

Seven members of The American Phytopathological Society were elected Fellows of the Society at the 1971 Annual Meeting in Philadelphia, Pennsylvania. Election as a Fellow of the Society is a reflection of the high esteem in which each is held by his colleagues. The award is given in recognition of outstanding contributions in extension, research, teaching, or other related activity to the science of plant pathology, to the profession or to the Society.



Arthur Watson Dimock was born in Middleboro, Massachusetts, in 1908. He received the B.S., M.S., and Ph.D. (1936) degrees at the University of California, Berkeley. He served 3 years as Assistant Plant Pathologist, Division of Forest Pathology, U.S. Department of Agriculture, headquartered in San Francisco, then joined the staff of the Department of Plant Pathology, Cornell University, in 1938 as Assistant Professor, becoming Associate Professor in 1943 and Professor of Plant Pathology in 1947. He served as Visiting Professor of Plant Pathology at North Carolina State University in 1957, and at the University of California, Berkeley, in 1966. Dr. Dimock is a leading expert on the diseases of floral and ornamental crops, an expert in diagnosis and extension programming, a designer of growth chambers and sensing apparatus, and a vigorous promoter of models, simulation, etc., in epidemiology. He pioneered work in the use of indexing procedures to establish disease-free stock plants for floral crops, the problems of secondary spread of pathogens by the use of nonspecific sprays, and the relationships of secondary pathogens in floral crop leaf diseases. His work epitomizes a combination of basic and applied research and extension in developing the "why" and the "how" of plant disease control. Dr. Dimock is recognized by commercial plant growers for his knowledge of floral crop production, by his colleagues for his insight into biological problems, and by his students for his keen understanding of the biological and physical sciences and his ability to utilize the two in developing disease control measures. He has directed the theses of a dozen or more students in several areas of plant pathology, and contributed to those of many others. In 1970, he was awarded the Floriculture Foundation Research-Education award of the Society of American Florists. He began his service to the American Phytopathological Society in 1952-54 as Associate Editor of *Phytopathology*, was Treasurer-Business Manager of the Society from 1958 to 1964, Vice-President in 1966, and President in 1968-69.



Mannon E. Gallegly, Jr., was born April 11, 1923, at Mineral Springs, Arkansas. He received the B.S.A. degree in 1945 from the University of Arkansas, and the M.S. and Ph.D. degrees in 1946 and 1949 from the University of Wisconsin. He accepted a position in research and teaching at West Virginia University in 1949, and became Professor of Plant Pathology in 1960. On January 1, 1970, he became Director of the newly organized Division of Plant Sciences in the College of Agriculture and Forestry.

Dr. Gallegly's research on vegetable diseases has emphasized late blight of potato and tomato. His work in breeding for resistance to wilts and virus diseases, as well as late blight, led to the release of a new resistant variety of tomato, West Virginia '63, which has become a popular home garden variety. He received the Campbell Soup Award for outstanding research in vegetables in 1960.

He was one of the pioneers in the study of genetics, sexuality, and pathogenic races of *Phytophthora infestans*. His discoveries contributed greatly to our present knowledge of compatibility types in Mexico and the USA, and of the gene-for-gene relationship of races of the pathogen and varieties of potato. Further studies on hybridization of species of *Phytophthora* and attempts at germinating hybrid oospores have pointed out the great complexity of the sexuality and genetic relationships within this genus.

Because of his practical as well as basic knowledge of potato and tomato diseases, Dr. Gallegly was invited to Kenya as an adviser to their developmental program in 1969. He has presented invitational papers at the International Botanical Congress in 1959, the International Congress of Plant Pathology in 1968, and the Tucker Memorial Symposium on *Phytophthora*, University of Missouri, in 1969.

His ability to stimulate and maintain interest and enthusiasm among his students is outstanding. He taught courses in vegetable diseases and principles of plant pathology until his appointment as an administrator. His close association and supervision of

his graduate students, working side by side with them as a team, are particularly noteworthy. The use of serology and of fluorescent antibody techniques have led to a tentative grouping of species of *Phytophthora*. Methods of screening for multiple factor resistance in potato selections have been developed.

Dr. Gallegly served a term on the Editorial Board of PHYTOPATHOLOGY, and was President of the Potomac Division of APS in 1965. He has also served on several committees of the Society.



William Querin Loegering was born November 11, 1912, at Long Prairie, Minnesota. He received his B.Sc. degree from the University of Minnesota in 1938. At that time, he joined the U.S. Department of Agriculture and was continuously with the Department until his retirement in 1967. He obtained his Ph.D. degree from the University of Minnesota in 1949.

From 1938 to 1951, he was employed by the Division of Plant Disease Control, Bureau of Entomology and Plant Quarantine, to assist with rust race surveys and race identification. In collaboration with E. C. Stakman and M. N. Levine, he extended and helped to perfect methods of identifying races of stem rust. Over 300 races were identified, and their general physiologic natures described.

From 1951 to 1953, Dr. Loegering worked on diseases of Abocca, cotton, and other fiber crops in Costa Rica. In 1953, he returned to rust research with the USDA at Beltsville, and has been a dominant figure in all phases of rust investigations since that time.

Dr. Loegering is well known throughout the world as a scientist and leader in cereal rust research. He has made important contributions to our understanding of the etiology and epidemiology of cereal rust diseases; of the genetic mechanisms of host and pathogen and their interaction; and of chemotherapy for reduction of cereal losses due to rust diseases. He developed a meaningful and orderly system for recording and utilizing rust disease data, and led a highly successful world-wide cooperative, cereal rust-testing program known as the International Rust Nurseries, with cooperating scientists in 40 countries. The achievements of this organization include cereal improvement programs of FAO, AID, and the Rockefeller Foundation in many countries.

Dr. Loegering led the research that resulted in

routine storage of rust urediospores in liquid nitrogen where they remain viable and unchanged genetically. With the advent of rust spore storage in liquid nitrogen, Dr. Loegering immediately saw the value and importance of depositing research cultures in the American Type Culture Collection. He has been a leader in demonstrating to phytopathologists the necessity, value, and importance of preserving cultures with the ATCC.

With co-workers, he developed a basic genetic model to interpret the genetics of pathogenicity of *Puccinia graminis* on wheat, and advocated consideration of the rust pustule as an organismlike body composed of both host and pathogen, the "aegricorpus". Using chromosome substitution lines of wheat and F₂ cultures of *Puccinia graminis*, he identified eight independent genes for pathogenicity in the fungus. These studies demonstrated the complexity in the aegricorpus, the correctness of the model for interpreting the phenotype, and the possibility of an orderly system for placing specific host-pathogen interactions on a sound genetic basis.

On April 1, 1968, Dr. Loegering joined the staff of the University of Missouri as Professor of Genetics. In 1970, he was appointed Professor of Plant Pathology, the position he currently holds.



Karl Maramorosch was born in Vienna, Austria, in 1915. He graduated from the Agricultural University of Warsaw, Poland, and obtained his M.S. degree there in 1938. His studies were continued for a short time at the Polytechnic Institute in Bucharest, Rumania. He carried out his thesis research at Brooklyn Botanic Garden, and obtained his Ph.D. degree from Columbia University in 1949. He became a U.S. citizen in 1952. His virus research has been carried out at the Rockefeller University, and more recently at the Boyce Thompson Institute. At both institutions, he has been the leader of an active virus research program in which he concentrated on the relationships of plant viruses and yellows agents to their leafhopper vectors. He found that the incubation period in injected vectors was shorter, the greater the dosage of inoculum. He performed the definitive experiment proving that the agent causing aster yellows multiplies in its vector. Other studies dealt with the unusual effects of plant virus infection on leafhopper feeding habits, the therapeutic effect of gibberellic acid on virus-induced dwarfing of plants, the effect of temperature on incubation

periods in vectors, cross-protection between strains of the corn stunt pathogen in vectors, and the relationship of curly top virus to its vector. He and his colleagues have contributed to our knowledge of optimal embryonic stages with which to start primary tissue cultures from leafhopper vectors, and the formulation of media for such cultures. Their research confirmed the Japanese discoveries of mycoplasma-like bodies in plants with yellows-type diseases, and demonstrated the same bodies in the salivary glands of insect vectors. Electron microscopy investigations have dealt with the multiplication of leafhopper-borne plant pathogens in nonvector leafhoppers or primary cultures derived from them, the identification of wound tumor virus in various vector tissues, and the description of various stages of its development in these tissues.

Dr. Maramorosch has served as Associate Editor of "Virology" and, with Koprowski, coedited "Methods in Virology". In addition to review articles he has edited books entitled: *Biological Transmission of Disease Agents*, 1962; *Insect Viruses*, 1968; *Viruses, Vectors, and Vegetation*, 1969; and *Comparative Virology*, 1971. The Cressy Morrison Prize in Natural Sciences, the Campbell Medal, membership in the Leopoldina Academy, and the AAAS Prize are among the honors he has already received.

He has played a prominent role in international plant pathology in the field, on committees, and in organizing international conferences such as the 1965 U.S.-Japan Conference on Arthropod-borne Plant Viruses in Tokyo, and the 1969 Conference on Comparative Virology in Montreal.



Richard Robert Nelson was born in Austin, Minnesota, on May 23, 1926. He attended St. Olaf College and received his B.A. degree from Augsburg College. He served in the U.S. Army in 1944-45. During 1947-48, he taught high school at Billingham, Minnesota, before undertaking graduate studies in Plant Pathology at the University of Minnesota. The Ph.D. degree was conferred by the University of Minnesota in 1953. In 1954-55, he served as a Research Fellow at the University of Minnesota. In 1955, he joined the USDA Cereal Crops Research Branch, and served as Plant Pathologist and Adjunct Professor of Plant Pathology at the North Carolina State University until 1966. In 1966, he joined the

faculty of The Pennsylvania State University as Professor of Plant Pathology and as Senior Member of the Graduate Faculty. He has made outstanding contributions to our understanding of the genetics and inheritance of pathogenicity and virulence in fungi through sexual and asexual mechanisms. His studies have clearly shown the significance of these phenomena to an understanding of disease resistance in plants. His contributions have been philosophical as well as factual, especially in the area of population dynamics. Dr. Nelson is a highly motivated, committed, and effective teacher. He regularly challenges students to achieve advanced intellectual levels through formal or informal course work and research. He has directed the programs of a number of graduate students, and serves as Chairman of his college's Committee for Graduate Study and Research. Dr. Nelson has served as a member and chairman of several committees, and as representative to a number of boards, including the Society for the International Biological Program and the XI Botanical Congress. He serves on the Editorial Board of *Annual Reviews of Phytopathology*, and has served as a consultant to public and private organizations. He has presented invitational lectures at a number of international symposia and organizations.



Luis Sequeira was born in San Jose, Costa Rica, on September 1, 1927. He completed high school in Costa Rica. He received the A.B. degree (cum laude) in 1949, and the Ph.D. degree in 1952 from Harvard University and spent 1952-53 in postdoctoral work at the Atkins Garden and Research Laboratory, Cienfuegos, Cuba, and at the Instituto Biologico, Sao Paulo, Brazil. In 1953, he joined the research staff of the United Fruit Company and was stationed at Coto, Costa Rica. In 1957-1960, he served as Scientific Director of the Coto Research Station of the United Fruit Company. In 1960-61, he was Visiting Professor in the Department of Plant Pathology at North Carolina State University. In August 1961, he joined the faculty of the University of Wisconsin as Associate Professor of Plant Pathology, and was promoted to the rank of Professor of Plant Pathology in 1964. He was awarded a National Science Foundation Senior Postdoctoral Fellowship in 1970 to support a study leave at the University of Reading, England.

Dr. Sequeira has distinguished himself in both research and teaching. His doctoral research on coffee leaf spot was one of the first demonstrations that

production by a plant pathogen of an auxin-inactivating enzyme could induce a major symptom of a disease. This study provided the impetus for related studies with other pathogens on the role of hormone imbalance in pathogenesis, and has been a point of continuing research interest for Dr. Sequeira. He is perhaps best known for the studies he and his students have completed using the interactions between *Pseudomonas solanacearum* and tobacco as the model system for analysis of changes in levels and origin of IAA and related compounds.

In his work on the lettuce corky root disease in Wisconsin, Dr. Sequeira was able to determine the causal factor for disease problem that had puzzled other investigators for a number of years. He developed the Marquette variety, resistant to the effects of the toxic products formed after decomposition of lettuce residue in soil.

Studies in collaboration with P. R. Rowe for development of resistance to bacterial wilt of potato provided the basis for understanding the genetics of inheritance of resistance to bacterial wilt in potatoes which had not been elucidated previously. The potential value of wilt resistance identified thus far in this program in the development of varieties of potato grown in Central and South America is yet to be realized. The prospects are high, however, that a major breakthrough is in progress that may enable expansion of the planting of potatoes in areas where this crop currently cannot be grown because of the threat of bacterial wilt.

In recent studies on the induction of the hypersensitive reaction in tobacco plants, Dr. Sequeira and his students have been able to demonstrate an unusual phenomenon involving prevention of the hypersensitive reaction by prior infiltration of the leaf with specific bacterial cell components.

Dr. Sequeira has responsibilities for teaching the basic introductory course in plant pathology to graduate students, and in this capacity and in other courses he is ranked by his students and colleagues as a superlative teacher.

Dr. Sequeira has served The American Phytopathological Society as a member of the Editorial Board (1968-1970), as Chairman of the Committee on Disease and Pathogen Physiology, and as a member of the Committee on Bacteriology and the APS Committee for IBP.



Malcolm C. Shurtleff was born in Fall River, Massachusetts, on June 24, 1922. He was awarded the

B.S. degree at the University of Rhode Island in 1943. After 3 years of military service in the U.S. Navy, he began graduate training in plant pathology at the University of Minnesota in 1946, receiving his doctorate in 1953. His research and thesis for the Ph.D. degree were done while filling a staff position in extension and research at the University of Rhode Island.

In 1958, Dr. Shurtleff joined the staff of the Department of Botany and Plant Pathology, Iowa State University, as Associate Professor. In July 1961, he accepted a position as Associate Professor of Plant Pathology at the University of Illinois, and was advanced to Professor in 1963.

Dr. Shurtleff has demonstrated outstanding ability and leadership in plant pathology extension. He has developed many innovations in teaching the principles of plant pathology, and has been an exceptionally able communicator of knowledge of plant diseases and their control to his constituents. His numerous writings on diseases of crop plants and of the home garden in magazines, trade journals, newspapers, and university publications have created for him a wide reading audience. He developed to a high degree news releases and articles for daily newspapers and newstapes for radio and television. He edited the pest control section for the "New Better Homes and Gardens Book". His successful book, "How to Control Plant Diseases in the Home and Garden", first published in 1962, is now in its third edition. He took a strong part in leadership in the development and completion of the APS *Plant Disease Profiles* which have proven so successful, and has carried out this concept through his work in extension plant pathology in Illinois.

The principal thrust of Dr. Shurtleff's many activities in extension has been to carry the story of plant diseases and their control to all who might benefit from such information. He has conducted research seminars on pesticides for personnel in commercial chemical industries, and was in charge of a High School Teachers' Summer Botany Institute, Brookings, South Dakota. Participation by invitation in turfgrass schools and vegetable growers' schools in other states attests to his high competence. He was early among observers to realize the potential impact of the southern corn leaf blight disease on corn in the midwest, and to bring the facts before growers, agronomists, and economists of the area.

Dr. Shurtleff has been continuously active in APS and has served on numerous committees, participated in the Society's teaching programs for high school biology teachers, and is now actively engaged as a committeeman in formulating a program on teaching for the Second International Meeting of Plant Pathologists to be held on the University of Minnesota campus in 1973. He was editor of *Phytopathology News* from its inception in 1967 through most of 1970, and deserves much credit for the success of this mode of communication among our membership.