

REMEMBERENCES OF PROF. MARTIN GIBBS

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Martin Gibbs

The death of Professor Martin Gibbs on July 24, 2006, saddens the community of plant physiologists and scientists worldwide. Professor Gibbs's wake and funeral were held July 27 and 28. He was buried in a wooded glen beside his beloved wife Karen, who died April 7, 2006, in Westview Cemetery, Lexington, Massachusetts.

An active member of ASPP/ASPB for more than half a century, Professor Gibbs edited *Plant Physiology* for three decades (1963–1992) while simultaneously, in his quite personal manner, skillfully promoting the research and educational career activities of a host of plant scientists both in the United States and abroad. During his editorship, *Plant Physiology* became “the place to publish” as the journal rose to become the premier publication in plant biology. The prestige of publishing in *Plant Physiology*, with its rigorous peer review process, was a great boost for many scientists as they built their careers, garnered support funds, and obtained professional positions. For decades Marty Gibbs was a vigorous influence within the ASPP community. He served on the Executive Committee for many years and offered experienced wisdom at moments of decision. The Society grew consistently during his tenure, and the journal expanded from a single volume to three volumes annually while the numbers of published papers rose from about 175 to well over 600. He began nudging the journal internationally as well, appointing Gleb Krotkov as the first non-U.S. citizen to the editorial board and increasing submissions from outside the United states from 300 in 1984 to over 600 in 1991.

When one surveys the activities of Professor Gibbs regarding the field of plant physiology, his breadth of knowledge and myriad beneficial actions are humbling. He was an engaging conversationalist and delighted in finding and verbalizing the humor in every event and situation. Many students and others who worked in his Brandeis University lab will remember him sitting at his unpretentious little round metallic coffee table coming up with amusing comments about the events of the day and occasionally relaxing with his cigar. He particularly loved to talk and visit with young people; he went out of his way to make such opportunities at numerous professional meetings and in teaching situations. He traveled to many countries, espe-

cially into Soviet-dominated places, to give his personal support, advice, and encouragement. His warm, personable manner was so readily evident, making him admired and trusted by scientists around the world. Gleb and Valentina Krotkov, both Russian immigrants to Canada, became his close friends. Marty and Karen formed lifelong friendships here at home, too, notably with Eli and Louise Romanoff, Bob and Eileen Rabson, Mack and Dot Dugger, Tony and Alice San Pietro, and Bill and Winifred Klein, all of whom strongly supported plant research. Over the years these couples often visited, shared ideas and news, and informally evaluated the progress and status of plant biology.

Professor Gibbs was in every deed a compassionate patriarch of plant physiologists. He worked exhaustively to promote the efforts of plant scientists by organizing conferences, seminars, meetings, proceedings, and many publications. There are few plant physiologists during the past four decades who did not benefit, often perhaps unknowingly, from the constant widespread attentiveness of Martin Gibbs toward plant research and education. He was a patriarch for plant physiology personally and professionally.

The compassion of Martin and Karen Gibbs for each other is legendary. "Isn't she beautiful?," he would say as he gently squeezed her smiling face between his hands. Karen was afflicted with multiple sclerosis for the last four decades of her life and confined to a wheelchair the last 30 years; yet Martin carried her around the world with him. Countless persons witnessed their tender devotion.

One memorable trip helps illuminate that devotion: During the 50th anniversary year of D-Day at Normandy, Martin and Karen, myself and my wife Betty, and Marie-Louise Champigny gathered in Paris and drove to Normandy for a week's visit. The genesis of the visit was that Martin's brother Sol Gibbs had landed on the beach, and my father had piloted a Landing Ship Tank onto the beach during the D-Day invasion. We wanted to experience memories of Normandy events and to search for the landing places of our relatives. In a highly memorable and emotional scene, we carried and pushed Karen along our way among the cliffs, emptied bunkers, and beaches of Normandy; indeed, we stood at Sol's landing site and at locations of the naval armada. The mutual devotion of Karen and Martin was evident.

As a scientist Dr. Gibbs was one of the most persistent persons at conducting plant biology research in the 20th century. After he graduated from the University of Illinois in 1947, the distinguished plant physiologist Professor Kenneth Thimann at Harvard University recommended him to the Brookhaven National Laboratory to work with ^{14}C labeling and purifying plant sugars. His production of ^{14}C -labeled sugars from plants for world distribution led to many famous biochemistry labs working on carbon metabolism (H. Gest, I. C. Gunsalus, W. A. Wood, R. D. DeMoss, B. L. Horecker, S. Ochoa, F. Lynen, H. Beevers, O. Kandler). This research established him as an outstanding biochemist and helped establish the anaerobic pentose phosphate pathway and the Entner-Doudoroff pathway of glucose break-

down. Intensive research was also under way in several places to discover how photosynthesis captured CO_2 and synthesized sugars. As the now-well-known reductive C3 or Calvin/ Benson/Bassham cycle was being elucidated and debated, Dr. Gibbs, working with Otto Kandler, discovered that the sugars of photosynthesis were asymmetrically labeled during $^{14}\text{CO}_2$ fixation, rather than symmetrically labeled as predicted by the proposed C3 cycle. He tenaciously pursued explanations for the asymmetrically labeled sugars for about four decades. Essentially every student he trained had to learn quantitative biochemistry by laboriously degrading sugars carbon by carbon! After a decade at Brookhaven (1947–1956), he and his growing family (two children were born on Long Island, two in Ithaca, New York, and one in Cambridge, Massachusetts) moved to Cornell University (1957–1964), where his aptitude for inspiring, teaching, and training students was honed. By that time photosynthesis research had broadened into a variety of biochemical discoveries related to photophosphorylation, electron transport, and light capture. In the midst of that intense research, Aubrey Naylor in 1962 asked Dr. Gibbs to become the editor-in-chief of *Plant Physiology* and he accepted that role, a role that lasted much longer than Martin or his students ever imagined it would! With his research in full bloom and the editor's responsibilities looming, the Gibbs Family moved to Brandeis University (1964–1993), where Martin became the Abraham S. and Gertrude Berg Professor of Biology and served as chair of the Department of Biology for three years.

As the new editor of *Plant Physiology*, Dr. Gibbs naturally focused his strong inclination toward biochemistry on journal manuscripts. Subsequently, *Plant Physiology* articles evolved with more rigorous biochemical approaches to understanding plants. An explosive research growth occurred in the United States in the 1970s and 1980s that strongly engulfed the Society and the journal. The field of plant physiology became more heavily funded and attracted more students.

In the fall of 1962, the journal received about 200 papers per year and was printed in six issues with about 800 pages total. By 1991 it received 1,300 manuscripts and was printed in 12 issues with a grand total of approximately 5,000 pages and a press run of 5,500 copies. According to surveys (e.g., *Current Contents*), *Plant Physiology* was the most quoted and considered to be the most prestigious plant journal in the world. Clearly the workload increased greatly as the number of manuscripts increased. Professor Gibbs received and made decisions on all manuscripts until 1970. Around then, associate editors were appointed who were assigned manuscripts for decision. Over his threedecade tenure, Dr. Gibbs closely interacted with the printer, making all decisions on paper, format, print size, cover layout, and general instructions to authors.

There are a number of "Gibbs sagas" related to *Plant Physiology* that illustrate Dr. Gibbs's concerns for the journal. In 1963 the business of *Plant Physiology* functioned more like a "mom & pop" operation. Thus, for a half-dozen years, Martin and

Bill and Winifred Klein ran the journal printing, publication, and distribution out of their homes and offices. One story relates to the sudden closure of the printer, Craftsmen, Inc., in Kutztown, Pennsylvania. It seems that the young man who owned Craftsmen was neglecting to remit FICA taxes to the IRS. Craftsmen's superintendent alerted Martin on a Friday night that he expected IRS agents to arrive the next day. Martin and the Kleins organized a hurried weekend auto trip to Kutztown, loaded up the galleys, and transported them to Business Press, Inc., in Lancaster, Pennsylvania, to ensure the timely publication of the next issue. At the next Executive Committee meeting, Dr. Gibbs apologized that the November issue of the journal had been a month late. That action demonstrated the detailed attention of Professor Gibbs and the debt of gratitude also owed to Bill and Winifred Klein as they worked, mostly unknown to the *Plant Physiology* community, with Dr. Gibbs to establish sound business operations for ASPP.

For more than three decades, numerous actions were taken by the Society in which Dr. Gibbs played pivotal roles. For example, he helped lead the move toward more businesslike functioning for the Society, being involved in the hiring of business managers, executive secretaries, and executive directors. He worked on the establishment of headquarters in Rockville, Maryland, and the Gude property gift that established a permanent site for Society business operations, spearheaded by business manager Pat Richter.

And near the end of his term, he had a strong voice in the debate surrounding the creation of the second Society journal, *The Plant Cell*.

Dr. Gibbs was born on Armistice Day—November 11, 1922. His formative years were shaped by the Great Depression, and he was ever mindful of resources and expenditures. Even so, through all these changes within the Society, Professor Gibbs was a wellspring of critical, yet warm and highly supportive, actions for the entire field of plant physiology.

Quite naturally the host of contributions by Professor Gibbs to science, to plant research, and to the Society were widely appreciated and honored. Some seminal memberships and recognitions include the American Academy of Arts and Sciences (1971); the National Academy of Sciences USA (1974); Marine Biological Laboratory Corporation, Woods Hole (1975); the ASPP Charles Reid Barnes Life Membership Award (1984); the Alexander von Humboldt Fellowship (1988); the French Academy of Sciences (1992); Honorary Life Member of the Canadian Society of Plant Physiologists (1992); the Russian Society of Plant Physiologists (1992); and the ASPP Adolph E. Gude, Jr. Award (1992). In appreciation of his research and service for 30 years as chief editor of *Plant Physiology*, the Society honored him by issuing the Martin Gibbs Medal, to be awarded to a distinguished plant scientist.

Since the inception of ASPP in 1924, no living member of the Society has been so honored. The recipient of the medal is invited to organize the Martin Gibbs Symposium for the next national meeting. Professor Gibbs was the first recipient (1992).

Martin courted Svanhild Karen Kvale during his graduate school years at the University of Illinois (1943–1947), and they married on October 11, 1950. They were blessed with five wonderfully attentive children—Janet Helene, Laura Jean, Steven Joseph, Michael Seland, and Robert Kvale—a devoted daughter-in-law, Donna, and 10 grandchildren: William, Leila, Steven, Daniel, John, Douglas, Alec, Samantha, Savannah, and Trevor.

As plant physiologists, scientists, and friends, we can reflect on Martin Gibbs with a sense of loss, but with a finer and truer feeling of having had our lives enriched through the devotion, example, compassion, and wisdom given to us all by Martin and Karen Gibbs.

Thanks to them both for entering and beautifying our lives.

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