



THE

ASDM

NEWSLETTER

TUCSON, ARIZONA

NO. 19 FALL 1977

THE DESERT'S DEADLY FLORA

While out reveling one late summer night, a Desert Museum staff member had the uncoordinated misfortune to fall full-body backwards into a prickly pear cactus.

Besides the immediate pain of a zillion tiny pricklers, this anonymous soul suffered a delayed reaction of muscle aches, listlessness and a 100-degree fever for two days.

All of this led to a serious discussion amongst museum personnel about toxic cacti. According to Don Ducote, Curator of Plants, cactus spines generally are not very toxic and any systemic reactions to an encounter with them could be blamed mostly on dirt and bacteria that may have accumulated on the spines. There are natural resins covering cactus spines which may cause a local irritation and, in combination with the bacteria, can help make a person who has had a significant dose of them feel quite lousy.

Nevertheless, Ducote advises that cactus encounters are not serious cause for alarm. However, there are a handful of plants, abundant and highly visible in this region, which can be deadly, even to adults, if eaten:

Western coralbean (*Erythrina flabelliformis*)—An alluring plant with large, red, showy, flamelike flower clusters, the coralbean produces thick long pods containing red or orange seeds which are used in Mexico for making necklaces.

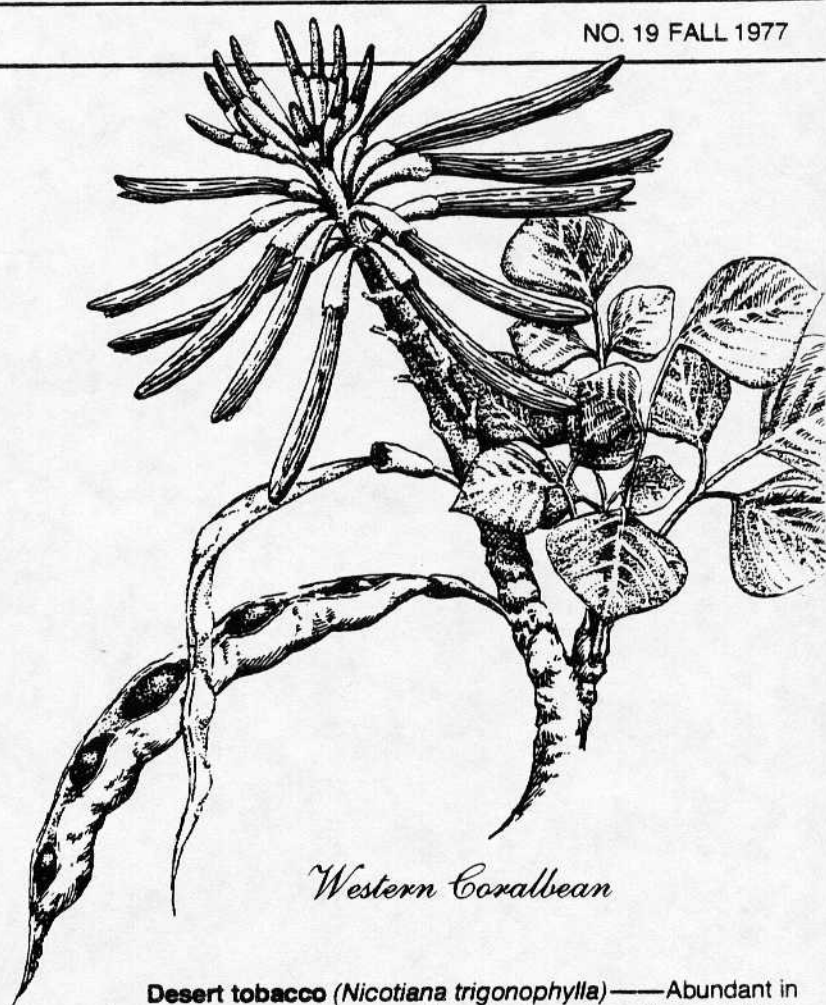
Beauty aside, these hard seeds are very poisonous, containing alkaloids which can make a person violently ill and, if ingested in sufficient quantity, can be fatal.

Case in point was a healthy adult who unwittingly ate half a bean. He became very sick, losing all the food and a lot of the moisture in his system, finally passing out for 14 hours. He has complained of stomach trouble ever since.

The coralbean plant is found most often on rocky canyon slopes and in washes at elevations of 3000 to 5500 feet amid grassland-woods vegetation. During most of the year, the coralbean appears as a spiny bunch of sticks, because the shrub leafs out (in three-leaflet-clusters) only during the summer rains and sports its showy blooms only in the spring.

Tree tobacco (*Nicotiana glauca*)—This conspicuous plant, with its long, tubular yellow flowers and leathery-looking leaves, is often used as a decorative plant in yards—sometimes without the knowledge that it is highly toxic and can be deadly. The leaves of the plant—which are large and covered with a white substance so that they appear a dull blue-green—contain nicotine and other poisonous alkaloids.

In the wild, tree tobacco—an evergreen—is found along streams, ditches and washes, also in disturbed areas such as roadcuts. Growing from 6 to 20 feet tall, this plant is an invader from South America, spreading extensively into the warmer desert areas of Mexico and North America.



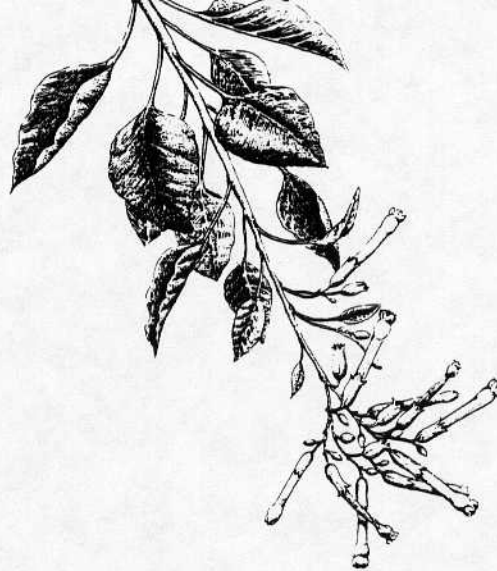
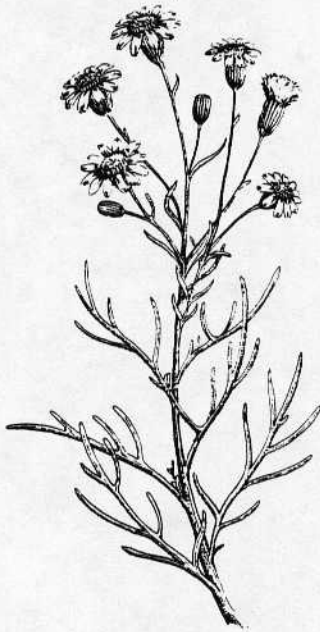
Western Coralbean

Desert tobacco (*Nicotiana trigonophylla*)—Abundant in desert areas around Tucson, desert tobacco has the same toxic principals, and toxic effect, as tree tobacco. However, this leafy perennial is quite a bit smaller and is characterized by its sticky foliage. Desert tobacco flowers do resemble tree tobacco blooms, except that they are smaller and lighter in color.

Datura—The real troublemaker in this region among the various species of datura is *Datura meteloides*, known commonly as sacred datura or jimsonweed (see cover drawing by Desert Museum artist Gary Dixon). The hallucinatory-visionary experiences made famous in the writings of Carlos Castaneda ("The Teachings of Don Juan") involved the use of sacred datura, among other plants. In certain quantities, it can kill a human.

Children, as well as horses, cattle and sheep have been poisoned by this plant—its roots are narcotic and are sometimes eaten by Indians to induce visions, an extremely dangerous practice. Users of the plant experience dilation of the eyes, blurred vision, near-blindness and pain when exposed to sunlight. Its effects can also be delirium, hallucinations, hyperexcitability and, with enough of the drug, convulsions leading to death. At least one Arizonan is reported to have died from the effects of the plant in the last two years.

Threadleaf Groundsel



Tree Tobacco



Desert Tobacco

Jimsonweed's so-called "attraction" for the thrill-seekers is a sensory distortion of physical forms or a supposedly spiritually uplifting experience with God or nature. People generally eat the leaves or brew them as tea. However, all parts of datura plants are toxic.

Sacred datura is a showy plant, marked by large, trumpet-shaped white flowers which resemble morning glories and stand out conspicuously among the surrounding vegetation. The plant blooms at night and the flowers remain open only until full sunlight forces them to close the next day. It grows wild around Tucson, found in roadsides, along ditches and in desert canyons at elevations from 1000 to 6000 feet.

Threadleaf groundsel (*Senecio longilobus*)—This deadly perennial carries an added dimension of danger in this region because it looks very much like a harmless herb known

as gordolobo (*Gnaphalium*) which is sold in health food stores and pharmacies as a medicinal remedy for intestinal ailments, sore throats, hemorrhoids and such problems.

Both senecio and gordolobo grow wild in the nearby mountains and are members of the daisy family. Both are small gray-green shrubs which look very similar to the untrained eye.

Medicinal gordolobo is usually drunk as a tea, and the confusion of the two plants has led to mistaken use of senecio in this brew instead, causing the death of a Phoenix child and the serious illness of a Tucson youngster earlier this year. The toxic alkaloids in senecio appear to cause chronic liver disease and deterioration.

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Specimens of these plants are available for inspection in the Desert Museum's Plant Department herbarium.