

Winthrop D. Means, February 7, 1933 - October 7, 2022



It is with great sadness that we share with you the news that Dr. Winthrop D. Means has passed away. Win was a legend in structural geology and an emeritus professor of geological sciences at the State University of NY until his passing at age 89.

Win was born in Brooklyn, New York. He attended Harvard University and earned a Bachelor of Arts degree in geology, summa cum laude, in 1955. He was also awarded a Fulbright Scholarship, and studied at Emmanuel College, Cambridge University. He then moved to the University of California at Berkeley where he earned a Ph.D. in structural geology in 1960. His first faculty position was at the University of Otago in New Zealand as a lecturer from 1960 to 1964. He became a

postdoctoral fellow at the Australian National University from 1964 to 1965. Win then joined the faculty in Geological Sciences at the State University of New York at Albany in 1965, where he achieved the rank of professor. He remained at Albany until his retirement in 1997 at the end of a 37-year career. Win continued to be active, however, after his appointment as professor emeritus in 1998 based on his outstanding accomplishments and service to the University. He served as the department chairman twice during his tenure as professor and served on the editorial boards of the *Journal of Structural Geology* and *Tectonophysics*.

Win's research resulted in over 50 major peer-reviewed publications in internationally recognized journals and two premier textbooks in structural geology, 'An Outline of Structural Geology' co-authored with Bruce Hobbs and Paul Williams, and 'Stress and Strain, Basic Concepts in Continuum Mechanics for Geologists.' His texts became required reading for students in the field of structural geology.

Win's research was funded continuously by the National Science Foundation (NSF) starting in 1976, enabling him to pioneer the development of a new method for observing grain-scale deformation process through a microscope in real time. This perspective opened an area of study previously limited to the examination of the initial and final stages of fabric development. In his experimental device, Win simulated many ductile microstructures found in real rocks and rock-

like materials, but also tracked their evolution in real time. He is credited with pushing the limits of experimental structural geology by simulating and revolutionizing the understanding of solid-state microstructures, as well as those formed in crystal-melt mixtures. His approach allowed reproducibility and quantitative analysis of a wide range of microstructures. He helped install his 'real time' experimental apparatus in 10 other Universities, provided community short courses, and his experimental work and visualization of active deformation are featured in the new Earth Sciences exhibit at the Smithsonian Institution.

Win was a brilliant scientist, and yet always kind, helpful, unpretentious, and full of wit and often subtle humor. He did as much to bring structural geology from a largely descriptive to a quantitative branch of science as anyone, for which he rightly received numerous awards, dedicated conferences and meetings, and a book in his honor. In 1996, Win was presented the Career Achievement Award from the Structure and Tectonics Division of the Geological Society of America. He received the State University of NY at Albany Excellence in Research Award in 1997 and the Bruce Hobbs Medal from the Geological Society of Australia in 1997.

Win epitomized the "gentleman" scientist, held himself to the highest ethical standards and expected no less of his students and colleagues, and was always generous with his time to help others. Win was well known for asking seminar presenters or defending Ph.D. students alike the most penetrating and thought-provoking of all questions, in the politest manner, that demonstrated his genuine curiosity, keen insights and understanding of a range of geological problems. A citationist of Win's GSA Career Award, Dr. Declan DePaor, summed up Win's sincere and unassuming character by finishing his remarks by stating "It is not normal, on occasions such as this, to list a person's shortcomings in addition to their achievements. However, I must mention one of Win's failings: he has no real understanding of the value of his own work nor any appreciation of the importance of his community service contributions in our science. He may even try to tell you he has not been terribly productive or that his interests have been esoteric. Pay no attention to him!" All of his graduate students at SUNY, Albany over many years appreciated his humanity as well as his wise mentoring and outstanding teaching. Win will be missed by his family, friends, colleagues, and students, but his enormous impact on individuals at SUNY Albany and the Earth science will endure.

We also remember Win not just as a focused scientist. Win loved and excelled in sports, most notably squash, tennis and skiing; was dedicated to his friends and family, which included his cherished wife Marilyn, and, of course, Andy, Dani, and Marli, his German Shepard compatriots. He excelled as an all-around handyman, obviously a skill honed around keeping his laboratory experimental apparatus maintained for over 37 years. He thoroughly enjoyed getting his hands dirty fixing one of his many 'antique' and modern tractors and maintaining the peaceful acres that he shared with Marilyn and their dogs.

Win is survived by his wife, the former Marilyn Morin, of Stephentown, NY; a sister, Margaret McIntosh of Waltham, MA; three children: Sarah Newman of Northampton, MA; Bridget Means of Charleston, SC; and Peter Means of Blacksburg, VA; two stepchildren: Tracy Myers of

Loudonville, NY and Scott Roberts of Simsbury, CT; five grandsons; and several nieces and nephews.

Because of Win's love for animals, remembrances may be made to the Berkshire Humane Society in Pittsfield, MA.

A Liturgy of Christian Burial will be celebrated on Friday October 21, 2022 at 11 a.m. at St. Elizabeth of Hungary Church, Marshall St. North Adams, MA. Calling Hours are Thursday October 20, 2022 from 4-7 p.m. at the Flynn & Dagnoli Funeral Home, WEST CHAPELS, 521 West Main St. North Adams, MA. To add to the Book of Memories, please visit flynndagnolifuneralhomes.com.