## Memorial to Gregory Worthington Webb 1926-1983

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Gregory W. Webb died in Amherst, Massachusetts, after a muscular illness that started in 1981. He was 57. Greg is survived by his wife, Beverly, two sons, James and Thomas, and two daughters, Joanne and Barbara. He was the son of Harold Worthington Webb and Vivian Mackenzie Webb, and descended from early English and Scottish settlers.

Greg was born on July 29, 1926, in Englewood, New Jersey, and lived in nearby Leonia, where he attended public school. He entered the U.S. Naval Reserve program at Tufts College in 1944 where he concentrated on naval science for two years. He was placed on inactive reserve with the Navy until 1954 when he was discharged. The Navy and the sea played an important role in Greg's life, reflected in his draw-

ings of marine scenes, his love of sailing, and the course he taught in oceanography at the University of Massachusetts.

Greg entered Columbia College in 1946 to study physics, but soon developed an interest in geology. His rapport with Columbia lasted until the death of his graduate mentor, Marshall Kay, in 1975. Greg apparently "hit the deck running." He completed an undergraduate degree in geology in two years, and then went on for graduate work. He received an M. A. in 1950 and the Ph.D. in 1954, but at the same time taught as a lecturer and laboratory assistant at Columbia until 1951, when he became a full-time instructor at Rutgers University, New Brunswick, New Jersey, for a year. Somehow during all this activity he found the time to marry Beverly Lister on June 17, 1950. This was a remarkable combination that developed into a warm, mutually supportive relationship.

In 1952 Greg moved to Bakersfield, California, with Bev and baby Jim. There he worked for the Standard Oil Company of California for four years, completing his Ph.D. during that time. Note that his Ph.D. was completed within a very acceptable time framework for most full-time graduate students, yet Greg was a full-time employee with Standard Oil. Greg's work on turbidites in general and the Miocene in particular developed into a knowledge of the subsurface geology that was to culminate in the late 1970s with consulting work with ARCO at the Bakersfield office. During these years Thomas and Joanne were born.

In 1956 Greg moved his family back to the East where he took a job teaching undergraduates at Amherst College. He was to make Amherst his home for the next 27 years. Tiring of small-college politics, he moved to the University of Massachusetts in 1959, where he worked until his untimely death.

During his tenure at the University of Massachusetts, Greg became a research fellow with the Gulf Research and Development Corporation (1960), visiting professor in geology (summers 1962 and 1963) at Columbia University, and did consulting work for

the Nestlé Company, Peter Henderson Oil Company, and ARCO. He was also a consultant to UNESCO and Cukurova University, Turkey, where he established a new geology program.

Greg was a member of many professional societies. He was a Fellow of the Geological Society of America. For the American Association of Petroleum Geologists, he was not only a Fellow, but also a member of a number of committees, among them the Academic Liaison Committee, the Membership Committee, the Strategic Affairs Committee, and the Communicator Committee. In the Communicator Committee he was one of the representatives from Massachusetts.

As a member of the faculty at the University of Massachusetts, Greg was appointed a member of the Faculty Senate on three separate occasions, most recently in 1980. He was also on the University Rules Committee, and he was appointed alternate delegate to the Board of Trustees (1979-80). He was chairman of the Marine Science Committee (1968-69) and also president of the University of Massachusetts chapter of the American Association of University Professors (1967-68). While on the Marine Science Committee, Greg succeeded in his negotiations for a marine research station. The result was the facility that became the University of Massachusetts Marine Research Center at Gloucester. He spent much time on this project and worked through Senator William Saltonstall to get it through the state legislature. Greg was instrumental in bringing geologists to the university from the People's Republic of China and in turn was invited by the Chinese Government to lecture on turbidites and the oil business. His illness prevented his going. Greg also did consulting work on the coal resources of eastern Massachusetts and Rhode Island (1977-78) for Dr. Jim Skehan at Weston Observatory.

Greg had two areas of research: one on the palinspastic restorations of deformed regions, using stratigraphic, sedimentologic, and structural information; the other on the depositional patterns of turbidites with particular regard to paleobathymetric control of sand and reservoir distribution. In the first area of interest, Greg made important contributions to our knowledge of the northern Appalachians, particularly in eastern Canada (New Brunswick to Newfoundland and even the continental shelf and slope area to the east and south) and Ireland. He also was interested in south-central California, specifically the San Andreas fault system.

With reference to his second area of interest, he made significant contributions to the understanding of the late Miocene turbidite sequence (the Stevens Sands). This is one of the most prolific oil reservoirs in the San Joaquin Valley. He had already published one report on this research, and it was the intention of W.J.M. Bazeley, province manager, that Greg return to work for ARCO in Denver to make a thorough study of all the Miocene turbidite sands in the southern part of the San Joaquin Valley. Greg had planned to leave the University of Massachusetts after his trip to the People's Republic of China in 1982 and start a new career with ARCO. Apparently his work in California was widely respected.

Greg's research in eastern Canada was at first controversial, then accepted by a few, and now is quoted by many as being the pioneer work on the tectonics of the Carboniferous basin. Recent highly speculative solutions to the post-Acadian assembly of eastern Canada from a collage of microcontinental chips have given Greg's palinspastic reconstructions the aura of classic conservatism. This left Greg slightly bemused. He presented evidence from 1963 through 1969 that the major transcurrent faults ought to have not only dip-slip but also strike-slip components of movement during Carboniferous time. Furthermore, he predicted that the direction of strike-slip movement was most likely dextral. By 1978, paleomagneticians had presented arguments that required more than 2000 km of sinistral movement between several microcontinental chips. Recent work

by Dwight Bradley shows that the paleomagnetic argument did not take into account field evidence of the type collected by Greg Webb more than 20 years ago. In the next few years, Webb's dextral model will be widely accepted.

Greg was very civic minded. He was elected a member of Amherst Town Meeting and remained very active from 1959 until his death. He was particularly active in various campaigns to preserve open farmland and to initiate a development rights purchase program for local farmers. He served on town committees dealing with energy conservation, landfill site selection, and waste recycling. He was a member of the Amherst Republican Town Committee and the Hampshire County Republication Club. He was co-chairman and director of a state representative candidate's campaign. Greg served on the Board of Trustees for the South Congregational Church from 1958 to 1961, was chairman of the fund drives for several years in the 1970s, and was chairman of the Sesquicentennial Committee for the year 1974-75.

Greg had many personal interests that centered on his love of the sea (he and the family sailed out of Plymouth harbor for many years) and of railroads (he published two articles in *Model Railroader* magazine). His inexhaustible memory was a delight to ship-and railroad-model enthusiasts, but on occasion it could cause consternation among his students. One story can perhaps serve as an example. In his early years at the University of Massachusetts, a certain group in stratigraphy class could not believe that it was humanly possible to remember the details Greg was reciting extemporaneously. One particularly obstreperous individual decided to expose him to the class. Bringing in the professional journal from which they had been reading the previous night, he started quizzing Greg on specifics. To everyone's astonishment, Greg could recite large amounts of the text and then could tell the class the page number. Someone then gave him a page number, and Greg got the gist of information from that page. Student respect and awe soon became widespread.

Greg's accomplishments demonstrated his originality and capacity for hard work, yet some of his most valued qualities underlie his work and are remembered by his family, friends, and colleagues. He was always willing and ready to listen to and discuss geological problems in his field, and for this reason was a good leader and role model for students. He was a painstaking worker who always remained good natured through even the hardest circumstances. What remains now is the good will he passed on to his family and friends and the sound common sense of his research.

## SELECTED BIBLIOGRAPHY OF G. W. WEBB

- 1956 (with Hintze, L. F.) Middle Ordovician detailed stratigraphic sections for western Utah and eastern Nevada: Utah Geological and Mineralogical Survey Bulletin. v. 57, 77 p.
- 1958 Middle Ordovician stratigraphy in eastern Nevada and western Utah: American Association of Petroleum Geologists Bulletin, v. 42, p. 2335-2377.
- 1963 Occurrence and exploration significance of strike-slip faults in southern New Brunswick, Canada: American Association of Petroleum Geologists Bulletin, v. 47, p. 1904-1927.
- 1968 Palinspastic restoration suggesting late Paleozoic North Atlantic rifting: Science, v. 159, p. 875-878.
- 1969 Paleozoic wrench faults in Canadian Appalachians, in Kay, Marshall, ed., North Atlantic—Geology and continental drift: American Association of Petroleum Geologists Memoir 12, p. 754-786.

- 1973 Salt structures east of Nova Scotia, in Hood, P. J., ed., Earth science symposium on offshore Eastern Canada: Geological Survey of Canada Paper 71-23, p. 197-218.
- 1976 Oklahoma City oil, second crop from preserved subunconformity source rocks:

  American Association of Petroleum Geologists Bulletin, v. 60, no. 1, p. 115-122.
- 1977 Stevens and earlier Miocene turbidite sands, San Joaquin Valley, California, in Bazeley, W.J.M., ed., Guidebook, Pacific Section, American Association of Petroleum Geologists and San Joaquin Geological Society Annual Meeting: p. 37-55.
- 1981 Stevens and earlier Miocene turbidite sandstones, southern San Joaquin Valley, California: American Association of Petroleum Geologists Bulletin, v. 65, p. 438-465.