## Memorial to Edward Richard Larson 1920-1979

JOSEPH LINTZ, JR.

Department of Geological Sciences, Mackay School of Mines, University of Nevada, Reno Reno, Nevada 89557



Edward Richard Larson collapsed in his office at the Mackay School of Mines on the morning of February 1, 1979. He was pronounced dead of heart failure upon arrival at a local hospital. He died with his lecture notes in his hand, having taught at Mackay on the University of Nevada, Reno campus for a few months short of thirty years. It was the way in which he would have wanted to depart. Memorial services conducted the week after his death brought an overflowing crowd of friends, admirers, and students, past and present.

Dick Larson was born on May 24, 1920, in New York City, to Elise and Frank Larson. An only child, he was educated in the New York City schools and then went on to Columbia University, where he majored in geology. I met Dick at the close of our junior year at the Wyoming

summer field camp sponsored by the University of Wyoming, Columbia University, and Vassar College. With Elliot Dressner, the three of us formed a field party for the course.

Upon graduation from Columbia in 1942, Dick was off to Alaska with the U.S. Geological Survey. He had been able to get some graduate work done at Columbia prior to entering the United States Army during World War II. As a second lieutenant he was involved in occupation duty in the Trieste area. Following the war, he returned to Columbia and took his M.S. degree in 1947, with a thesis on the Ordovician Nittany limestone under Marshall Kay's supervision. That fall he joined the faculty of the Missouri School of Mines at Rolla and began his teaching career. He was also engaged in work on his Ph.D. dissertation, again under the supervision of Kay of Columbia, this time on the Ordovician Plattin limestone.

Two years later Dick was recommended to fill a teaching vacancy in the field of stratigraphy at the Mackay School of Mines, University of Nevada, Reno. He moved to Reno in 1949 and assumed his duties in the fall semester. For the next three years Dick was the junior man in the Department of Geological Sciences, but upon the retirement of Vincent P. Gianella in 1952, he became the department chairman and the senior man. Columbia awarded him the Ph.D. in 1952. That fall he found himself teaching the course in structural geology, an assignment he resisted at first. As he began to read deeper into the topic, however, he became more and more involved with it, and his course work in structural geology became his primary field, while stratigraphy, which had been his former preference, trailed in second place. With the exception of the summer of 1954, when he worked in Nevada for the Gulf Oil Corporation, Dick devoted himself solely to teaching and scholarly endeavors. I had been invited to join the staff at Mackay in the fall of 1951, and so by chance found myself reunited with an undergraduate field partner; we thus resumed an association that lasted for twentyeight years. Dick was already teaching the Nevada summer field camp, an activity with which he remained identified all of his years at Nevada. During the fifties the field camp was usually located in Eureka County, and the "desert rats," as the students called themselves at first,

grumbled over the primitive conditions, but acquired a strong sense of pride in getting through the course.

Dick Larson was a strict taskmaster. A gruff exterior put many students at a distance, but those who penetrated that thin barrier found a man with many admirable qualities and a warm personality. He was scrupulously fair with his students, and they quickly recognized that Dick did not permit favoritism. He was an avid reader of geological literature that encompassed an unusually wide scope; many things interested him. But he was also conservative in his outlook. Vehemently opposed to the continental-drift theory of Wegener, he took a very long time accepting the modern concepts of plate tectonics, changing his position only when too many lines of evidence began to weave a fabric of consistency that was inescapable.

Two excerpts from the tribute paid by the student speaker at the memorial services are appropriate here:

It was not until I began working at the field camp in Ely as the camp cook, that I began to understand Dr. Larson better. Although he came across as gruff and tough, and had definite ideas on how he wanted things run, Dr. Larson gave me the freedom to learn by my own mistakes. Occasionally he would threaten to take over my duties and serve nothing but chili for the next month if I didn't shape up, but it was always said with a twinkle in his eye, exposing a little of the old softie underneath.

Often the things Dr. Larson taught seemed unimportant or irrelevant at the time. It was only later through more experienced eyes that I came to understand his total grasp of the situation. . . . At a Wyoming summer field camp I was able to work things through for myself, and became aware of deficiencies in students from other schools, who lacked someone like Dr. Larson behind them. I felt the depth of my background and understood Dr. Larson's teaching approach even better.

Dick Larson's research output was not voluminous. He consistently carried a heavy teaching load. His papers, however, are of the highest quality. His 1963 paper, "The Geology of the Diamond Springs Quadrangle," was the compilation of the individual plane table sheets produced by several generations of his "desert rats," and stands as a well-executed study of a portion of the complex Diamond Range in Eureka County. In 1973, with Ralph L. Langenheim, Jr., he published the "Correlation Chart of the Formations of the Great Basin Area," a very large undertaking that involved more than 100 sites in four states. This is already a classic work which will stand for several decades. Both papers were published by the Nevada Bureau of Mines and Geology.

One of Dick's most interesting accomplishments was the production of a motion picture film "Across the Cordillera—The Genesis of a Geosyncline." With a grant from the National Science Foundation, he set out to photograph the history of the Cordilleran geosyncline. His skillful melding of aerial photography, animation, and ground photography yielded a concise exposition of this history. The thirty-minute film was completed in time for showing at the International Geological Congress in Montreal in 1972. It has received wide acclaim from the geological profession and has set the record for the greatest number of loans in the history of the University of Nevada film library.

Two of Dick's papers will be published posthumously. The first is a paper for one of the Centennial volumes for the U.S. Geological Survey to be published later in 1979. This paper, written with R. L. Langenheim, concerns the Carboniferous formations of the Basin and Range province, combining stratigraphy and structure to propose modifications in the usually accepted geological history of the area.

Fewer than twenty-four hours prior to his death Dick mailed an article written for the Rocky Mountain Association of Geologists, to be published in the guidebook for their 1979 field trip which is to include the eastern margin of the Great Basin. This was Dick's last written communication.

While in residence at Columbia for his graduate programs Dick and a fellow student, Betty Smith, decided they shared a relationship they could and should cherish. Their marriage was harmonious and beautiful. Betty had worked for the Louisiana Geological Survey as a micropaleontologist, and thus always understood Dick's work and his penchant for the field. Although she stopped working in micropaleontology at the time of her marriage, Betty has gone on to other areas of creativity and now commands an esteemed regional reputation as an artist. Three sons were born to them: Karl, James Matthew, and, some time later, Bruce. Their sole tragedy was the senseless street murder of James shortly after his discharge from the Army in 1970. Karl now is involved in construction projects, and Bruce is enrolled in a pre-law curriculum at the University of Nevada, Reno. Dick's parents reside in Woodstock, New York.

In his last years, Dick was inconvenienced by some disabilities which limited his field activities. It appeared that he suffered from an inner ear degeneracy. Although his hearing acuity declined only slightly, his balance deteriorated greatly, so that walking on uneven surfaces became more and more difficult, even with a staff or cane. Nevertheless, he persisted and curtailed no field trips from his established courses. He took his normal load in summer field camp in 1978. Although he had planned not to return to field camp in 1979, his expressed reason was the conflict with the International Congress on the Carboniferous that had been scheduled for the same time. Dick was also planning to attend the International Geological Congress in Paris in 1980. He was less excited about the sessions in Paris, but especially wished to join the field trips to the Alps. He had spent the spring of 1963 at the Université Grenoble, devoting himself to extensive alpine traverses and devouring literature not available in Reno. His desire to revisit these localities in 1980 was marred by the awareness that he would not be able to move far away from the bus at the various stops.

His colleagues in the Department of Geological Sciences will miss his counsel and influence. Having served as chairman for thirteen years, he was the respected elder, the conservative realist. His analyses of what the department needed to be doing at a given time, or of the direction toward which it might be heading in the future were ever cogent, well reasoned, and not to be cast aside lightly. The gruff exterior displayed to the students did not exist for us; we knew him as a warm and friendly man who enjoyed those with whom he came in contact. He was at his best in the evening beside a campfire sharing a bottle of beaujolais and a fund of funny stories, many of which he had either participated in or observed. Always ready to share his geological knowledge, he was the most scholarly among us, and a source of strength and stability to us all.