

Mojave Desert Vegetation

By Todd Keeler-Wolf

Although considered the smallest North American desert, the Mojave Desert is the largest desert in California. It stretches over approximately one fifth of the state and beyond to southwestern Utah and northwestern Arizona. It epitomizes much of what we consider to be the true desert of the American southwest. Home to such desert icons as the Joshua tree (*Yucca brevifolia*), Death Valley, and the lower reaches of the Grand Canyon of the Colorado River, the Mojave Desert is rich and varied, known for its stark beauty, rugged topography, and high biological diversity. There are an estimated 1,500 plant taxa in the Mojave, 210 of them endemic to the state.



Joshua tree alliance
(*Yucca brevifolia*/*Pleuraphis rigida* association)
Joshua Tree National Park, Mojave Region
DFG photo: Todd Keeler-Wolf

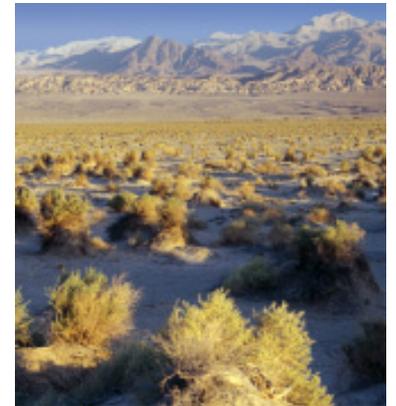
The Mojave is a transitional desert, lying midway between the hot Sonoran Desert to the south and the cool Great Basin Desert to the north. The pattern of rain and snowfall transitions from a summer-dry pattern reflecting California's Mediterranean climate in the western Mojave to a pattern of winter and summer moisture in the eastern Mojave. Certain succulents such as Utah agave (*Agave utahensis*), Spanish bayonet (*Yucca baccata*), Mojave yucca (*Yucca schidigera*), and grasses such as big and little galleta

(*Pleuraphis rigida* and *P. jamesii*) and side-oats gramma (*Bouteloua curtipendula*) are common in the eastern portions with summer rain. Other species found in the western Mojave, but not the eastern, include many winter annual herbs such as



Blackbush (*Coleogyne ramosissima*) alliance
Death Valley National Park, Mojave Region
DFG photo: Todd Keeler-Wolf

desert coreopsis (*Coreopsis bigelovii*), goldfields (*Lasthenia californica*), and California poppy (*Eschscholzia californica*). These and many other species present spectacular wildflower displays in good winter rainfall years.



Arrowweed (*Pluchea sericea*) alliance
Death Valley National Park, Mojave Region
DFG photo: Todd Keeler-Wolf

Alluvial fans and basins comprise much of the landscape of the Mojave Desert. Extensive alluvial fans form skirts around the mountains and fill much of the basins. They are typically vegetated with Creosote bush (*Larrea tridentata*)-burrobush (*Ambrosia dumosa*) scrub. The basins are vegetated with various salt-tolerant species. In some cases the basins are so salty that no vegetation occurs, and only remarkably flat playas and blinding white salt deposits exist.

More than a dozen dune systems occur in the Mojave. Many are occupied by unusual plant and animal species such as the Eureka dune grass (*Swallenia alexandrae*) and the Mojave fringe-toed lizard (*Uma scoparia*).

The higher desert mountains are topped with pinyon pine (*Pinus monophylla*) and, at the highest elevations, limber pine (*Pinus flexilis*) and bristlecone pine (*Pinus longaeva*). The mountains of the eastern Mojave contain much limestone and marble, and hold many limestone endemic plants.

Because the Mojave is so close to major metropolitan areas, such as the Los Angeles Basin, and includes several rapidly growing cities, the once wild and unpopulated Mojave is now compromised by the influences of civilization. In 1994, Congress enacted the California Desert Protection Act, designating large areas of the Mojave Desert as wilderness. Currently, the Bureau of Land Management and other cooperating agencies are working on management plans in an attempt to sustain the fascinating and fragile ecosystems of the Mojave Desert.

