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NATIVE PLANTS FOR DESERT TORTOISES

by Mary Cohen

The Desert Tortoise Natural Area (DTNA) is a 39.5 square mile area of prime natural habitat located in the Mojave Desert of California on the slopes of the Rand Mountains. This desert ecosystem includes over 160 different species of plants. Many of the animal inhabitants of the DTNA feed upon these plants. One such inhabitant is the desert tortoise (*Gopherus (Xerobates) agassizii*), Official Reptile of the State of California.

The desert tortoise meets its nutritional needs by consuming a wide variety of plant materials. This article does not presume to be a complete listing of all the food plants growing in the DTNA; in fact, it profiles only a fraction of the plants growing there. The article concentrates on DTNA plants stocked by the Theodore Payne Foundation, which is currently the only source that many of these native California plants can be purchased from. All the plants mentioned in this article are available as seed in packets and sometimes in bulk; a few are available as container stock. Seed can be mail ordered directly.

Desert tortoises in their native habitat feed on annual wild flowers, annual and perennial grasses, and the pads and buds of some cactus species. The term "annual" designates plants that complete their life cycle in one season. These plants germinate, grow flower, set seed, and die in one growing season. The seed they have set will germinate and grow under the right conditions the following season. Perennial plants may live through several to many seasons. The roots and underground of some perennial plants remain alive through the seasons even when the above ground portions of the plants die back each year. These are known as herbaceous perennials.

Seeds of many of the annual wildflowers on which desert tortoises feed are available from Theodore Payne Foundation. The following paragraphs describe these annuals in more detail.

Leafy-Stemmed Coreopsis (*Careopsis calliopsiclea*) grows from 4 to 20 inches (10-50 cm) in height and bears 1 to 3 inch (2.5-7.5 cm) wide golden flowers.

Whispering Bells (*Emmenanthe peruliflora*) grow from 4 to 20 inches (10-50 cm) in height and bear small, yellowish cream flowers resembling bells.

The California Filago (*Filago californica*) is a small, white, woolly annual growing from 2 to 12 inches (5-30.5 cm) in height/spread and bearing minuscule flowers.

Gold Fields (*Lasthenia chrysotoma*) is a slender annual growing 2 to 10 inches (5-25 cm) tall with small yellow flowers, and which carpets the desert after the winter rains.

White TidyUps (*Layia glandulosa*) grow 12 to 24 inches (30-60 cm) in height and bear numerous flowers that are 1 inch (2.5 cm) across and white with yellow centers.

Desert Dandelion (*Malacothrix glabrata*) is a many-stemmed annual 4 to 15 inches (10-38 cm) tall which bears numerous pale-yellow, fragrant flowers.

Owl's Clover (*Orthocarpus purpurascens*) is also known as Pink-Brush, referring to its appearance in flower. It grows 4 to 15 inches (10-38 cm) in height and bears striking flowers, which are greenish-purple at the base and reddish-purple at the tip.

Thistle Sage (*Salvia carduacea*) is an annual growing with a rosette of prickly leaves at the base of 12 to 24 inch (30-60 cm) tall stalks of lavender-fringed flowers each about 1 inch (2.5 cm) long.

Chia (*Salvia columbariae*) grows in well-drained locations to a height of 4 to 20 inches (10-50 cm), bearing clusters of blue-purple flowers and edible seeds

Theodore Payne also offers a desert-annual seed mix composed of many plant species, some of which are native to the DTNA and some of which are not.

Several perennials native to the DTNA are available as seed or 1 gallon container plants:

Bluedicks (*Dichelostemma pulchellum*), which send up a few grass-like leaves and numerous flower stalks 12 to 24 inches (30 -60 cm) tall from small onion-like bulbs (grassnuts). Bluedicks have pale-blue to purple flowers.

Mojave Aster (*Machaeranthera tortifolia*) is a shrubby perennial growing 12 to 27 inches (30-70 cm) in height, and bearing yellow 2-inch (5 cm) wide flowers in the spring.

Desert or Apricot Mallow (*Sphaeralcea ambigua*) is a desert cousin of tropical hibiscus, blue hibiscus, and Chinese lantern. Growing 20 to 40 inches (50-100 cm) in height, desert mallow bears beautiful apricot to peach red to grenadine-colored flowers, which are relished by desert tortoises.

Several native grasses occur at DTNA:

Indian Ricegrass (*Oryzopsis hymenoides*) is a slender, perennial bunchgrass which, including florets (the “flowers” of grasses), reaches a height of 12 to 24 inches (30-60 cm).

Desert Needlegrass (*Stipa speciosa*) is also a perennial bunchgrass reaching a height of 12 to 24 inches (30-60 cm). These two grasses are similar enough to hybridize naturally. Grow

Desert Needlegrass with CAUTION! Needlegrass may cause mechanical injury from the sharp florets becoming embedded in the skin or mouth. It may also aggravate hay fever and asthma conditions.

Theodore Payne offers several shrubs native to the DTNA:

Cattle Spinach (*Atriplex polycarpa*) is an intricately branched, grey saltbush reaching a height of 3 to 6 feet (1-2 m). It bears minute male and female flowers on the same plants.

California Buckwheat (*Eriogonum fasciculatum*) is a low, spreading shrub with many 24 to 48 inch (60-120cm) long stems. The stems terminate in clusters of tiny pinkish flowers.

Beavertail Cactus (*Opuntia basilaris*) offers tortoises edible pads, buds, flowers, and fruit. This low spreading cactus has grayish stems 4 to 12 inches (10-30 cm) long and showy rose-orchid flowers. Spines are absent, but “glochids” (tiny, sharp, bristle hairs) are present. Glochids easily detach from the plants and embed in the skin. If this occurs, moisten the area with water and vigorously rub ordinary table salt on the place of intrusion. This will provide relief and will help work the glochids out of the skin. It is nearly impossible to remove them with tweezers, as they are very small and break off at the skin surface very easily.

Creosote Bush (*Larrea tridentata*) is NOT a food plant but provides shelter and shade, and tortoise burrows are often located at their base. The dominant shrub in the DTNA, it grows 4 to 10 feet (1-3 m) tall, and bears small yellow flower throughout the year. Its strong-flavored, resinous sap gives the leaves a polished look and deters browsing by animals.

Theodore Payne Foundation is a non-profit, unendowed foundation dedicated to the propagation and preservation of California native flora. Its nursery, which includes a hillside wildflower walking trail, stocks a wide variety of California native plants. It provides educational events on topics ranging from native-plant care to basketry. The bookstore offers many volumes on native plants and natural history. The reference library features an extensive horticultural and botanical literature. In the spring (March-May) its wildflower-hotline (818) 768-3533 provides current reports on the best areas in the southland to see wild flowers in bloom.