

Memorial to Sarah Andrews Brown 1951–2019

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Sarah (Andrews) Brown, geologist and geologic mystery writer, tragically died with her husband, Damon, and their 25-year-old son, Duncan, on 24 July 2019 when their private plane crashed in Nebraska, on their way to their California home from an air show in Wisconsin.

Sarah was a talented, award-winning author, pilot, artist, teacher, and professional geologist who brought the excitement of geology to the public through her mystery stories. She adeptly engaged geoscientist friends in her research, often rewarding them with veiled appearances in her books, sometimes with unfortunate outcomes. In her dozen books, geologists, paleontologists, biologists, accountants, and graduate students, among others, were murdered. Her chief alter ego, petroleum geologist turned forensic geologist, Em Hansen, demonstrated that geological principles can be used not only to solve murders and scientific problems but also to address social concerns. She painted positive pictures of petroleum, mining, environmental, engineering, and research geologists in industry, the U.S. Geological Survey (USGS), state geological surveys, and academia.



Sarah's career gave her the background and contacts for research on her many books. In 1969, Sarah moved from the East Coast to obtain her undergraduate education at Colorado College. Four years later she obtained a B.A. in geology. Her first geological job was with the USGS in Denver. Fascination with Grand Canyon and dedication to her USGS mentor, Eddie McKee, chief naturalist at Grand Canyon National Park from 1929 to 1940, allowed Em Hansen to deftly tackle creationism while rafting down the canyon (in the book *Rock Bottom*).

Eddie McKee helped open many professional doors for Sarah. Her USGS research was published in a seminal 1981 paper on Great Sand Dunes (now a National Park and preserve), the same year that she completed her M.S. in Earth resources at Colorado State University (CSU), advised by Frank Ethridge. She subsequently became a petroleum geologist for Amoco Corporation and Angus Petroleum, which provided plots for *Tensleep*, *A Fall in Denver*, and *Only Flesh and Bones*. Sarah gracefully navigated the cultural complexity and challenges of being a woman in a male-dominated field.

Sarah met her husband, Damon Brown, who also went to CSU, pursuing an M.S. in geology with Frank Ethridge. Sarah had called Frank to say she was running a geology field trip for petroleum geologists and could use a strong graduate student with a truck to help with logistics for the trip. Frank immediately thought Damon might be interested in this task since it would be a good opportunity for him to meet fellow geologists in the petroleum industry, learn some new geology from Sarah, and gain more field experience, and most importantly, he had a truck. Damon agreed to the task, and the rest is history. After the trip, they dated, married, and had their only son Duncan, who brought them much joy. The family and their adventures were the inspiration for many of her books.

Professional contacts also gave Sarah a long-lasting friendship with Lee Allison (later state geologist of Utah, Kansas, and Arizona), who in 2016 also tragically passed away, and through whom other friendships developed with state geologists and employees of the state geological surveys of Utah (*Bone Hunter*—with intrigue about collecting vertebrate fossils for sale; *Fault Line*—with questions about revealing information on hazards to the public), Nevada (*An Eye for Gold*—touching on fraud and endangered species), Pennsylvania (*Earth Colors*—using elements in pigments as poisons), Florida (*Killer Dust*—effects of African dust), and Colorado (*Dead Dry*—drought and water resources). A downturn in the petroleum industry gave Sarah the opportunity to leave the oil patch for the environmental consulting business in California (background for her book *Mother Nature*) and lecturing at Sonoma State University.

Sarah's gregarious personality also engaged academics and law-enforcement professionals who jumped at the chance of helping her gather information for her books. Reading the acknowledgments in her books is a good way of discovering a network of helpful friends and colleagues. Sarah also acquired background for her books from her youth on the East Coast. She inherited some of her artistic talents from her grandmother and father, who were recognized oil painters. Sarah often entertained CSU faculty and students with her artistic ability, which included quirky cartoons on geology and the oil patch. Sarah's mother, an English and religion teacher, gave her confidence to tackle writing and topics for which geology and religion occasionally collide.

The National Science Foundation awarded Sarah an Artists and Writers Grant to conduct research at McMurdo Station and field stations in Antarctica for her book *In Cold Pursuit*, in which the protagonist is a female graduate student who proves that her professor isn't guilty of murdering a journalist.

Sarah was frequently invited to lecture on a wide range of topics, including geology, mystery writing, communicating science to the public, women in geology, how geologists think, the controversy between science and religion, and the life of Eddie McKee. A Fellow of the Geological Society of America, Sarah received several significant awards: the 2016 President's Medal of the Geological Society of America, the 2009 Louis T. Benezet Award from Colorado College, the 2006 Antarctic Service Medal, the 2003 Special Award of the Association of Engineering Geologists (later named the Association of Environmental & Engineering Geologists), the 2001 James T. Shea Award of the National Association of Geoscience Teachers, the 1999 Journalism Award of the American Association of Petroleum Geologists, and the 1997 Journalism Award of the Rocky Mountain Association of Geologists.

On a personal level, the Brown family had wide circles of friends and involved many of their friends in adventures filled with fun and laughter, from road trips to rafting trips down the Colorado River. Sarah will be greatly missed, and long remembered for her passionate embrace of life, devotion to friends, and contributions to her profession.

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