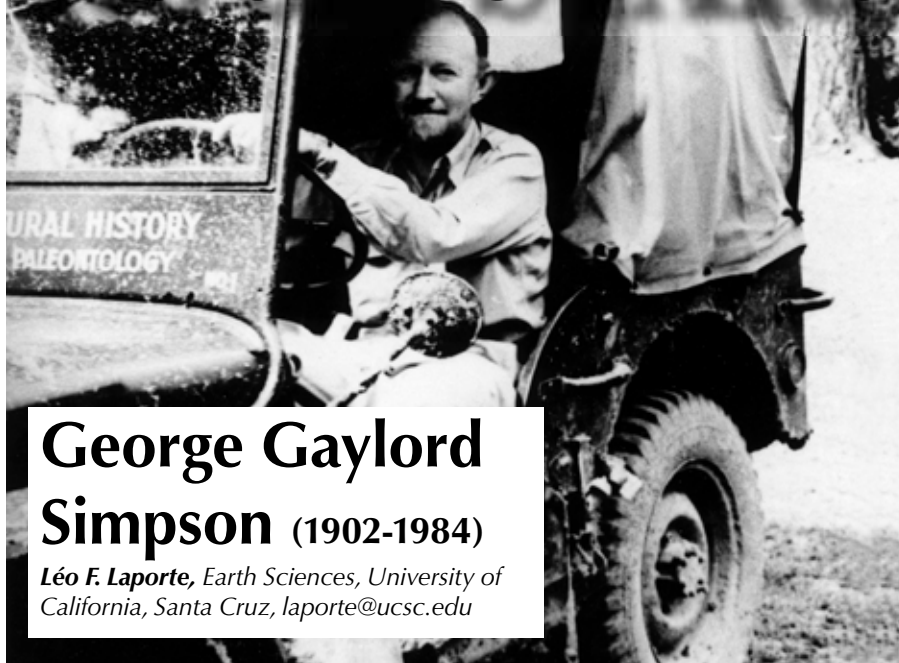


ROCK STARS



George Gaylord Simpson (1902-1984)

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George Gaylord Simpson in the early 1950s. He claimed that “field work was the next best thing in life after a loving wife”—his, of course.

What motivates a person to pursue a career in science? The distinguished American paleontologist, George Gaylord Simpson, claimed “Nothing learned [in high school] had any bearing at all on the big and real questions. Who am I? What am I doing here? What is the world? What is my relationship to it?” Later, in college, he had come to the conclusion that “life is the most important thing about the world, the most important thing about life is evolution.”

Such motivating questions inspired Simpson’s lifelong study of the history and evolution of life on Earth. By the late 1930s and early 1940s, Simpson, though relatively young, was already a distinguished paleontologist at the American Museum of Natural History in New York City. His achievements included a Yale doctorate in geology, research position at the British Museum, leadership of two fossil-collecting expeditions to Patagonia, two books, and more than one hundred scientific articles and monographs—all topped off by election to the National Academy of Sciences and the American Philosophical Society.

Before leaving for military service in 1942, Simpson completed a major text, *Tempo*

and *Mode in Evolution*, published two years later, that applied the concepts and conclusions of the new discoveries in genetics to the extensive fossil evidence of life’s long history. He claimed that the small-scale “microevolution” of the geneticist could adequately explain the large-scale “macroevolution” of the paleontologist, thereby validating the usefulness of fossil evidence for addressing evolutionary questions.

Early Life

Simpson was born in Chicago, on 16 June 1902, the only son and third child of his attorney father and missionary-raised mother. His Scots ancestry and missionary background led to a strict Presbyterian upbringing. By age nine, Simpson was made a formal member of the church but soon after “deconverted” when he decided in a fit of childish peevishness that he “did not want to forsake forever being naughty.”

At about the same time, he talked his parents into purchasing the *Encyclopedia Britannica*, which he read straight through. “I think it gave me my first conception of the world of learning as a whole, my first definite feeling for organized facts, and

my first inkling of how to go systematically about finding out such facts.”

University Years

After skipping several years in school, Simpson at age 16 entered the University of Colorado at Boulder in the fall of 1918. He thought perhaps he wanted to be a creative writer, but in his second year he enrolled in a geology course and was quickly converted, in part because of the enthusiasm and encouragement of his instructor, Arthur Tiejé, the first teacher who recognized and challenged his formidable intellectual abilities. In his senior year, Simpson transferred to Yale, because Tiejé advised him that if he wanted to be a geologist and paleontologist, Yale was the best place to study. Perhaps additional reasons for the transfer were his not getting the editorship of the college humor magazine he helped start and—insult added to injury—the new editor then stealing his girlfriend.

After graduation, Simpson stayed on at Yale for his doctoral studies where, in the basement of the Peabody Museum, he discovered a large collection of primitive mammals from Mesozoic age rocks of the American West that he wanted to study for his doctoral dissertation. But his advisor, Richard Swann Lull, told him that “those fossils are much too important...very delicate and highly significant...for a young graduate student.”

First Field Work

At the end of his first year of graduate work, Simpson obtained a position prospecting for Tertiary mammals in Texas and New Mexico as a field assistant to William Diller Matthew, chairman of the department of paleontology at the American Museum. Matthew was one of the leading paleomammalogists, particularly known for his research on Cenozoic mammals and for his book *Climate and Evolution* (1915). He was also a leading student of horse evolution. By the end of the summer, Simpson had shown himself to be an energetic and highly successful field man, having made two unique fossil discoveries. The first was the skull of an important link between ancestral Pliocene and modern horses. The second was the skull, backbone, and rib cage of a Miocene “dog-bear,” a heavy, large, doglike carnivore.

Lull was suitably impressed by these discoveries and permitted Simpson to study the Mesozoic-age mammals after all. Matthew, too, was enthusiastic, for he became Simpson’s informal off-campus advisor for his dissertation and

later an advocate for his subsequent appointment at the American Museum.

But, in the beginning, the search for fossils that summer was hardly promising. As Simpson wrote to his sister Martha, "I've been digressing all over the landscape.... Now & then we find a fossil—every third day or so, if small fragments count.... Poor Dr. Matthew gets madder & madder [.] 'First...formation in which I couldn't find mammals.'" Part of Matthew's chagrin was no doubt due to Simpson's initial clumsiness. Matthew had found some important horse teeth and, after treating them with shellac, laid one of them on the ground to dry. Simpson promptly stepped on the tooth, breaking it into several pieces. Matthew glowered, telling Simpson, "Go stand over there," and didn't talk to him for several hours. But by the next day the incident was forgotten.

Simpson received his Yale Ph.D. in 1926 and went to the British Museum of Natural History in London to continue his study of the then little-known, primitive mammals by examining British and European counterparts. The subsequent two publications of his Yale research on American Mesozoic mammals and on the British Museum fossils quickly established his paleontological reputation.

American Museum of Natural History

On his return from England in the fall of 1927, Simpson joined the American Museum as assistant curator of fossil vertebrates, assuming a position left vacant when Matthew moved to the University of California at Berkeley. In the late 1930s and early 1940s, Simpson's work turned more theoretical as he shifted his attention to more general problems of evolution rather than focusing solely on fossil mammals. Simpson published *Quantitative Zoology*, co-authored with his second wife Anne Roe, and he completed two book-length manuscripts, *Tempo and Mode in Evolution*, and *Principles of Classification and a Classification of Mammals*. He also managed to publish a picaresque travel narrative of his first paleontologic expedition to Patagonia in the early 1930s where, upon arrival in Buenos Aires, he found himself in the midst of a revolution, barely escaping with his life.

In 1942, the new director of the American Museum was contemplating major departmental reorganization by putting the zoologists working with living groups with the paleontologists studying their corresponding fossils. Simpson resisted this plan and

considered leaving the museum altogether. Instead, he enlisted in the U.S. Army in December 1942, and was made a captain in military intelligence. He surprised his superiors by completing a six-week course in intelligence methods in a single week. He shipped out to North Africa, later moving on to Sicily and Italy, until 1944, when he was sent home with a severe case of hepatitis. By then, he held the rank of major and had been awarded two Bronze Stars.

When Simpson returned to the museum, the controversial reorganization plan had been scrapped and a more attractive plan was imposed, which included a department of geology and paleontology of which he was named chairman. He also accepted an appointment as professor of vertebrate paleontology at Columbia University. In 1949, Simpson published a popular account of modern evolutionary theory from the point of view of the fossil evidence, *The Meaning of Evolution*, which was subsequently translated into ten languages and sold some half-million copies. In 1958, he resigned the department chairmanship and soon after left for the Museum of Comparative Zoology and Harvard University.

The centennial of Darwin's *On the Origin of Species* in 1959 not only signaled a fresh start for Simpson at Cambridge, but also brought him further into the limelight as a leading evolutionist. Conferences and symposia marked the centennial, with Simpson often present either as a contributor—as in Chicago where he gave a keynote public lecture at the meeting of the American Association for the Advancement of Science, titled "The World into Which Darwin Led Us"—or as an honoree—as in London where he received the Darwin-Wallace Commemorative Medal from the Linnaean Society, in whose meeting rooms Charles Darwin and Alfred Russel Wallace first announced their theory of natural selection a century earlier. Nor was Simpson ignored at home: in February 1966, he received the National Medal of Science from President Lyndon B. Johnson.

Final Years

In 1967, Simpson and his wife Anne Roe retired to Tucson, Arizona. He continued to work for the next decade and a half in a small building next to his house, surrounded by his research files and extensive personal library, walls and surfaces scattered with honorary degrees, photographs from the past, and replicas of the many schol-

arly gold medals he had been awarded.

In the last years of his life, Simpson had become a memory from the past, as often happens, even to the most distinguished of scientists. Most thoughtful students of paleontology and evolution were aware of what Simpson had contributed, but now took it for granted. They looked instead to the writings of younger paleontologists and evolutionary biologists for new ideas. In a way, Simpson had outlived his fame, and had become a living, mostly ignored monument of what had come before. A hint of his state of mind is revealed in a posthumously published work of science fiction (*The Dechronization of Sam Magruder*, St. Martin's Press, 1996). Simpson tells the story of Sam Magruder, who was experimenting on the "quantum theory of time-motion" in 2162 A.D. when he suffers a "time-slip" that puts him back in the Late Cretaceous of New Mexico. Helplessly lost in time and with no hope of returning to the present, Magruder ekes out a primitive existence for some years until a fatal accident befalls him. Before his death, Magruder manages to chisel out his experience and philosophy of life on eight rock slabs that are recovered many millions of years later, and so his story becomes known.

Always more comfortable in expressing his views in writing than in speaking, Simpson appears to use this work of science fiction to reveal his own, mostly melancholy, views about life's meaning and purpose, the importance of adapting to the here-and-now, and how historical contingency controls subsequent outcomes. Was Simpson speaking for himself when Magruder declares "My real purpose in engraving these slabs is a search for comprehension... I am exploring my own nature"?

In the summer of 1984, Simpson contracted pneumonia during a South Pacific cruise and was in and out of the hospital several times over the next few months. He finally succumbed on the evening of Saturday, 6 October 1984, at the age of 82. His remains were cremated and dispersed in the Arizona desert.

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Laporte, L.F., 2000, *George Gaylord Simpson—Paleontologist and Evolutionist*: Columbia University Press.

See also <http://people.ucsc.edu/~laporte/simpson/Index.html> (case sensitive).

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