Memorial Resolution
DISTINGUISHED PROFESSOR EMERITUS MARCUS MORTON RHOADES
(July 24, 1903 - December 30, 1991)

Upon learning that he was to be awarded an honorary doctor of sciences degree at the spring commencement exercises on May 8, 1982, Distinguished Professor Emeritus Marcus Morton Rhoades wrote to President John W. Ryan:

> ...This action by Indiana University fills me with humility and gratitude. It is an honor that I proudly accept. I cannot refrain from saying that no recognition is as sweet and as prized as that coming from your home institution. I hope that my scholarly activities have added some luster to the fair name of Indiana University, an institution for which I have admiration and affection.

The statement was made by a man who loved being a scholar and was humbly grateful for the opportunity to pursue an academic career, a man who received extensive institutional recognition for his contributions and achievements and was loved and honored by all who knew him or knew of his work. He truly cared for his university, his department, and his colleagues.

Marcus was born to Ralph R. and Nina (Nixon) Rhoades in Graham, Missouri; early in his life the family moved to Downs, Kansas, and later to Kansas City, Missouri. He helped out for a time in his father's lumber yard and worked long hours behind the counter in a Kansas City drugstore. At the soda fountain, he became acquainted with Walt Disney, creator of animated cartoons, and with Casey Stengel of Yankee baseball fame. Marcus told many stories of his youthful days in Downs and Kansas City and always seemed to remember them fondly and with the imaginative mind of an appreciative youngster. From these stories, it is clear that he grew up as a person loving life and enjoying those around him. These characteristics stayed with him all of his years.

At the University of Michigan, he earned a Bachelor of Science degree in 1927 and a Master of Science degree in 1928. He continued graduate work at Cornell University, specializing in corn genetics, and received the Doctor of Philosophy degree in 1932. At Cornell, Marcus was a member of a small group of exceptional and enthusiastic students, two of whom were later awarded Nobel prizes for their research in genetics.

While at Cornell, Marcus met, and in 1931 married, Virginia Hatcher, a native of North Dakota and a graduate student at Cornell; Marcus and Virginia celebrated their sixtieth wedding anniversary last year. Two sons--Marcus M., Jr., and William D.--were born to the couple. Professor Rhoades was fortunate in having this very supportive family behind him throughout his career.

Dr. Rhoades remained at Cornell as an experimentalist in plant breeding until 1935 when he was hired by the United States Department of Agriculture. For three years he worked at the Arlington Experimental Farm located at the present site of the Pentagon. In 1940, he joined Columbia University as an associate professor and was promoted to full professor in 1943. During the period from 1948 to 1958, Rhoades was a Professor of Botany at the University of Illinois.

From 1958 to 1968, he was Chairman of the Botany Department at Indiana University. Throughout his career, Marcus served on numerous local, national, and international committees primarily judging and defining the quality of academic performance. Locally, he was pleased to be a member of the Indiana University Athletic Committee. Many of his tasks were of an editorial nature, and he held several offices in professional societies. He especially enjoyed his service on the Selection Committee for Guggenheim Fellowships. At age 65, he relinquished the Botany Chairmanship and was honored as a Distinguished Professor. Although he became Distinguished Professor Emeritus in 1974, Professor Rhoades continued to work seven days a week in his office, laboratory, greenhouse, and his beloved cornfields until shortly before his death.

Throughout his career, Marcus Rhoades maintained a high level of interest and enthusiasm in his scientific inquiries; his attention could not long be diverted from his on-going experiments. His mind was wide-ranging, receptive to new ideas and stimuli, and retentive of details. Although he made no claim to having mastered the new field of molecular genetics, he did have an intuitive grasp of what is significant. He greatly enjoyed his participation in the exciting and competitive atmosphere of the molecular laboratory while on sojourns in Canberra, Australia, during 1978 and 1979.

Marcus attacked his research on the genetics and cytology of the maize plant with a painstaking and rigorous style. Never satisfied with a single experiment, he was impelled to repeat and check the original result, sometimes even after publication. He was a perfectionist. He was pleased that some of his experiments were recognized as being so reliable that they were used as instructive classroom exercises. From his long hours of labor in the field and laboratory, he accumulated a vast array of data. Many of his experiments remain unreported; he published only the truly significant findings and had no interest in "pot-boilers." He possessed an uncommon gift for words, and his papers are notable examples of clarity and style. His scientific contributions include more than 70 articles in refereed journals; in addition, over 170 research reports appeared in the *Maize Genetics Cooperation News Letter*. A considerable portion of Rhoades' research findings served as the basis for student theses, with all of his students being sole authors of the papers published from their doctoral thesis research. Twenty-six persons finished their doctoral work with him.

The research of Professor Rhoades dealt with recombination, mutation including action of transposable elements, cytoplasmic inheritance, genetic control of meiosis, structural aberrations and preferential segregation of chromosomes, and the roles of chromosomal knobs and heterochromatin. Especially notable among his contributions is the study of the Dotted gene, sometimes regarded as a precursor of the work on transposable controlling elements. The significance of his research endeavors is evidenced by numerous citations in widely used textbooks and monographs. Without doubt, he was one of the world's leading cytogeneticists.

His stature has been acknowledged in many ways. He was one of the few scientists who have been elected to the National Academy of Sciences as well as to both the American Philosophical Society and the American Academy of Arts and Sciences. He was made a Foreign Fellow of the Royal Danish Academy of Sciences and Letters in 1977. In 1981, he and Barbara McClintock (a member of that small group of graduate students at Cornell) were the first recipients of the Thomas Hunt Morgan Medal awarded by the Genetics Society of America. As already mentioned, Indiana University awarded him an honorary Doctor of Science degree in 1982 for his contributions to genetic research and for his outstanding service to the university as the Chairman of the Botany Department and as a teacher.

Of equal importance, although less tangible, is the influence of Marcus Rhoades on his own students--as well as on a host of other graduate students, postdoctoral fellows, and colleagues with whom he was closely associated. Many attributes of his scientific style are reflected in his Ph.D. students: some have adopted his opportunistic approach; others emulate his passion for detail and thoroughness of analysis. His students have shown much affection and admiration for the professor; they kept in touch with him over the years and his attentive interest and approval of their accomplishments remained important to them. His attitudes about scholarship will be passed on to even more generations.

Marcus felt fortunate to be a member of the Indiana University community, to have access to its various activities, and to contribute to its functioning. We are fortunate to have known him as a scholar, teacher, and friend.

This document is a part of the minutes of the Bloomington Faculty Council. It is deposited in the University Archives. Copies are to be sent to Professor Rhoades' wife Virginia; to his sister, Ruth Hay; to his sons Marcus and William and their wives; and to each of his grandchildren.

Ellen Dempsey
Carlos Miller
Drew Schwartz