



Drought-Adapted Landscapes

WHAT IS A MEDITERRANEAN CLIMATE?

WHAT DOES WATER HAVE TO DO WITH IT?

PLANT ADAPTATIONS TO MEDITERRANEAN CLIMATES

TWO MAIN STRATEGIES: DROUGHT RESISTERS AND DROUGHT EVADERS

Drought Resisting Strategies

- Tough, leathery, evergreen leaves (sclerophyll) that resist dehydration
- Vertical leaf alignment to reduce sun exposure
- Hairy or fuzzy leaf surfaces to reflect sunlight
- Gray or gray-green leaves to reflect sunlight
- Bloom or farinose powder to reflect sunlight (often seen on succulents)
- Small leaves to reduce surface area minimizing dehydration
- Seasonal dimorphism: Bigger leaves in the spring when it is rainy, then smaller leaves in the dry season

Drought Evading Strategies

- Drought deciduous – lose leaves in summer to conserve plant resources
- Water storage in stems and leaves, often seen in succulents
- Geophytes (“Bulbs”) – underground food and water storage
- Annuals: complete life cycle in one season; “opt-out” when conditions are harsh

Other Adaptations

- Roots with two water-seeking strategies: deep and wide
- Roots with ways of accessing nutrients in the poor soils often found in mediterranean climates
- Surviving wildfire

KEYS TO SUCCESS

- Understand the unique features of a mediterranean climate and use them to advantage.
- Notice what looks good during each month of the year, and plan for year-round interest. Visit gardens that feature drought-tolerant plants to get inspired!
- Common “looks” in mediterranean climate plants include dark green leathery leaves, tiny leaves, and gray/fuzzy leaves. Pay attention to how things look together: too much of any one element is deadly dull, yet too much diversity often reads as random in the worst possible way.
- Group plants with similar growing needs (sun/shade, water, etc.) together.
- When planting: Dry Plant + Dry Hole = Dead Plant
- The best time to plant is with the winter rains, NOT in April.

RESOURCES -- BOOKS

Designing California Native Gardens : The Plant Community Approach to Artful, Ecological Gardens, by Glenn Keator and Alrie Middlebrook (Berkeley: University of California Press, 2007).

Mediterranean Gardening : A Waterwise Approach. Gildemeister, Heidi. (Berkeley: University of California Press, 2002).



The New Sunset Western Garden Book: The Ultimate Gardening Guide, edited by Kathleen Norris Brenzel (New York, NY: Time Home Entertainment Inc., 2012).

Plant Life in the World's Mediterranean Climates, by Peter R. Dallman (Berkeley, CA: University of California Press, 1998).

Plants and Landscapes for Summer-dry Climates of the San Francisco Bay Region, by Nora Harlow ([Oakland, Calif.]: East Bay Municipal Utility District, 2004).

A FEW USEFUL WEBSITES

CLIMATE, SUSTAINABILITY AND WATER CONSERVATION

ReScape California (formerly the Bay-Friendly Landscaping and Gardening Coalition). Free information on how to create sustainable and drought-tolerant gardens, and a search function to help you find Bay-Friendly Qualified landscape professionals.

<https://rescapeca.org/resources/for-communities/>

Also see: <http://rescapeca.org/wp-content/uploads/2016/01/Bay-Friendly-Gardening-Guide.pdf>

Gardening in Mediterranean Climates Worldwide. Comprehensive website about gardening in Mediterranean climates. Includes climate information, useful lists of plants, including dry shade and clay soil; books, forums, blogs. <http://www.gimcw.org/>

PLANT SELECTION AND WATER USE

Calscope. Enter an address or zip code to generate a list of California native plants local to that area. Includes helpful categories such as trees, shade, bird and butterfly, hedges. <https://www.calscape.com/>

Selectree: A Tree Selection Guide. Right tree, right place. Enter tree attributes (size, sun/shade, *Sunset* zone, etc.) to generate a list of trees appropriate to the site. <https://selectree.calpoly.edu/>

Water Use Classification of Landscape Plants (WUCOLS IV). Evaluates water use of over 3,500 ornamental plants by region. Searchable by plant name, water use, region, plant type. <https://ucanr.edu/sites/WUCOLS/>

A FEW NURSERY WEBSITES WITH RELIABLE PLANT INFORMATION

Las Pilitas Nursery. California natives.

<https://www.laspilitas.com/>

Mountain States Wholesale Nursery. Desert adapted plants; plant information sheets.

<https://www.mswm.com/>

San Marcos Growers. Extensive plant database.

<https://www.smgrowers.com/>

Delta Bluegrass Company. Lower water use sod; California native grass turf blends.

<http://www.deltabluegrass.com>

AND...

The UC Master Gardener Program of Contra Costa County. We're here to answer your gardening questions!

<http://ccmg.ucanr.edu/>