

# Fred B. Phleger Biography



Fred B. Phleger was born in Kansas City, Kansas on July 31, 1909, the only child of Fred Phleger and Norabelle Elliott. His father owned a grocery store in Kansas City and later a gas station in California. The family moved to Los Angeles, California when Fred B Phleger was a child.

Phleger received three degrees in geology, an A.B. degree from the University of Southern California in 1931, an M.S. from the California Institute of Technology in 1932 and a Ph.D. from Harvard in 1936. Phleger's early work in paleontology concerned Ordovician fossils, Lichadian trilobites, and Pleistocene cats. His mentor at Harvard was the preeminent foraminiferal ecologist, Joseph A. Cushman. Phleger served as Cushman's assistant in paleontology from 1934-1936 and worked with Frances L. Parker, a student and later colleague of Cushman. Phleger held the Sheldon Traveling Fellowship in Geology for 1936-1937.

Phleger married Marjorie M. Temple (1908-1986), a writer, on October 23, 1933. She was from Glendale, California. She received a Bachelor's degree from the University of Southern California, where she and Phleger

met. She received a master's degree in theater arts from Smith College in 1948. The Phlegers had two children, Charles F. "Rick" Phleger and Audrey Phleger Levonas. Charles was a professor of biology at San Diego State University for many years.

Phleger taught at Amherst College from 1937 to 1949. He served as an instructor in paleontology for the first three years, assistant professor (1940-44), and associate professor (1944-1949). During this period he spent summers at Woods Hole Oceanographic Institution (WHOI) as a research associate in submarine geology working with Henry C. Stetson. In 1948, while at WHOI, Phleger established a marine Foraminifera laboratory with the support of the Office of Naval Research. While at Amherst, Phleger and Frances Parker wrote a GSA Memoir on the distribution for Foraminifera in the northwest Gulf of Mexico.

Phleger was a visiting associate professor at the Scripps Institution of Oceanography from 1949 to 1951. He received a permanent appointment as Associate Professor (1951-1957) and then Professor of Oceanography (1957-1977). When Frances Parker joined the Scripps staff in 1950, the two founded the Marine Foraminifera Laboratory at Scripps. Phleger described foraminiferal research and the function of the laboratory in a March 2, 1951 memorandum to the director: <sup>1</sup>

Foraminifera are microscopic marine Protozoa which secrete a calcareous or arenaceous shell. They live in all marine environments, are both planktonic and benthonic, and upon death the shells accumulate as a part of the sediment on the bottom of the ocean. They are delicately adjusted to the various marine environments under which they live and leave a record of the environments in the sediments of which they become a part. Foraminifera are widely used in geology as fossils for age correlations of ancient marine rocks.

During his early years at SIO, Phleger became associated with American Petroleum Institute Project 51 and focused on shallow-water distribution of Foraminifera as related to sedimentary processes in the Gulf of Mexico. He also participated in the Swedish Deep Sea Expedition of 1947-1948 and wrote, with Frances Parker and Jean Peirson, a classic report, *North Atlantic Foraminifera*, Reports of the Swedish Deep-Sea Expedition, volume VII (1953). Throughout the 1950's Phleger published papers on Foraminifera, often with Frances Parker. Many of these were concerned with the foraminiferal ecology of the Gulf of Mexico. In 1960, Phleger published *Ecology and Distribution of Recent Foraminifera* which summarized all that was then known about foraminiferal ecology. Phleger's student Wolfgang Berger noted that this work "outlined the essence of a new sub-discipline of geology and oceanography -foraminiferal paleoceanography."<sup>2</sup>

Phleger served on many SIO committees and was active in a number of professional associations. He was a member of the SIO Director's Advisory Council, the Natural Land and Water Reserve System Committee and the Deep Sea Drilling Program Steering Committee. He chaired the Geological Research Division at SIO from 1970 to 1973. He taught courses and supervised the work of many doctoral students. He was a fellow of the Geological Society of America, the AAAS and the Paleontology Society. He served on the Board of Editors for *Marine Geology* and other publications. He was a member of many scientific associations including the American Association of Petroleum Geologists and the Sociedad Geologica Mexicana. He served as Director of the Cushman Foundation for Foraminifera Research. He served as a consultant for both American and Mexican governmental bodies on coastal lagoons. He was an honorary research fellow of the Instituto de Geologia, Universidad Nacional de Mexico in 1961. His research was supported by grants from the Office of Naval Research and the National Science Foundation.

Phleger developed close working relationships with Mexican geologists during the course of his research on marsh and lagoon foraminiferal distributions in Mexico and his work in Mexican waters. On December 5, 1967, SIO Director William A. Nierenberg appointed Phleger as the first Scripps Liaison Officer with the Republic of Mexico. <sup>3</sup> Phleger was responsible for overseeing the participation of Mexican nationals in SIO research and instructional programs, coordinating visits of Mexican scientists and government officials to SIO, and arranging SIO participation in teaching and scientific consultations in Mexico. Phleger also prepared reports and arranged

for sample shipments and loans of equipment and supplies to and from Mexico. He oversaw the application process for clearances necessary for field and oceanographic expeditions to Mexico.

Phleger received the 1980 Joseph A. Cushman Award which recognized Phleger as a pioneer of modern marine geology whose work "had considerable impact on the development of paleoecology and paleoceanography, both in deep-sea research and in the study of shallow marine deposits."<sup>4</sup> The citation for the award acknowledged his contributions as a teacher, and mentioned his students W.R. Walton, T. Uchio, J.S. Bradshaw, A. Golik, A. Blackman and Wolfgang Berger. Phleger retired from Scripps in 1977, but continued his scientific work for many years.

Phleger had a literary career as well as a scientific career. His wife, Marjorie Temple Phleger, taught drama at the Bishop School when they first arrived in La Jolla. She later became public relations head at the La Valencia Hotel, which was owned at the time by oceanographer Gifford Ewing. While there she met many actors and writers, including Clark Gable and Tennessee Williams. She was a columnist for the *San Diego Union* and the *La Jolla Light*. She was a founder of the original La Jolla Playhouse. The Phlegers became acquainted with Ted Geisel and his wife Helen in the early 1950's. Geisel encouraged the Phlegers to write children's books and introduced them to the editors of Beginner Books at Random House. Marjorie Temple Phleger first wrote a survival themed book set in Baja California, entitled *Pilot Down, Presumed Dead*. In 1959, Fred Phleger published *The Whales Go By* and *Ann Can Fly* and in 1960 *Red Tag Comes Back*. He and his wife published *You will Live Under the Sea* and *Off to the Races* in 1966.<sup>5</sup>

Marjorie Phleger died on February 15, 1986. Fred Phleger's health declined after the death of his wife, and he died December 14, 1993.

## References:

1. Memorandum from Fred B Phleger to Director, Scripps Institution of Oceanography, 2 March 1951, 4 page typescript. In: SIO Biographical Files AC5, Box 13, f 423, "Fred B Phleger, Papers, 1941-1956."
2. Wolfgang Berger, Joseph R. Curray and Timothy D. Herbert, "In Memoriam, Fred B Phleger, Professor Emeritus of Oceanography, 1909-1993," Academic Senate: San Diego Division, November 22, 1994.
3. William A. Nierenberg to All Hands, December 5, 1967, in Biographical Information Files on Fred B Phleger, SIO Archives UCSD.
4. W.H. Berger, "The 1980 Joseph A Cushman Award: Fred B Phleger," *Journal of Foraminiferal Research* 11, no. 4 (October 1981), pp. 260-261.
5. Ann Commier, *Something about the Author* (Detroit: Gale Research Company, 1984), v. 34, p.165.