Domesticating Wildflowers: Spare the Water

Flowers: Calochortus can be grown from bulbs or seeds, but they must be protected from insects. They produce magnificent blooms.

By KEVIN CONNELLY

Mariposa lily displays blotches on petals resembling butterflies.

Fred Smith tends calochortuses in his Glendale home. He has experimented in their cultivation for years.
Attraction is what flowers are all about. Their brilliant colors and unusual markings are beacons for insects and other pollinators, but they wind up attracting human beings as well. In California’s arid plains such flirtations have developed into lifelong infatuations for many people, especially when the flowers involved are the ones called calochortus.

In 1878, Carl Purdy, a 17-year-old Michigan native, was living with his family in Mendocino County. As he wandered the oak woods collecting wildflowers for his sister, who was recuperating from tuberculosis, he noticed some dainty yellow flowers that resembled glowing paper lanterns. He dug up some of the plants, which he found grew from bulbs, and mailed them to a New Jersey flower broker who dealt in California plants.

The broker replied that the flower was a type of calochortus, a genus of the lily family related to tulips, and that he would pay Purdy $1.50 for each 100 bulbs he could send. From then until his death in 1945, Purdy made a career of exporting calochortuses and other California bulbs dug from the wild, in one year alone shipping over a million bulbs.

Perhaps 40 calochortus species are native to California, and they fall into three categories. Globe lilies or fairy lanterns have nodding, lantern-shaped flowers, while the type star tulips have erect, open flowers, their petals sometimes so thickly covered with hairs as to suggest another common name, cat’s ears.

But the most famous of the calochortus clan are the mariposa lilies, whose petals are often punctuated with spots, streaks and blots of color resembling the markings on butterfly wings.

All types of calochortus grow in summer-dry environments, a factor few of Purdy’s customers understood. Because they were watered in summer or planted in summer-rainfall areas, most of the bulbs Purdy sold perished in a year or two. Fortunately, some of Purdy’s customers persisted and became expert calochortus growers.

In his last years, Purdy sold some bulbs to Fred Smith, at that time an El Monte traveling salesman. Smith potted the bulbs and was pleased when they bloomed the following spring. However, that summer he left them in his mother’s care while he traveled, and she watered them to an early death.

Smith was not about to give up, for he had been enamored of mariposa lilies since a 1936 high school hike in the Montebello hills. There he found Calochortus catalinae, a shapely, tulip-like flower that he recognized as a relative of the sego lilies of his native Wyoming. He was hooked, but his urge to grow calochortuses lay dormant, for years until he saw Purdy’s catalogue.

After his initial failure, Smith started to grow calochortuses from seed, experimenting with various soil mixes, containers and watering schedules. Now retired and living in Glendale, Smith continues to be fascinated by the globe lilies, star tulips and mariposa lilies he grows in redwood boxes arrayed around his swimming pool.

The new generation of calochortus fanciers is represented by Rob Ferber, a Caltech biology student whose introduction to the genus is strangely similar to that of his predecessors. Ferber’s family moved from Pennsylvania to La Canada Flintridge in 1978, when he was 9-years-old. His first impression of California was, “It’s a desert! It’s dead!”

He found little else to like until, while visiting relatives in San Diego a few years later, he came across what he considered “a really pretty flower.” It was Calochortus splendens, a lavender-flowered mariposa lily. When his attempts to grow them from seed failed due to summer watering, he began to study calochortus in earnest.

Ferber is now researching the molecular genetics of calochortus, trying to learn how the 60 or so species which range from British Columbia to Guatemala are related to each other and how they evolved.

Besides unraveling this scientific mystery, Ferber is also making progress on how to grow calochortuses. Studying diseased bulbs, he observed that they had been gnawed by mice, allowing fungi to penetrate the bulb and rot them. So, in addition to keeping bulbs dry in their dormant period, Ferber recommends drenching them with the insecticide diazinon and the fungicide benlate during the growing season.

Calochortus bulbs planted now will flower in the spring and, with adequate care, will bloom at least every other year thereafter. They should only be planted in strictly summer-dry parts of the garden or in containers, most growers favoring redwood boxes or clay pots.

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