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AN EXCERPT FROM

yard full of sun

The story of a gardener's obsession that got a little out of hand

"You could call our dusty garden a corral of plants, or a nurseryman's obsession run wild, but mostly our yard is a response to a powerful sun moving across a big sky," says Scott Calhoun in his preface to *Yard Full of Sun*. This guide to arid-land gardening chronicles the adventures of one young family as they design and construct a true desert paradise on Tucson's east side. In addition to plant charts, resource lists, and answers to FAQs, this book helps readers identify their own personal "big ideas" for designing their gardens, at the same time challenging our notions of landscape and of the desert.

When hot weather sets in, 'Baja Red' queen's wreath charges upward.

WRITTEN AND PHOTOGRAPHED BY **SCOTT CALHOUN**

CURTAINS OF VINES

In the 1920s, Arizonans knew how to keep cool. Before the invention of air conditioning, most homes had sleeping porches, also called Arizona rooms, and many homes used awnings and trellised vines to protect west- and south-facing windows from the intense afternoon sun. On really hot days, these vines would be hosed down for extra cooling. This method was so venerable that Phoenicians called it "the way Cleopatra kept cool," according to Bruce Berger's *The Telling Distance.* Even now, when many Southwesterners would consider living without air conditioning as preposterous as living in a desert without a golf course, it seemed to me that using trellised vines was still a great way to passively cool our house.

A 1989 ASHRAE (the American Society of Heating, Refrigerating, and Air-Conditioning Engineers) study found that windows fully shaded from the outside have a summer solar heat-gain reduction of 80%, and this study only considered the value of blocking the solar radiation. It did not consider the second cooling benefit that vines provide: their leaves transpire water. Like a tiny misting system too small to feel but nonetheless effective, vines cool the air by releasing tiny amounts of water vapor. Since many vines grow fifteen feet or more in one season, they offered us a quick shade fix while our young trees were filling in.

If you think of the plants in your yard as outdoor furniture, vines are the curtains and ceilings of the garden. Vines can divide the yard into "rooms" without the expense and permanence of brick and mortar partitions, and they can provide as much overhead protection from the sun as a covered porch can. Because vines grow vertically, they fit well in even the smallest yards. In spite of all these benefits, vines are still not widely planted in Southwest yards.

Our small yard seemed the perfect candidate to drape with vines. We had little horizontal space but lots of vertical space. We had installed two water-harvesting culverts in our back yard that needed some vines to soften their look of gleaming steel. Because the vines I wanted to use required something to climb on, I designed two circular steel trellises to slide over the tops of our culverts. On these round trellises, I planted a pair of yellow morning glory vines (*Merremia aurea*), which are native to southern Baja California and fit in fine with the Mexican theme in our back yard. Their vigorous star-shaped leaves have covered my culverts and turned them into twin green cylinders. In the summer, when the heat really gets cranking, this vine is covered with an astounding number of big, bright yellow morning glory-like flowers. After flowering, the vine produces a papery seedpod that contains up to four seeds. Zoë has taken up collecting the seeds, which look exactly like black velvet-covered rabbit droppings. The seeds are as hard as rocks and are highly sought after among native plant enthusiasts. As evidence of how much they flower, we now have a storage-size freezer bag nearly full of black seed that Zoë gathered from the two plants in just one growing season.

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1 Snail vine forms a living blind over a westward-facing window.

2 "Stinky" passion vine, or *Passiflora foetida,* twines its way across the top of a ramada.

Next to one of the water-harvesting culverts, I built a little ocotillo fence on which I hung my collection of Southwestern license plates. This fence needed a petite little wisp of a vine to climb up through, but not obscure, the license plates. I chose a vine that I had seen growing out of a crack in the cement at the Arizona-Sonora Desert Museum—a small native called twining snapdragon (*Maurandya antirrhiniflora*). At the Desert Museum, the snapdragon vine was growing up over a little agave in a gauzy halo. This vine sent out a fine embroidery of tiny heart-shaped leaves and a good number of purple and white snapdragon-shaped flowers. I love the way the green tendrils and white flowers look draped across Utah's Delicate Arch license plate, and the purple flowers look particularly fine against the green backdrop of the Colorado plate. This little vine, which rarely reaches ten feet high, was perfect for the ocotillo fence.

I can think of few things better than a vine that provides both shade and fruit, and that's exactly what the native "stinky" passion vine (*Passiflora foetida*) does. This plant grows very fast, and in a single summer, it nearly smothered our ramada, providing an awning of velvety silver three-lobed leaves overhead. The native passion vine blooms a pale-blue flower followed by excellent fruit about the size of a large grape that falls to the ground when ripe. That first summer, Zoë and I often went outside in the evening to collect the fruit. We found that if we waited until morning the crickets would beat us to it, leaving only hollowed-out husks. You eat the fruit by biting off one end and squeezing the pulp into your mouth, discarding the skin. Its flavor and texture suggest a cross between a grape and a kiwi fruit: it has the juicy, slippery insides of a grape and the little crunchy black seeds of a kiwi. Our vine produced copious amounts of fruit, and we ate loads of it throughout the summer, especially after monsoon storms induced mass blooming and fruiting. When the fruit drop was heavy, Zoë took pockets full of passion fruit to school to share with her friends.

Yellow morning glory scales a 480-gallon rainwater collection culvert, or cistern.

Most people don't plant the passion vine for its fruit. This plant is a big-time butterfly plant and is the primary food source for the gulf fritillary butterfly. Butterfly gardeners are crazy for this plant. Personally, I welcome the gulf fritillary with the same enthusiasm that the Egyptians welcomed the plague of frogs. The butterfly plague begins with the appearance of fuzzy black and copper caterpillars, which you don't notice until you look up and think, "Hmm, this vine looks a little more sparse than it did last week." At this point, the caterpillars are not visible to your untrained eye. Then you notice one happily chewing a pubescent silver leaf. Once you find him, your eye will become attuned, and you will quickly discover all of his brothers and sisters and cousins lunching on every section of your vine. I don't spray any non-organic chemicals in my yard, but I have been tempted to spray BT (*Bacillus thuringiensis israelensis*) to rid my vine of caterpillars. BT is a naturally occurring bacterium so benign that even organic farmers use it. I would have used it myself, but I worried that I would greatly upset my butterfly-gardening peers. After all, the editor of *Butterfly Gardening* magazine lives right around the corner from me, and she would be sure to notice the decrease in fritillary activity the following summer. They are good people, but if I riled them up they might burn me in effigy at their annual meeting. So I held off on the spraying and tried to make my peace with the gulf fritillary.

The larvae ate my native passion vine to the ground, and it didn't come back the next year. Because of its popularity with the local caterpillars, I had just about given up on this particular native plant—until I noticed seedlings popping up in several places around the ramada. All those fruit casings that Zoë and I had tossed into the garden after sucking out the pulp must have contained a few seeds. It appeared we would have another summer full of passion fruit and shade.

During the time I thought the passion vine was a goner in our garden, I

planted another vine I had long admired in its place: 'Baja Red' queen's wreath (*Antigonon leptopus* 'Baja Red'). I had seen this vine in an all-red garden at the Arizona-Sonora Desert Museum, rambling over a rustic ramada made of twisted mesquite logs. Its leaves were big and heart-shaped and crinkled like crinoline, and its sprays of flowers were a deep reddish magenta. Regular queen's wreath is common around the old barrio areas of Tucson and is also fondly known as San Miguelito. I had also seen queen's wreath in its native range in southern Sonora, rambling over trees and shrubs on canyon hillsides. I liked this big-hearted vine right away. It has a feminine appearance and looks like something your granny would plant, but it is tougher than a tomcat. Queen's wreath grows from a big tuberous root, which stores starch and water and allows the plant to survive tough desert conditions.

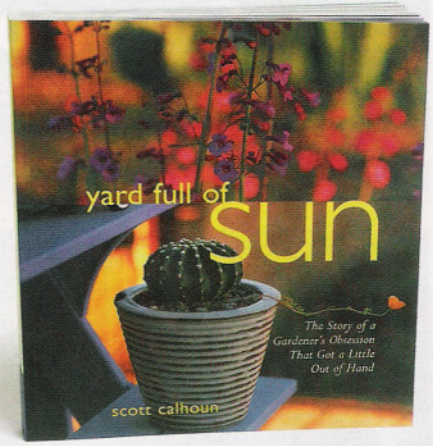
My neighbor around the corner had queen's wreath planted at the base of his foothills palo verde tree. In the late summer, a cloud of pink flowers would emerge like a hat at the top of his tree. The pink created a wonderful contrast with the lime-green palo verde branches. In our back garden, which was primarily red in color, pink wouldn't work—I needed the reddest flowers we could find, and 'Baja Red' seemed to fit the bill.

A slow starter, it climbed ten or twelve feet the first year. By the second year the queen's wreath and the passion vine were fighting for the entire ramada ceiling. It was like the showdown of the desert climbers. Who would dominate? It turned out that the passion vine got a jump-start on the queen's wreath, but the queen's wreath engulfed the passion vine later in the season. Queen's wreath does attract a lot of bees, so you might want to be careful if you're allergic to bee stings. However, in my experience, the queen's wreath provides so many flowers that the bees are busy gathering nectar and pollinating and are not concerned with the humans below.

Other un-vinelike vines are vining cacti. Some of them will climb through trees like the tentacles of a giant octopus, and others will crawl along the ground like fat green boa

constrictors. Nearly all of them have large white blooms that illuminate the night several times throughout the year.

On the steel ramada in our back yard, we are growing a strange climbing cactus along with passion vine and queen's wreath. It's a large, cantankerous plant called the moon cactus (*Harrisia bonplandii*). I saved this cactus from under a tree that was being cut down; its former owner was ready to put it in the trash. Using green nursery tie-tape, I've woven this climbing cactus in and out of the steel grid of our ramada. One of the moon cactus's charms and frustrations is that, as with the mesquite tree, there is no straight to it. It twists and bends and coils on itself like a garden hose. I am trying to encourage it to grow up, yet it insists on sending out large shoots that swoop down toward the ground. So I tie and trestle the lower branches to promote upward growth. There is one branch growing toward the top of the ramada in exactly the fashion I had imagined, but its fellow branches refuse to follow its lead.



Just when I'm thinking the trash might have been the proper home for this cactus, summer comes. The moon cactus begins to grow strong green arms in all directions. One summer night, we noticed a flower bud the size of a man's fist. The next night that bud exploded into an obscenely large and lusty white flower caked with globs of yellow pollen. When it blooms, it is like its namesake: dogs bark, cars stop, and the neighbors come over. No one can resist a freakishly large moon-like cactus flower.

A fourth-generation Arizonan, Scott Calhoun manages the garden center at Civano Nursery in Tucson, Arizona, where he lives with his wife and daughter. His home and award-winning garden have been featured in Horticulture *and* Sunset *magazines, and he has a weekly gardening show on local television, Channel 13, Thursdays at noon.*