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Obituary

J. Marion Wampler: In Memoriam



Figure 1. J. Marion Wampler.

J. (Jesse) Marion Wampler was born on 31 October 1936, in the Shenandoah Valley, Virginia. He died peacefully in the early hours on 15 January 2026, with his wife Valerie at his home (Chamblee, GA, a suburb of Atlanta). He attended an Editorial Board meeting for *Clay and Clay Minerals* the day before. He was setting up the MS-10 mass spectrometer in the new lab. He was looking forward to running the next batch of samples. His passing was a surprise.

Marion was a friend. A confidant. A learned and humane scholar. He was well-grounded in isotope geochemistry and chemistry overall. He received his Bachelor's degree from Bridgewater College (Virginia). He graduated with his PhD degree from Columbia University in 1963 under the direction of Professor J. Laurence Kulp. Marion joined the Geophysical Division of the School of Ceramic Engineering at Georgia Institute of Technology soon after a post-doctoral period. He was tasked to build a K-Ar line to work with Dr Charles Weaver on the dating of diagenetic illite. The K-Ar ages would start to answer whether or not diagenetic illite was forming at depth. The timing of diagenetic illite was thought to be coincident with the generation of crude oil and natural gas. The work was noteworthy and important. The Weaver–Wampler ideas appeared to have evolved in parallel to those from John Hower, Sam Savin, and Jim Aronson during the 1970s. When I joined GSU in 1995, I was fortunate to have the opportunity to continue my K-Ar work on diagenetic illite with Marion. I was even more fortunate to learn K-Ar geochronology from both groups during my career.

Marion retired from the School of Earth and Atmospheric Sciences at Georgia Tech in 2003. I offered space in the GSU Clay Lab to Marion to maintain and build further his K-Ar line. After some convincing, he said yes and moved his line to the clay lab in Kell Hall. Later, we moved the line to the new Geosciences Sparks Hall lab. Again, we moved the line to new digs in the Natural Science Complex late last year. He was ready to undertake new analyses next week for Activation Laboratories as sales/service work. He was adept at keeping the 1950s MS-10 mass spectrometer and its controller (vacuum tubes) running well. We were replacing parts of the controller with new solid-state components. He knew that circuitry inside and out. This K-Ar lab was perhaps the only K-Ar lab running in the US, thanks to Marion's ingenuity and painstaking efforts during his retirement.

He was a part of the Geosciences family at Georgia State University for about 20 years during retirement. He met new students with warmth and good cheer. He enjoyed teaching the rudiments of K-Ar geochronology to all students who wanted to do that work. He put us all through our paces. He loaded and calibrated new ^{38}Ar bulb tracers. He wrote a very comprehensive spreadsheet to calculate the K-Ar ages. He provided lectures when needed on these techniques. He made some liquid oxygen on one occasion to trap CO_2, water, and other gases from a very gassy sample. He was a perfectionist in his work and his writing. We will miss his skills and insights. He

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wrote many papers with colleagues and students. I point out a few papers below (Wampler et al., 2012; McIntosh et al. 2023; Shabazi-Asl et al. in press) that have been most memorable.

Marion was creative in developing new techniques for K-Ar geochronology. He developed a one weigh out K-Ar technique. That one weigh out lowered analytical error considerably so that it was on par with the error of the Ar-Ar technique. He used that technique in several papers. In another memorable study, he adapted the idea of using sodium tetraphenylboron to remove detrital illite from clay mixtures containing both detrital and diagenetic illite as was done in soil science work in the 1960s to the study of Pennsylvanian paleosols as terrestrial climate proxies. This exchange shows promise towards solving an intractable problem of dating diagenetic illite in shales and other argillaceous rocks. These results comprised the Master's thesis for Arya Shahbazi-Asl with samples coming from Dr Julia McIntosh, USGS. These results are to be published in *Clay Minerals.* These new techniques speak to Marion's creativity in developing new analytical methods.

Marion had a long-standing interest in the sorption and fixation of Cs by muscovite and illite. Marion found that the sorbed Cs has a distinct different Cs/K, and Rb/K compared with Cs/K and Rb/K within the muscovite structure. That insight provided a way to probe into the interlayer beyond the frayed edge site. These results were published in *Environmental Science and Technology* in 2012, a paper now approaching 100 citations. That interest led to several papers, new Department of Energy funding, Dr Laura Zaunbrecher's dissertation, and one issued European patent. He was immensely productive in retirement.

He very much enjoyed the laboratory work. He was a gifted and creative analyst. His lab notes were coherent and useful. He brought that joy to all of us. He was a demanding reader and editor. He was not constrained to any clock. He devoted considerable time, focus, and energy to reading drafts, manuscript reviews, assisting Editors in the review of papers for *Clays and Clay Minerals.* Marion was an associate editor for that journal for more than 20 years. He relied on comments from peer reviewers whom he had sought, and he carried out his own in-depth review. He always studied manuscripts very carefully and offered authors comprehensive insights into their work. His detailed analyses without doubt enhanced the scientific quality of published manuscripts that he handled. He was a regular attendee at the Clay Mineral Society (CMS) Annual Meetings. He was admired for his detailed manuscript reviews. He will be missed by many members in the CMS community.

Marion enjoyed an occasional round of golf when he wasn't busy working and being a loving husband, parent and grandparent. He is survived by his wife Valerie, two daughters Jeani Wampler and Patty Rodriguez of his previous marriage with Eileen who died in 2001 while married to Marion, granddaughter Adrianna Rodriguez, and many extended family members.

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