INTRODUCTION

The desert has often been described as harsh, unyielding, barren, desperate, and dangerous. One man called it "the most God-forsaken, barren, burned out bit of country I ever saw!"

At first acquaintance, the desert seems to merit all or any of these terms. It is hot during summer months, with temperatures sometimes ranging up to 49°C (120°F) or more in the low valleys. To conceive of much life existing in the stifling heat would seem to require a stretch of the imagination. It does appear to be almost devoid of plants, certainly those of tree size, anyway. For all that all-important life sustaining substance—water—the dry washes, slopes, and canyon bottoms always seem to have a parched look. Such an appearance is natural as only about three percent of all rain that falls on the desert penetrates the soil to any appreciable depth. This is true, also, of the frequent cloudbursts that hit the desert during July and August. Torrents of water fall, flood the washes in a few moments, and as quickly run off, leaving little to benefit plants at the area.

It is when one gets better acquainted with the desert that its true characteristics are revealed. It is harsh—but also fragile and easily destroyed. Plants and animals living here are often literally on the thin edge of existence. With annual rainfall of some 10 cm (4 inches) or less, an inch of moisture can easily mean the difference between life or death for several species. The loss of a couple of inches of rainfall during the year can be a disaster if prolonged into following years. Barren and desolate it surely appears, but it contains many plants and has the potential for many more. Animal life is widespread, involving numerous species of mammals, birds, reptiles, and even some amphibians, invertebrates, such as insects, spiders, scorpions, etc., are common. Thus an appearance of barrenness and desolation is truly deceptive.

Given the right conditions of moisture, temperature, and soil, the desert can and does become a vast flower garden on a scale difficult to imagine. However, such a condition does not happen every year. In fact, there usually are several years after one "flower show" before another comes along.

Every living thing in the desert has these basic problems to solve if it is to survive. These are scarcity of water, high temperatures, and availability of food. In the plant world, these problems are met in a variety of ways and with amazing success.
Plant Groups

Planets divide very naturally into three well-defined groups, depending upon how they meet the problem of drought survival.

**The Drought Escapers:** These are the perennials, the most abundant and showy of desert plants, with some of the tenderest and most exquisite flowers. They have no water problem. For if there is a problem, they do not germinate. Seed germination is a high-temperature affair. Unless certain well-defined conditions are met, seeds lie dormant on the ground, usually thinly covered with the fine dust or blow sand brought in by strong winds that are so prevalent. The seeds of most of these annuals contain a substance which acts as an "inhibitor" to germination. To dissolve away this protective material, approximately an inch of water must fall during colder months of autumn, winter, and spring seasons. At the same time desert winds must not be too drying and the mean temperature must remain around 16°C (60°F) or lower. The seeds will then germinate. The reverse is true for annuals that bloom in the heat of summer. Summer rains will dissolve away the germination inhibitor if the mean temperature stays around 22°C (70°F) or above. Thus, no matter how much rain falls in winter, seeds of the summer annuals will not germinate; the reverse is true with the winter annuals when heavy rains fall in the summer. In both instances, however, the life of the annual is brief. With an extremely short growing period available, each plant must quickly achieve its life objective—form blossom and produce seeds for a new generation. Thus, much of its energy is devoted to production of all important flowers.

Some flowers are designed to enhance the possibility of visits by insects and other pollinators, and this may increase the rate and quantity of seed production. Because some insects, such as the bee, can see yellow, green, blue, etc., but not red, most annuals have one or more of these colors in their petals. Thus, increasing the chances that they will not be overlooked. Even the red-petaled flowers, such as monkeyflower and pansy, have yellow in their stamens. White-petaled annuals, also abundant, carry the important color for pollination; within the flower petals. Night blooming plants depend primarily upon odor to bring pollinators to the flowers. Moths do most of this work. They do not react to color, but do have a keen sense of smell.

Once seed production is assured, the plant soon withers and dies. Seeds fall to the ground, there to be moved about by wind and rain until they finally come to rest, ready for germination at some future time. Such a time may be years in coming, but sooner or later they will have their short few weeks of colorful beauty.

**The Drought Survivors:** These are well-armed and long-lived perennials, living for many years. Most are the problems of water scarcity and high summer heat by reducing all but essential life processes. They flower in spring along with the annuals, but their long summer growth makes them voracious users of water. While their leaves and roots may appear to be dormant, suitable growth conditions are quite different. The mariposa lily and the ocotillo are examples.

**The Drought Resisters:** This group includes a wide range of shrubs and other woody or perennial plants. These take the worst conditions the desert offers and manage to survive. Some, like members of the cactus family, store water in their stems or root tissues. Others, such as mesquite and cattail, depend upon widespread root systems designed to utilize every available bit of moisture in the soil. Still others, like the desert shrubs, rely upon red rock surfaces. Some have fine, gray, downy coatings on leaves and stems which reflect the sun's heat away from the plant. Brush bush and desert holly are representative of this group. The creosote bush bears its leaves with a waxy material that reduces moisture loss. All of these plants manage to live from one growing season to the next, adding growth as opportunities arise.

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Plant Communities

Plants, like people, have definite preferences as to where they live. Some prefer open desert. Others like the rocky slopes and cliffs, the dry stream beds or where permanent water is found. Some even live on salt containing meadows that are toxic to many other species. Plants of the Lake Mead region can be grouped into five rather well-defined communities.

**The Joshua Tree Community:** The Joshua tree is found from around 1,066-1,524 m (3,500-5,000 feet) in elevation, and several other species are associated with it. At this elevation rainfall is more plentiful and summer temperatures are not as high. It normally receives light snows in winter.

**The Creosote Bush Community:** The most conspicuous plant of the region is the creosote bush, ranging into high and low desert elevations between 152-914 m (500-3,000 feet). It is abundant in the middle desert zone around 409-762 m (1,300-2,500 feet). Rainfall is low, only about 1-10 cm (0.4-4 inches) a year. Temperatures range from -12° to 45°C (10° to 115°F) annually. Other common plant species associated with this community include burro bush, cholla, senita, and indigo-bush, to mention only a few.

**The Desert Wash Community:** This Community occurs from elevations of about 152 m (500 feet) to as high as 914 m (3,000 feet). Water concentrates here during rainstorms and because more underground water is available, plants grow in greater abundance than in the surrounding area. The washes are subject to flash flooding and are preferred by most of the spring flowering annuals. Such a Community is common and is characterized by greasewood, chukar marsh's delight, desert mallows, and cat-scrat.

**The Cliff Community:** Narrow, steep-walled canyons often form the upper ends of desert washes. In such places we find the Cliff Community. Plants prefer the rocky slopes and cliffs, often growing out of crevices in the rocks. Representative species include desert grass, rock daisy, barrel cactus, and rock-rose.

**The Desert Spring Community:** Plants of this Community grow around springs, along river courses, and in low washes where water is found. Some are near the surface. They include cattails, rushes, arrowweed, desert willow, mesquite, and saltcedar (tamarisk).
How to Use This Book

This book considers only plants most commonly seen in the Mohave Desert, northern reaches of the Lower Sonoran Desert, and in particular those found in the Lake Mead-Mohave region. Many less common and less conspicuous plants are not included. To make easier the identification of each, the book is divided into sections according to flower color. The scientific name of the plant, as well as that of the family to which it belongs, is given in the descriptive text.

Throughout the text, references will often be made to elevations where the plant in question is found. Three such elevational zones are given.

Lower Elevations—areas from 137-427 m (500-1,500 feet)
Middle Elevations—areas from 457-914 m (1,500-3,000 feet)
Higher Elevations—areas from 914-1,374 m (3,000-4,500 feet)

Some plants occur only in the Lake Mead region that rise above 1,374 m (4,500 feet). No attempt is made here to include plants found at such elevations.

Most of these plants, or closely related species difficult to differentiate, are found in Death Valley and Joshua Tree National Monuments, and in the nearby Nevada State Parks of Valley of Fire and Red Rock Canyon. Those found which occur in Death Valley National Monument are indicated by an (+) placed by the common name; those found in Joshua Tree National Monument are indicated by a (-).

Index to Color Sections

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plants whose flowers are mainly

RED
or shades of red

PINK
or shades of pink
Flat-Topped Buckwheat
Eriogonum pubescens
BUCKWHEAT FAMILY

Wild Rhubarb
(Roads)
Rheum rhaponticum
BUCKWHEAT FAMILY

Sand Verbena
Abronia villosa
FOUR-O’CLOCK FAMILY

Windmills
Asclepias viridis
FOUR-O’CLOCK FAMILY

Arizona Lupine
Lupinus arizonicus
PEA FAMILY

Filaree
Erodium cicutarium
GERANIUM FAMILY

**Flat-Topped Buckwheat**
Known over much of the desert country as “docks,” this is an easily recognized reddish-colored perennial. The plant has large leaves, waxy margined, and the stems are thick and possess an acid sap. It grows in dry washes and is often seen in disturbed soil along road shoulders in the southern part of the Lake Mead region. The petals are good substitutes for rhubarb in pies. Indians used the leaves for greens and roasted and ate the petals. It also furnishes food for various desert animal species.

**Wild Rhubarb**
This is one of the most spectacular and fragrant desert wildflowers. Blossoms are in clusters and produce a delicious fragrance, especially noticeable in evening and early morning. As the flowers age, they quickly lose their initial radiance and fade. Some can still be seen blooming as late as June. With sufficient rains in early fall, a short flowering season may develop. The stems are often as much as 61 cm (2 feet) in length, mostly procumbent. The entire plant is covered with small silky glands, resulting in an over covering of sand. It grows profusely in dune areas or where patches of breeding sand have accumulated.

**Sand Verbena**
This leafy-stemmed annual may grow to a height of 61 cm (2 feet), but usually much less. The leaves are compound, composed of 5 to 10 leaflets and grow along the entire stem. Their arrangement is termed palmate because the leaflets arise from a common point. Seed pods are hairy, about 2.5 cm (1 inch) in length and contain 5 to 7 seeds. The seeds are an important food source for small animals, such as mice and birds. The plants prefer dry washes and gravel stripes, and are often found growing along roads shoulders. They bloom from March to May.

**Filaree**
Introduced from Mediterranean countries, Filaree is a common annual throughout the United States. The delicate and spreading stems produce numerous finely dissected leaves. Small purple flowers appear in February and persist through May. The fruit is composed of a long sterile projection with the five seeds produced at its base. Attached to each seed is a hair-like projection which is humidity sensitive. Changes in humidity cause this projection to coil and uncoil, allowing the seed to penetrate the soil surface. Populations of Gambel’s quail are dependent on the seeds as a food source. These plants are common along roadsides and open areas throughout the recreation area.
During the late 1800s saltcedar was introduced into North America. It has spread rapidly through desert regions to become a serious problem. It thrives in a hot, humid climate and is tolerant to saline soils. Wherever there is water, this graceful plant forms shrubs which can drain small streams or springs, thus excluding native plants and animals from the scarce water supply. In spring and early summer, pink to white blossoms form drooping colorful plumes along the shores of Black Canyon and at the mouths of washes feeding into Lake Mead and Lake Mohave. The flowers attract many insects, especially honey bees and the tamarisk fly, a large, orange-winged wasp. While little food value to other wildlife forms, it does furnish protection for birds and small animals.

One of the most beautiful desert blooms, the flower is round in outline and barren enough to show the five corolla spots on the inner bases of the petals. The plant is short, usually less than 45 cm (18 inches) high, with round, alert, leaves. If a hand lens is used, glistening star-shaped hairs can be seen covering the stem and leaves. Frequently seen in the washes, it is a striking contrast to the somber, flat landscape which it seems so popular. It blooms from March to May.

This, one of the oddest of desert plants, is exceptionally well adapted to withstand harsh climate. Its long, spiny stems extend upwardly as much as 6 m (20 feet) and are often completely leafless. The root system lies immediately beneath the surface, to insure maximum benefit from any moisture that falls. Small green leaves, five in a bundle, quickly appear the stems a few days after a good dose of rain. Flowers seem to blossom to make a startling show. It adapts to leaves very quickly to extreme water as long as soil moisture becomes scarce. But will grow new ones when more rain falls. This may occur more than once during the year. It prefers rocky slopes, and large stands may be seen in the lower Lake Mead and Pearce Ferry areas. Ocotillo stems are often planted in rows, where they soon take root to form a spiny, thick hedge.

Beavertail

*Copiapoa cinerea*

**Cactus Family**

Strawberry Hedgehog Cactus

*(Calocactus tomentosus)*

**Echinocereus engelmannii**

**Cactus Family**

Mohave Mound Cactus

*(Echinocereus fruticosus)*

**Cactus Family**

Saltcedar

*Tamarix pentandra*

**Tamarix Family**

Desert Five-spot

*(Lycoctonum floridanum)*

**Malvaceae Family**

Ocotillo

*Fouquieria splendens*

**Ocotillo Family**

Ferihook Cactus

*Ferihook cactus*

**Cactus Family**

Rock Glue Cactus

*Stapelia gigantea*

**Cactaceae Family**

Beavertail

*Copiapoa cinerea*

**Cactaceae Family**

During May and June this clustering “hedgehog” creates a spectacular display of flowers with as many as three per stem. Each flower is 3-8 cm (2-3 inches) in length and may or may not open completely. The petals are either slightly or very evident, giving it an almost artificial look. It prefers rocky slopes and rock crevices in higher elevations, ranging into Pinera-Juniper Community. In the recreation area, it is found through the Newberry Mountains and in the Grand Wash Cliffs.
Long, slender, hooked spines give this cactus the appearance of being covered with fishhooks. The plant is small, seldom rising more than 12 cm (5 inches) above the ground, so it is often overlooked. It may occur in low clumps or as a single stem. Flowers are comparatively large and are produced along the sides of the plant. Sometimes several bloom at one time, forming a crown. They mature into club-shaped fruit, eagerly sought by small mammals. It is sometimes called "chained cactus," as the seeds have a coarse, brown appendage. Look for this inconspicuous cactus among the rock-covered slopes that line our around low elevation mountain ranges.

Though similar in appearance to an immature barrel cactus, the pigmy barrel cactus can be recognized by its round, unarmed spines. Growing to 20 cm (8 inches) in height and 15 cm (6 inches) in diameter, it appears as a red-gray club on a warm, southern slopes of mountains. Wide variation in flower color makes this plant especially intriguing. In general, there seems to be a color gradient as one travels south from the Las Vegas area. In the Muddy and Spring Mountains, the flowers take on a purer hue, in the vicinity of Searchlight and the northern Nevada Mountains, they are a lemon yellow. Flowers remain open for a very brief time, usually about five days.

This early spring annual is often found in dense stands on the gravel slopes along lower elevation washes. The flowers are small and the stems slender, so the impression one gets is that of a pink wash over a portion of the landscape. The leaves are thin and waxy, sticky. It blooms from April to June, and in good rainfall years is especially noticeable in the washes above Willow Beach.

A common annual blooming in early spring and into May, occasionally washes a height of 30 cm (1 foot), but usually less. Leaves are broad, long and pointed, somewhat hazy. Several plants grow together, forming a colorful mass of flowers, a characteristic that has given rise to the common name. It blooms from late March to May and prefers sandy washes and gravels throughout lower elevations.

The delicate stems of this beautiful "buzzy flower" spread along the ground in early spring. Near the stem tips and at the base of the plant are the flowers, usually several in number. Leaves are narrow and somewhat hazy. Several plants often grow together, forming a colorful mass of flowers, a characteristic that has given rise to the common name. It blooms from late March to May and prefers sandy washes and gravels throughout lower elevations.

This is a low, somewhat rounded shrub with aromatic, dark green, veined leaves. The purple flowers are small and rather inconspicuous. The seeds become fused and enlarged with opening seeds. At maturity, this fruit will break away from the plant, appearing as a small "paper bag." This large container may easily be picked up by the wind and carried a considerable distance, thus aiding in the spread of seeds across the desert. These are frequently used as food by small rodents, especially the cactus ground squirrel. The plant grows in washes and washes in middle elevations of the desert.

The genus Penstemon is large and represented by many species through the Southwest. This beardtongue is characterized by tubular flowers arranged along a stem 1 to 1.5 m (3 to 4 feet) high. The flowers contain five slender, narrow leaves at the base, usually 20 petals with many long, slender projections—hence the common name. Leaves are opposite and fused at the base, completely enclosing the stem. Because of limited distribution in the Lake Mead area, it has been classified as a "threatened" species. A favorite of hummingbirds, it may be found occasionally in wash gravels or Desert Wash Communities in Southern Nevada and Northwest Arizona.
Indian paintbrush is a perennial which appears in the spring from a woody root crown. Hair stems rise 30 cm (or feet) or more high. Leaves are narrow and about 2.5 cm (an inch) long. Flowers are barely visible, being hidden at the ends of the stem in a "bloom" of scarlet-tipped foliage. It grows along rocky crevices and on dry, brush slopes, often growing up among the shrubs themselves. It may show as an isolated plant or in clumps with others of its kind. This is one plant that can be identified easily even from a moving vehicle. The bright color attracts many hummingbirds to feed on the nectar.

This is probably the most attractive of the group sometimes humorously referred to as "billy plows." Depending on winter and spring rainfall, it may attain a height of 20 cm (8 inches). A plant this size could easily go unnoticed, but with the relatively large flowers, this seldom happens. Flowers measure about an inch in length and are disposed near the stem top. Stems are reddish and glandular with thin leathers. With a short growing season before the heat of summer arrives, most of the plant's energy is directed toward producing flowers for seed production. It perishes the grays of desert washes throughout low and middle elevations.

Thistles represent an interesting group of plants. These are annual species. During the first year they develop a basal rosette of leaves and a root system. The following year leafy stems and flowers are produced. After flowering, the entire plant withers and dies. The characteristic feature of thistles is the presence of spines from the elevated flowers to the basal leaves. Mohave thistle is found in most locations of our low mountain ranges.

**Indian Paintbrush**
*(Castilleja chromosa)*

**Monkey-Flower**
*(Mimulus bigelovii)*

**Mohave Thistle**
*(Cirsium neomexicanum)*

Plants whose flowers are mainly:

**Blue**
On shades of blue

**Green**
On shades of green

**Purple**
On shades of purple
Teddybear Cholla - (Bigelow Cholla, Jumping Cholla) - \textit{Cylindropuntiabigelovii} - CACTUS FAMILY

This cactus is rather tall, and its short, heavy stems are joined and covered with a profusion of showy, silvery spines. The spines are barbed and difficult to remove, once attached to clothing or bare flesh. They are deceptively cute and the pouter possibly mistaken for children before they know it. The enemy of "jumping cactus" and "jumping cholla". Flowers are either greenish or pale yellow and inconspicuous as to be easily missed. The plant propagates itself annually by joints on the stems, which drop to the ground and take root. The wonderful extra of these joints to the new, not only making it home almost immune from coyotes and other predators, but creating new plants as the joints grow. Cactus wets build their nests amidst the spiny branches.

Bristle Gilia - \textit{Langsdorffia serpens} - PHLOX FAMILY

This plant is small, with soft bristles. The flowers are light violet, with streaks of purple that are believed useful in attracting pollinating insects. Leaves are wedge-shaped, with 3 teeth at the base of the stem. The entire plant measures only about 7.5 cm (3 inches) across. It grows in tussocks. Found only as times of adequate rainfall. This annual is often seen in abundance on rolling hills and along the banks of washes in middle elevations.

Death Valley Phacelia - \textit{Phacelia kalidromis} - \textit{Larrea tridentata} - \textit{Larrea tridentata} - WATER-LEAF FAMILY

Of several kinds of phacelias in the Lake Mead region, this is the only common one that is weak stemmed and grows up among low shrubs for support. The stems are often purplish and covered with hair-like bristles. Leaves are long and pointed into leaves. It grows in broad, grayish, dry washes in lower elevations of the desert. The flowering period is March to May.

Notch-Leafed Phacelia - (Scorpion Weed, Wild Heliotrope) - \textit{Phacelia frutescens} - \textit{Larrea tridentata} - WATER-LEAF FAMILY

Two or three forms of this annual, all similar in appearance, occur in the Mohave Desert. It may attain a height of 30-60 cm (1-2 feet). Leaves are longer than wide and rounded along the margin. The stems are green, glandular, and strongly tinged. Sap of this plant is poisonous to many individuals and can cause severe skin rash, very similar to that produced by poison oak. It blooms profusely in the spring, after winter rains, and grows on gravelly, rolling hillsides and slopes.

Weakstem Mariposa - \textit{Calochortus flavus} - LILY FAMILY

This desert perennial often forms large, round mats of spreading stems about a meter (several feet) across. The flowers are large, sweet-scented and open in early evening and night. It blooms during the spring months and into early fall. The leaves are large, opposite on the stem, and unmarked in size. It prefers open sandy areas and desert washes and is commonly seen along the Peavine Ferry road and also near Searchlight.

Giant Four-O'Clock - \textit{Mirabilis longiflora} - FOUR-O'CLOCK FAMILY

With wiry stems, violets flowers and gray-green leaves, this small plant is one of our most attractive shrubs. It grows to a height of a meter (three or more feet) and is extensively branched. It produces many one-seeded, white, pointed pods, decorated with numerous small, red glands. It grows in sandy washes and open desert. While the normal flowering season is April and May, it may bloom again in the fall if moisture and temperature conditions are suitable.

Indigo-Bush - \textit{Fallopia hastata} - \textit{Fallopia hastata} - SEA FAMILY

Range Ratany - \textit{Krameria parviflora} - RUTACEAE

Mohave Sage - \textit{Eriogonum mohavense} - \textit{Eriogonum mohavense} - ERIOLEAF FAMILY

DEATH VALLEY PHACELIA - DEATH VALLEY PHACELIA - DEATH VALLEY PHACELIA - DEATH VALLEY PHACELIA - DEATH VALLEY PHACELIA

TODDYSM GILLA - TESSIS GILLA - TESSIS GILLA - TESSIS GILLA - TESSIS GILLA - TESSIS GILLA - TESSIS GILLA - TESSIS GILLA - TESSIS GILLA
This plant may grow 60 cm (2 feet) or more in height and somewhat resembles a small Christmas tree because of the tapering growth form. It produces numerous small, rather inconspicuous blue flowers along its length. There are long, stiff hairs on the stem and shallow-roofed leaves. The entire plant is glandular and produces an extremely ill-smelling odor if handled. Although considered an annual, it requires two years to mature. One of the most restricted plants of the Lake Mead area, it grows only in gypsum-bearing soils, especially along the North Shore flood. It flowers in April and May.

This annual grows to a height of 30 cm (a foot or more), with round clusters of flowers produced along the stem. The square stem has opposite branching, woolly leaves, and a green, spiny, hairy surface. It grows on gravelly slopes and in open areas. The seeds were once an important portion of the diet for many desert Indians. They are high in protein and oil, and it is said that one can survive for an extended period on a solution of water and this seed. Antelope, ground squirrels, pocket mice, and small seed-eating birds also use them as food.

This is one of the most attractive desert sunflowers. The flowers are numerous, large, and long-stemmed, so are easily observed. This perennial is somewhat woody at the base and sends up several branches to a height of 20-60 cm (1-2 feet). The leaves are long, with spine-tipped lobes. It grows in rocky areas, and is especially abundant in the steep-sided ravines. Because of its large showy flowers, it is frequently noticed along roadsides. It blooms from March to May, also in early fall. If sufficient rains have occurred.

**Palmer's Phacelia**
Phacelia palmeri
WATER-LEAF FAMILY

**Mohave Sage**
Salvia mohavensis
MENT FAMILY

**Chia**
Salvia columbariae
MENT FAMILY

**Mohave Aster**
Macieanthus fortis
SUNFLOWER FAMILY
This resembles a small-flowered Easter lily, and is closely related. The back of each petal and pedal has a green stripe. The flower has a pleasant fragrance. The stem is erect and 15-30 cm (6-12 inches) tall, depending upon available moisture. It is definitely a low sand and dune species. Its bulb is deep-seated, frequently occurring from 30-60 cm (1-2 feet) beneath the surface. Found in the southern part of the Lake Mead region, it is most often seen along the State Highway just west of Dava Dam. The name Ajo is Spanish for garlic. The bulb has an aromatic flavor and desert Indians used it as food.

**Ajo Lily**
*(Desert Lily)*
*Mussaenda undulata*

**Joshua Tree**
*Yucca brevifolia*

**Mohave Yucca**
*Yucca schidigera*

This is our most common yucca and the Joshua tree have much of their distribution within the Mohave Desert, and are therefore considered indicator plants for this geographical region. It has a stunted appearance and may reach a height of 2.5 m (8 feet). Leaves are numerous and as much as 1.25 m (4 feet) in length. They are fibrous and spine-tipped. Indios used the flower petals as food, and ground the seeds into a fine meal. They peeled long white fibers from leaf margins for use in weaving and making rope. Leaves were also made into sandals. The seeds comprise an important source of food for several species of small mammals and birds.
The Nolina is often confused with the yuccas, but its leaves are flat, grass-like in appearance and have minutely low-toothed edges. The plume-like flowers are much smaller and less showy than those of yuccas, and appear in May. The flowering stalk, usually 1 m (3 feet) in height, is persistent and often remains intact until the following spring. Seeds are small and hard, and used as food by small rodents. Its large clumps of leaves afford protection for insects, small mammals and birds. The plant does not grow in open areas, but prefers sheltered, rocky locations. It may be found on protected slopes in the vicinity of Christmas Tree Pass in the Newberry Mountains.

Over 100 species of Engraulis are found throughout the Southwest. Identification of this group of buckwheats can be most frustrating. The skeleton weed is a spreading plant forming an umbrella about 25 cm (10 inches) above the gravel in which they are found. Leaves occur only at the base of the single stem. Scattered along the horizontal branches, small pendulous white or pink flowers about the size of rice grains can be found through spring and summer. In late summer and early fall these plants take on a reddish tinge and are quite commonly seen along the roadsides. Fields of skeleton weed occur in low lying areas at all elevations in the Lake Mead region.

The opposite branching of this Mirabilis resembles the pattern of a wishbone, hence the common name. Flowers of the plant are somewhat confusing. There are no petals, only sepals, placed inside a fleshy involution. The sepals are white in color and there is a single flower in the cup-shaped involucre. To those unfamiliar with this family, there will appear to be two fused sepals and five fused petals. Much for leaves which are opposite and usually unequal in size. The leaf character is important because few desert herbs have opposite leaves. Look for the wishbone bush at all elevations within the vegetation area, normally on rocky hillsides.

This is one of the large, showy poppies of the region. It grows to a height of 60-91 cm (2-3 feet). The leaves are lobed, both leaves and stems are covered with needle-like straw-colored spines which tend to prevent desert animals from eating the fleshy tissue. Stems contain a yellowish-orange sap. Large petals surround numerous yellow stamens, making the appearance of the flower similar to that of a fied egg—thus giving rise to one of the plant’s common names. The seed capsule is about 2.3 cm (1 inch) long and quite spiny. It is commonly found from the lower elevations into the Joshua Tree Community around 1,066 m (3,500 feet), and often grows in roadside gravel and sandy washes.

The stems of this many-branched perennial may extend to a height of 80 cm (2 feet) and are spreading, resulting in a rambunctious appearance. Leaves are divided and thread-like, growing throughout the length of the stems. The foliage has a spiny and pebbly texture. Flowers have minute petals measuring less than .3 cm (an eighth of an inch) in length and are fragrant. The flowering period is at the tip and each compartment contains a single seed. It prefers gypsum soils and is widespread in the region, being especially common in roadside gravel. It was once known as a treatment for skin disorders.

The desert almond is a common shrub with leaves less than 2.5 cm (1 inch) in length, clustered at sites along its branches. The small, rather inconspicuous flowers appear in April. They rapidly dry and fall along with the leaves at the onset of summer. At some large web mazes of the Great Basin, an ant pupator can be observed within the gray branches. The desert almond requires large quantities of water and is, therefore, limited to the Desert Wash Community at middle elevations.
White Margined Spurge
(Euphorbia abelmoschate)
SPURGE FAMILY

This small woody shrub is well named, as its green stems and leaves are covered with short, barbed hairs having the rough texture of sandpaper. The plant is very stiff and the stems break easily. Flowers are fragrant and appear in profusion in the summer. It is limited to very alkaline soils, but may be seen along the North Shore Road from Las Vegas Wash to Overton.

Dune Primrose
(Oenothera deltoides)
EVENING-PRIMROSE FAMILY

This annual is a simple, single, reddish-stemmed primrose. Leaves are green, mostly basal and toothed. The flowers vary in color from white to purple to red. Normally there is a dark spot at the base of each petal, although sometimes this is absent. The seed capsules are on stalks about 2.5 cm (1 inch) long and dish-shaped. It is common on gravelly soils in low and middle elevations and blooms from March to May.

Brown-Eyed Primrose
(Oenothera fasciculata)
EVENING-PRIMROSE FAMILY

Small-Leafed Amsonia
(Amsonia nuttallii)
FOODSHRUB FAMILY

Rush Milkweed
(Apennina nuttallii)
MILKWEED FAMILY
Humble Gilia - Linanthus demissus
PHLOX FAMILY

Several species of Linanthus in this region have small white flowers and four-pointed nut-like fruit. All have a close resemblance, and a thorough examination of the fruits is required to separate these plants at the species level. All have flowers with petals fused at the base and bony enclosing the sepals. These plants are mostly basil annuals with narrow leaves. Various kinds range in size from 7.6 cm (3 inches) to less than 20 cm (1 foot) tall. Some are so tiny they easily merit the name of "humble flowers." They are commonly found in the Cowpats-foam Community throughout the region. They bloom in early spring.

Forget-Me-Not - Cristanthemum angustifolium
DIOXYM FAMILY

This small annual is well named as it is very low growing and easy to overlook. The entire plant is not over 5 cm (2 inches) tall. It is leafy and covered with small hairs. The petals of the flower are twisted, and each on the inside two conspicuous purple parallel lines at its base. Flowers are fragrant, with usually several on a plant. While often found in localized clumps, it cannot be said to be common. It likes gravel washes and desert slopes in lower elevations.

Sacred Datura - Datura meteloides
NIGHTSHADE FAMILY

This plant grows up to 1 m (3 feet) in height and may cover over 5 sq m (50 square feet) of ground. The large, gray-green leaves and trumpet-shaped flowers are a common sight along some roads and in washes. The flower blooms mostly at night, usually closing up in daytime, but may sometimes remain open if not in intense sunlight. Just before sunrise, it gives off a strong, sweet fragrance that serves to attract sphinx moths and thus insure pollination. Seed pods are round and thorny. All parts of the plant contain amine and related alkaloids, poisonous compounds that have been known to cause death when eaten. Indians once used the plant to indicate visions. It is often called "Jimson-weed," the common name given its close relative by the settlers at Jamestown, Virginia.

Desert Tobacco - Nicotiana trilfolia
NIGHTSHADE FAMILY

This plan is usually under 0.5 m (2 feet) tall, with tubular flowers about 2.5 cm (1 inch) in length. The leaves are dark green, clasping at the base. If crushed, the foliage gives off a strong, somewhat irritating odor. It blooms from early spring to June, but may produce flowers into fall. It prefers washes and rocky areas, especially around a cacti base. It is known to contain nicotine and was smoked by Indians of this region in ceremonial ceremonies. Another member of this family - true tobacco - is a small rose and grows along the shores of Lake Mead. It has tubular yellow flowers.

Palmer Penstemon - Penstemon crandallii
FIGWORT FAMILY

This is a tall plant, ranging from 6 to 8 m (20 to 26 feet) high. Leaves are sharply toothed, but do not extend far up the stem. The upper 20-50 cm (8-20 inches) of the stem bears numerous tubular flowers, characterized by being strongly two-lipped. Prominent purplish-lilac axils extend from the lower lip into the flower throat. The flowers produce a sweet-scented fragrance, and their petals are much sought by bees.

Desert Willow - Salix arbuscula
REedmelia FAMILY

This is not a willow at all, but a member of the carpoid family. Its willow-like foliage has given this small tree or large shrub its name. Its trunk is crooked and has black bark. It flowers from April to July, but most of the year's conspicuous among the heavier growth of trees and shrubs which often form thickets in desert washes. Long slender seed pods identify the tree long after flowers are gone. The oval-like leaves are of such beauty that the plant is sometimes cultivated as an ornamental. The durable wood was prized for fence posts by ranchers and settlers. Leaves are used as food by larvae of the white-winged moth and palo dats, about 2.5 cm (1 inch) in length, may frequently be seen on the branches in late spring or early summer.
Desert Star

Monahapiastella

SUNFLOWER FAMILY

This little annual easily qualifies as a "bally flower" as its stems cling close to the ground. Its dull green hairy leaves form a circle of some 10-15 cm (4 to 6 inches) across. The flowering heads are placed at the tips of the stems. It has the typical "daisy" appearance. The plants grow toicky or sandy soils, and are often so thick that it's difficult to avoid stepping on them. They bloom from late March to May.

Pebble Pincushion

Cheesewsites

SUNFLOWER FAMILY

This annual has a rather brief life span, as its short roots are not long enough to reach much moisture. If the spring is sufficiently wet, the plant grows as a root or more in height and produces a profusion of flowers. If the moisture is limited, it develops short stems and few flower heads. The heads are rounded, and have many narrow leaves which appear to be "pinned" to the receptacle. It likes dry flats and rocky slopes, in lower elevations. They are growing in areas above the desert

Fremont Pincushion

Cheesewalls

SUNFLOWER FAMILY

This little annual is one of the most abundant flowers to be found in a good flower year. It may have a single stem or branch, and grows to a height of as much as 30 cm (15 inches). The stem is green with leaves somewhat fleshy and rounded. The flowers in the center of the head are minute and flat-topped, with the stigma lobes appearing as two white "horns". Those around the flower margin are larger and irregular in shape. It prefers sandy soils in the gravel washes and open slopes in the middle and low elevations. Often it grows around the bases of creosotebushes. (See also the pebble pincushion).

Gravel Ghost

Tobacco Weed

Atrichosina phyllostyla

SUNFLOWER FAMILY

The large flowers, born on a tall, slender, inconspicuous leafless stem seem to be floating in mid-air, giving rise to its common name, and also to that of "pincushion". It is not the same plant as the "Desert Star", by which it is sometimes known. Its large, spotted, leathery leaves lie flat on the ground and bear some resemblance to tobacco leaves. The flowers are sometimes showy, appearing as two white "horns", those around the flower margin are larger and irregular in shape. It prefers sandy soils in the gravel washes and open slopes in the middle and low elevations. It blooms from April to June, and in a good flower season will be commonly found in the washes above Willow Beach.

Desert Chicory

Retinocarpus

SUNFLOWER FAMILY

Closely resembling desert chicory, white toackstem is similarly veined, striped or dotted with rose or purple on the backs of the ray flowers. However, there are significant differences in stems and leaves. This plant has slender leaves, much divided, the cichory has broad leaves, mostly at the base of the plant, with small scale-like bracts along stems. The stem below the flowering head of toackstem has dozens of minute oval-shaped glands. Another species, Pointy toackstem, has yellow flowers.

White Tacksstem

Calycoseris

SUNFLOWER FAMILY

The narrow, soft leaves of this plant are scattered along the stems. The flowers are abundant and showy, with a white tube. The plant grows in sandy soils and open slopes in the middle and low elevations. It blooms from May to July.
plants whose flowers are mainly

YELLOW
OR SHADES OF YELLOW

ORANGE
OR SHADES OF ORANGE

Under favorable climatic conditions, this short-stemmed, almost leafless lily produces a variety of flower colors. In our region, the color varies between yellow and orange. At the base of each petal and sepal is a black or purple gland which helps attract pollinating insects. The plant survives the harsh desert climate by storing its bulb as deep as 60 cm (2 feet) below the surface. Its bulb was used as a source of food by Indians and early settlers. It is sometimes dug up and eaten by small rodents. (A red-flowered variety is found in Death Valley National Monument.) Mariposa is Spanish for butterfly.

This is one plant which lends emphasis to the adoration "watch where you walk in the desert!" It is small, growing only 7 or 80 cm (a few inches) in height. The leaves are weakly and grow around the base of a cluster of green, spiny leaves. Flowers are tiny and almost concealed by the spines. It blooms during spring and early summer months. The stem and spines soon become woody after the plant dies. During this time the spines pose a threat to anything walking across the desert. It is well equipped to withstand extreme heat and is commonly found in coarse gravels and areas of desert pavement in open, low elevations.

This remarkable plant was discovered by John C. Fremont on his journey across the Mohave Desert in 1844. The leaves form a flat mat against the ground. The leafless, branching, flower stem rises 30 cm (a foot) or more above the mat of leaves. It likes washes and areas of disturbed soil, especially along road shoulders. The plant has many uses. Stem tips taste a bit sour, but can be used in salads. Desert animals, such as the bighorn, feed on it. The edible, dried stems are sometimes used by the Mohave people to make a tea. Drilling a small hole near the top of the infusion, she inserts several insect larvae into the cavity and lays her eggs on them. When the eggs hatch, her offspring have plenty to eat. Look for a small hole near the top of the swollen stems. If you find one, it was probably made by the wasp.
Bear-Paw Poppy
(Desert-Poppy, Desert-Claw Poppy, Bear-Claw Poppy)

**Aquilegia californica**

**PAPAVERACEAE**

The common name is from the densely hairy leaves, shaped somewhat like a three-toed "foot." Several flowers form on the tip of a leafless, but hairy stem. Because it grows only on harsh alkaline soils it is restricted in numbers, and has been recommended for placement on the list of threatened and endangered plants of the Lake Mead area. Unfortunately, many flowers are picked by persons unaware that the flowers are very quickly and that picking them destroys much needed seed production. It blooms in late March and April and is best seen near Las Vegas Wash and Rogers Spring. A white blossomed variety of this plant is found in Death Valley National Monument.

Desert Gold-Poppy

**Eschscholzia glyptosperma**

**PAPAVERACEAE**

This smaller duplicate of the California State flower, has flowers a bright yellow, compared to the orange-yellow of its California relative. It stands approximately 30 cm (low) tall and produces numerous blooms each one single on an erect, naked stem. Occasionally flowers are found with pronounced orange spots at the bases of petals. Leaves are located near the base of the plant. It is often quite abundant at lower elevations when there is sufficient winter moisture, preferring the sands and gravels of washes and rolling hills. It produces great numbers of seeds which are used as food by small wild creatures.

Little Gold-Poppy

**Eschscholzia minutissima**

**PAPAVERACEAE**

Resembling the desert gold-poppy, this little plant differs mostly in flower size. The entire plant may be only 5-7 cm (2-3 inches) across, while the flower stems bear one or more 1 cm (3/8 inch) wide blossoms. It grows best in broad, gravely washes and on open slopes. In good flower years it is common from the Boulder Beach area southward, blooming in March and April.

Prince's Plum

(Desert-Plum)

**Stanleya pinnata**

**MUSTARD FAMILY**

One of the more noticeable plants of the Mohave Desert, it stands over 1 m (3 feet) high. The silvery-green leaves are produced mostly on lower portions of stems and are deeply divided. Flowers are large and showy, a situation uncommon in the Mustard family. Seed pods are narrow, measuring up to 7.6 cm (3 inches) in length. These plants are considered poisonous because of their ability to fix selenium from alkaline soils into the stem and leaves. Look for them in Desert Wash Communities.

Bead-Pod

**Leptospermum Rigens**

**MUSTARD FAMILY**

The blackbush is an important plant community indicator, growing just above the upper limit of creosote-bush. It often grows in such pure stands as to give a blue-gray or pale purple appearance to wide areas on the benches and slopes of desert ranges. It ordinarily grows to a height of 60 cm (2 feet) and its branches are rough and rigid. The flowers do not have petals, sepals furnish the color. This plant, as well as the creosote bush, fixes chemicals which may help inhibit growth of competing plants. An important ground cover plant, it provides both food and protection for small forms of animal life.

Blackbush

**Calycanthus Nutans**

**ROSE FAMILY**

Paloverde is Spanish for "green stick or tree," an excellent description for this low desert species. The tree stands 4.5-6 m (15-20 feet) high and has smooth blue-green bark. The compound leaves are present only during spring, soon falling away with desert heat. The bark then takes over the task formerly carried on by leaves. Flowers are typical of the pea family. Seed pods are long and narrow with a constriction between each two seeds. Seeds have an especially hard casing that must be cracked or abraded before they will germinate. Indians produced a meal from the seeds by grinding them and mashing with water. Several kinds of desert wildlife use the seeds as food. Thus far, the plant is known only in the vegetation area along the eastern shore of Lake Mohave, opposite Calicoonah Cave.

Paloverde

**Cercidium microphyllum**

**PEA FAMILY**
**Mesquite** (+
(Money Mesquite)
Prosopis glandulosa
PEA FAMILY

This many-branched shrub or small tree is one of the desert’s valuable water-indicating plants. Look for this handsome, many-branched tree where springs pour or water is near the surface of the ground. Its roots may penetrate 15-24 m (50 to 80 feet) in search of water. Flowers bloom in late April and May and attract many insects, especially honey bees. The fruit, resembling green beans, ripen in autumn and are eaten by several kinds of animals. Indians around the land, sweet pods into a meal. During pioneer days, the wood was used as fuel, fence posts, and in making furniture. Mesquite frequently acts as a windbreak, and wind-blown sand may pile up around a plant. Almost buying it. It responds by sending out many new branches, while the trunk continues to grow underground. A thicket of mesquite is an important habitat for small burrowing mammals as well as for birds and small reptiles.

**Catclaw**
Acacia (Gringa)
PFA FAMILY

Numerous thorns, short and curved like a cat’s claw, readily identify this deciduous shrub or small tree. It often forms thickets in the bottoms of canyons and washes. The plant is heavily armed by rider and herder alike because of its ability to catch and tear clothes and flesh. It is sometimes called “water-mining” bush and “devil’s claw.” The flower is very fragrant and an important source of honey. Seeds are in pods and were formerly used by Indians as food. Occasionally mesquite causes large spindle-shaped swellings on this plant but it is snow common on mesquite. The thorny branches after an excellent nesting site for the weir, while heavier branches afford fine protection for small mammals.

**Hairy Lotus**
Lotus (Beer-Vetch)
PEA FAMILY

The main characteristic of this small pinnate annual is the compound leaves. The leaves usually number from 4 to 6 and are covered with fine woolly hairs. Flowers are minute, less than 1 cm (less than 1 inch) long. The petals are often reddish on the back with age. Several seeds are produced and are gathered and stored by small rodents. The plant continues to grow as long as the soil remains moist. It may be found in mid-Mexico and along desert washes in all elevations in the southern portion of the region.

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This low, rounded, many-branched shrub adds little color of any kind to the desert during most of the year, appearing dead and leafless much of the time. If winter rain furnish sufficient moisture, its smooth, pointed, stems become greenish, a few small leaves appear, and the shrub turns into a vivid mass of flowers in April and May. With disappearance of the flowers, the tiny leaves are shed to conserve moisture during the hot summer. Occasionally it receives enough late summer rains to bloom again in the fall. The seeds are utilized for food by small mammals. It is most conspicuous in the desert washes or open areas throughout middle elevations of the region.

This is one of the most abundant plants of the Southwest deserts. The leaves often glisten as if freshly wet, because of a coating of silvery waxy. This oil production protects the plant from too great a water loss during the long, dry periods between rains. In April and May the plants turn on a yellowish cast from the numerous flowers. After a few weeks, the shrub is covered with fluffy white, ball-like fruit, each containing five seeds. Each a reddish imitation on the branches, was used by Indians to repair pottery and glue snowshoes to snowshoes. After a rain its name becomes evident, as it gives off a resinous, sweet odor. It is often referred to in Mexico by the name of “Peregrinis,” translated “little bad-smelling” or “little wrinkled.”

Globe-mallow flora: their graceful, blossoms, covered stems on either side of the road between the Victor Center and Las Vegas, and throughout most of the region, especially in disturbed soils and washes. A herbaceous annual or a woody base, it grows as tall as 1 m (3 feet). The rounded leaves usually appear shrunken and wrinkled. Some people find the silvery hairs on the plants irritating to the eyes. In some parts of the Southwest, they are called “eye-popper.” When in full bloom, the plant takes on a fairy glow in late afternoon sun. It flowers throughout the year when conditions are right, but is most often seen from March to June.
This plant is well named, as contact with it causes considerable discomfort. The skin soon develops a red, stinging rash similar to that from the familiar stinging nettle. Thousands of small, sharp-pointed poisonous hairs and sharper barbed ones give a greenish sheen to its leaves and stems. The leaves cling to clothing and are difficult to remove. The plant grows from 20-50 cm (one to two feet) high. It prefers the rocky canyons under shady overhanging ledges, and it is frequently found along the shores of the lake. It flowers from April to June. Except for various insects and small reptiles, most animal life seems to shun the plant.

**Blazing Star**  
(Desert Cabbage, Spiny-haired Blazing Star)  
*Montana*  
STICK-LEAF FAMILY

This is a coarse-stemmed, much-branched, annual with roughened texture of the stems and leaves which causes them to cling to clothing. It grows to a height of about 30 cm (one foot) when it has sufficient moisture. The outer stamens of the flowers are discolored and have three lobes at the end. As a sun-loving plant, it is commonly found on south facing slopes and low ledges in lower elevations. It blooms from March to May.

**Small-Flowered Blazing Star**  
*Montana albiglauca*  
STICK-LEAF FAMILY

This annual is branched at the base, with white and stinging stems, and grows about 38 cm (15 inches) tall. Flowers are small and rather inconspicuous, measuring approximately 1.2 cm (one-half inch) across, and appear from March to May. It grows well in either the open or in partial shade at shrubs, and is commonly found on sandy or gravelly soils of dry washes or open areas.

**Mohave Prickly Pear**  
*Cylindropuntia*  
CACTUS FAMILY

The Mohave prickly pear is primarily a spreading cactus with large and rather flattened stems. Besides the noticeable curved spines, this plant also produces the minute haw-like spines, called "glochids." Flower color, as in most cacti, is variable, in this species it ranges from light yellow to pink. The fruits are "fuzzy" take on a purple color when mature and are commonly used in production of jellies, syrups, and wines. They also serve as food for many of our small desert mammals. Natives often feed on the peels during late summer. This cactus has limited distribution in the Lake Mead area, with only or higher elevations of the Newberry Mountains and Grand Wash Cliffs.

**Buckhorn Cholla**  
(Deerhorn Cholla, Cane Cholla)  
*Opuntia spinosior*  
CACTUS FAMILY

This much branched, robust and long-stemmed cholla is common throughout the region. Typically, it achieves a height of 1.5 m (5 feet) or more and occurs in open basins and valleys in the Desert Bush Community. Flowers may be yellow, variegated or tinged with red. Spines are 2.5 cm (one inch) or more in length, stout, and quite numerous. Stalks portion of the stems are often made into walking canes or other woodcrafts. Indians use the buds and eat them in combination with pomegranate or salt bush graces. The fruits are also eaten by rodents, such as the woodrat.

**Holy Cross Cholla**  
(Dorning-Needle Cactus, Diamond Cactus, Pencil Cholla)  
*Opuntia ramosissima*  
CACTUS FAMILY

This cactus grows as a low shrub with few ascending stems and many thinn, spreading branches. The numerous snow-colored spines borne on short tubercles, are covered with thin, papery sheaths. When these are moltened they leave with spines. It blooms in April and May. The flower petals are sometimes tinged with red on the outer petals. Flowers are followed by dry, spiny fruits that often do not mature. The silver cholla cactus forms thickets. After it has died, the woody tubular stem skeletons, appropriately called "mummified wood" by desert campers, make excellent fuel. It is found in low elevations, preferring wide valleys and open slopes.
Old Man Prickly-Pear -- (Grizzly Bear Cactus)
Opuntia engelmannii
CACTUS FAMILY

The "old man" cactus received its name from the dense white or pale gray, bristle-like covering of spines. Flowers are bright yellow, often tinged with pink or red, and sometimes may be a rich reddish-purple. The pads of plants form mounds that may rise 60 cm (two feet) or more in height. The plants prefer gravelly slopes in higher elevations and may be found in the Newark Mountains. A reddish-flowered variety grows in the Pierce Ferry area associated with the Joshua tree forest. Both varieties bloom from late April to June. Unrelated people often illegally remove these plants from their natural habitat and try to grow them under unsuitable conditions.

Cotton-Top Cactus --
Echinocereus polyacanthus
CACTUS FAMILY

The name "cotton-top" refers to the generous tufts of white cottony hairs enveloping the flower base and fruit. Because these "balls of cotton" are present throughout most of the year, species recognition is easily accomplished. The stems are usually dumplike, often in groups of more than a dozen, and may grow only 30 cm (1 foot) or less in height. It prefers gravelly slopes and is seldom found elsewhere. Spines and flowers resemble the solitary barrel cactus, but their distribution differs. It ranges from the Cascade Bush Community to the Pinon and Juniper Community. They may be seen in several places in the recreation area, but especially as you descend from Searchlight to Cottonwood Cove and around Pierce Ferry.

Solitary Barrel Cactus (Disocactus)
Ferocactus acanthodes
CACTUS FAMILY

Together with other species, this cactus is also called "tunisia." The solitary barrel cactus, like the globular in form, eventually becomes cylindrical and may grow to a height of 80 cm (2.5 ft) or more. It tends to grow toward the sun, which often produces a leaning habit, frequently seen in older plants. The flat reddish spines are 10-20 cm (1/2 in) long, and flowers are yellow and arranged in a circular pattern at the apex of the stem. While it has been called a wonderful thirst quencher, the shiny oblong fruit obtained by mashing the pulp is no substitute for drinks, but is suitable for water. A few have been known to eat into the plant at the base, living off of the soft tissues and water while being well protected from enemies.

This is one of the most notable of several different kinds of pinwheels in the region. It may grow to a height of 60 cm (two feet) and produce from 60 to 100 cylindrical stems. Each stem may have several flowers, each flower about 2.5 cm (1 in) across. The toothed leaves are mostly confined to a basal rosette, usually arranged in early spring or late winter months. They are often red-colored beneath. It is an abundant plant of basalt gravel washes and rolling hills, blooming from March to May, and is an important food for wildlife, especially big horn sheep.

It is thought by some that the former in this received their name from the dense covering of their stiff prickly hairs. Once you've become acquainted with these plants you, too, will not forget them. Fiddleneck possesses small flowers less than 1.2 cm (one-half inch) in length. The arrangement of these flowers in one-sided corkscrews resembles the structure of the neck of a violin, hence the common name. Each flower produces a nut-like fruit composed of four parts. Seeds are believed to cause digestive problems in grazing cattle and sheep. Fiddlenecks are abundant in the open Cascade Bush Community, especially in southernmost portions of the recreation area.

This is a rather compact plant and a common desert perennial. It is usually low-growing, but under favorable moisture conditions may grow to a height of 30 cm (1 foot). The flowers are pendant and sometimes drooping when open. After blooming, paper seed pods form, with many scattered tiny seeds. It grows in desert washes and around protective boulders, blooming from April to July. It is related to the Gametum and the berries are edible and may be eaten raw or cooked. Some people have used them in making preserves. Indians knew the value of the berries for food. Several small animals find them good to eat.

This flower resembles the garden snapdragon, but is smaller. It grows on a bright green, thread-like stem which climbs by twining around the low branches of desert plants, thus receiving only limited exposure to sunlight. Found in any year when abundance is confined to the Creosote Bush Community, where it is often associated with scrub growing in the washes. Blooms in April and May.

Sundrop ++
(Chorny Evening Primrose)
Camissonia tenax
EVENING-PRIMROSE FAMILY

Fiddleneck ++
Anastrangul resedelate
FORGET-ME-NOT FAMILY

Ground Cherry +
Physalis crassifolia
SIMPSON-MOSES FAMILY

Twining Snapdragon +
Antirrhinum filipes
FIGWORT FAMILY

TWIKNING SNAPDRAGON
Lesser Mohavea
Mohavea breviflora
FLOWERING FAMILY

The flowers resemble the familiar golden winged dragon, and are partially hidden by the leafy stem. The plant grows only about 1-20 cm (6-8 inches) in height, and its stem is branched from the base. It is covered with many glandular hairs, resulting in a very sticky texture. Because of this, sand pockets are usually found adhering to the stem and leaves. A short-lived annual, it germinates, flowers, and produces seed in a three-week period. It is a lower elevation plant and prefers the steep, talus slopes of lava bluffs, but also occurs on gravelly banks of washes.

Coyote-Melon
Cucurbita pepo
CUCURBITACEAE

Like other gourds, this plant spreads out for several feet, with stems being extended as long as 3 m (10 feet). Leaves are large, palmately lobed, and dark green. The plant usually has both male and female flowers. The female flower is large with a 3 lobed pistil, the male flower is smaller, the anthers formed into a single central tube. The mature gourd is yellow grey and up to 10 cm (four inches) or more in diameter. The plant prefers gravelly banks of washes and is frequently seen growing in disturbed soils along roadsides. The gourd is a favorite food of the coyote, hence the common name.

Matchweed
Matchweed
Broom Snakeweed
Gutierrezia sarothrae
SUNFLOWER FAMILY

These small rounded shrubs bloom during late summer and fall, often occurring in almost pure stands. The flowering heads are small but quite numerous, sometimes numbering into the hundreds. They are clustered in bunches at the ends of the many branches. The leaves are linear and burn readily when dry. It grows best on open slopes and is especially abundant around 914 m (3,000 feet) or more in the Joshua Forest Community. The flowers are favorite targets for bees.

Spiny Goldenbush
Haplopappus Goodallii
SUNFLOWER FAMILY

Found in late summer and fall, this plant seems to grow best on gravelly soils and rocky talus slopes. It is a perennial with several leafy stems arising from a woody base. It grows 15-40 cm (6-16 inch) tall and is bright green. The leaves are short and slender with many bristle tipped lobes. Its green foliage and seeds furnish food for small rodents.

Golden-Eye
Golden-Eye
Resin Weed
Eriogonum douglasii
SUNFLOWER FAMILY

This low shrub looks very similar to the Royales Encelia, and the two are sometimes found growing in the same area. It grows to a height of 30-60 cm (1-2 foot). The lower stems are opposite, strongly toothed, heavy variegated, with edges rolled under. The medium-sized flower heads are numerous, growing on the tips of long, slender stems, either solitary or in small flat-topped clusters. It prefers open gravelly slopes and blooms in late summer and early fall. It is common in higher elevations, being especially abundant near Christmas Tree Pass in the Newberry Mountains.

Sunray
Encelia artemisii var. argophylla
SUNFLOWER FAMILY

Sunray is one of the most impressive members of the sunflower family to be found in this desert. The large flowers, as much as 15 cm (6 inches) across and on leafless stems, rise to a foot or more above basal tufts of large, shiny gray leaves. The leaves are rather thick, smooth, covered with a fine down, and feel similar to felt. Papillae or eroded cells containing gum is. It is especially noticeable along the North Shore Road from Las Vegas Wash to Overton, and in the Kingman Wash and Barrell Landing area. A closely related variety, almost identical in appearance, is the Penman day, found in Death Valley National Monument.

Bristle-Bush
Bristle-Bush
Incana incana
SUNFLOWER FAMILY

This shrub is one of the most impressive members of the sunflower family to be found in this desert. The large flowers, as much as 15 cm (6 inches) across and on leafless stems, rise to a foot or more above basal tufts of large, shiny gray leaves. The leaves are rather thick, smooth, covered with a fine down, and feel similar to felt. Papillae or eroded cells containing gum is. It is especially noticeable along the North Shore Road from Las Vegas Wash to Overton, and in the Kingman Wash and Barrell Landing area. A closely related variety, almost identical in appearance, is the Penman day, found in Death Valley National Monument.
This shrub is 1 m (three feet) or more in height, and composed of a large number of stems. Leaves are gray-green and very bitter to the taste. The plant may become leafless during high summer temperatures to reduce moisture loss from transpiration. Flowers are small but numerous, giving a look of the branches a rich yellow cast. The ray's flowers are borne in clusters. In spite of its name of "oiseaux," the plant has a pleasant odor. The blooming of rabbitbrush heralds the approach of fall. It is commonly found in washes and around slopes. Several other species of rabbitbrush somewhat similar in appearance to this one, are found in the region.

These plants often form vast gardens of color on sandy desert basins and along roadsides. Even when there isn't much rainfall in the cooler months to furnish needed moisture, these annuals seem to bloom anyway. Flowers begin to show as early as February in lower elevations and continue through May. Occasionally conditions are right for another flower season in early fall. It is large and showy with many short white hairs on leaves and stem, stands about 60 cm (2 feet) high, and is common throughout the area. Many small rodents use the seeds as part of their diet.

**Rabbitbrush**
*Chrysothamnus nauseosus*
**Desert Sunflower**
*Geraea canescens*
Rayless Enceila -+
Encelia floridiana
SUNFLOWER FAMILY

This rounded, much branched shrub is similar in appearance to its relatives, the encelia and brittle-bush. Its leaves are green, without any coating, and are scattered along the whitish stems. The plant has only disk flowers. It prefers dry slopes and desert flats in the Creosotebush Community. Commonly found at elevations up to 1,200 m (4,000 feet), it is especially noticeable in the Newberry Mountains near Davis Dam.

Encelia -+
Encelia virginiensis
SUNFLOWER FAMILY

This shrubby plant closely resembles the rayless encelia, but differs in that it has a coating of fine, grayish-white hairs over its green leaves, a feature lacking in the other. Each flower stalk bears a single head, having both ray and disk flowers. It grows on the bases of rocky washes and edges in middle and higher elevations of the desert. It may bloom during both spring and fall months. It produces quantities of seeds, which are stored and eaten by small rodents. Some Indian tribes boiled the leaves and flowers and used the brew as a wash to relieve rheumatism.

Sweetbush -+ (Chudwala’s Delight)
Breaia juncea
SUNFLOWER FAMILY

Leafless most of the year, this shrub is well adapted to the desert. The rounded plant often reaches a diameter of 2.5-3.5 m (8-12 feet). Stems are numerous and rough to the touch. The flowers are small, but numerous, in the late spring. When conditions are right, it may bloom again in the fall. It is common in the broad sand and gravel washes. As the common name indicates, it is a favorite food for the chudwala lizard. It is also eaten by brigh and vigor extensively by bees.

Desert-Marigold -+
(Marigold)
Baileya multiradiata
SUNFLOWER FAMILY

Often producing the “yellow living” along the roadsides, it blooms throughout much of the year. The flowers, one to each stem, are 2.5 cm (1 inch) in diameter and produced in clusters. The stems bear the yellow flowers, the leaves mostly basal and downy. It prefers well-drained, rocky or gravelly slopes and is abundant in discolored soil along road shoulders throughout the region. It produces large numbers of seeds, an important food for small desert rodents.

This is a fragile, gland-covered annual with a strong scent when crushed. Its leaves are large and shiny, with a crinkly or closed texture. Flowers are small, not especially noticeable. The leaves are strongly colored under large boulders, mapping the moisture captured therein. Because of its preferred habitat, it is properly named. It is found among boulders of steep talus slopes and around the base of cliffs during the period from April to June, although it may also become abundant in early fall if sufficient moisture is available.

Woolly-Daisy -+ (Wallace Eriophyllum)
Eriophyllum wallacei
SUNFLOWER FAMILY

Another small annual which can be classified as a “belly flower,” it is less than 5 cm (2 inches) tall and is covered with numerous soft hairs. A single plant may produce as many as a dozen or more flower heads. These plants may become abundant, producing a fluffy carpet following periods of above-average rainfall. They grow in rocky soils and in sandy washes and sandy slopes. Flowering season is April and May. Although small, the flowers produce quantities of seeds which are eaten by small rodents. A closely related species found in the same region, differing mainly in having white flowers, is the woolly eriophyllum.
Yellow-Head +
(Yellow Pincushion)
Trichophorum medium
SUNFLOWER FAMILY

If sufficient moisture is available at the right times, this aromatic annual may bloom between March and May and again in September and October. The round, bell-like flower head is made up of numerous small, tube-shaped flowers. These heads are borne on slender, reddish stems 2-3 cm (0.8-1.2 inches) in length. It is a low-growing plant with the stem and coiled leaves covered by reddish hairs. It grows best in open areas of desert pavement in the Creosote-bush Community.

Chinch-Weed +
Poa annua
SUNFLOWER FAMILY

This tall flowering annual is a conspicuous feature of the desert's autumn color. It possesses a strong, but pleasant, odor associated with the small, dark-capped glands at the base of the flower and on some of the leaves. Following adequate summer rains, it may provide a yellow hue to blend with the desert brown and greens. Look for this plant in September and October throughout low to middle elevations of the region.

Desert-Fir +
(Pigmy-Cedar, Sprucebush)
Psuedotsuga schottii
SUNFLOWER FAMILY

This shrub received its several names because its vivid green, needle-like leaves and general shape give superficial resemblance to a coniferous tree. In reality, its flowers reveal membership in the sunflower family. It may attain a height of 1.5 m (5 feet), but is usually smaller. The resinous leaves give an aromatic fragrance when crushed. It is found along steep, calcareous slopes and in many dry washes. It is especially numerous in the Black Canyon area and blooms from early spring to May.

Turtleback +
(Desert-Rose)
Papaverussa
SUNFLOWER FAMILY

The growth form resembles the back of a turtle, hence the common name. It is a very compact plant, with thick, green, waxy leaves that are covered with numerous hairs. Crushed leaves have a strong, spicy odor. Stems are very short. The flowers are small and rather inconspicuous. It prefers gravelly soils, especially where the soil has been disturbed along washes. It is common in the Las Vegas Wash area along the North Shore Road.

Groundsel +
(Sand-wash Groundsel)
Senecio douglasii
SUNFLOWER FAMILY

This colorful annual grows up to 30 cm (12 inches) in height. The large, deeply lobed leaves are mostly basal, with a few smaller leaves along the stems. The flower heads are fragrant and several may be found on one plant. It is closely related to the desert-dandelion. Although the two plants are very similar, they are usually not found growing together. It is in sandy areas that yellow flowers have become adopted and are quite common in some years. An abundance of seeds is produced, and these are much relished by small rodents and seed-eating birds.

The flower heads of this plant look very much like the familiar dandelion so common in spring, with one difference—the center of the desert variety has a small reddish button. Depending on rainfall, it may produce numerous blossoms or just a few. It grows in open areas and on rolling hills. In good flowering years the desert is carpeted in many areas with these colorful creations. Its green leaves furnish food for several kinds of wildlife, and the flower heads are eagerly eaten by the desert ratites.

Two closely related species occur in the Lake Mead region (see White Tack-Stem). The only noticeable difference is in flower color. The white variety is the more common of the two. Like its white cousin, the yellow variety is named from the small, numerous, dark, tubular glands which cover the upper portions of the stem. It is found in open, gravelly areas and rolling hills.

Yellow Saucers +
Mirasphorium sonoranum
SUNFLOWER FAMILY

Desert-Dandelion +
Magellanaster glabrata
SUNFLOWER FAMILY

Parry Tack-Stem +
(Part-Stem)
Caloprasia parryi
SUNFLOWER FAMILY
plants with flowers very inconspicuous or apparently absent

Sometimes called "joint-fruit" because of its jointed stems, the plant is closely related to the plinio, cyclus and grimes. The stems bear scale-like leaves and develop small yellowish cones at joints on the stem. It grows best in washes and on higher desert slopes. It was commonly used by Indians as a brew and a medicine, and later by Mormon pioneers as a refreshing tea. The brew is somewhat laxative. The plant contains a high concentration of tannin, which helps digestion and is used as a medicinal tonic and poultice. Its small black seeds were prized and eaten. Birds and small mammals, especially antelope ground squirrels, harvest them in great quantities.

The mistletoe is a parasitic, that is, it survives at the expense of its host. Large dumps are commonly found growing on honey mesquite and catclaw, but may sometimes be found on creosote-bush, palo verde, and mesquite. Branches of these plants may suffer from over-infection by the parasite. The flowers are fragrant and showy. Red berries appear during summer and remain into the fall. Birds, such as the phainopepla, bluebird, and Gambel’s quail are particularly attracted to the berries as a food source and consequently assist in seed dispersal. The juicy pulp of the berries helps supply water as well as food for wildlife during dry summer months.

This silverly shrub is another desert plant found growing on gypsum-rich soil. Leaves are thick, somewhat leathery to the touch, and covered with a velvety down. Later in summer the leaves take on a pinkish tinge and many tend to drop off, especially if rainfall is unusually sparse. Flowers are inconspicuous and wind-pollinated, thus hard to miss. The seeds are flat, papery, and rounded, about the size of pinhead flakes. In some parts of the desert this plant has been collected until it is quite rare. The silverly leaves make it a desirable Christmas decoration and quantities have been sold for that purpose. It is now protected and thus protected from such practices. It is commonly seen along the North Shore Road.

Mormon Tea +
(Dessert Tea, Mexican Tea)
Ephedra
Herbaeensis
JOINT-RIA
FAMILY

Desert Mistletoe +
Phoradendron californicum
MISTLETOE
FAMILY

Desert Holly +
Arctostaphylus hymenolepis
GOOSE-FOOT
FAMILY