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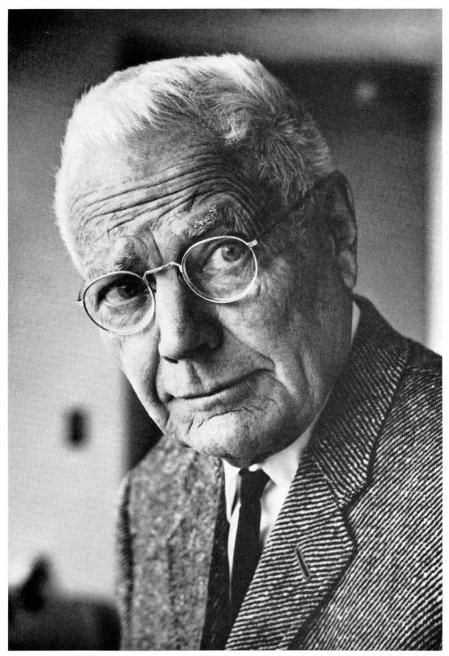
# Philip A. Munz, Botanist and Friend

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# PHILIP A. MUNZ, BOTANIST AND FRIEND

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With the passing of Philip Alexander Munz on April 10, 1974, we, his many friends, have lost a personality whose importance far exceeded what his modest, gentle demeanor suggested. To me, he was a fine scientist whose qualities demonstrated that great contributions to botany can be the product of simple and compelling virtues rather than spectacular charisma.

Some of these simple virtues could no doubt be traced to his rural origins. He was born on April 1, 1892, in Saratoga, Wyoming. When he was six, his family moved to Denver. He graduated from high school at the age of sixteen, but his parents then kept him at home for a year because that chronological age made him too young to begin college. He attended the University of Denver, living at home and traveling to classes on his bicycle. As a sophomore in college, Phil Munz was told he should continue in the sciences. A professor suggested he write to Cornell University to obtain advice regarding a good program preparatory for graduate work. He received a reply from the Chairman of the Biology Department, Professor James G. Needham. Remarkably, Professor Needham did not forget Phil Munz's letter, and when Phil finished at the University of Denver, sent him a postcard inviting him to apply for a teaching fellowship in Biology at Cornell. After completing an M.A. at Denver, Phil Munz did enter Cornell University for graduate work in entomology, which was Needham's field of interest. His doctorate thesis dealt with wing venation of Zygoptera.

Today's diversification of science into highly channelized disciplines would not permit a graduate student who had done doctorate work in entomology to obtain a position in botany. However, Phil Munz was able to secure an Assistant Professorship in Botany at Pomona College in 1917. Pomona College was, at that time, a very small liberal arts college in an isolated town in southern California, and the position would have been considered by many less prestigious than a position in one of the larger eastern universities. Pomona College readily accepted him as a talented entomologist, provided he would teach botany—and, in fact, be the entire Botany Department. In fact, Pomona College proved to be an ideal location for him because it offered opportunity and challenge—to which Phil Munz responded enthusiastically.

In August, 1917, he arrived in Claremont, equipped with a minor in botany from his Cornell training, and proceeded to learn the plants of the area as rapidly as possible. He was aided by an eager sophomore, Ivan Johnston, who was later to pursue a notable career in botany. Johnston urged him into climbs of the mountains near Claremont, and with this hasty introduction to the local flora, Phil Munz was able to teach about southern Californian plants during his first year at Pomona College. In addition to taxonomy, he taught plant physiology, elementary botany, most of the elementary biology course—and in fact a total of five courses that covered the field of botany. Despite the very considerable work involved, he began the Pomona College Herbarium, engaged in field work, and began taxonomic research projects on Onagraceae and other groups prominent in the flora of the southwestern United States. Phil Munz always had a knack for taking up tasks, often unpromising ones, that needed to be done.

During his teaching career, his assistant one year in the Biology course was Alice McCully, daughter of the chairman of the English Department of Pomona College and a Pomona College alumna. Although her father had fostered careers in English for his children, Alice had escaped into botany, and after her B.A. pursued graduate work at Pomona College. Alice and Phil married, and she blended her botanical interests into his by working alongside him in many of his field and research endeavors. Alice happily joined him in field trips, and soon they had two children, Bob and Fred, who became a part of excursions that ranged into the eastern United States or the Pacific Northwest. These trips were centered around Onagraceae, a family in which Phil made a series of contributions during the remainder of his career. On one of these field trips, the Munzes visited the Denver Museum, where Fred, aged four, spotted an *Oenothera* in a marsh deer diorama, and announced it loudly to disconcerted visitors. Studies at herbaria in the eastern United States were parts of the summer field trips. During a stay at Harvard University, the Munzes found that a nursery school at Radcliffe College provided a convenient way of caring for Bob, who has since told friends that he attended Radcliffe. Summers in the field were more than *Oenothera* searches. The Munzes camped out to save money, but this provided opportunities for exploration of natural areas and appreciation of natural history in general. Very naturally, Fred became interested in insects and reptiles; he is now a professor of zoology at the University of Oregon. Summers in the field became a tradition for the Munz family even after Bob and Fred had grown up and left home. Each year, Phil and Alice have joined Bob and Barbara and their four children and Fred and Dorothy and their three in camp-out reunions in natural areas.

The necessity for herbarium studies took the Munzes to Europe during other summers. Not immune to places other than herbaria, the Munzes developed a lifelong affection for charming villages and byways in Europe, and for European history. The most extensive field work undertaken by the Munzes was an expedition to South America in 1938–9. Under the auspices of a Fellowship from the John Simon Guggenheim Foundation, they visited Peru, Chile, Argentina, and Brazil. Studies on Onagraceae of these regions resulted in a number of monographs, both generic (e.g., *Fuchsia*) and regional.

Among Phil Munz's attributes were patience at prolonged tasks, willingness to undertake arduous and unglamorous projects and see them through, and the ability to work concurrently over many years on several important projects. For example, his years of acquaintanceship with the southern Californian flora built gradually into A Manual of Southern California Botany, published in 1935. Meanwhile, he engaged in conservation projects. Because of his detailed knowledge of desert species and his efforts at contacting influential people and preparing exhibits, the area known today at Joshua Tree National Monument remains as a natural oasis in the midst of what has become variously disturbed portions of the Mojave Desert. He solicited the aid of Ellen Browning Scripps, noted patroness of Scripps College in Claremont, in buying the Marcus E. Jones collection, an important addition to the Pomona College Herbarium. Field trips with his classes were numerous, and aroused the botanical ambitions of students. Notable among these were F. Raymond Fosberg, C. Leo Hitchcock, David D. Keck, and Louis C. Wheeler. Phil Munz's work at Pomona College was distinguished, and he had advanced to full professor by 1926. Because his concerns for the affairs of the College ranged beyond the Botany Department, he was named Dean of the Faculty in 1942. However, he was most happy when studying or teaching about plants, and did not want to advance into administrative posts where he would be entirely isolated from botany.

In 1944, Phil Munz returned to Cornell University, where he took a position as Professor of Botany and was associated with the Bailey Hortorium. The Munzes fully expected to stay at Cornell, but in 1946 an opportunity too challenging to resist surfaced: Botanist of the Rancho Santa Ana Botanic Garden. Those who know this Botanic Garden today may not realize that in 1946, this position offered a challenge, but certainly not the luxury of a well-established institution. Located in the Santa Ana Canyon between Anaheim and Santa Ana, the Rancho Santa Ana Botanic Garden began as a portion of a large ranch, a portion withheld from agriculture by Susanna Bixby Bryant. Mrs. Bryant had founded this Botanic Garden in 1927 for the display and study of the native plants of California. Although the Garden had succeeded in these functions, its effect was not as far-reaching as ideally could be hoped. The location of the Garden in the Santa Ana Canyon was remote, reached by a comparatively small number of visitors, and was unfavorable for cultivation of many species because the canyon slopes were dry and windy. However, the Rancho Santa Ana Botanic Garden had a hidden asset. Mrs. Bryant had noticed the financial failure of a botanic garden elsewhere in southern California during the depression years, and was determined that such a fate not overtake the garden she had founded. She and the other trustees showed willingness to expend what were, at that time, considerable sums of money to assure success of this enterprise.

A botanic garden, however, can succeed in various ways. Through his visits to American and European botanic gardens, Phil Munz had developed a broad vision of the functions of a botanic garden. For him, it ought to be an institution that grew plants, but also performed numerous other valuable and interrelated activities: research on horticulture, introduction of new hybrids and cultivars into cultivation, public education, pure scientific research, and teaching of students at higher educational levels. After the death of Mrs. Bryant in 1946, Munz became Director and new directions had to be taken. Phil Munz's vision of a model botanic garden, presented to the trustees with logic, clarity, a view to the future, and gentle daring, came into being. Research appointments were made. The Botanic Garden was moved to an entirely new site. That new site, appropriately, was in Claremont. In 1950, when the Botanic Garden moved, Claremont hosted not only Pomona College, but also Scripps College, Claremont Men's College, and Claremont Graduate School, colleges that had been developed on an interlocking basis. Claremont College (the operating institution of the Claremont Graduate School) donated a parcel of land. The Botanic Garden bought an adjacent area, and a building was erected in 1950. In return for use of the land donated by the Graduate School, Ph.D.'s on the Botanic Garden staff were to join with other Claremont professors in offering a graduate program in botany. Both the Rancho Santa Ana Botanic Garden and Pomona College herbaria were to be housed at the new building, and library holdings of both institutions were to be fused there.

This scheme was both eminently sensible and vet very bold and innovative. Phil Munz's patience and foresight in forging this new version of the Botanic Garden must be counted as outstanding, and might be regarded as his greatest achievement because of the manifold effects it had. Also demonstrated was his remarkable appreciation of fields of botany other than taxonomy, and his appreciation of advances and new directions in science. He searched keenly for excellence in research appointments. The appointments he made, in chronological order, were Dr. Lee W. Lenz (cytologist, cytogeneticist, and now Director), Dr. Verne Grant (biosys-tematist), Dr. Richard K. Benjamin (mycologist), and, upon Phil Munz's retirement, Dr. Peter H. Raven. All of these individuals have led distinguished and productive careers. Alice Munz, as the librarian, began the formidable task of collating and curating an outstanding library from the various sources from which books were contributed. Phil Munz persuaded the Claremont Graduate School to augment the graduate program by appointing a plant anatomist, and in 1956 the writer joined the Graduate School faculty and took an office in the Botanic Garden building. This group of researchers and professors, together with the Pomona College botanists, joined in offering graduate work leading to both M.A. and Ph.D. degrees in Botany. Research by graduate students in Botany at Claremont has focused largely on Californian plants, and a number of these studies have been published in the Botanic Garden's scientific journal, Aliso. To stress only the achievements of the scientific work of the Botanic Garden, however, would be to forget many noteworthy features. For example, the graduate students, who also are given offices in the Botanic Garden building, share in a warm, familylike atmosphere. The Botanic Garden has indeed become a superb showplace for display of native plants. There is an interplay between these grounds and the scientific work of the Garden. Many species are cultivated for research purposes. Plants on the grounds are used in teaching of courses for graduate students.

As Director of the Rancho Santa Ana Botanic Garden, Phil Munz had much to occupy his attention-not to mention the teaching of classes for graduate students and advising of those students. However, during this period he began a preposterously large effort: the writing of a flora of California. Originally, he envisioned contribution of certain segments by various authorities, with the balance to be divided between him and Dr. David D. Keck. However, Keck's duties at the New York Botanical Garden forced Keck to contribute less, and a larger burden fell on Phil Munz. Undaunted, he saw A California Flora through to completion. Desiring to update this work, he accumulated materials for a Supplement, which was subsequently published and is currently issued as an integral part of the book. Citing the 1681 pages of the Flora and the 224 pages of the Supplement does not convey the enormity of the work involved, for the huger the task, the far more complex and formidable it becomes. Phil Munz conscientiously gathered all possible sources of information, including cytological data, for these works. Without his perseverance, steadiness, expertise, and broad outlook, this vast achievement could not have been possible. Indeed, I doubt that anyone will ever have the fortitude to construct anew a flora for the entire state of California in the future.

A California Flora appeared shortly before Phil Munz's retirement as Director of the Rancho Santa Ana Botanic Garden in 1960. As Director Emeritus, he continued with unabated eagerness. In addition to writing four wildflower books, he produced monographs on Onagraceae and on Delphinium. Moreover, he began a task that would have frightened younger botanists: construction of a new flora of southern California. This book, A Flora of Southern California, appeared very shortly after his death. In many ways, it is his finest piece of botanical work, and ought to be studied as a model by those who endeavor to write floras in the future.

Phil Munz did receive honors during his lifetime, such as a special award of merit from the Botanical Society of America. Plants were named for him (Echinocereus munzii, Iris munzii, Layia munzii, Opuntia munzii, Munzothamnus); more would have been named for him had he not been so diligent in describing his own discoveries. However, those tributes he received during his lifetime seem inadequate to those of us who had the privilege of knowing the person. In addition to dedication and accomplishment of hard work, he had a keen sense of what was good in science, and he applauded the achievements of others. We found in him kindness, concern, wisdom, and warmth, which he often expressed with jovial humor. He and Alice were hospitable, and many professors, students, and friends have been their guests. Never too busy for a friendly talk, Phil offered informally any knowledge, any encouragement he could give, just as he did in the classes he taught. Phil Munz's growth and modernity during his later years were amazing. For example, he realized the pragmatic value of an herbarium arranged on a completely alphabetical basis, and he organized his A Flora of Southern California on this basis. Foresight, diligent work performed with joy, cheerfulness and kindness are qualities that are ALISO

timeless. The memory of Phil Munz is timeless, too, therefore, and will influence far more people than he could ever have guessed.

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(Photograph of Philip A. Munz by James S. Henrickson.)