

IN MEMORIAM: EDWARD ROBERT DALTON SCOTT

Edward Robert Dalton Scott (74) passed away unexpectedly on 7 October 2021 at his home in San Rafael (California, USA). Scott was a distinguished meteoritist, former President of the Meteoritical Society, and Emeritus Professor at the School of Ocean and Earth Science and Technology at the Hawai'i Institute of Geophysics and Planetology (HIGP).

Born in Heswall (England), Ed earned his BA and MA degrees from the University of Cambridge's Churchill College (UK), majoring in mineralogy and crystallography with a minor in physics and materials science. In 1972, he received his PhD from the University of Cambridge with a thesis on the geochemistry, mineralogy, and petrology of iron meteorites. After completing his PhD, Ed took postdoctoral positions at the University of California, Los Angeles, with John Wasson, and then at the University of Cambridge with Stuart Agrell. He also held a position as a Senior Fellow in the Department of Terrestrial Magnetism at Carnegie Institution of Sciences in Washington (USA) and spent 10 years as a Research Scientist and then Senior Research Scientist at the University of New Mexico (USA) before joining the staff at HIGP, where he remained until his retirement in 2015.

Ed was a superb scientist with deep curiosity about the Solar System and its origin. Throughout his career, he did innovative research into the nature and origin of all types of meteorites, from iron meteorites to the origins of primitive components in chondritic meteorites, to the nature of processes operating in the cloud of gas and dust surrounding the Sun as it was still forming, and the accretion of nebular dust into asteroids and planetesimals. He was a big thinker who liked complicated problems.



Ed's accomplishments were recognized by his receiving the Leonard Medal from the Meteoritical Society, an international organization founded in 1933 to promote the study of extraterrestrial materials and planetary science. The Leonard Medal recognizes outstanding contributions to the science of meteoritics and closely allied fields. Besides receiving this award, Ed was also recognized by having asteroid 4854 named "Edscott" in 2000 and by having the first natural occurrence of the iron carbide Fe_5C_2 named after him: edscottite. Over the years, he held numerous positions with the Meteoritical Society, including serving as its president. He also served as an associate editor for both the *Journal of Geophysical Research* and *Meteoritics & Planetary Science*.

Ed was a devoted educator, teaching courses at both the undergraduate and graduate levels. For many years he was Associate Director of the Hawai'i Space Grant Consortium, managing the undergraduate fellowship program, which links University of Hawai'i (UH) undergraduate students with faculty members to do research on projects in space science and engineering. Ed was a beloved member of not only the UH faculty but the planetary science community as a whole. In the words of one of his HIGP colleagues, Ed was a "a science friend to all." He certainly was that and much more. Ed was also instrumental in the Meteoritical Society's joining of the *Elements* magazine family. He will be greatly missed.

— Portions of text courtesy of G. Jeffrey Taylor, University of Hawai'i (modified from https://www.lpi.usra.edu/planetary_news/2021/10/11/in-memoriam-edward-r-d-scott-1947-2021/) along with Gary Huss, Klaus Keil, Sasha Krot, and Ian Sanders.

IN MEMORIAM: SANDRA PIZZARELLO

It is with great sadness that we announce that Sandra Pizzarello passed away on 24 October 2021. Sandra was born in Venice, Italy, in 1933. She obtained a PhD in biological sciences at Università degli Studi di Padova (Italy) in 1955. She was a research associate with Farmitalia Research Laboratories, Neuropharmacology Department (Milan, Italy) from 1957 to 1960. She started her research at the Department of Chemistry and Biochemistry, Arizona State University (ASU) (USA) in 1977. She was a research professor and an emeritus professor at ASU until she passed away.

Sandra was a pioneering scientist. While collaborating with the late Prof. John R. Cronin (1937–2010) for over 30 years, she identified and greatly expanded our knowledge of a suite of soluble compounds in carbonaceous chondrites including amino acids, monocarboxylic acids, dicarboxylic acids, hydroxyl acids, hydroxydicarboxylic acids, aliphatic hydrocarbons, ammonia, amines, polar hydrocarbons, as well as insoluble organic matter. Sandra concentrated her efforts on the development of the analytical techniques for these compounds, in particular, a diverse suite of over 80 amino acids, which are different from the distribution of terrestrial amino acids. They carried out the first isotopic analysis of amino acids in meteorites and revealed enrichments in D, ^{13}C , and ^{15}N . These results provided the first evidence that suggested a direct relationship



between meteoritic organic compounds and interstellar chemistry. Later, Sandra worked on the compound-specific C, H, and N isotopic analyses of soluble organic compounds in meteorites. Her results demonstrated the diverse synthetic pathways of these compounds in the early Solar System. One of the highly laudable achievements in Sandra's works, in collaboration with Cronin, was their discovery of L-enantiomeric excesses (ee) in a suite of rare (non-biological) extraterrestrial amino acids from carbonaceous chondrites in 1997.

Sandra's significant contributions to the research fields of meteoritics, astronomy, astrobiology, and origins of life have influenced the next generation of scientists. She was an effective mentor for younger scientists and a role model for women in science. She served as president of ISSOL (International Society for the Study of the Origin of Life – The International Astrobiology Society) from 2014 to 2017. She is survived by her husband, Tony, and three children and their families.

Modified from full obituary written by: Hikaru Yabuta (Hiroshima University, Japan), George Cooper (NASA Ames Research Center, USA), Lynda Williams (Arizona State University, USA), Kenso Soai (Tokyo University of Science, Japan), Maitrayee Bose (Arizona State University). For the full version please see the society's website.

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