

MEMORIAL RESOLUTION

MYRA KEEN (1905 – 1986)

At Stanford she will be remembered as the gracious lady of Geology Corner. By her professional colleagues in the study of mollusks she has been called the First Lady of Malacology. As teacher, researcher, quiet champion of the role of women in the modern American university, and embodiment of all the best implied by "a Christian spirit," Myra Keen made an indelible mark. Succumbing to cancer on 4 January 1986, nearly 15 years after retiring from the Department of Geology, she left a major contribution in scientific publications that have helped to shape her field of technical expertise and a rich legacy in her personal effect on students, colleagues, and friends. That she was one of Stanford's first three tenured women faculty members and was formally Professor of Paleontology because she had no degree in geology are only additional symbols of her stature and uniqueness.

Angeline Myra Keen – but she did not use her first name – was born in Colorado Springs, Colorado, the only child to parents of simple means but unusual personal strengths. Before she was two her family homesteaded 20 miles out in the country, near the town of Littel. Here her parents built their own stone house on land that grew to encompass 1200 acres and where, as a young girl, she got about on horseback and herded cattle. A visit to cousins 20 miles away was an all-day undertaking by horse; the family's first car came when she was eight. Certainly the isolation and independence suggested by these circumstances were critical in shaping her strong character, which was strengthened further by the influence of a Quaker mother.

Although her parents had little formal schooling, they were the best educated and most progressive people in the community. In addition to cattle rancher, her father was postmaster and a member of the school board. Her own early instruction was in a country school (total enrollment of 30) where skipping grades was easy, and Myra progressed through its eight grades in five years. Determined that she should have whatever benefits a modern education might bring, her parents moved back to Colorado Springs to permit Myra to attend the much better city high school, from which she graduated in 1923. Following this graduation, her family returned to the country and Myra, temporarily fed up with school, and spent three years "wading up and down creeks photographing all the wild life that would stand still." She aspired to write articles on nature but met with no commercial success, and so concluded that neither her education nor her prose was adequate. In response to her obvious hunger for more education, her parents took advantage of a chance to sell the ranch and moved once more to the city.

In high school Myra's interests had centered on biology and when the opportunity for a scholarship-aided education at Colorado College materialized, she thought seriously of majoring in entomology. But, discomfited by dissecting cats and seeing butterflies come alive on pins after too brief a period in the cyanide jar, she chose to major in psychology instead. The then current vogue of psychology also promised greater earning power in the deteriorating economy of the Crash and subsequent Great Depression. Somewhat earlier her father had taken up chicken farming and, this business transported with them to the city, supplemented so

substantially the earnings from his regular job there as a landscape gardener that Myra always said that chickens put her through college.

Elected to Phi Beta Kappa before graduating from Colorado College, Myra received a scholarship to Stanford for graduate work in psychology in 1930 and, accompanied by her mother, moved to California. This initiated a 14-year separation between her parents during which she and her mother were supported in California largely by regular monetary contributions from the chicken business in Colorado. When her Stanford scholarship ended after one year (M.A. 1931), Myra, by then having acquired California residency, was able to continue her studies at Berkeley, from which she received her Ph.D. in Psychology in 1934.

During her Berkeley years, she had worked part time as a student assistant at the Child Welfare Institute -- an experience that had a profound effect on her subsequent life, but not of the sort one might at first imagine. It was here she acquired an abiding distaste for federal assistance programs. As a consequence she steadfastly declined to apply for federal aid throughout her career, despite the wide availability of government funds during the later years of the Depression and in the years after World War II. She was repelled by what she sensed to be the effect of government funding on research. As she put it, she didn't "want to get myself tied up in government" and into circumstances under which "you don't plan the project the way you want to do it. You plan it the way they will grant the money." How few have had the strength of conviction -- and the good fortune, as we shall see -- to be able to withstand the pressures as she did?

Unfortunately -- or fortunately, as it turned out for the field of her biological interests -- a new Ph.D. in 1934 was not a touchstone to professional opportunity. With no income in California and the "chicken money" from Colorado providing subsistence but no more, there was nothing to do but to put her name on a job list, and wait. It was at this point that minor events played a commanding role and directed a major reorientation of her interest and effort.

While still a Berkeley student, Myra, who had grown up near the Continental Divide, had become intrigued by Pacific coast sea shells. She had first collected them on a psychology field trip to Monterey, and then found out something about them at a shell shop in Berkeley. Already she was "hooked." With no job in sight despite her Ph.D., she returned to Monterey, where living was much cheaper than in Berkeley, and spent a summer collecting shells. She visited the Hopkins Marine Station to seek help in identifying the shells and there learned about a local amateur collector, who introduced her to Mrs. Ida Oldroyd, curator of Stanford's shell collection. That was the beginning of the "Stanford Connection."

At first she helped Mrs. Oldroyd as an unpaid volunteer -but better poor doing what one enjoys than poor otherwise, and soon she removed her name from the Berkeley list of job applicants in psychology. After two years as a volunteer, she was given a part-time appointment as a curatorial assistant and paid meagerly -- except for one year when "they forgot" to put her in the budget and President Wilbur came to the rescue with \$300 for the year.

From then on professional advancement was slow and erratic, as her employers had candidly warned her it would be. After all, she was a neophyte with no degree in the field of geology, the position in prospect was only that of a curator -- and she was a woman. She

characterized that first agreement with the University as a part-time curator of paleontology in 1940 as "a contract of sorts."

From her first days with Mrs. Oldroyd, Myra had devoured information on her new field. A formal degree in geology would involve too much filling of missing requirements, but auditing courses allowed her to learn what she wanted. As somewhat of an apprentice to Professor Hubert Schenck, her knowledge of molluscan fossils in California's coastal mountains grew expansively; at the same time, as curator of the comparative collection of modern shells, she learned about the distribution of living species and came in contact with both amateur and professional malacologists all over the world.

Nor did her background in psychology go unused. Her training in statistics enabled her to do for Professor Schenck what he wanted but was not trained to do: analyze masses of data and identify patterns of distribution. From this came several studies and early publications comparing the distributions of molluscan species from California to Washington today and in the Pleistocene. These were seminal studies that quantified temperature shifts in Pacific coastal waters over the last million or so years.

Then came World War II. Schenck accepted an army appointment, gave Myra a couple of weeks' intense instruction, and turned over to her part of his course in paleontology. Other courses followed as she substituted for other absent professors. In fact, for a time she and Eliot Blackwelder, chairman of the department, were the entire teaching staff in geology. Eventually there were courses of her own. In the period of bursting enrollment under the GI Bill after the War, she had 12 students in Micropaleontology, a record for that course unsurpassed before or since. Her most popular course was Biological Oceanography, which she taught to ever-enlarging classes during the last few years of her teaching career.

Before 1954, all of her teaching was, in effect, by proxy: she did the work, full-time on half-time pay, but she couldn't sign the class lists because she had no professorial appointment. Then in 1954, the situation was regularized by an appointment as Assistant Professor of Paleontology. Subsequent promotions to Associate Professor with tenure (1960) and Professor (1965) were also in the name of paleontology, acknowledging both the biological focus of her specialty and her lack of degree in geology. This slowly accorded recognition was welcome, but satisfaction in it was inevitably diminished by seeing men whom she had taught rise through the academic ranks more rapidly. Even at Stanford, which prided itself on being coeducational from the start, women's place was not automatically equal; witness the "Days of the 500" when female enrollment was frozen at that number, and an incident in 1930 when Myra, as a student, had been the target of verbal abuse because she had inadvertently walked down the steps of the Law Department, forbidden to women students. Even later there was a certain bench outside Geology Corner where she and other women felt themselves distinctly unwelcome, at least on the part of some of the less progressive men.

Like her mother, and no doubt in large part thanks to her, Myra had a deep and very personal religious faith. Her values were most closely akin to those of the Society of Friends, although she did not formally join the Quakers until 1964. From that time on she was an active member of the Palo Alto Friends Meeting, where she was deeply loved and respected for her quiet strength and her willingness to share with others her philosophy of life and the wisdom she had gained from its living. She had great self discipline, guided by what she herself termed a

sort of Puritanism, with which few of her contemporaries would have been comfortable. At age 15 she had decided never to see another movie; she eschewed the theater because she felt it held a mirror to life, whereas she wanted to look at life herself. She rigorously avoided any indulgence that she considered excessive, but she derived immense satisfaction from music, which she considered one of man's greatest achievements.

The contributions that Myra Keen made toward establishing the place of women at Stanford were made quietly but persistently. As an early member of a very conspicuous minority, within the university as well as in her profession, her way was to achieve by deed and lead by example. Her students and faculty colleagues regularly saw her high standards and sensed the absolute command she had of her subject. Specialists knowledgeable in her technical field admired and respected her contributions as a teacher and as an original researcher. All who came to know her well came also to appreciate that beneath her quiet composure there was great depth of feeling and conviction. She suffered under inequality and unfairness but, seeing no virtue in martyrdom, she directed her efforts toward improvement, not complaint, and her success encouraged others to do likewise. In the days when the Men's Faculty Club was "the" faculty club (and completely exclusive), she was an active member of a small group known as The Women of the Faculty. Their monthly meetings, opportunities to share experiences and to exchange information on professional accomplishments, supported the slow advancement of the status of women on campus. Myra was the long-standing historian of the group and its third chairman (from 1958 to 1960) following two preceding years as assistant chairman.

The shell collection of which Myra Keen was curator had its start in the early days of the university as an adjunct to the teaching of paleontology. By acquisitions through gifts, purchases, and exchanges, and under the early care of the first curator, Mrs. Oldroyd, it grew spectacularly; one addition of material from the Philippines in 1930, just before Myra arrived at Stanford, amounted to two tons of specimens. Much material was sent in by former students, including Stanford servicemen during World War II. Shortly following Myra's retirement, when the bulk of the collection was placed on permanent loan with the California Academy of Sciences in Golden Gate Park, it contained approximately a million catalogued specimens and was regarded as the second or third most important research collection of mollusk shells in the country. Myra personally added to the collection the many specimens she collected from the Pacific coast between northwestern Washington and Baja California. More importantly, she enlarged it by incorporating duplicates of material submitted to her for identification. She derived great enjoyment and satisfaction from developing this collection into the powerful research tool it became. She assisted the many specialists who came from all over the world to use it, and packed specimens by the cartons-full to send on loan to those who could not come to Stanford. In addition, she selected specimens from the collection for display in extensive educational exhibits which she maintained in a small museum. This brought to the third floor of Geology Corner a steady flow of local school groups, as well as many amateur and professional collectors.

As Myra's retirement approached, the Geology Department was forced to consider its options with regard to the collection. Changing interests within the department and the oppressive cost of assuring adequate space and curatorial care for such a collection over the long term were important factors in the decision to transfer it to the California Academy unless new monies could be found to support it at Stanford. When several serious efforts to raise a supporting endowment were unsuccessful, the move was effected. Sadly, this came about while

Myra was still actively engaged in research and necessitated redirection of the work she was able to do in her remaining years. Painfully, she witnessed the departure from Stanford of this major research resource, which had received so much of her effort, attention and devotion. All that remains today at Stanford of this collection is a small sampling arranged by Myra in a few display cases in Geology Corner, where it is known as the Myra Keen Exhibit of Modern and Fossil Shells.

Although she never sought government funds to support her research, frugality and serendipity combined to make an adequate substitute. From childhood she had made the most of what she had, but her good fortune was also impressive. When a wealthy amateur shell collector in southern California seeking a comprehensive reference on shells in the Gulf of California was informed by a book dealer that no one had written such a work, he inquired who could write one. The dealer said there was one woman in California who could -- Myra Keen. To which the collector responded, "You tell her to write it and I'll pay for it." At first Myra agreed only to supervise a small committee that would do the work, but when this group fell apart for a variety of reasons, she ended up the sole author. The result was the first edition of her most massive published work, "Sea Shells of the Tropical West America" (Stanford Press, 1958). This volume, with 624 pages of text and 1700 figures drawn under her careful direction by the departmental draftsman, automatically became a standard reference. Years later, when the first printing was exhausted and a revision was needed, another benefactor came forward with supporting funds. The resulting substantially rewritten and greatly enlarged edition (Stanford Press, 1971) remains the major work of its kind.

Myra was also a member of several expeditions to the Gulf of California made possible by the Belvedere Scientific Fund. Through this medium Kenneth K. Bechtel supported the work of selected scientists whom he transported, in part on his private yacht, to an area in which he was personally interested and where they could pursue their research under his aegis and observation. On one of these trips in 1960, Myra made the exciting discovery of the first bivalved gastropod living in the eastern Pacific. This peculiar snail, housed not in a spired coil but between two shells like a clam, she named, appreciatively, Berthelinia chloris belvederica.

Her nine books and over 75 articles treat a diversity of topics that show the range of her talents and interests. A few are popular articles and some are short notes written for the serious amateur collector. Many involve detailed descriptions of new species or technical discussions of nomenclatural problems, matters of concern only to the specialist. Still others have more general import. An early work (1942) was the first documentation of the extent to which temperature controls the latitudinal distribution of mollusks along the Pacific coast today, and of how fossil examples of these molluskan assemblages can be used as paleothermometers to infer conditions, of coastal waters in the geologic past. As had happened with "Sea Shells of Tropical West America," her eagerness to see a difficult job well done and her willingness to cooperate seemed to combine, more often than she wished, with default by others, and to lead to sole authorship of works that were planned to be shared. This was true of some of her several contributions to the mammoth Treatise on Invertebrate Paleontology, published by the Geological Society of America and constituting the standard worldwide reference for many matters pale ontological.

Myra supervised the programs of about ten doctoral students, some of whom now occupy leading positions' ' in U.S. malacological circles. She built strong relationships with her students, nurturing them carefully while they were at Stanford, and following their developing

careers with keen interest thereafter. She maintained contact with her former students, as she did with a host of other friends and professional acquaintances, through a voluminous correspondence.

Acknowledgments of Myra Keen's professional achievements were numerous and satisfying. She traveled twice to European museums on a prestigious John Simon Guggenheim Fellowship in the sixties. In 1963 she received the Award of Honor of the American Malacological Union, of whose Pacific Division she had been an organizer and first acting chairman in 1948; she was chairman of the Division in 1964.

In 1969 she was Vice President and in 1970 President of the Western Society of Malacologists. She was a Fellow of the California Academy of Sciences and in 1979 was awarded its Fellows Medal. A special citation from the Trustees of Colorado College recognizing her scholarly accomplishments was awarded to her in 1984. She was also a Fellow of the Geological Society of America and a member of the Paleontological Society. She served as chairman of the Nomenclature Committee of the Society for Systematic Zoology and on the editorial boards of several publications.

No commentary on the life of Myra Keen would be complete without mentioning what was to her, perhaps, its most delicious highlight, if not necessarily its most important. This was her invited audience with Emperor Hirohito of Japan in 1975. After World War II the Emperor, a man of considerable biological acumen, had sent to Myra some specimens from his private shell collection for her to verify the identifications. Thereafter they exchanged scientific papers and, when the Emperor made his historic visit to the U. S. in 1975, he requested that Myra meet with him in San Francisco, where he stopped briefly on his way back to Japan. For half an hour they discussed their mutual interests in the invertebrates that inhabit the waters of the North Pacific, and discussed ways in which the long-distance distribution of these species might be investigated. This event was an exceptional experience for an unassuming yet sensitive lady. In an august way, the meeting between emperor and professor encapsulated the respect accorded Myra Keen by her colleagues and friends, and epitomized the vital communication between professional scientist-educator and enthusiastic student that was the great achievement of her professional career.

(Note: A complete bibliography accompanies the memorial by Robert Robertson which will appear in the journal "Malacologia.")

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