in the department. She worked with Dr. Kelman on bacterial diseases of potatoes.

Dr. Lung-Chi Wu (Professor of Plant Pathology, National Taiwan University, Taipei, Taiwan) has been a Visiting Professor of Plant Pathology during the last year. Dr. Wu has also been working with Dr. Stahmann in the Department of Biochemistry.

DEPARTURES

Mrs. Henrietta Markham retired from her secretarial position on June 19, 1973 after 7½ years of service to the department.

Peter Rortvedt (Walnut Street greenhouses) retired on March 16, 1973 after 37 years with the University of Wisconsin (18 years at the Walnut Street greenhouses). Peter and Mrs. Rortvedt were honored at a dinner at Minnick's Top Hat.

Dr. Edson C. Setliff accepted an appointment to a position of Forest Pathologist at the Cary Arboretum of the New York Botanical Garden, Milbrook, New York.

Fernando Morales started work in the Department of Pests and Diseases, Foundation Service for the Farmer, Experiment Station of Cagua, Cagua, Aragua, Venezuela.

Dr. Walter Schaffer accepted a position in the Department of Biology, Phillips Science Building, University of Wisconsin-Eau Claire.

Mr. Raymond Gasser, who was employed by the department since October 1954 terminated his employment on March 29, 1974. An informal party was held for him and a gift of appreciation for his services to the department was presented to him.

Dr. Matthew Koncewicz, who worked on a postdoctoral appointment with Dr. Durbin, left the department to return to Cambridge, England. He accepted an appointment as Research Associate in the Sub-Department of Chemical Microbiology at the University of Cambridge to work with Dr. D. Ellar.

Dr. Miguel Porto left on April 26, 1974 for his home in Brazil. He is an Assistant Professor in the Faculdade de Agronomia, UFRGS, Porto Alegre-RS, Brazil.

- Dr. Hari Bhalla, after a one-year postdoctoral position in the Department of Plant Pathology, Riverside, California, working with Dr. Peter M. Tsao on the biology of Phytophthora cinnamoni, the avocado root rot fungus, is now with the L. M. Scott Company in California at their research station.
- Dr. Alan Gotlieb left on June 17, 1974 for a position as Assistant Professor of Plant Pathology at the University of Vermont.
- Dr. Thomas J. Wacek is now at Nis Tal, Paia, Hawaii.
- Dr. Soetrisno Hadi returned to Indonesia after finishing his Ph.D. where he is in the Department of Forestry, Institut Pertanian Bogor and BIOTROP, SEAMEO Regional Center for Tropical Biology, Kebun Raya, Bogor, Indonesia.
- Mrs. Margaret Johnson retired from her position in the departmental office on June 28, 1974 after 6½ years of service to the department.
- Dr. Sanchai Tontyaporn left on August 5, 1974 to assume a position with the Division of Plant Protection in the Thailand Department of Agriculture.
- Gustavo Granada left on August 15, 1974 to return to his position at I.C.A., Palmira, Colombia, where he will be head of plant pathology investigations.
- Mrs. Carol Gale, project specialist for Dr. Smalley, and her husband left for their new home in Maryland in August 1974. Charlie will be teaching in the Washington, D.C. area and Carol is enrolled for training in the Montessori method in instruction of young children.
- Dr. Hasib Humaydan joined the Joseph Harris Seed Company at Rochester, New York on September 1, 1974. He is in charge of the pathology section and breeding for disease resistance.
- Dr. James Zalewski has taken a position as Assistant Professor of Plant Pathology in the Department of Botany and Plant Pathology, Oregon State University, Corvallis. He is conducting research on vegetable diseases and teaching elementary plant pathology.
- Dr. Thomas German left on September 9, 1974 for the University of California-Riverside where he is a postdoctoral fellow with Dr. William Dawson and will work on the physiology of virus replication.
- Dr. Ziaeddin Banihashemi left September 13, 1974 for Iran to resume his position with the Department of Plant Protection at Pahlavi University, Shiraz, Iran.
- Dr. Robert G. Pratt left at the end of October, 1974 for a postdoctoral position in Forest Pathology at Oregon State University, Corvallis.
- Dr. Mostafa Abo El-Nil left in November, 1974 for a postdoctoral position in the Department of Plant Pathology, University of Florida, Gainesville.
- Dr. Luis Corcuera left in November, 1974 to join the Department of Botany, Facultad de Ciencias, Universidad de Chile, as an Assistant Professor of Botany.
- Dr. Patrick Fenn left in January, 1975 for Sydney, South Wales, Australia, and the Department of Plant Pathology and Agricultural Entomology, University of Sydney. He is working on stem rust of wheat or soybean rust and on disease resistance.
- Miss Audrey Dunlap, Departmental Secretary for 26 years, retired on January 3, 1975.
- Kiyoshi Matsuoka left in February 1975 for his position at the University of Vicosa in Brazil.
- Robert Ehr left February 11, 1975 for Walnut Creek, California, where he is doing fungicide research for Dow Chemical Company.
- Leo C. Haakenson, a Gardener working with Dr. Smalley on his Dutch elm disease research program, retired January 31, 1975 and passed away on July 1, 1975.

William H. Hughes (specialist with Dr. Army) left the department on February 28, 1975 to take a management training position with the Green Giant Company at Fox Lake, Wisconsin.

David TeBeest left the department in March, 1975 for Arkansas where he will work as a Research Associate with Dr. George E. Templeton, Department of Plant Pathology, University of Arkansas, Fayetteville, and with Dr. R. J. Smith, A.R.S. Weed Scientist, Rice Branch Experiment Station, Stuttgart, Arkansas. Dave will be assisting in the development of a pilot program to determine the feasibility of using a fungus as a mycoherbicide in rice.

Dr. Peter Kraus left in March, 1975 for Limburgh Hof, Germany to work in research for the Beyer Chemical Company at Leuevkusin, Germany.

Dr. Ronald J. Howard left in April, 1975 for a position as Extension Plant Pathologist at the Alberta Horticultural Research Center at Brooks, Alberta, Canada.

EXAMINATIONS

Master's:

Ruperto F. Hepp (with Dr. de Zoeten)	February 8, 1974
Gordon M. Murray (with Dr. Maxwell)	May 10, 1974
David Pinnow (with Dr. Hagedorn)	May 30, 1974
John Omuemu (with Dr. Berbee)	June 14, 1974
Gustavo Granada (with Dr. Sequeira)	July 10, 1974
Zaydan Abul-Hayja (with Dr. Williams)	July 24, 1974
Lemma Kifle (with Dr. Army)	September 4, 1974
Robert Fries (with Dr. Hanson)	January 24, 1975
Robert Ehr (with Dr. Williams)	January 31, 1975

Ph.D. Preliminary:

Vivienne Armentrout (with Dr. Maxwell)	June 4, 1973
Miguel Porto (with Dr. Hagedorn)	June 8, 1973
Ronald Sushak (with Dr. Hildebrandt)	August 13, 1973
Wa-Lee Lim (with Dr. Hagedorn)	October 16, 1973
Ronald J. Howard (with Dr. Williams)	December 20, 1973
Hasib S. Humaydan (with Dr. Williams)	December 20, 1973
Ruperto F. Hepp (with Dr. de Zoeten)	March 15, 1974
Gordon M. Murray (with Dr. Maxwell)	May 10, 1974
Solke De Boer (with Dr. Kelman)	May 21, 1974
John Omuemu (with Dr. Berbee)	June 14, 1974
Diane Cuppels (with Dr. Hanson, Bacteriology)	June 17, 1974
Zaydan Abul-Hayja (with Dr. Williams)	July 24, 1974
Michael Woodward (with Dr. Helgeson)	July 31, 1974
Asimina Gkinis (with Dr. Smalley)	October 3, 1974
Wayne Nishijima (with Dr. Smalley)	October 4, 1974
David Palzkill (with Dr. Williams)	January 30, 1975

Ph.D. Final:

Hari S. Bhalla (with Dr. Mitchell), June 11, 1973; The biology of oospores of Aphanomyces euteiches Drechsler in the soil.

Peter Onesirosan (with Dr. Army), September 4, 1973; Target spot of tomato incited by Corynespora cassiicola (Berk & Curt) Wei.

Thomas J. Wacek (with Dr. Sequeira), February 14, 1974; Isolation and characterization of bacterial fractions that induce resistance in tobacco leaves.

- Soetrisno Hadi (with Dr. Berbee), February 20, 1974; Epidemiology and control of Cylindrocladium stem canker and root rot of conifers in nurseries.
- Miguel Porto (with Dr. Hagedorn), April 5, 1974; Studies on a Brazilian isolate of soybean mosaic virus.
- Alan Gotlieb (with Dr. Berbee), June 10, 1974; Isolation, characterization and transmission of apple mosaic virus in white birch and isolation and characterization of a latent virus in yellow birch.
- David TeBeest (with Dr. Kuntz), July 12, 1974; The carbohydrate content of tissues and stomatal resistance of leaves of Quercus rubra L. during development of oak wilt and drought.
- Sanchai Tontyaporn (with Dr. Boone), July 23, 1974; Comparison of Exobasidium vaccinii from Vaccinium macrocarpon with other Exobasidium spp. from Ericaceous hosts.
- Hasib Humaydan (with Dr. Williams), August 5, 1974; Multiple disease resistance and genetics of Raphanus sativus.
- James C. Zalewski (with Dr. Sequeira), August 19, 1974; Inheritance of resistance to Pseudomonas solanacearum (race 3) in Solanum phureja and the possible role of a bacterial growth inhibitor in the mechanism of resistance.
- Thomas German (with Dr. de Zoeten), August 28, 1974; Purification and properties of the replicative forms and replicative intermediates of pea enation mosaic virus.
- Robert G. Pratt (with Dr. Mitchell), October 29, 1974; The distribution, survival and activity of Phytophthora megasperma in Wisconsin soils and factors affecting its interaction with alfalfa.
- Luis J. Corcuera (with Dr. Upper), November 18, 1974; Identification of the major active component present in corn extracts inhibitory to soft rot Erwinia species.
- Mostafa Abo El-Nil (with Dr. Hildebrandt), November 20, 1974; Geranium viruses and in vitro induction of virus-free tetraploid and androgenetic haploid geranium plants.
- Loretta Sue Loesch (with Dr. Fulton), November 26, 1974; Some biological and physical properties of the nucleoprotein particles of Prunus necrotic ringspot virus and of tobacco streak virus.
- Patrick Penn (with Drs. Durbin and Kuntz), January 10, 1975; The development of a seedling system for studying oak wilt. The synthesis of indole-3-acetic acid and related indoles by the oak wilt fungus, Ceratocystis fagacearum (Bretz) Hunt.
- Donald J. Merlo (with Dr. Kemp), April 21, 1975; Sunflower crown gall: a molecular approach to the mechanism of tumor induction.
- Ronald J. Howard (with Dr. Williams), April 22, 1975; Pythium root dieback of muck-grown carrots.

MARRIAGES

- Ruperto F. Hepp (with Dr. de Zoeten) and C. Gloria Landaida on June 18, 1973, in Madison.
- Wayne T. Nishijima (with Dr. Smalley) and Kate A. Fukuki on August 12, 1973, in Honolulu.
- Cleora Richardson (with Dr. de Zoeten) and Stephen D'Arcy on October 7, 1973, in Hastings on Hudson, New York.
- Patricia Ann Schneider (specialist with Dr. Sequeira) and Gordon Mackenzie Murray (with Dr. Maxwell) at Trinity United Church of Christ, Brookfield, Wisconsin, on October 13, 1973.

Carl Schmidt (specialist with Drs. Boone and Upper) and Debra Peterson on December 28, 1973, at the Edgewater Hotel.
Dr. Robert W. Fulton and Jeanette Eich on February 28, 1974, in Madison.
Steven Lindow (with Dr. Upper) and Kathy Preston on June 8, 1974, in Hillsboro, Oregon.
Phyllis Nieradka (with Dr. Hildebrandt) and Douglas McCabe on June 9, 1974, in New Jersey.
Greg Weidemann (specialist with Dr. Boone) and Rozanne Petratta on August 17, 1974, in Madison.
Russell N. Spear (specialist with Dr. Patton) and Sue Kimball on August 10, 1974, in Winnecke, Illinois.
David L. Pengelly (with Drs. Durbin and Kuntz) and Vicki Fiala on August 17, 1974, in Casper, Wyoming.
Connie Carl (secretary) and Daniel L. Haas on August 24, 1974.
Dr. John D. Kemp and Sharon Kvalheim on May 3, 1975, at the Lutheran Church in Stoughton.

BIRTHS

To Dr. and Mrs. Thomas Wacek, a daughter, Wikloia Maria, on April 23, 1973.
To Holly and Dennis Tourdot, a daughter, Heather Ann, on April 28, 1973.
To Walter and Judy Stevenson, a son, James Walter, on June 1, 1973.
To Dr. and Mrs. Walter Schaffer, a daughter, on July 27, 1973.
To Dave and Sandi TeBeest, a daughter, Melissa Ann, on November 7, 1973.
To Dr. and Mrs. Jim Aist, a son, Gregory Stewart, on December 8, 1973.
To Mostafa and Nabila Abo El-Nil, a son and a daughter, Mahmoud and Mona, on May 6, 1974.
To Holly and Dennis Tourdot, a son, on December 1, 1974.
To Carl and Debbie Schmidt, a son, Jeffrey Peter, on April 24, 1974.



GRADUATE STUDENTS IN PLANT PATHOLOGY - SPRING 1974

Left to Right -

Front row: Z. Abul-Hayja, R. Howard, D. Merlo, S. Tontyaporn, R. Hepp.

Second row: M. Woodward, R. Fries, G. Granada, A. Gotlieb, P. Fenn.

Third row: C. D'Arcy, D. Cuppels, P. Delwiche, A. Gkinis, P. McCabe.

Fourth row: S. DeBoer, L. Corcuera, S. Loesch, S. Lindow, D. Webster.

Fifth row: D. Pinnow, J. Omuemu, R. Ehr, D. Palzkill.

Absent: M. Abo El-Nil, V. Armentrout, T. German, S. Hadi, E. Halk,
H. Humaydan, M. Khan, L. Kifle, W. Lim, K. Matsuoka, G. Murray,
W. Nishijima, D. Pengelly, M. Porto, R. Pratt, J. Pronos, R. Sushak,
D. TeBeest, F. Vojtik, T. Wacek, J. Zalewski.



GRADUATE STUDENTS IN PLANT PATHOLOGY - SPRING 1975

Left to Right -

Front row: C. D'Arcy, E. Fernandez-Northcote, M. Daub, J. Victoria,
V. Otoide, W. Fett.

Second row: C. Lopes, B. Holroyd, D. Cuppels, E. Halk, M. Woodward,
S. Lindow.

Third row: C. Too, M. Ribeiro, R. Ribeiro, A. Gkinis, S. DeBoer,
O. Tortolero, R. Martin.

Fourth row: J. Pronos, R. Reeleder, L. Ciampi, D. Webster, A. Eimanis.

Absent: Z. Abul-Hayja, M. Albers, V. Armentrout, H. Constantinidou,
B. Cours, P. Delwiche, L. Hansen, R. Hepp, M. Khan, W. Lim, L. Nadolny,
W. Nishijima, J. Omuemu, D. Palzkill, D. Pengelly, J. Phillips,
G. Weidemann, D. Willis.