

IN MEMORIAM

RICHARD HARVEY RICHARDSON

Richard Harvey Richardson (Dick) of Austin, Texas, passed away on March 22, 2018, from complications of dementia. He was born in Mexia, Texas, on March 24, 1938, the only child of Rufus Harvey Richardson and Mary Irene Adams Richardson.

Dick served as president of the Mexia High School chapter of Future Farmers of America and graduated valedictorian in 1956. His stated ambition was “to be a successful farmer.” To that end, Dick enrolled in the Agricultural and Mechanical College of Texas (TAMU) and completed a Bachelor of Science in Plant and Soil Science in 1959. He continued his studies at North Carolina State University (NCSU) in Raleigh on a four-year National Science Foundation Fellowship where he received a Master of Science in Plant Breeding (1962) and a Ph.D. in Genetics (1965). He returned to Texas with a National Institute of Health Postdoctoral Fellowship to study population genetics through statistical analyses at The University of Texas at Austin with the late Dr. Kenichi Kojima, his mentor at NCSU, who had moved not long before to the University’s Department of Zoology.

Dick became an Assistant Professor in the Department of Zoology at UT Austin in 1967, teaching genetics and biostatistics courses. He was an Associate Professor from 1969 to 1979, when he was promoted to Full Professor. During these years, he received a National Institute of Health Career Development award that allowed him to participate in research and teaching at the University of Puerto Rico at Rio Piedras and the University of Sao Paulo in Sao Paulo, Brazil. Much of his research during this period was on genetics of *Drosophila*, and it took him on numerous trips to Hawaii and Mexico. Dick came to UT Austin near the end of an era that lasted

from the 1930s to the early 1970s when UT Zoology was the epicenter for genetic, evolutionary, and systematic studies of the genus *Drosophila* and housed the National Stock Center established by UT professor J.T. Patterson. The Center housed 250 species of *Drosophila* and many genetic stocks key for researchers around the nation and the world. In the late 1970s, Dick Richardson took on raising grant funding to keep the Center going, but the evolution of the department had diminished the local importance of the Center. Dick did important service in keeping the Center functional, which allowed it to survive until its adoption by a series of other institutions. The Center lives on today at Cornell University.

Although research applicable to practical problems has long been acceptable in the biomedical field, most faculty in the Department of Zoology when Dick arrived were somewhat deprecating about applied work related to agriculture and environment. However, his ranching background and training in land-grant universities prepared Dick to move his program in an applied direction. He shifted research focus to genetic studies of screwworms, an infesting pest that economically affects ranching. For one thing, he realized that the key to screwworm eradication lay in basic studies of x-ray-induced mutagenesis conducted by UT Austin's early genetics group. The group found that irradiated male fruit flies who mated with normal females rendered them sterile. That discovery ultimately led to successful eradication carried out by the United States Department of Agriculture (USDA).

Dick feared, however, that the USDA's sterile-male release program was declared victorious too soon and the potential of other strains or species of screwworm fly moving out of Mexico needed to be considered. He addressed these concerns in a review published in *Science* and was editor for and contributor to *The Screwworm Problem: Evolution of Resistance to Biological Control* published by The University of Texas Press. Fortunately, the concerns Dick

expressed have not realized, but the analysis of potential pitfalls in the program was an important contribution.

Taking a leave of absence from 1987 to 1989, Dick spent time as a visiting research fellow at the University of Hawaii and as secondary teacher at the Kamehameha schools in Honolulu. Upon his return to UT Austin, he concentrated his research on interactions between environment, economics, and agriculture, especially the health and management of prairies and rangeland. Becoming a pilot, Dick used aircraft to do multispectral imaging, data analysis measuring vegetation type and growth and soil moisture content. He was an Advisory Board member of Holistic Management of Texas, using collaboration instead of conflict to restore ecological functions on public and private lands. He studied the soil food web, from bacteria and fungi to dung beetles, that contributes to water infiltration, water holding capacity, and plant nutrition. He applied his expertise to help ranchers restore their lands, with positive outcomes that included re-emergence of native plants that had not been seen for many years.

Over the years, Dick Richardson taught and influenced the lives of many undergraduate and graduate students, post-doctoral fellows, and young professors. He aspired to teach students to be self-motivated learners. He was the first at UT Austin to teach genetics as a substantial writing component course, and he gave essay exams “to allow students to explain their understanding and document their thought processes.” In his Natural Resource Management course, he trained students to develop observation skills and to interpret the ecological dynamics of a site. He used the Learning Record Online (an assessment method developed by Dr. Margaret Syverson) to help “students learn to observe what they learn, recognize how they learn, and document it in their work.” He had a long collaboration with Dr. Kevin Anderson of the Center for Environmental Research at Hornsby Bend, a site for research and teaching. There, Dick again

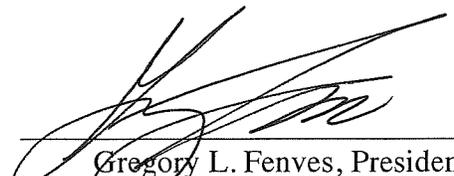
combined research with teaching as students learned water treatment ecology by creating a functioning wetland. In 2000, in addition to his regular appointment in the then-new School of Biological Sciences, he was granted faculty status in the Department of Geography to enhance relations between departments. He had a profound impact on the undergraduates he taught, with many altering their career paths toward environmental sciences and research focused on improving the health of natural and managed environments, and thus improving the lives of humans dependent upon that land.

In 2006, Dick spoke at the Fourth International Conference on the Gaia Theory, which he saw as an integrative framework for all disciplines. Dick was always a big thinker and always generous in offering research ideas to students and fellow teachers. He would push us beyond the edges of our imagination into new understanding. It was his gift. Dick was a fellow of the American Association for the Advancement of Science, a life member and past President of the Texas Academy of Science, a member of the American Academy of Science, and a member of Sigma Xi, the Scientific Research Society.

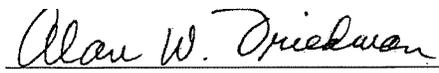
Dick retired as a Professor Emeritus of the Department of Integrative Biology in the College of Natural Sciences in May 2010. In addition to his University career, Dick was a rancher, horseman, and cattleman in partnership with his father until Harvey's death in 1985. He was a long-time member of the Texas Farm Bureau and the American Quarter Horse Association. During his time at NCSU, he trained a cutting horse, learned trick roping, and participated in rodeos with his friend the late Gene Mettler. In the seventies, Dick became interested in Native American culture after hearing Bobby Bridger's "Ballad of the West" and he developed a life-long friendship with the singer. In 2002, Dick's course on Destiny and the Environment presented

Bridger in performance of music, poetry, and historical knowledge while addressing issues of evolution, ecology, and economics.

Dick had three children. His daughter Desni Richardson Cox of Mexia, Texas, was born in Raleigh to his first wife, Barbara Pinkens (now Barbara Creel). His son Russell Richardson and daughter Kaci Richardson Myrick were born in Austin to his second wife Martha Edmison Richardson. He had four granddaughters, Ashley Bishop of Kemp, Texas, Brandie Cox of Mexia, Gretchen Myick and Natalie Myrick of Austin, and three great-grandsons, Carsyn Dyer, Cameron Dyer, and Ryan Bishop of Kemp. Dick is survived by his wife of twenty-one years, Patricia Q. Richardson, all his children, grandchildren, and great-grandchildren.



Gregory L. Fennes, President
The University of Texas at Austin



Alan W. Friedman, Secretary
The General Faculty

This memorial resolution was prepared by a special committee consisting of Professors James J. Bull, Lawrence E. Gilbert, and Camille Parmesan.