

OUT OF THE WILD AND INTO THE GARDEN: GEOPHYTES IN THE LIFE AND WORK OF CARL PURDY

by Dot Brovarney

He is a man of great nobility, a man of strong character and high purpose . . . a man clear-minded, far-seeing and gifted with a rare sagacity.

—Willis Jepson
on Carl Purdy, 1935

It is somewhat common knowledge amongst California Native Plant Society members that Carl Purdy was a bit of a raper-plunderer.

—Phil Van Soelen, 2011

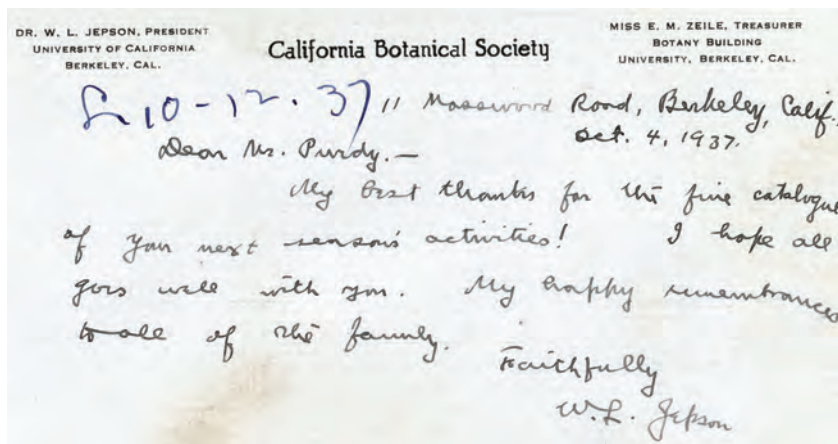
The disparity between these views of bulb collector and nurseryman Carl Purdy calls for research into the man's life, his work, his relationships, and the historical and botanical context in which he lived.

DISCOVERING CALIFORNIA WILDFLOWERS

By the turn of the 20th century, botanist and horticulturalist Carlton Elmer Purdy had become a leading expert on Western North American lilies, specifically *Calochortus*, *Erythronium*, and *Lilium*. He had arrived in Mendocino County as a nine-year-old in 1870. Inspired by his sister's love of flowers and fasci-



Golden globelily or Diogenes' lantern (*Calochortus amabilis*) was given its Latin name by Carl Purdy in 1901, years after he discovered it in Mendocino County in 1878. Photograph by Ree Slocum.



Willis Jepson remained a lifelong Purdy friend and correspondent, as did Cal Academy Curator Alice Eastwood, who named Purdy's iris (*Iris purdyi*) and Purdy's fritillary (*Fritillaria purdyi*) for him. Photograph courtesy of the Carl Purdy Family Collection.

nated by the natural world, young Carl spent hours hiking the countryside of rural Mendocino. In 1878 at the age of 17, he found a species of *Calochortus* that he would later learn had not been identified by botanists. Purdy followed a friend's advice and shipped the pressed flower of the bulbous plant to a New Jersey plant and bulb dealer who was seeking California wildflowers. This decision proved pivotal and was to set the course for the rest of Carl Purdy's life. The dealer, assuming it to be Mount Diablo globe lily (*C. pulchellus*), ordered 50 bulbs, paying 75 cents. For a young man facing limited job opportunities in a rural farming town, receiving payment for doing what he loved—exploring the natural world and learning about plants—was the catalyst for his career in horticulture. Growing and studying *Calochortus* over the next 20 years, Purdy determined that this flower he so admired was not *C. pulchellus*, but something different—a species unknown to science. Purdy named the new lily *C. amabi-*

lis, meaning “loved one,” commonly called golden globe lily or Diogenes' lantern.

A SELF-TAUGHT BOTANIST AND COLLEAGUE

An eager student of California botany, Purdy began learning about both wild and garden-raised geophytes—perennial plants propagated by underground storage organs, either bulbs, corms, rhizomes, or tubers. Purdy sent specimens and questions to California botanists, including Edward Lee Greene at UC Berkeley, John Gill Lemmon, and Mrs. Kate Brandegee. He developed lifelong friendships with Berkeley professor Willis Jepson; Alice Eastwood, Curator of Botany at the California Academy of Sciences; and Luther Burbank, who urged him to shift from a wholesale market to the retail trade in the early 1900s. Collecting natural specimens was a favored research method, so Purdy requested his colleagues collect and send specific bulbs from distant locations for him to study.

RESEARCHING AND WRITING ABOUT LILIES

Carl Purdy made a special study of lilies, especially the genera *Lilium*, *Erythronium*, and *Calochortus*, which he knew well from exploring north-west California. His two-decade study of *Calochortus* (Mariposa tulips, star tulips, and globe lilies) culminated in “A Revision of the Genus *Calochortus*” published by the California Academy of Sciences in 1901. Purdy based this monograph on extensive observation in the field, a study of herbarium specimens, and experiments in his garden where he tested different soils, elevations, light exposures, and moisture levels. This publication reveals that he was a disciplined researcher despite a lack of academic credentials.

During this period, Purdy applied what he learned from his experiments with geophytes and other plants to a growing horticultural business. English and European enthusiasm for gardening with West Coast native flowers had been kindled by Scottish botanist David Douglas who, in the 1830s, had sent Western North American native specimens back to England, including *Calochortus*. By the 1890s, Carl Purdy’s experience with East Coast sales and subsequent ones in Europe convinced him that a global market existed for West Coast native bulbs.

CHOOSING HOME AND GARDEN

Despite the lure of a lucrative landscaping career in the Bay Area following his role as garden manager for the 1915 Panama-Pacific International Exposition, Purdy returned to his home, “The Terraces,” in rural Mendocino County. Here, in the northern Mayacamas Mountains east of Ukiah, he had planted the spring-fed natural terraces with native and non-native bulbs. These gardens provided the grounds for

his experiments and horticulture business for over 60 years until his death in 1945 at age 84.

The earliest surviving catalog in the Purdy family collections is a simple one, printed for the wholesale market in 1891. Later retail catalogs, with detailed planting and growing descriptions, reflect Purdy’s knowledge from his experiments and customer reports about bulb growth in various locales. He marketed what he grew both from seed and bulb, as well as wild bulbs, which were collected primarily by trained employees and contractors in distant places.

COLLECTING

With landowners’ permission, Carl Purdy collected primarily in

California’s Coast Ranges, from the prairies bordering the Pacific to the interior valleys. He described his scope: “There are fifty-two counties in the state, and I get bulbs from only fourteen of them. . . . I draw from as little as a thirty-foot square in one case, and scattered over a few hundred acres where I get the most.”

Purdy’s assistants included trained local employees who traveled mainly in California and contractors in more distant West Coast locations. In 1912, Purdy told a *San Francisco Call* reporter, “My collectors are instructed to leave the bulbels [aka. bulbils, small secondary bulbs that grow between leaf and stem] and stalks, carefully covering them and in a few years they produce more than were dug out.”

This image of Carl Purdy in his gardens appeared in a 1940 issue of *Gentleman’s Quarterly*. Here he grew more than 3000 species and varieties of plants, including many California bulbs reproduced from both bulb and seed. Botanist Lois Weeth, who visited Purdy at the Terraces in 1936, recalls a variety of *Calochortus*, *Brodiaea*, *Camassia*, *Erythronium*, and *Trillium* species, as well as *Lilium pardalinum*, among other plantings. Photograph courtesy of the Carl Purdy Family Collection.



Documentation regarding Purdy's distant contractors is limited. Achieving complete control over their work habits would have been difficult, and in cases of their engagement to gather bulbs for other collectors, impossible. However, a newly discovered document indicates a vigilance regarding distant collectors and an insistence that they be of "the right fiber." In a 1903 letter, Southern California collector Robert Haley Asher, son of San Diego's first commercial nurseryman, described a Mr. Donaldson who had been sent to accompany him, as one who "was with Carl Purdy at Ukiah for several years."

HARVESTING FOR SUSTAINABILITY

Carl Purdy's collecting habits were informed by his experiences with Mendocino County's Native Pomo who relied on geophytes for starch in their diet. Purdy was familiar with their cultural traditions, having worked with the Pomo on his father's hop farm. His ventures into Mendocino's backcountry also provided a window into Native harvest practices.

The Pomo, like other California Indians, harvested edible bulbs, tubers, and corms, commonly known as "Indian potatoes." Using a digging stick, they removed large bulbs and dispersed the smaller ones, aerating the soil, accelerating plant growth for future consumption, in effect, cultivating and sustaining their food source.

QUESTIONS ABOUT OVERCOLLECTING

Concerns about Carl Purdy's work have been raised over the years, particularly in more recent times, as native plant rarity has increased and extirpation of some species has occurred. Besides misgivings about the practices of Purdy's distant collectors, other concerns are: the large

numbers of bulbs that Purdy claimed to have collected; his profiting from sales; and his marketing of some bulbs that he described as rare at the time.

"Rare" in the 19th century, when Purdy came of age and began his business, meant exotic and desirable, but not limited in abundance as it is considered today. (Think wild animal trophies, ladies' plumed hats, etc.) Some question whether his collection of then-rare plants contributed to their increasing rarity in the 20th century and, in some cases, current endangered status.

From the perspective of the present day, the volume of California native bulbs that Purdy collected seems shocking (e.g., 10 million between 1890 and 1920). The numbers of harvested bulbs, however, need to be considered in historical context. "Without historical perspective from which vegetative change can be reconstructed," cautions author Richard A. Minnich in *California's Fading Wildflowers*, "conclusions may be ad hoc stories."

Eighteenth and 19th century descriptions of California's native plant riches suggest that wildflowers generally grew in copious amounts, from the Pacific through the inland valleys and hills into the Sierra. The Coast appeared as a "Land of Fire" to the Spanish explorers for its profusion of flowers. To John Muir, the Sierra foothills were "living plant gold forming the most glowing landscape the eye of man can behold." Nine-year old Carl Purdy, en route to Ukiah from Petaluma in 1870, observed "masses of a single flower covering . . . hundreds of acres." Lacking quantitative data about existing geophyte populations in the American settlement period, it is difficult to conclude that Purdy's harvesting was excessive relative to plant abundance at the time.

Some critics point to Carl Purdy's business interest as a motivation for overharvesting. His lifelong career

of selling native and non-native bulbs and seeds was not a source of wealth. He engaged in other work to make ends meet—landscaping, article writing, and lecturing. Through these endeavors and his catalog, Purdy believed that his mission, in no small part, was to teach people about native plants, their culture, and adaptability to the garden.

ADDRESSING WILDFLOWER DISAPPEARANCE

During his lifetime, Carl Purdy himself addressed concerns about over-collecting and increasing wildflower disappearance. He noted the loss of wildflowers in great areas of California and the West, much of it beyond his collecting range. He considered the problem in the context of complex environmental changes that he had witnessed since the 1870s. This perspective, including decades of collecting along the same route from Mendocino County to Yosemite, gave him a unique opportunity to observe shifts in environmental patterns and their effects on native bulbs.

Purdy believed that the severe impacts that native plants had suffered resulted from several settlement activities: fire suppression leading to rampant growth of forest and brush crowding out native plants (contrary to the Native practice of selective burning, which opened up shaded areas, promoting plant growth); ever expanding clearance of land for agriculture; grazing, particularly sheep; and the introduction of invasive grasses supplanting both wildflowers and native grasses.

Carl Purdy demonstrated a passion for plants throughout his life. His love of the natural world is reflected in the tone and content of his published writing and handwritten lecture notes, as well as in his personal and business correspondence, particularly with his colleagues in California botany and horticulture. His greatest pleasure



Carl Purdy and crew sorting bulbs at the Terraces, his nursery and home, in the Mayacamas Range near Ukiah, California, c. 1914. Purdy marketed garden-grown bulbs along with wild-collected ones. Photograph by Charles Turrill, courtesy of the Carl Purdy Family Collection.

beyond the plants themselves was sharing his joy with the world's gardeners.

REFERENCES

- Anderson, M.K. 2005. *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*. University of California Press, Berkeley, CA.
- Asher, Robert Haley to Mrs. J.M. Asher. 1903. Collection of Peter Brueggeman, La Jolla, CA.
- Jepson, W.L. to Carl Purdy. 1937. Carl Purdy Papers. Purdy Family Collection, Ukiah, CA.
- Jepson, W.L. 1935. Field book 55: 63. Jepson Herbarium, University of California, Berkeley, CA.
- Lenfest, L.A. 1912. The lily man of Ukiah. *San Francisco Call*, April 7.
- Minnich, R.A. 2008. *California's Fading Wildflowers: Lost Legacy and Biological Invasions*. University of California Press, Berkeley, CA.
- Purdy, C.E. 1891. *California Bulbs*. Carl Purdy Papers. Purdy Family Collection, Ukiah, CA.
- . 1893. *Novel and Rare Bulbs and Plants*. BiodiversityLibrary.org.
- . 1880–1895. John and Sarah Lemmon Papers, University and Jepson Herbaria, UC Berkeley.
- . 1901. A revision of the genus *Calochortus*. Proceedings of the California Academy of Sciences. 3d ser.: *Botany* 2(4):106-157.
- . 1903. A revision of the genus *Calochortus*. *Flora and Sylva* 1(1): 22-30.
- . 1919–1920. *California's Choicest Bulbs*. BiodiversityLibrary.org.
- . 1927–1928. *California's Choicest Bulbs*. Collection of Ellen Uhler, Oakland, CA.
- . late 1920s. TS. Carl Purdy Papers. Purdy Family Collection, Ukiah, CA.
- . 1976. *My Life and My Times*. Np: Eugene and Mary E. Humphrey.
- . N.d. MS. On wild flowers, are they disappearing and if so why? Carl Purdy Papers. Purdy Family Collection, Ukiah, CA.
- Van Soelen, P. 2011. Letter. *Pacific Horticulture* 72(4):56.
- Weeth, L.W. 2003. A visit with Carl Purdy. *CNPS Sanhedrin Chapter Newsletter* (Winter/Spring 2003–2004): Np.

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