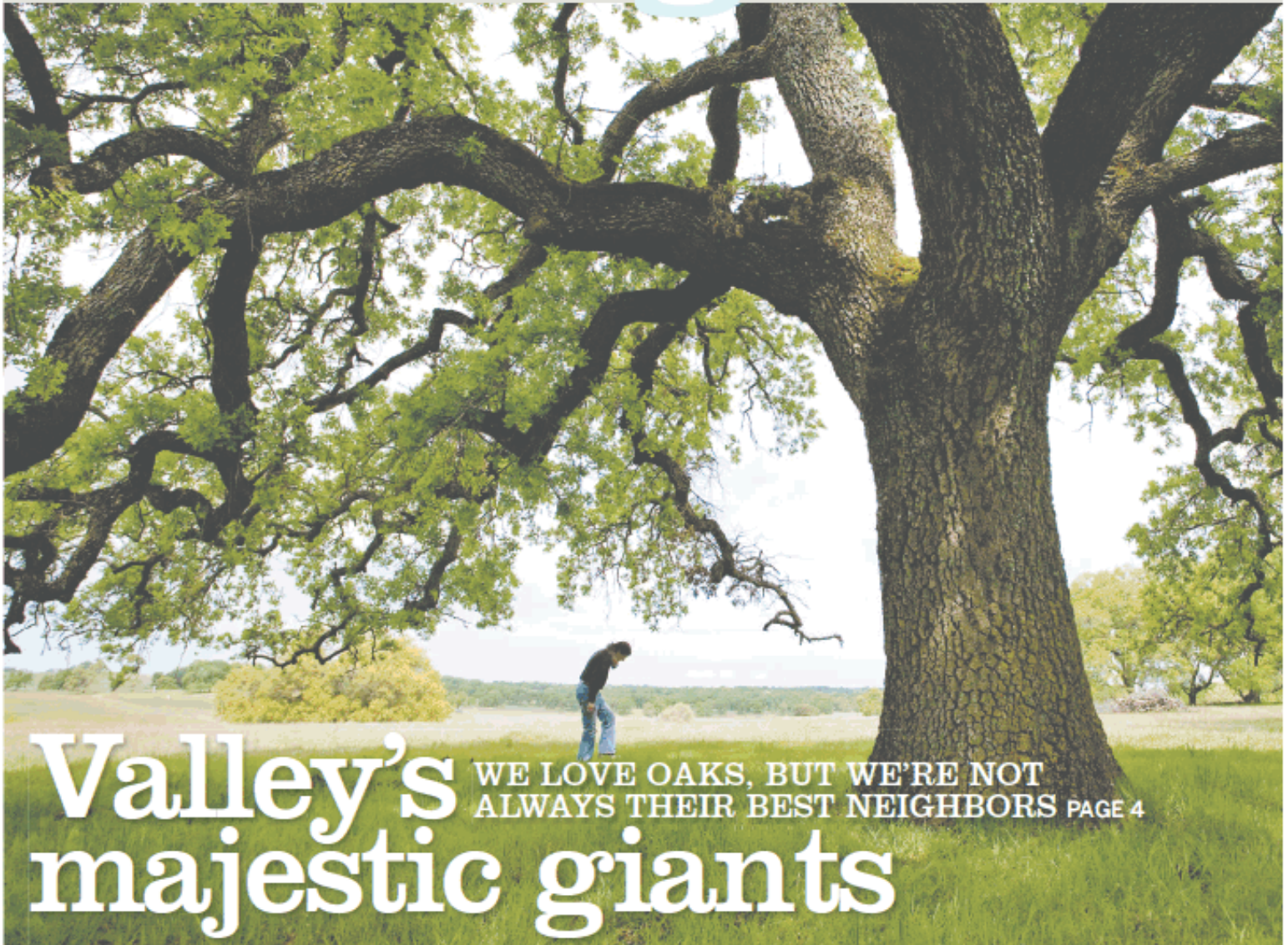


home & garden



Valley's WE LOVE OAKS, BUT WE'RE NOT ALWAYS THEIR BEST NEIGHBORS PAGE 4
majestic giants

Cover story

Oaks earn their place in the sun

By DEBBIE ARRINGTON
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We live with oaks, but we're not always the best neighbors or caregivers.

These native trees may have survived centuries, but we can kill them quickly with our kindness – too much water and too much fertilizer. Or we may inadvertently stomp on their sensitive roots and usher in a speedy demise.

In our urban sprawl, thousands of local homes and businesses have an oak on the property, often predating the construction by generations.

Living with heritage oaks means understanding their needs. And those needs vary widely, depending on the oaks' own family roots.

"I was unhappy seeing so many oaks in urban areas declining and dying," said oaks expert Laurence Costello, co-author of the extensive "Oaks in the Urban Landscape" (University of California, \$65, 265 pages). "It's just a shame; they're such a beautiful tree and the symbol species of California." By understanding these trees and their care, he said, landowners can stop the die-off.

Costello, who retired this summer from the University of California's Cooperative Extension, and co-authors Bruce Hagen and Katherine Jones turned decades of scholarly oak research into a definitive how-to guide for home gardeners as well as arborists.

"What's really important: Know what kind of species you have," Costello said. "Is it a California native or imported? It makes a huge difference."

The natives – along with Mediterranean oaks – prefer dry summers. Oaks from wetter regions – such as England or Mississippi – can take a lot more summer water.



Leslie Sterling for Ing@sacbee.com

Melaine Aufdermaur, left, and Grace Swickard, former UC Davis students, return to a favorite oak in the UC Davis Arboretum to take photos of each other.

Don't surround a valley oak with lawn; irrigation three times a week can cause fungus problems in the root and crown. But other species such as the Texas live oak can be happy ringed by grass.

"The key thing with valley oaks: Avoid destruction of the root zone as much as possible," Costello said. "Don't put in a swimming pool or utility lines or even an irrigation line until you know exactly where those roots are. They can be a long way from the trunk, but they're very sensitive."

"You can put in a new lawn

in a day," he added, "but it may have taken 150 years for that valley oak to grow. You could plant a replacement, but you won't be around to see it reach maturity."

Oaks are worth the special effort, Costello added. "People need to understand they're different beasts. They're well adapted to our area, but we change their environment. You've got to appreciate that oaks are different from other planted trees in the urban landscape."

Mulch – preferably bark – keeps oak roots comfortable.

Avoid compacting the soil under trees; those roots need to "breathe," too.

"The biggest misconception: that oaks need a lot of fertilizer," Costello said. "The natives in general don't need feeding."

Pruning can be problematic, too; it often can weaken an older tree. Always call in an expert before cutting branches, Costello advised.

Sacramentans don't have to go far to see oaks in all their natural glory.

"Some of the largest trees in our collection are oaks," said



Acorns are forming on a netleaf oak in the UC Davis Arboretum. The 6-acre oak grove is home to 85 species, grouped according to their watering needs. Many oaks thrive without extra irrigation.

HOW TO KEEP OAKS HAPPY AND THRIVING

Symbolic of the Sacramento Valley, oaks offer a lot to home landscapes, but they're not for every garden. Here are some pros and cons to consider, courtesy of the UC Davis Arboretum staff.

GROW AN OAK BECAUSE ...

- Picturesque spreading branches add beauty to the garden. Mature trees increase property values.
- Many oaks are long-lived and drought tolerant, provide shade and require little maintenance.
- Contrary to popular belief, many oak species grow rapidly and tolerate normal garden irrigation. Most California native oaks prefer dry summer conditions.
- Oaks support native wildlife like jays, squirrels, insects and songbirds.
- Some oaks, such as valley oak, are resistant to Sudden Oak Death, a disease that is epidemic in coastal northern California but not now a problem in the Central Valley.

POTENTIAL PROBLEMS

- Trees that are too big for the site can cause problems for home gardeners. Pruning large trees can be expensive, and spreading roots can lift sidewalks and damage foundations.
- Leaf litter and acorns can be messy.
- Evergreen oaks create deep shade that makes it hard to grow other plants.
- Native oaks and lawns are not compatible. Frequent irrigation can cause fungal diseases in some oaks.
- Deep-rooted seedlings can be a challenge to weed.
- Some oaks, such as coast live oak, are susceptible to Sudden Oak Death disease, particularly in coastal regions.

CHOOSING THE RIGHT OAK

- Oaks' needs vary according to their species. Most thrive with minimum care – a layer of mulch and deep, infrequent irrigation. These varieties in particular thrive in the Sacramento Valley and are immune to Sudden Oak Death:
- **VALLEY OAK (*Quercus lobata*):** Mighty deciduous oak of the Central Valley is upright and fast-growing when young. It grows to 50 to 70 feet tall with a spreading crown as it matures. Tolerates moderate irrigation, heat and alkaline soils.
 - **ENGLISH OAK (*Quercus robur*):** Fairly fast-growing deciduous tree to 50 to 60 feet tall with a wide open canopy. There are also upright forms with narrow canopies. Tolerates occasional to frequent watering.
 - **SOUTHERN LIVE OAK (*Quercus virginiana*):** Picturesque evergreen oak of the South, with wide, open canopy of glossy leaves. Grows moderately fast to 40 feet tall and wide. Tolerates irrigation or dry conditions.
 - **GAMBEL OAK (*Quercus gambelii*):** Small, rugged oak to 30 feet tall, deciduous, adaptable to many soil types and moisture levels. Fast grower in rich soil. Can be multi-trunked.

WHAT TO PLANT UNDER OAKS

Oak partners – plants that make themselves at home under trees' spreading branches – have to like shade. But is that dry shade or irrigated shade?

Oaks native to California and the Mediterranean basin prefer dry summer conditions with little irrigation – deep watering once or twice a

month. Potential partner plants need to have the same water needs or gardeners risk harming the oak due to overwatering.

Some suggested oak partners for California natives: Snow berry (*Symphoricarpos albus*), hummingbird sage (*Salvia walthamiae*), Canyon Snow Pacific iris (*Iris douglasiana*), California fescue (*Festuca californica*), deergrass (*Muhlenbergia rigens*), coral bells (*Heuchera Rosada*), island alumroot (*Heuchera maxima*), evergreen currant (*Ribes viburnifolium*) and toyon (*Heteromeles arbutifolia*).

RESOURCES

- "Oaks in the Urban Landscape: Selection, Care and Preservation" by Laurence Costello, Bruce Hagen and Katherine Jones (University of California Agriculture and Natural Resources Publication 3518; \$55, 265 pages). This comprehensive new book is a wonderful guide for anyone serious about oaks, particularly in Northern California. Hundreds of native and imported oak species are profiled (including where to find examples in Sacramento, foothills and the Bay Area) with attention to their unique qualities and needs. From acorns to Sudden Oak Death, this book tackles the care and nurturing of trees – whether heritage oaks or newly planted – as well as diagnosis and treatment of potential problems. Preservation issues, such as the impact of urban development and ordinances to protect trees, also are explored. Illustrated with scores of color photos. Available online from

<http://anrcatabg.ucdavis.edu> or call (800) 994-8849.

- Shields Grove, UC Davis arboretum: Visit the campus' 6-acre collection of oaks. In artistic fashion, new ceramic plaques offer insight into the names and history behind more than 80 species in the collection. With places to relax and picnic, the grove is open free daily, dawn to dusk, with free one-hour street parking on Garrod Drive. Visitor parking (\$6) also available in Lots 54 and 55. For a map and more details, click on the arboretum's oak collection page at <http://arboretum.ucdavis.edu/oak-collection.aspx> or call (530) 752-4880.

- www.californiaoaks.org: An offshoot of the California Wildlife Foundation, this Oakland-based project is devoted to protecting California native oaks. The website features lots of information on care of native oaks as well as how to collect, store and plant acorns; special projects for kids; plus links to nurseries that offer oaks and arborists with oak expertise. California Oaks can also be reached by phone: (510) 763-0282.

- Sacramento Tree Foundation: This local resource knows its oaks, including acorn propagation and conservation. Click on www.sactree.org or call (916) 924-8733.

- Oak Conservation blog: University of California experts share their latest research and tackle current issues about oaks in risk. Read it at <http://ucanr.org/blogs/OakCon>.

—Debbie Arrington

Ellen Zagory, horticulture director for the UC Davis Arboretum, home to several hundred oaks. "They're literally enormous and majestic."

Located on the west end of the UC Davis campus, the 6-acre Peter Shields Grove boasts 85 species of oaks – out of more than 400 species worldwide. California's 20-plus native species are represented along with varieties from throughout the Northern Hemisphere, the oak's natural range. Some are deciduous, others evergreen.

"There are oaks in tropical rain forests, oaks in deserts, oaks on mountains and oaks in bogs," explained Emily Griswold, who oversees the collection. "We cluster them by their care needs.

"Because we are a collection, we can let the oaks

grow naturally with their branches all the way to the ground," Griswold added. "We let them all hang out."

California and Mediterranean oaks are irrigated every two weeks. The arboretum's oldest tree is a 400-year-old valley oak. Besides the natives, the most common oak on campus is cork oak.

"We probably have more cork oaks than anywhere in the New World," Zagory added.

Native to Portugal, cork oaks became popular in the early 1900s throughout Sacramento and Davis; their renewable bark is the source of wine corks. They tolerate more irrigation than many native oaks, helping them adapt to urban landscapes.

More than 80 years old with a trunk 18 feet around, a gigantic cork oak dominates David Weil's yard near

Land Park.

"It's a little nervous living with a tree that size," Weil said. "It's so huge and it's right by the house. But it looks healthy and it's absolutely gorgeous."

"It's a fascination," Weil added. "It's the largest oak in the neighborhood, and the bark is so unusual."

Weil has two other large oaks on his lot. Together, they provide abundant shade, keeping his home and garden cool. Because they tolerate irrigation, he has an extensive shade garden planted beneath their branches. "I'm still learning about them," he said. "I'm a caretaker."

Oaks can be a lot of work. "They're messy," he said. "They always seem to be dropping something. ... But they're beautiful trees."

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Volunteers at the UC Davis Arboretum take a break in the shade of four Persian oaks in the Peter Shields Grove. Native and imported oaks are well-represented in the arboretum.