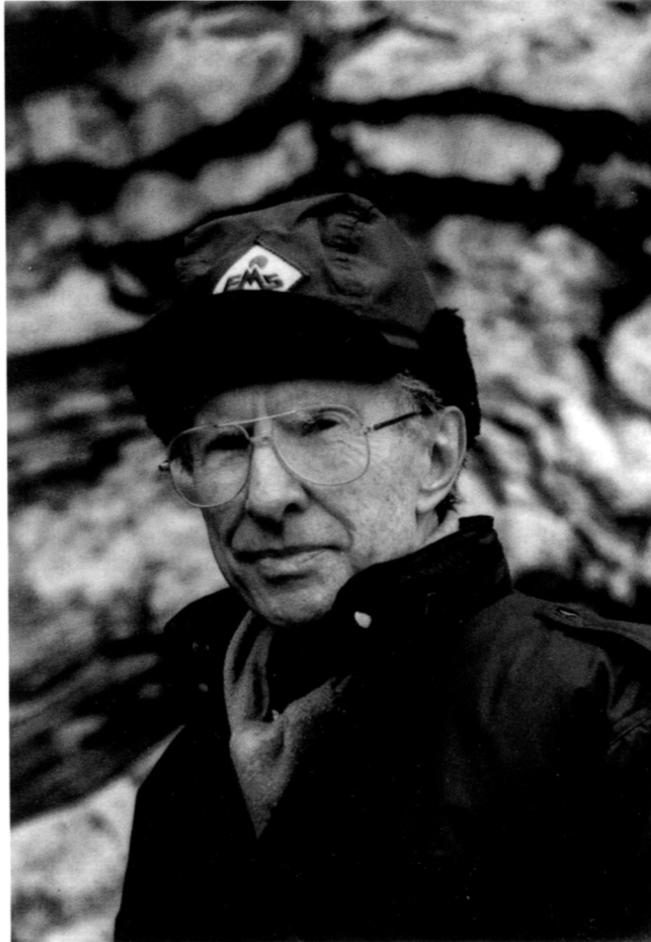

MEMORIAL



NORMAN DENNIS NEWELL (1909–2005)

Little more than three weeks after the appearance of his 188th publication, the infirmities of age prevailed over a resilient spirit and Norman Newell's life ended in his ninety-sixth year. At his death on 18 April 2005, the Paleontological Society lost one of its most distinguished members—a past-president and medalist who led and embodied major changes in the thinking and practices of invertebrate paleontologists. Along the way, he mentored a host of talented graduate students, including four who became presidents of this society and three winners of its medal.

As a boy in Stafford, Kansas, Norman was strongly influenced by his father's interest in natural history. The elder Newell did not live to see his son enter college but Norman never forgot the excitement he felt as a six-year-old when his father explained the

significance of a mammoth tooth that had been plowed up in a wheat field.

At the University of Kansas, Newell majored in geology and received BS (1929) and MA (1931) degrees. During these years, he was mentored by Raymond C. Moore, whose forceful personality and single-minded determination to excel made a lasting impression. In 1931, Moore recommended him for a fellowship at Yale where, after two years of residence, Norman was awarded the doctorate. This work was supervised by Carl O. Dunbar, but Newell also enjoyed friendship with the retired Charles Schuchert. In fact, he credited Schuchert for making his New Haven days financially feasible by employing his wife Valerie to catalog specimens.

While at Yale, Newell admired the work ethic of an older student, J. Brookes Knight, and followed his suggestion to take bivalve mollusks as his field of specialization. A Sterling Fellowship subsidized a postgraduate year at Yale, during which Newell accomplished most of the research for his seminal monograph, *Late Paleozoic Pelecypods: Pectinacea*. This 1937 publication demonstrated the importance of utilizing zoological information (e.g., muscle anatomy) and concepts (e.g., population variability) when interpreting morphology and relationships of fossil shells. This proclivity for bridging the gap between paleontology and zoology continued throughout his life. His work attracted the interest of biologists, and by midcareer he had served as president of both the Society for the Study of Evolution and the Society of Systematic Zoology.

Newell's teaching career began in 1934 at the University of Kansas and continued (1937–1942) at the University of Wisconsin. Soon after America's entry in World War II, the State Department recommended him to the Peruvian government to participate in that country's regional petroleum surveys. His best-known publication resulting from that three-year assignment is the 1949 Geological Society of America memoir *Geology of the Lake Titicaca Region, Peru and Bolivia*.

In 1945 he joined the staffs of Columbia University (professor of geology) and the American Museum of Natural History (curator). This arrangement proved ideal and Newell's career blossomed in an environment that combined excellent research support at the museum with teaching and supervision of graduate students at the university. In 1977 he was awarded emeritus status at both institutions but his appetite for research was undiminished. At age 90 he was still working many hours each week at the museum.

Although Newell published important papers on fossil bivalves throughout his career, it can be argued that his most influential taxonomic work occurred in the 1960s with the publication of a comprehensive classification of the Bivalvia and with his major role, both as editor and contributor, in producing volumes one and two of the Bivalvia section of the *Treatise on Invertebrate Paleontology*. While carrying out the unglamorous *Treatise* responsibilities, Norman found time to produce prescient papers emphasizing the episodic nature of the history of life and its major turning points. The one marking the Paleozoic–Mesozoic transition held a special interest for him and he contributed repeatedly to the lengthy international debate dealing with criteria for defining the Permo–Triassic boundary and with selecting a world stratotype section.

In the 1950s, before paleoecology was recognized as a subdiscipline with great potential, Newell and his graduate students were involved in a major research project on Permian reefs in western Texas. He synthesized the group's results in the coauthored 1953 classic, *The Permian Reef Complex of the Guadalupe Mountains Region, Texas and New Mexico*. Recognizing the need for comparative information from modern carbonate environments, he and his research group had begun field work in the Bahamas while the Texas project was underway. His work on modern reefs and sediments continued in the 1960s and produced several influential publications.

In another pioneering effort, Newell recognized as early as 1973 that growing scientific illiteracy in America was providing a willing audience for antievolutionists. Through a series of articles, he tried to arouse the scientific community to the threat to science education and he authored the 1982 book *Creation and Evolution: Myth or Reality?* for nonscientists seeking enlightenment on the controversy.

A long list of medals and awards, not all noted here, attests to the high esteem in which Newell was held by his peers. In addition to the Paleontological Society Medal, they include the Mary Clarke Thompson Medal (National Academy of Sciences), Hayden Award in Geology and Paleontology (Philadelphia Academy of Sciences), Verrill Medal (Yale Peabody Museum), Gold Medal for Achievement in Science (American Museum of Natural History), Raymond C. Moore Medal (Society of Economic Paleontologists and Mineralogists), Penrose Medal (Geological Society of America), and Legendary Geoscientist Award (American Geological Institute). He was elected to the American Philosophical Society in 1971 and to the National Academy of Sciences in 1979.

When accepting awards, Norman emphasized the importance of the support and encouragement provided by his parents and by others along the way. Of special significance were his first wife, Valerie, and Gillian, whom he married in 1973 following Valerie's death. For the rest of his life Gillian and Norman were inseparable; she participated enthusiastically in all phases of his scientific work, and sustained him during his final years of declining health.

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