

Memorial to John Chapman Frye (1912–1982)

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“Those of us who only knew of John Frye admire his career as scientist, administrator, and public servant. Those of us who knew him personally feel the same admiration and will also miss him as a warm, caring friend.”

—Robert Bergstrom, In Memoriam, 1983

John Chapman Frye, a native of Ohio, was educated in the Midwest, and spent most of his professional career working in the Tertiary/Quaternary of the Midcontinent. He devoted some of his effort to groundwater studies. He was an intense scientist, a fine scholar, a gentle but firm teacher, a quiet but effective administrator, and always a true gentleman.

Frye was born in Marietta, Ohio, on 25 July 1912. His father was a construction engineer and his mother a homemaker; he was an only child. He married his childhood sweetheart Ruth L. Heizer in 1936 and from this union came three children: Sally Jean (Schwarzlose), John Douglas (deceased), and Terri Ruth. Getting married and attending university was difficult at best during the Great Depression, but the Fries managed.

John received his A.B. degree from Marietta College in 1934, attended Ohio State University for a term and transferred to the State University of Iowa where he was granted his master's degree in 1935 and Ph.D. in 1937. His graduate work was supervised by the renowned A.C. Trowbridge. His master's thesis was “Geology of a Portion of the Lower Muskingum Valley, Ohio,” and his dissertation was on “Additional Studies on the History of Mississippi Valley Drainage.” In 1955, Marietta College awarded him an honorary doctor of science degree.

On completion of his studies at Iowa, he took a job with the U.S. Geological Survey (USGS) Groundwater Division and assigned to the USGS/Kansas Geological Survey (KGS) Cooperative Groundwater Program in Kansas. He transferred from the USGS to the state survey side of the program in 1940. John had a flare for administration, and in 1941, when R.C. Moore departed for the Army in WWII and Ken Landes left for the University of Michigan, Frye was named assistant director and assistant state geologist-in-charge of the Kansas Survey. Frye was the de facto director while Moore was in the service and later in 1946 was officially named state geologist and executive director while Moore retained the title state geologist and director of research.

Frye's efforts as director were mainly concentrated towards groundwater, Pleistocene geology, county mapping, and geomorphic studies, but other aspects of Kansas geology were not neglected. He contributed to mineral-resource studies for wartime industries during WWII and with R.C. Moore compiled a mineral resource map of Kansas in 1942.

His decade of work in the Kansas Pleistocene culminated with publication in 1952 of his classic KGS Bulletin 99, *Pleistocene Geology of Kansas*, co-authored with A. Byron Leonard.



John published his results as projects were completed and later compiled them into a major summary publication. He followed this strategy in 1955 when he published KGS Bulletin 118, *Stratigraphy of the Ogallala Formation (Neogene) of northern Kansas*, co-authored with Leonard and Ada Swineford.

Frye published extensively on Kansas and in particular on the High Plains, almost ninety scientific contributions all told. His knowledge of the Pliocene-Pleistocene geology of the High Plains in western Kansas, in the present river systems in eastern part of the state, and in the glaciated country in northeastern Kansas was amazing.

He developed a team at Kansas with different backgrounds and interests to work with him. This cadre included Byron Leonard (biologist), Ada Swineford (sedimentary petrologist), and Claude Hibbard (vertebrate paleontologist) as well as a host of survey employees with varied backgrounds. He was equally persuasive in getting others to do survey work he deemed necessary. He was organized and highly efficient, and that allowed maximum results with a minimum of time and effort—the mark of a good administrator.

Concurrently with the survey position, Frye was appointed an assistant professor in the University of Kansas (KU) Department of Geology in 1940 and advanced rapidly to associate professor with tenure in 1945 and full professor in 1952. Not surprising, he concentrated his teaching efforts on Pleistocene geology, groundwater, and geomorphology. He enjoyed teaching and when possible would hold the class at a once-a-week meeting at his home in the evening. His favorite teaching method was to assign the student a subject and at the next meeting the subject would be presented by the student followed by a general discussion by the class (with pertinent, pointed questions by John), each student in turn. That assured maximum participation by everyone.

In the late 1940s he taught advanced physical geology, starting in the fall of 1949 he offered a course in groundwater geology, and later a graduate course in Pleistocene geology; he also taught geomorphology. One summer he handled the KU Colorado Geology Field Camp. Frye did not seek graduate students, but they naturally gravitated to him, especially those with similar interests.

Frye left Kansas in 1954 to be chief and state geologist of the Illinois State Geological Survey (ISGS), at the time the largest and best-funded state survey in the United States. He succeeded Morris M. Leighton, who had built the Illinois Survey into the premier state survey in the United States. Although Frye changed venue, his work ethics remained the same at Illinois as he rekindled his research interests back to the Ohio River Valley and the upper Midwest. At ISGS Frye maintained his commitment of supporting fundamental research and supplying basic data for applied problems. He built on that reputation and increased the studies in water, increased staff when possible, added equipment, and oversaw building of new core/sample facility with additional laboratory space. Under his administration, a new state geologic map was prepared and published in 1967. He championed environmental studies and was one of the first to use the term “environmental geology” after working with urban problems in the Chicago area. He was a dynamic force for continued change there. He also was appointed concurrently as a professor of geology at the University of Illinois, Urbana-Champaign. He religiously continued his field studies and research with his long-time Kansas colleague, Byron Leonard, and they extended their interests south into New Mexico and northern Texas.

On his retirement from ISGS in 1974, Frye became executive director of the Geological Society of America (GSA) in Boulder, Colorado, for eight years until his second retirement. Not surprising, he put his administrative skills to work and dramatically turned around the financial health of the GSA while supporting new GSA initiatives such as the *Decade of North American Geology* (DNAG).

Frye was proud to have been elected to the National Academy of Engineering in 1971. He served on the advisory committee to the secretary of the interior for the U.S. Geological Survey and in 1972 received the Interior Public Service Award; other recognition followed. His involvement with national scientific and governmental committees was extensive.

He belonged to many organizations including the American Association of Petroleum Geologists, American Association for the Advancement of Science, GSA, SEPM (Society for Sedimentary Geology; vice president, 1965–1966), American Institute of Professional Geologists, American Institute of Mining Metallurgical and Petroleum Engineers, Society of Economic Geologists, American Association of State Geologists (president, 1960), Illinois Academy of Science (president, 1962–1963), and American Geological Institute (president, 1966). He was a Mason, a Rotarian, and a member of the Cosmos Club of Washington, Sigma Gamma Epsilon, Sigma Xi, and Alpha Sigma Phi.

In 1990, GSA established the John C. Frye Memorial Award for the best environmental paper published by GSA or by one of the state geological surveys.

John Frye had all the qualities of the classical field geologist—talent, imagination, and determination—and ranks in with the best of the researchers. He was a superb teacher. His administrative skills were topnotch and he had a way with people. He was a triple threat geologist—researcher, teacher, and administrator.

John died of cancer after a short illness in Boulder, Colorado. His ashes were returned to and interred in Ohio near Columbus. There was a private memorial service and he requested no memorial be published, a difficult request to honor for such a worthy and productive scientist—I do not feel honor-bound by his request. John's wife of 46 years survived him along with two daughters and three grandchildren. I would like to thank Sally Jean (Frye) Schwarzlose for sharing information about her father and family.

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