George A. Hudock

George Hudock majored in biology at Harvard College and graduated in 1959 with highest honors. Professor R. P. Levine, one of the pioneers in genetic analysis of photosynthesis, was quite impressed by George's senior honors research project. When George entered graduate school at Harvard, Levine recruited him into his laboratory. There he participated in the earliest phase of biochemical-genetic analysis of photosynthesis with a unicellular alga, *Chlamydomonas reinhardi*, as his model organism. It was also there that he met and married Margaret "Peggy" Olmsted. He received his Ph.D. in biology from Harvard University in 1963.

While at Harvard, George established the correlation between chlorophyll biosynthesis, chloroplast structure, and the emergence of photosynthetic activity and its requisite enzymes. The key component of this research was a mutant that he isolated, y-2, which lacked chlorophyll in the dark but turned green in the light. George also did seminal work on the arginine biosynthesis pathway in *Chlamydomonas*, establishing it to be of bacterial type. He also found the first case of enzyme repression in algal systems. Levine stated that George's research showed high degrees of insight and imagination, adding that he had the knack of designing and carrying out experiments with great efficiency. He wasted very little time and achieved interesting and reliable results with dispatch.

George was a postdoctoral fellow and research associate with Professor R. C. Fuller at Dartmouth Medical School. There he worked on the regulation of NADP specific triose phosphate dehydrogenase in photosynthetic eukaryotes and prokaryotes. In 1965, George joined Indiana University's Department of Zoology as an assistant professor. He became an associate professor of biology in 1968 and earned tenure in 1971.

Once at Indiana, George's interests shifted more toward the exploitation of the *Chlamydomonas* genetics system to explore basic questions of cell biology. In collaboration with Carol Bart, he showed that the y-2 mutant was incapable of chlorophyll synthesis in the dark and that it was also incapable of sustained heterotrophic growth in batch cultures. In chemostat culture, however, y-2 grew heterotrophically indefinitely. This suggested that the accumulation of toxic products in the y-2 batch culture caused cell death and that chlorophyll synthesis was not obligatory for cell growth. George's research also extended beyond IU's boundaries to the Crane naval base, where he worked to detoxify biologically a TNT-soaked munitions field.

George initiated the genetic analysis of phototaxis in *Chlamydomonas* in collaboration with his wife, Peggy, whom he was to lose to cancer in 1980. His student Joan Wood discovered that a temperature-sensitive phototaxis negative mutant, with uniparental inheritance, suggested chloroplast gene involvement.

In 1992, when interviewed by *The Scientist* for an article on increasing science literacy, George reflected, "After I got tenure, I was able to create a universe where I could just teach, which is what I knew I did best." His passion for teaching earned him several awards over the years: IU's Ulysses G. Weatherly Award for distinguished teaching in 1972; the Senior Class Council's Teaching Award, also bestowed in 1972; a Senior Class Award for Teaching Excellence in Biology and Dedication to Undergraduates in 1987; and one of IU's Teaching Excellence Recognition Awards given in 1998.

George is a gruff, taciturn man, but his students quickly learned that he cared deeply about them. He was a demanding professor who stressed analytical thinking as well as content mastery. Students appreciated his clear and concise lectures, considering him to be tough but fair. One former student, a teacher who had returned to campus to earn a doctorate, praised George's dedication to his students, declaring him to be one of the most outstanding teachers he had known. Another contacted George to tell him that he had been teaching for seventeen years and was still following George's teaching style: that of clearly stating expectations and only accepting the best from each student.

George's educational zeal extended beyond IU. His many outreach activities included giving talks to lay audiences and scientific writing for the lay public. In an article on genetic technology, George clearly stated his educational goal. "We should be teaching students about genetics and its consequences as soon as and as much as possible . . . If we do that which is easily possible now, we have the hope of producing a generation of citizens who are more keenly aware of genetic anomalies, more informed about their causes and consequences, and more aware of the impact of science on their lives."

George worked tirelessly on behalf of the biology department's students. He served on numerous departmental committees: five years on the curriculum committee; seven years on the undergraduate research task force, which he chaired; and an impressive twenty-three-year-long stint, fourteen of them as chair, on the department's honors and scholarship committees. He also served as a University Division adviser from 1987 to 1989 and as a departmental honors adviser from 1993 to 2000.

One of George's former students credits him with helping her earn two degrees in zoology. He convinced her that she could accomplish anything she wanted. In gratitude for his inspiration and guidance, she established the George Hudock Graduate Fellowship in his honor.

George taught his last classes during the fall semester of 2000. An ice storm was predicted for when his final exams were scheduled. George lives out in the country and, rather than face icy roads, he simply packed a change of clothes, hauled in some extra food, and slept in a chair in his office while the storm blew. He may have been uncomfortable and a bit tired, but he didn't miss those exams. Now that's true dedication.

George is looking forward to retirement. It will give him more time with his second wife, Carol Bart, and his two grown daughters, Jennifer and Jessica. No doubt, George and Carol will continue to adopt the various stray cats and dogs who seem instinctively to know there is always room for one more at the Bart/Hudock household. Most of all, George looks forward to extended trips to the Western states. He feels a strong, spiritual connection to the wilderness in that area of the country. We wish him many well-deserved sojourns there, but selfishly hope that occasionally he will return to Jordan Hall to visit his many colleagues and friends.

Robert K. Togasaki
Kathy E. Wyss