Memorial to Orville L. Bandy
1917-1973

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Professor Orville L. Bandy died on August 2, 1973, in Inglewood, California, after a brief illness. With his death the geology profession lost one of its foremost members in the branch of paleontology. The teaching profession lost a man who trained scores of professional paleontologists and whose laboratories produced a large number of scientific contributions. His influence extended into national affairs as a committee member in federal granting agencies and as an officer of several societies. In the international scientific community, Orville was widely recognized for his contributions at congresses, conferences, and symposia. He had been chief scientist or a member of several expeditions of international scope.

Orville was born on March 31, 1917, in Linden, Iowa, but his family moved to Corvallis, Oregon, when he was four years old. Orville’s higher education began at Oregon State University, where he earned B.S. and M.S. degrees in 1940 and 1941. It was there that he was introduced to Cenozoic stratigraphy and paleontology with such effectiveness that these became the major areas of his later professional interest. The war interrupted his career from 1942 to 1946 when he served as a Communications Officer in the U.S. Air Corps. When the war ended, he started work for the then Humble Oil and Refining Company in Houston. Soon thereafter, he became convinced of the need for more advanced training as a result of his involvement in the problems of stratigraphy and paleontology of the Gulf Coast. For the next two years he studied at Indiana University under the eminent and dynamic J. J. Galloway, one of the world’s foremost micropaleontologists. Orville was granted the Ph.D. degree in 1948 with a dissertation on the “Eocene and Oligocene Foraminifera from Little Stave Creek, Clarke County, Alabama.”

Orville joined the faculty of the Department of Geological Sciences at the University of Southern California in 1948 and immediately plunged into an active program of research, in addition to assuming the heavy teaching assignments which were customary at that time. USC had just started to increase the faculty of the department but had not yet added new scientific facilities, so his first quarters were inadequate to say the least. His laboratory was a former chemistry stockroom about six feet wide. This laboratory was known as “Bandy’s broom closet” at the time, but it was more like a sauna bath, due to the battery of constantly boiling pots used for freeing forams from their matrix. From this incredible environment, he produced his first dozen papers in four years. These largely involved morphology and classification of foraminifers and their geologic distribution.
By 1953 he had become proficient in the environmental adaptations of foraminifers. Pioneer work on the subject had been done in southern California by Manley Natland in 1933. Orville was also fortunate to be associated at USC with K. O. Emery, who was extremely active in delineating the physical parameters of the waters off southern California. Orville's first (1953) major paper on this subject is still a classic entitled "Ecology and Paleoecology of Some California Foraminifera," divided into two parts. The first part was on the frequency distribution of foraminifers with respect to various physical parameters such as depth, temperature, salinity, and oxygen content. This paper contained the first of the many composite frequency abundance diagrams which he used commonly to illustrate papers and talks and which have become known in some circles as "bandygrams." The second part of the paper was on foraminiferal evidence of subsidence rates in the Ventura Basin. He extended his methods to studying the distribution of foraminifers on the Gulf Coast in 1954. From this time on Orville combined his interest in pure research with application of academic matters to practical geologic exploration for oil and gas. In 1960, he summarized the principles of paleoecologic methods as applied to benthonc foraminifers in a report entitled "General Correlation of Foraminiferal Structure with Environment." A veritable flood of published contributions emanated from his laboratory, and many proved to be of great value to theoretical as well as to practical geologists. Two of his major papers in the latter category were published in co-authorship with Robert Arnal. The first, "Concepts of Foraminiferal Paleoecology," was published in 1960, and the second, "Middle Tertiary Basin Development, San Joaquin Valley, California," appeared in 1969.

Although his early work largely utilized bottom-dwelling or benthonic foraminifers, his attention was devoted increasingly to the floating or planktonic foraminifers during the 1960s. Orville was refining stratigraphic correlations and checking correlations made on benthonic organisms by use of this alternate group. His foraminiferal contributions in this decade cover an impressive range of subjects, including morphology and taxonomy of foraminifers; stratigraphic and bathymetric zonation of foraminiferan faunas; refinement of data on depth, temperature, salinity, turbidity, and sediment type as controlling factors in paleontologic correlations; paleoclimatology; displaced faunas; application at an early time of modern quantitative methods to paleontologic studies; use of geochemical and mineralogic features in discriminating faunal elements used in correlation; relation of zones to radiometric datum planes; graphic presentation of faunal data for ready recognition by applied paleontologists; problems of pollution; facies studies in exploration; the more accurate recognition of geological formational boundaries; development of methods to recognize environments of oil and gas accumulation by the gross morphology of foraminifers; coiling ratios; and methods of interpreting the history of subsidence of sedimentary basins by changes in foraminiferal populations. His materials for study came from Europe and Asia as well as from North America.

For the past three years, he maintained the same high rate of publication as before and increased the breadth of his interests to include aspects of paleomagnetism and magnetic reversals as they related to foraminiferal zonation. He published 133 articles and has several in press. His virtuosity in his field was unique.

From 1967 to 1972, Orville was chairman of the department of geological sciences.
During that time he added programs in geochemistry, geophysics, and chemical oceanography to the department and was responsible for enlargement of the faculty by five members. His own laboratories had long since been installed in Allan Hancock Foundation, and as chairman he now succeeded in obtaining much improved quarters for the remainder of the department.

About this time, he began serving as a member of oceanographic research teams and soon was entrusted with responsibilities as chief scientist on international cruises. On one of these expeditions there was grievous disharmony between the scientists and the commanding officer, whereupon Orville obtained permission to relieve the captain of the ship of his command and had him set ashore. His decision was subsequently reaffirmed and he therefore became a legend in his own time.

To those who knew Orville as a mild-mannered and affable companion or associate at conventions, the foregoing incident may come as something of a surprise. But to those who were closely associated with him, it should not have been any surprise that he would brook no interference with the pursuit of proper goals in research or academic affairs. He was strongly motivated toward professional excellence in both academic and industrial circles. Moreover, he had the capacity for intense concentration, as well as for hard work.

Orville exemplified the adage that if you want to get a job done, then give it to a busy man. Along these lines he was a member of 13 scientific organizations and served in elective or appointive positions on most of them. As a member of the Cushman Foundation for Foraminiferal Research, he was a continuing member of the board of directors, an associate editor, and president of the foundation during 1966-1967. His service to the Society of Economic Paleontologists and Mineralogists was extensive, starting with his election as counselor in 1963 and extending through chairmanship of the Research Committee, national vice president, and finally national president in 1971-1972. In this interval he also organized a symposium and edited the resulting volume of papers. He was vice president in 1954 and president in 1955 of the Pacific Branch of the Paleontological Society. He was also a member of the American Society of Limnology and Oceanography.

Orville's connection with industry was strengthened through his service to the American Association of Petroleum Geologists. He was a trustee of the Research Fund from 1960 to 1963 and was vice president of the Pacific Section in 1960, as well as serving on the Council through his office in the Society of Economic Paleontologists and Mineralogists. His tour as distinguished lecturer for the AAPG was so long that it had to be divided into two segments in 1963 and 1964.

On campus he had been secretary, vice president, and president of the chapter of Sigma Xi; he also served on the Faculty Senate.

In international circles, he was a member of the Société Géologique Suisse, a member of the International Subcommission on the Plio-Pleistocene Boundary of the International Geological Union, Asociación Mexicana de Geólogos Petroleros, and was a Collaborator for Revista Española de Micropaleontología.

Orville was a strong supporter of the concept that geologists should organize for the improvement of the profession, and he was an enthusiastic member of the American Institute of Professional Geologists and a Registered Geologist in the state of California.
He was direct in speech and manner and backed up his opinions with facts. His speeches at conventions often raised controversial issues or provoked more animated discussions than is generally the case at these affairs. He was much in demand as a participant in colloquia on foraminifers and traveled extensively in Europe and America in this capacity. In return, his laboratory was a waystation for both the great names and the aspiring newcomers in micropaleontology from all over the world. Scores of students obtained their professional training under his tutelage, and numerous post-doctoral researchers enriched their backgrounds in his quarters.

USC recognized Orville's abilities in 1967 by granting him the Award for Creative Scholarship and Research. In 1972 he was a national distinguished lecturer for the AAPG. Only a few months before his death, he received the A. I. Levorsen Memorial Award for giving the best paper at the Southwest Section meeting of the AAPG and affiliated societies in Midland, Texas. This was his second "best paper" award. On the day on which about 350 of his friends gathered for a memorial program, the following telegram was received:

In addition to being a fine man, an excellent teacher and an eminent scientist, Dr. Orville L. Bandy was a member of the Governor's Earthquake Council. In this capacity his service to the state of California deserves lasting recognition. The work of the Council, on which he was an active participant, has accomplished much toward reducing loss of life and property in future earthquakes. Thousands of citizens of this state may survive these events who otherwise would not thanks to the work of Dr. Bandy and the other members of this organization. Therefore, your loss is also the State's loss and the Council and I join you, his family, and his many friends in sorrow at his loss.

Ronald Reagan, Governor

Orville and his wife Alda were married in 1943. Besides Mrs. Bandy, a son, Donald, and a daughter, Janet Lowinger, survive. The Bandys entertained graciously in their beautiful home, and their friendship was offered generously and unaffectedly to students, colleagues, and friends alike.

Despite his many outstanding achievements, there was one thing at which Orville failed to excel—that was to relax. Although he at one time apparently occupied essentially full-time careers simultaneously of teaching and research, administration, grantsmanship, and professional elective positions, he never eliminated anything from one when accepting new demands from another. As a result, he seems to have lived more than one life during his rather short lifetime. The geological profession, and particularly those sectors involved in teaching and in exploration, are deeply indebted to Orville Bandy for leaving them a reservoir of people and ideas to continue his aspirations.

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