

CACTI

Well adapted for surviving in harsh, dry climates, over a dozen varieties of cacti can be seen in the Mojave and Colorado deserts. Cacti frequent well drained, rocky slopes. They are capable of storing moisture from infrequent desert rains and prevent water loss by shading their stems with abundant spines, which also discourage rodents and other animals from feeding on the plants. Two excellent areas to visit are the Cholla Cactus Garden where the Jumping Cholla and Calico Cactus are abundant, and the Queen Valley dirt roads where Mojave Mound Cactus, Dead Cactus, and Grizzly-bear Cactus may be found.



1. BARREL CACTUS, *Ferocactus cylindraceus lecontei*. Rocky, well drained hillsides. Location: 49 Palms.



2. BEAVERTAIL, *Opuntia basilaris*. Alluvial fans and dry slopes. Location: WC, PB.



3. MOJAVE MOUND CACTUS, *Echinocereus triglochidiatus*. Open flats and high valleys. Location: QV.



4. CALICO CACTUS, *Echinocereus engelmannii*. Rocky, well drained hillsides. Location: LH, QV, PB.

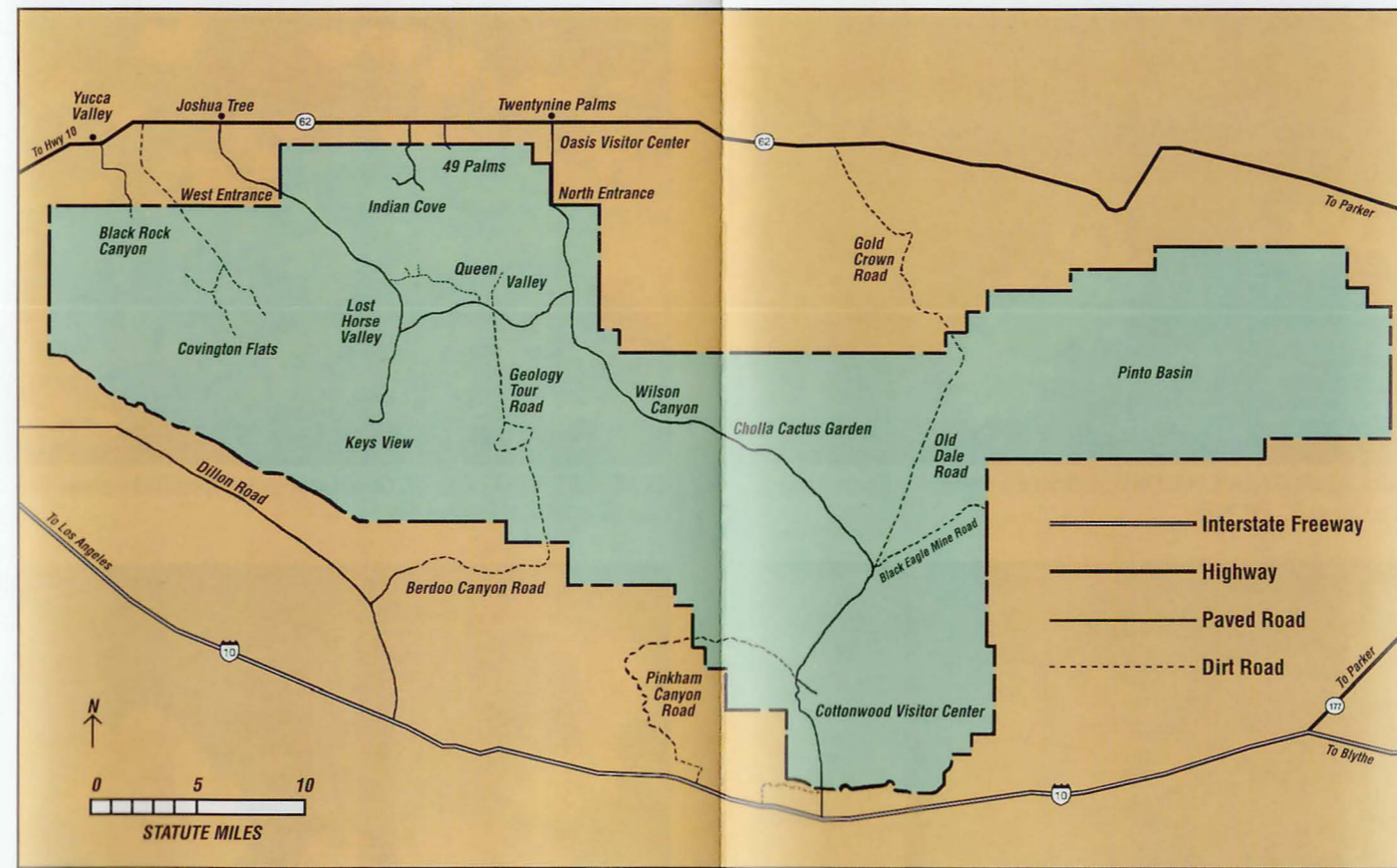


5. FOXTAIL CACTUS, *Escobaria vivipara alversonii*. Rocky hillsides. Location: QV, WC, LH.

Wildflowers of Joshua Tree National Monument



JOSHUA TREE, *Yucca brevifolia* with GOLDEN GILLIA, *Linanthus aureus*. Open flats and high valleys of the Mojave Desert. Location: QV, LH, CF.



- Key to abbreviations for locations:
- CF Covington Flats
 - CW Cottonwood
 - IC Indian Cove
 - LH Lost Horse Valley
 - NE North Entrance
 - PB Pinto Basin
 - QV Queen Valley
 - WC Wilson Canyon

TREES AND SHRUBS

Standing in a typical section of Mojave Desert, the plant one is likely to notice first is the Joshua Tree. Joshua Trees are found in the higher elevations of the park, where annual rainfall may be six to eight inches a year, as compared to the lower deserts where three or four inches is average. Here freezing temperatures are common during the winter months so this tree is adapted to both heat and cold. Most desert trees and shrubs have adaptive characteristics for surviving in this climate. Small leaves lose less moisture; some leaves are covered with fine hairs to prevent moisture loss. The Palo Verde and the Desert Senna are almost leafless, but are able to carry on photosynthesis in their stems.



15. BRITTLEBUSH, *Encelia farinosa*. Rocky hillsides and gravelly slopes. Location: PB, CW.



16. DESERT SENNA, *Senna armata*. Gravelly slopes and rocky flats. Location: PB, NE.



17. DESERT MALLOW, *Sphaeralcea ambigua*. Open flats and gravelly slopes, often along roadside. Location: QV, PB.



21. CHUPAROSA, *Justicia californica*. Gravelly slopes and sandy washes. Location: CW.



22. PAPERBAG BUSH, *Salazaria mexicana*. Open flats and high valleys. Location: QV, LH.



23. ROCK GOLDENBUSH, *Ericameria cuneata*. Base of rocks and rock crevices. Location: LH, QV.



12. MOJAVE YUCCA, *Yucca schottigera*. Parkwide on alluvial fans, flats, and hillsides. Location: QV, LH, PB, IC, NE.



18. CREOSOTE BUSH, *Larrea tridentata*. Parkwide, abundant on open flats and slopes. Location: PB, QV, LH, IC, CW.



24. INDIGO BUSH, *Psoralea sp.* (*P. arborescens*, Gray; *Dalea schottii*, Munz). Open flats and gravelly slopes. Location: NE, QV.



9. MOJAVE PRICKLY PEAR, *Opuntia phaeacantha* (*O. mojavensis*, Munz). Rocky slopes and hillsides. Location: LH, QV.



13. PARRY'S NOLINA, *Nolina parryi*. Rocky hillsides and rock piles. Location: QV, LH.



19. BLADDERPOD, *Isomeris arborea*. Open flats and sandy washes, and roadsides. Location: NE, PB, WC.



25. MOJAVE ASTER, *Xylorhiza tortifolia*. Rocky hillsides. Location: QV, PB.



10. PENCIL (DIAMOND) CHOLLA, *Opuntia ramosissima*. Dry flats and slopes parkwide. Location: IC, QV, LH, PB.



14. OCOTILLO, *Fouquieria splendens*. Well drained alluvial fans and gravelly slopes of Colorado Desert. Location: PB, CW.



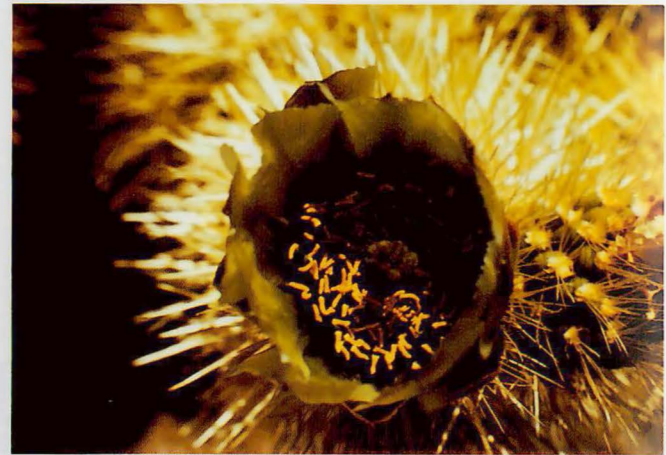
20. DESERT WILLOW, *Chilopsis linearis*. Sandy washes parkwide. Location: IC, PB.



26. SPINY HOP-SAGE, *Grayia spinosa*. Open flats. Location: LH, QV, IC.



11. SILVER (GOLDEN) CHOLLA, *Opuntia echinocarpa*. Dry flats and slopes parkwide. Location: IC, LH, PB, QV.



8. JUMPING (TEDDY-BEAR) CHOLLA, *Opuntia bigelovii*. Well drained, gravelly slopes. Location: PB.



6. DEAD (DEVIL'S) CACTUS, *Opuntia parishii*. Open, dry flats in high valleys. Location: QV.

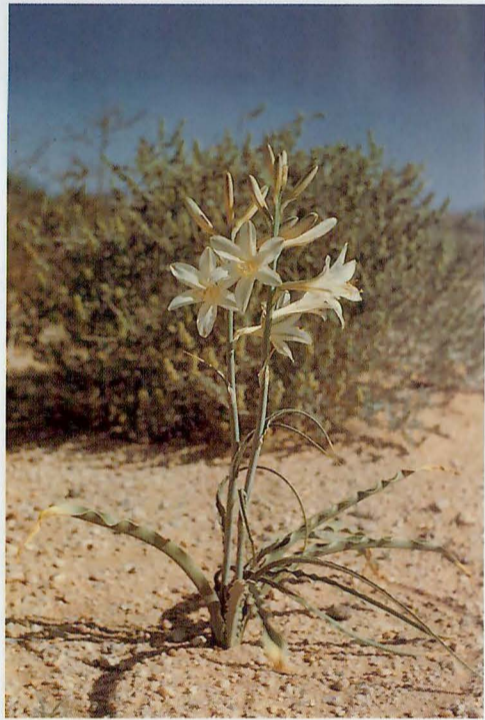


7. GRIZZLY-BEAR (OLD-MAN) CACTUS, *Opuntia erinacea* var. *erinacea* (var. *ursina*, Munz). Open dry flats. Location: QV.

WILDFLOWERS

When and Where

The extent and timing of spring wildflower blooms in the California deserts may vary greatly from one year to the next. Fall and winter precipitation and spring temperatures are key environmental factors affecting the spring blooming period. Normally desert annuals germinate between September and December. Many need a good soaking rain to get started. In addition to rains at the right time, plants also require warm enough temperatures before flower stalks will be produced. Green leaf rosettes may cover the ground in January; however, flower stalks wait until temperatures rise. Wildflowers will begin blooming in the lower elevations of the Pinto Basin and along the park's south boundary in February and at the higher elevations in March and April. Desert regions above 5,000 feet will have plants blooming as late as June.



NPS File

27. DESERT LILY, *Hesperocallis undulata*. Open sandy flats and dry washes. Location: PB.



NPS File

28. DUNE PRIMROSE, *Oenothera deltoides*. Dry washes, sandy flats, and roadsides. Location: PB, LH, QV.



Penny Knuckles

29. WESTERN JIMSONWEED, *Datura wrightii*. Sandy washes and flats. Location: IC, PB.



Penny Knuckles

30. DESERT STAR, *Monoptilon bellioides*. Low to ground on slopes and flats. Location: WC, PB, QV, IC.



Penny Knuckles

31. GHOST FLOWER, *Mohavea confertiflora*. Rocky hillsides and gravelly slopes. Location: PB, CW.



NPS File

32. BROWN-EYED PRIMROSE, *Camissonia claviformis*. Sandy washes and flats, and alluvial fans. Location: PB, IC.



Penny Knuckles

33. BLAZING STAR, *Mentzelia involucrata*. Rocky hillsides. Location: WC, PB.



Penny Knuckles

34. DESERT PINCUSHION, *Chaenactis fremontii*. Open sandy flats. Location: QV, PB, IC.



Penny Knuckles

35. SAND MAT, *Chamaesyce polycarpa*. Low to the ground plant of flats and washes. Location: QV, PB, IC.



Penny Knuckles

36. AMSONIA, *Amsonia tomentosa*. Open flats. Location: QV, LH.



Brian Prescott

37. CALIFORNIA CHICORY, *Rafinesquia californica*. Open flats. Location: IC, PB, NE.



Penny Knuckles

38. DESERT DANDELION, *Malacothrix glabrata*. Often abundant on sandy flats and in dry washes. Location: CW, PB, IC, NE.



Penny Knuckles

39. WALLACE'S ERIOPHYLLUM, *Eriophyllum wallacei*. Low, woolly plant of open flats, washes, and alluvial fans. Location: QV, PB, IC.



Penny Knuckles

40. COREOPSIS, *Coreopsis bigelovii*. Open sandy flats. Location: QV, LH, PB.



Penny Knuckles

41. DESERT POPPY, *Eschscholzia glyptosperma*. Alluvial fans and gentle slopes. Location: PB, CW.



Penny Knuckles

42. COYOTE MELON, *Cucurbita palmata*. Open flats and washes. Location: IC, PB, NE.



Penny Knuckles

43. DESERT SUNFLOWER, *Geraea canescens*. Open rocky areas near sand hills. Location: PB.



Penny Knuckles

44. DESERT (WOOLLY) MARIGOLD, *Baileya pleniradiata*. Open sandy flats and washes. Location: PB, LH, QV, IC.



Bill Truesdell

45. SCALE BUD, *Anisocoma acaulis*. Gravelly slopes and open flats. Location: CW, PB, NE, IC.



Alan Elabson

46. PRINCE'S PLUME, *Stanleya pinnata*. Open flats and roadsides. Location: NE, CW, LH.



Penny Knuckles

47. LARGE YELLOW PRIMROSE, *Oenothera primiveris*. Rare with Dune Primrose on sandy flats. Location: Old Dale Road and PB.



Penny Knuckles

48. MARIPOSA LILY, *Calochortus kennedyi*. Gravelly flats and rocky areas. Location: QV, CF.



NPS File

49. DESERT (INDIAN) PAINTBRUSH, *Castilleja angustifolia*. Gravelly flats and rocky areas. Location: LH, QV.



Brian Prescott

50. LIVE FOREVER, *Dudleya saxosa*. Rocky areas. Location: QV, LH.



Penny Knuckles

51. PURPLE MAT, *Nana demissum*. Open flats and sandy washes. Location: PB, CW, IC.



Penny Knuckles

52. DESERT FIVE-SPOT, *Eremalche rotundifolia*. Dry slopes and alluvial fans. Location: PB, CW.



Penny Knuckles

53. SAND VERBENA, *Abronia villosa*. Sandy flats, washes, and roadsides. Location: PB, LH.



Bill Truesdell

54. BIGELOW MIMULUS, *Mimulus bigelovii*. Sandy washes. Location: PB, CW.



Penny Knuckles

55. YELLOW THROAT PHACELIA, *Phacelia bicolor*. Open flats and alluvial fans. Location: LH, QV, IC.



Elton Warnow

56. CANTERBURY BELLS, *Phacelia campanularia*. Rocky slopes and sandy washes. Location: PB, CW.



Penny Knuckles

57. ROYAL DESERT LUPINE, *Lupinus odoratus*. Alluvial fans and sandy washes. Location: PB, CW, LH.



Penny Knuckles

58. CHIA, *Salvia columbariae*. Parkwide: sandy washes, open flats, and gravelly hillsides. Location: QV, IC, PB, CW.

This publication was produced by the Joshua Tree Natural History Association, in cooperation with the National Park Service.

Additional information may be obtained from:
Joshua Tree National Monument
74485 National Monument Drive
Twentynine Palms, CA 92277
(619) 367-7511

Publications about wildflowers available from the Joshua Tree Natural History Association at the above address:

Desert Wild Flowers by Edmund C. Jaeger
California Desert Wildflowers by Philip A. Munz
70 Common Cacti of the Southwest by Pierre C. Fischer
100 Common Wildflowers of the Southwest by Janice Emily Bowers
Mockel's Desert Flower Notebook by Henry and Beverly Mockel
Colorado Desert Wildflowers by Jon Mark Stewart

Scientific names used in this publication were taken from *The Jepson Manual—Higher Plants of California*, edited by James C. Hickman and published by the University of California Press, 1993.

Special thanks to the National Park Service staff members, Natural History Association employees, and volunteers who donated their time or slides for use in the production of this brochure.