

Two vines are prominent. Brandegia is a bright green vine that grows over shrubs for support. The Coyote Melon, especially noticeable after summer rain, spreads many arms radiating from a common point where the main stem emerges from a large tuberous root. It has large, orange flowers and its fruit are green gourds the size of large oranges.

Some of the trees and shrubs of the Colorado Desert are found here. Smoke Trees, Desert Lavender, Jojoba, and California Taxis have their northern extension here in this transition zone between the two deserts.

How do these plants survive?

They are all adapted to the harsh desert conditions. Leaves are very small and have surfaces that reduce water loss. The leaves may be waxy, hairy, leathery, or there may be no leaves as with Desert Tea and cactus. The cactus has spines that shade and protect it from animals that would like to eat it. Some plants, such as the Desert Senna or Ocotillo, can drop their leaves under drought conditions.

The annual wildflowers bloom in two seasons. They take advantage of just the right amount of rain to germinate, grow, bloom, and produce seed. Usually, ¼ inch of rain will be enough for some to germinate. Others need a little more. For the winter annuals to be prolific and large in size, a series of rains coming at just the right intervals from October through February is necessary. The plants germinate in the fall and remain small and close to the ground as their root systems develop.

Blooming Begins in March

The first annuals to bloom are the Forget-Me-Nots, Comb-burs, Fiddleneck, and a couple mustard species (Tansy Mustard and Cooper's Caulanthus). The flowers of these plants are very small and may go unnoticed.

You really become aware of the wildflowers when the showy ones begin to bloom. The Fremont Pincushion with its head of white disc flowers and Desert Dandelion with yellow heads made up entirely of ray flowers can be abundant. Others include Chia, Woody Bottle Washer, Coreopsis, and Desert Chicory. Low to the ground are the Desert Star and Wallace's Woolly Daisy. Last to bloom is the Desert Woolstar with its light blue flowers.

One of the first shrubs to bloom is the Turpentine Broom, a citrus relative with purple flowers. More visible is the Bladderpod with its yellow flowers and green pods. The Bladderpod can have flowers almost any time of the year. By May, most of the perennial shrubs are blooming.

The Beavertail is the first cactus to bloom, followed by the Hedgehog Cactus, Golden Cholla, Barrel Cactus, and Foxtail Cactus. Pencil Cholla and Cottontop Cactus bloom in the summer.

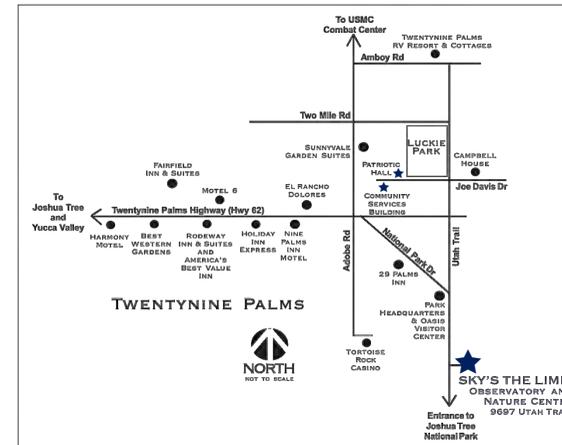
By May, the Indigo Bush will be covered with deep royal blue flowers. The Desert Senna will stand out with its flowers of bright yellow. Later, in June, the Smoke Trees in the large wash west of Utah Trail will burst out with bluish-violet flowers.

The rare Dead Cactus also blooms in June. Its natural habitat is in Queen Valley at an elevation of 4,500 feet. It has flowers that vary in color from yellow to rose.

Late Summer and Fall Blooms

There are other annuals that only germinate when the ground is warm. These are the ones that come up after a heavy summer thunderstorm and bloom in August and September. Chinch Weed, Boerhavia, and Windmills are a few. One vine, the Coyote Melon, also responds with new growth and large orange flowers. Another is Brandegia, a vine with bright green leaves, which begins to drape over shrubs and trees in dry washes. It is not a parasite and will not kill the plant. It just grows on it for support.

If summer rains are substantial, many of the shrubs bloom again in the fall.



Please do not remove samples of native plants for any reason. A beautifully illustrated guidebook, *Native Plants of Sky's the Limit*, is available for purchase in the Welcome Center.

SKY'S THE LIMIT
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For more information visit
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THE NATURE TRAIL

OF
SKY'S THE LIMIT
Observatory and Nature Center

Twentynine Palms, California



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Plants identified along the
Nature Trail of SKY'S THE LIMIT
Observatory and Nature Center

1. Creosote Bush
2. Dead Cactus
3. Teddy Bear Cholla
4. Smoke Tree
5. Mojave Yucca
6. Catclaw
7. Desert Senna
8. Palo Verde
9. Ocotillo
10. Foxtail Cactus
11. Brittlebush
12. Paperbag Bush
13. Spiny Menodora
14. Old Man Cactus
15. Pencil Cholla
16. Pancake Cactus
17. Jojoba
18. Bladderpod
19. White Ratany
20. Peach Thorn
21. Beavertail Cactus
22. Calico Cactus
23. Fishhook Cactus
24. Golden Cholla
25. Barrel Cactus
26. Burrobush
27. Cottontop Cactus
28. Engelmann Prickly Pear
29. Turpentine Broom
30. Desert Tea
31. Desert Mallow
32. Parish's Goldeneye
33. Cheesebush

Artists of the Morongo Basin
generously donated their original
artwork, reproduced here, to support
a Native Plant Education Program at
SKY'S THE LIMIT.



DESERT SENNA
Senna armata
by Anne Lear



PENCIL CHOLLA
Cylindropuntia (Opuntia) ramosissima
by Jerry McPheeters



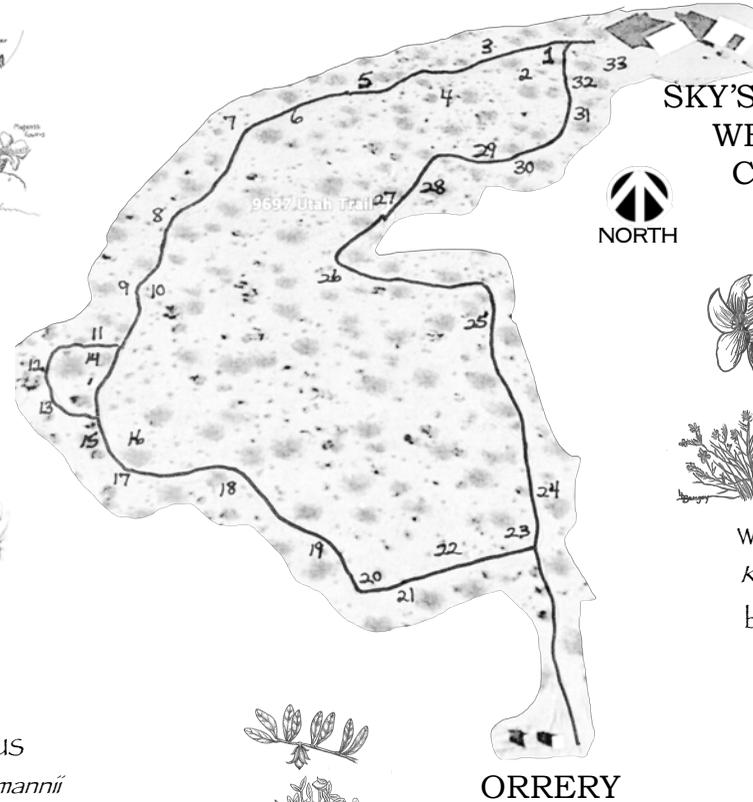
MOJAVE YUCCA
Yucca schidigera
by Darlene Morris



CREOSOTE BUSH
Larrea tridentata
by Katholeen Perry



BEAVERTAIL
Opuntia basilaris
by Joyce Eckersall



SKY'S THE LIMIT
WELCOME
CENTER



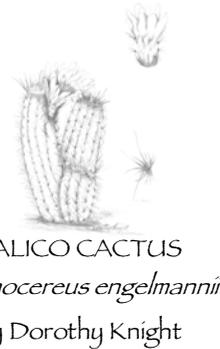
ORRERY



WHITE RATANY
Krameria bicolor
by Lore Bergey



CATCLAW
Senegalia greggii
by Shirley James



CALICO CACTUS
Echinocereus engelmannii
by Dorothy Knight



JOJOBA
Simmondsia chinensis
by Naomi Rios



SILVER or GOLDEN CHOLLA
Cylindropuntia (Opuntia) echinocarpa
by Dorothy Knight



BARREL CACTUS
Ferocactus cylindraceus
by Gabrielle von Kahrs

An Alluvial Fan Plant Community

SKY'S THE LIMIT is located on an alluvial fan at an elevation of 2800 feet, standing on soil of coarse decomposed granite mixed with finer soils – material washed down from the mountains to the sandy washes, the alluvial fan supports a community of plants adapted to harsh desert conditions. These plants are able to survive in an environment of little rainfall, intense sunlight, temperature extremes, low humidity, and drying winds.

The plants around you are part of the creosote bush scrub plant community. The Creosote Bush is the dominant shrub here. It is widespread throughout the Mojave and Colorado Deserts at elevations below 3500 feet. Generally, companion shrubs include Burrobush and Krameria. In some areas these 3 make up the majority. But here there is a broad variety of shrubs, vines, and grasses.

Perennial shrubs include the Mojave Yucca, Jojoba, Catclaw, Desert Senna, Paperbag Bush, Cheesebush, Spiny Menodora, and Bladderpod.

Cacti include the Golden Cholla, Pencil Cholla, Pancake Cactus, Barrel, Foxtail, Calico, and Fishhook. A nice specimen of the rare Dead Cactus (*Grusonia*) grows at the beginning of the nature trail.

Text: Darrell Shade. Front panel illustration: *Teddy-Bear Cholla*, original watercolor by Pat Flynn-Zawojski especially for SKY'S THE LIMIT *Living Gift Program*.



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