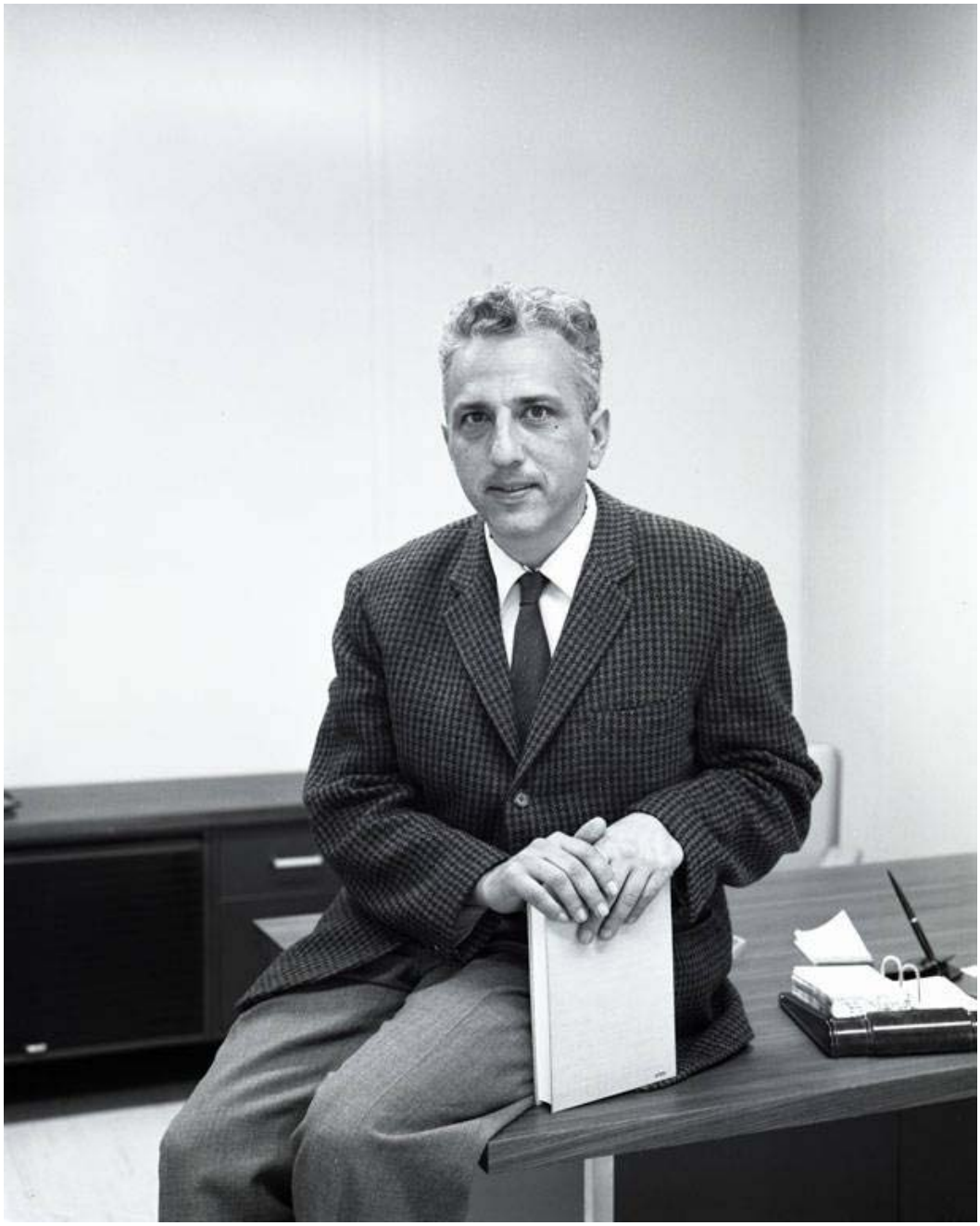
Edward Goldberg Biography



Edward David Goldberg was born in Sacramento, California August 2, 1921. His father, a high school teacher died when he was young, and his mother taught piano. He received a B.S. degree (1942) from the University of California, Berkeley and a Ph.D. in chemistry (1946) from University of Chicago. He served as a naval officer in the Pacific during World War II. He worked as a postgraduate at the University of Chicago under Harrison Brown whom he considered his mentor, and Brown influenced him to work on geochemistry and meteoritics. In fact Goldberg proudly called himself Harrison Brown's first graduate student. Goldberg wrote his first five scientific papers in collaboration with Brown. Goldberg was surprised to find Brown interested not simply in science but in the problems of mankind – survival, food supply, population, disease. Years later Goldberg followed his mentor's lead by involving himself both in science and the environment. Brown recommended Goldberg to Roger Revelle who sought a geochemist for the Scripps Institution of Oceanography in 1949 who

would contribute to environmental studies of seawater using trace elements, studies of ocean sediments, studies of ocean pollution, and questions related to the carbon cycle.

Goldberg wrote over 225 articles and many books on marine chemistry and the human impact on the oceans. His books include, Marine Chemistry (New York: Wiley, 1974), Strategies for Marine Pollution Monitoring (New York: Wiley, 1976), The Health of the Oceans (UNESCO Press, 1976) Black Carbon in the Environment (New York: Wiley, 1985) and Coastal Zone Space : Prelude to Conflict? (UNESCO, 1994). The Health of the Oceans was considered the definitive statement on marine pollution at the time of its publication and in the book, Goldberg set up the framework for his Mussel Watch Program. With support from the EPA, scientists analyzed mollusks from 100 stations along the American coast collecting data and found them very sensitive to environmental changes. The program was so successful it became international. With his colleagues Robert L. Fisher and Charles Cox and he edited a centennial history of the Scripps Institution entitled, Coming of Age: Scripps Institution of Oceanography.

Goldberg's studies of lead in the marine environment which he initiated with other colleagues in the 1970's were groundbreaking and influential. In the 1980's Goldberg became concerned with reports of decimation in the oyster fishery and other shellfish near marinas. Goldberg sampled water in California harbors and identified the problem as tributyltin, a toxic chemical then routinely added as an antifouling agent to marine paints by the U.S. Navy and the marine commercial industry. Goldberg's work persuaded the U.S. Navy to eliminate the chemical and his work was instrumental in setting new environmental standards for harbors. This was politically tricky because the U.S. Navy was a major sponsor of research in oceanography. Joseph E. Brown commented on Goldberg's approach to controversy and quotes him "I suppose that not being afraid to say something unpopular is what keeps my juices flowing. I enjoy a good argument and I refuse to be quiet just because it seems the thing to do."

He received many honors and awards including the first Bostwick H. Ketchum Award for his leadership in environmental research in coastal and open oceans in 1984. Dr. Goldberg received the Tyler Prize for Environmental Achievement in 1989 together with Dr. Paul Crutzen . Goldberg was cited for having "dedicated much of his scientific career to monitoring the effects of and finding solutions to societal insults to the marine environment. During the presentation in Los Angeles, the presenters noted, "scientists and policy makers now have an increased knowledge of the contamination levels of coastal waters in most parts of the world. And the pollution measurements in different laboratories are being made on a comparable basis."

Dr. Goldberg traveled widely and attended seminars and symposia around the world to confer with other chemists and oceanographers. He attended and supported the Dahlem Workshops on Atmospheric Chemistry held in Germany. He was a Guggenheim Fellow to the University of Bern in 1961. He was a NATO Fellow at the University of Brussels in 1970. He edited four scientific journals in the course of his career.

Dr. Goldberg's doctoral students include Robert W. Rex (SIO Ph.D. 1958), Peter M. Williams (SIO Ph.D. 1960), Maynard M. Nichols (SIO Ph.D. 1965), Hans H. Veeh (SIO Ph.D. 1965).

Bibliography:

Brown, Joseph E. Edward D. Goldberg. Oceanus 33, no. 2 (Summer 1990), 76-84.

Goldberg, Edward D. The Surprise Factor in Marine Pollution Studies. MTS Journal 8, no. 2 (February 1974), 29-33.