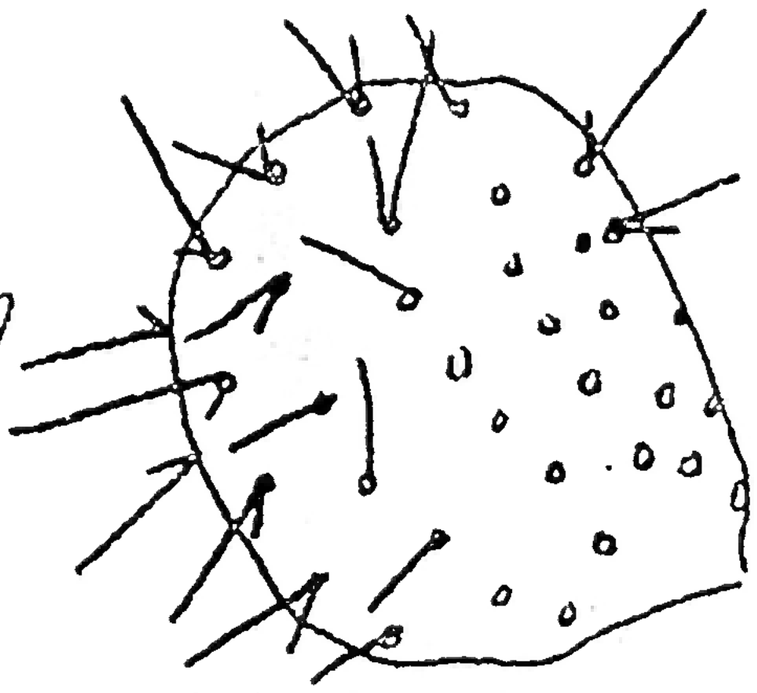
CACTOS Y SUCULENTAS



OFFICIAL PUBLICATION OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY

March, 1966 Vol. 2, No. 3

NATIONAL SPONSORS SHOW

MARCH MEETING

San Diego Floral Building at 2:00 p.m., Saturday, March 5.

Mr. Frank Mousseau will speak on the "Economic Importance of Euphorbias."

This meeting we will begin the Plant Sale Table. Tickets will be sold at a modest price, and members will have the opportunity to add new specimens to their collections.

If members have plants in bloom or new or different species, bring them to display for the Bragging Table. Last month Mrs. Howe brought a Kalanchoe caudatum with delicate pink flowers.

Mr. and Mrs. Taylor have recently returned from a trip to Mexico to purchase and collect plants. Hopefully, we may be able to persuade one of them to tell about their trip.

Refreshments will be served at modest donation. Bring yourself and friends.

LAST MEETING

Major part of program was taken up by the showing of four motion pictures: "Plant Reproduction," "The Angiosperms," "The Desert," and "The Amazon."

A WORK PARTY IS SCHEDULED FOR SATURDAY MORNING, MARCH 5, 8:30 TO 11:30 AT THE CACTUS GARDEN.

The Cactus and Succulent Society of America is sponsoring a show June 16 through 19 at the Los Angeles State and County Arboretum at Arcadia.

Any member of the national or affiliate societies may enter exhibits. Societies, individuals, and nurseries may enter garden exhibits. Ribbons, trophies, plants, etc. will be awarded to winners.

Only amateurs may enter the sections "Specimen Plants" and "Plant Collections." "Garden Exhibits" will be open to amateurs, societies and nurseries.

There will be a special "Children's Division" for those under16 years.

Other exhibitions open to amateurs and/or societies will include "Arrangements," "Corsages," "Dish Gardens," "Planters," "Art" (includes photographs), "Purple Glass," "Natural Desert Woods," "Bonsai" (cacti and succulents only).

Theme of the show is very general, "Cacti and Other Succulents Around the World."

Members who are interested may contact Joyce L. Tate, Show Chairman, 11845 H ubbard St., Sunnymead, Calif. 92388.

MINUTES FOR MEETING, FEB. 5, 1966

The meeting was called to order by President Vaughan; the minutes were read and approved.

Six guests were welcomed. The treasurer's report was as follows: $367.91 bank total, $79.39 petty cash, giving a total of $447.30.

The notice was read in the "Affiliate Reporter" concerning the flower show sponsored by the National Society to be held in June.

President Vaughan gave Mrs. A. A. Lewis a special thanks for taking care of the Cactus Garden these last weeks.

Member Bud Crane told the Society that we have been placed on the mailing list for the quarterly British Journal at $3.00 per year.

Mr. Stevenson reminded the club of the plant sale table that is to start in March.

Mr. Ward presented the proposed budget for 1966 as follows:

Income	
Surplus Balance at end of 1965	$428.00
Expected Membership Dues for 1966	80.00
Miscellaneous Income (Plant Donations, etc)	30.00
Fair Prize Awards (Four displays)	400.00 (Min.)
Total Cash & Income	$938.00
Expenses and Reserve	
Professional Dues	15.00
Rental of Floral Building	25.00
Fair Expenses	100.00
Programs for General Membership	100.00
Library (Books & Subscriptions)	120.00
Mailing Costs	55.00
Newsletter	60.00
Charity	50.00
Plant Procurement/Display Participation	100.00
Miscellaneous Expenses	10.00
Proposed Expenditures	$635.00
Contingency Reserve	303.00
Total Expenditures & Reserve	938.00

Mr. Nelson made the motion that it be accepted and was seconded by Dr. Roberts. Motion carried.

The program of four botanical films was presented by Mr. Ward: "Plant Reproduction," "The Angiosperms," "The Desert" and "The Amazon."

Refreshments were served by Mrs. Hoffman, aided by Mrs. Lewis. Mrs. Merritt will be in charge of refreshments for April.

Shirley Ward
Temporary Secretary

PEA TREES DOMINATE

J.Ward

Our Southwest deserts (Sonoran, Arizona, Colorado River Deserts) do not have a great variety of trees. The most characteristic trees are members of the pea/bean family (Leguminosae); they are found, as a rule, in flood washes and areas with shallow water tables.

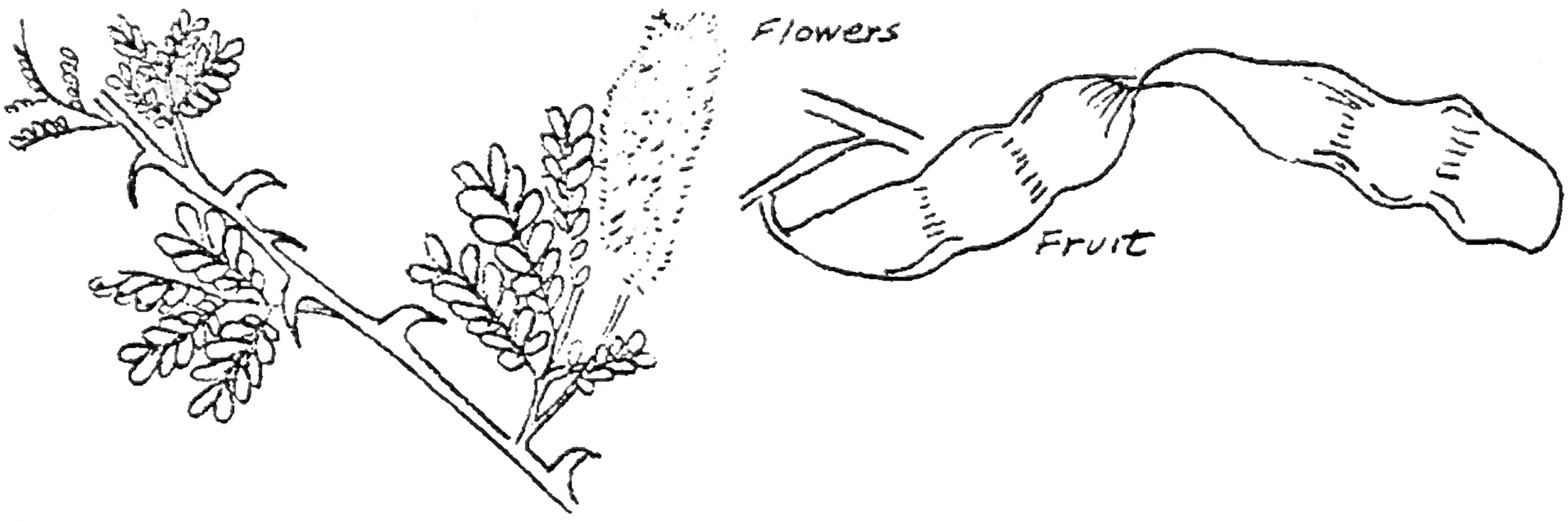
One may find these trees cultivated in coastal areas if he searches for them, but they have never become popular because they are characteristically thorny. Most species shed leaves continually, including small branchlets with thorns; this also makes them less than desirable.

However, when they are blooming in spring with their solid mantles of yellow flowers, they are just as beautiful as any of the imported Acacias.

The most commonly found pea trees are:

Acacia greggii (Cats-claw, Devils-claw)

Distribution:	Calif., Ariz., Texas, below 4,000 ft.
Flowers:	Pale yellow; April-Oct.
Fruit:	Typical pea-pod shape, light green, reddish when mature.
Size:	Up to 20 ft.
Wood:	Hard; good firewood.



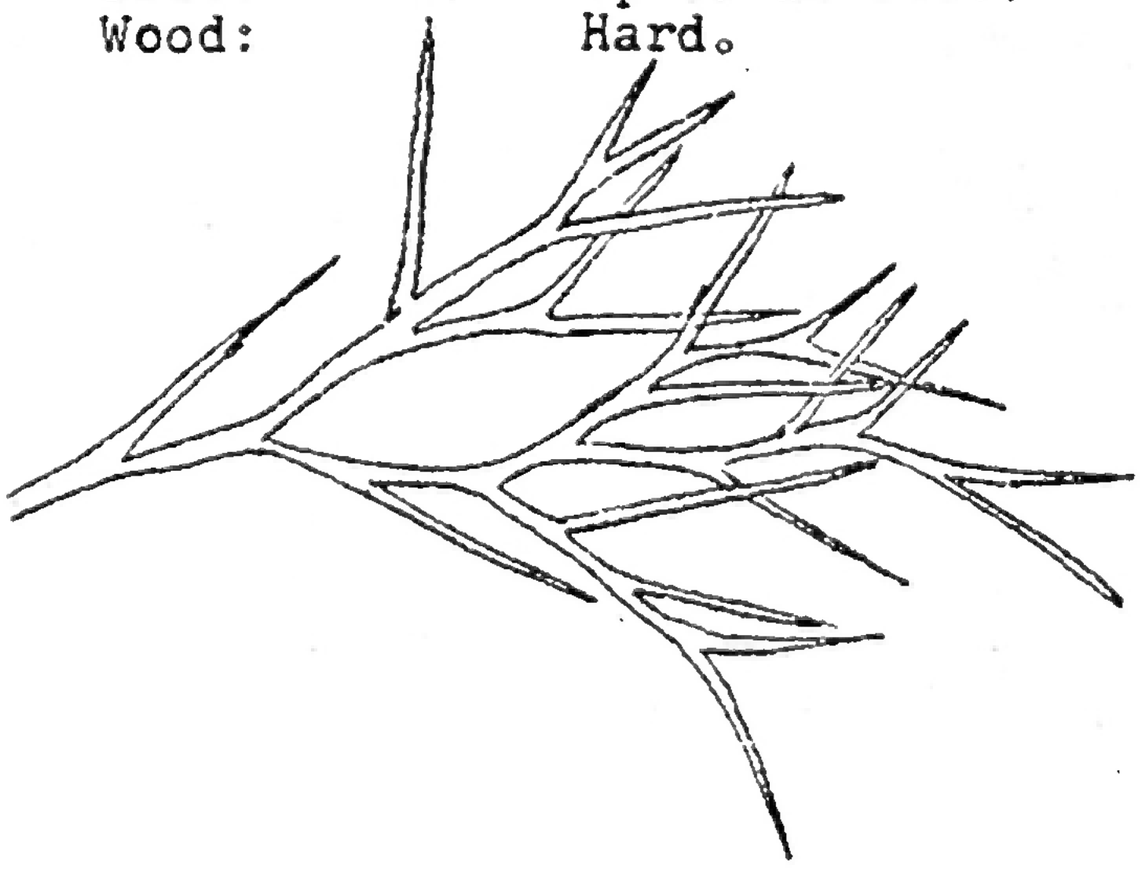
Cercidium microphyllum (Paloverde)
Cercidium floridum (Blue Paloverde)

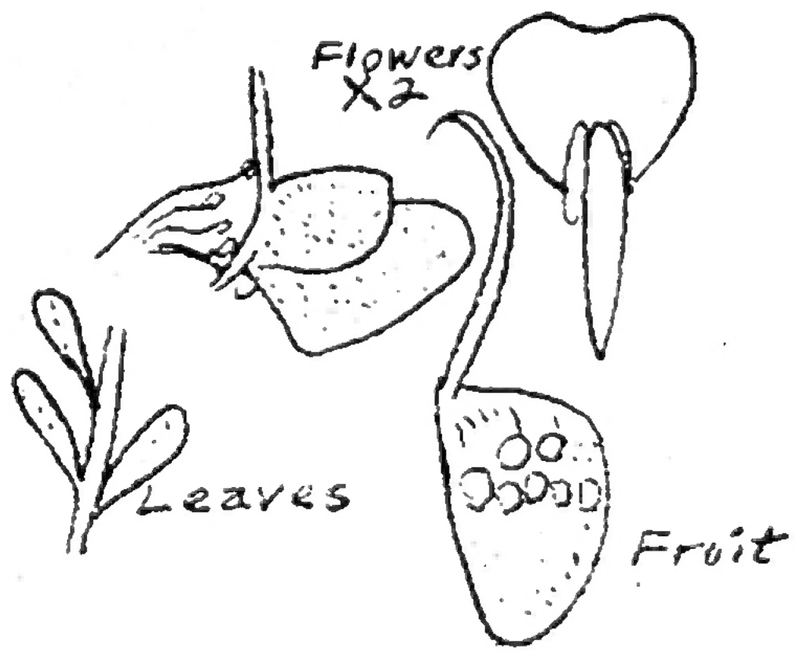
Distribution:	Calif., Ariz., below 4,000 ft.
Flowers:	Pale Yellow to Golden.
Fruit:	Bean-like pods.
Size:	Up to 25 feet.
Wood:	Brittle and soft; disagreeable odor.

PEA TREES

Dalea spinosa (Smokethorn, Smoketree)
Dalea formosa (Texas Smoketree)

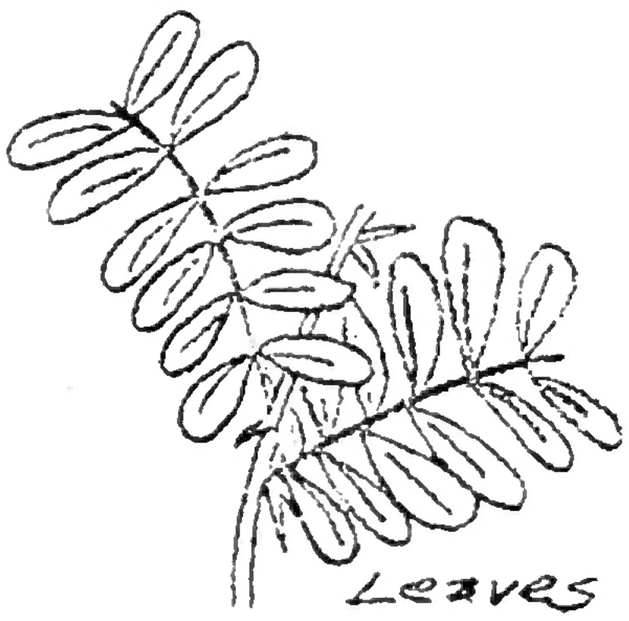
Distribution: Calif., Ariz., Texas.
Flowers: Blue-violet, violet, April-June.
Fruit: Shortened pod.
Size: Up to 12 feet.
Wood: Hard.

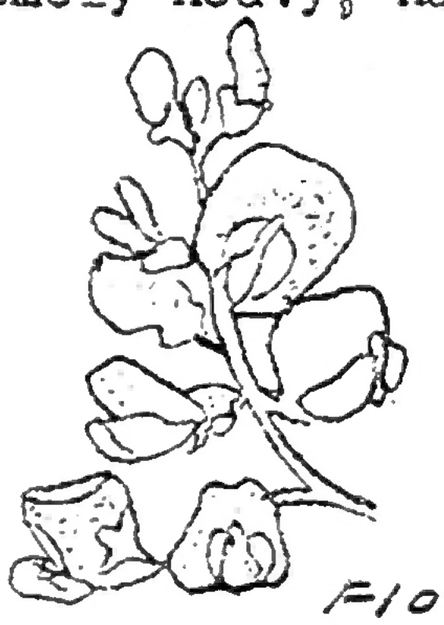




Olneya tesota (Ironwood)

Distribution: Calif. and Ariz., below 2000 ft., uncommon.
Flowers: Violet purple; May-June.
Fruit: Pea-pod like.
Size: Up to 35 feet, with wide crown, evergreen (does not lose leaves like other pea-trees).
Wood: Extremely heavy, hard and resistant;



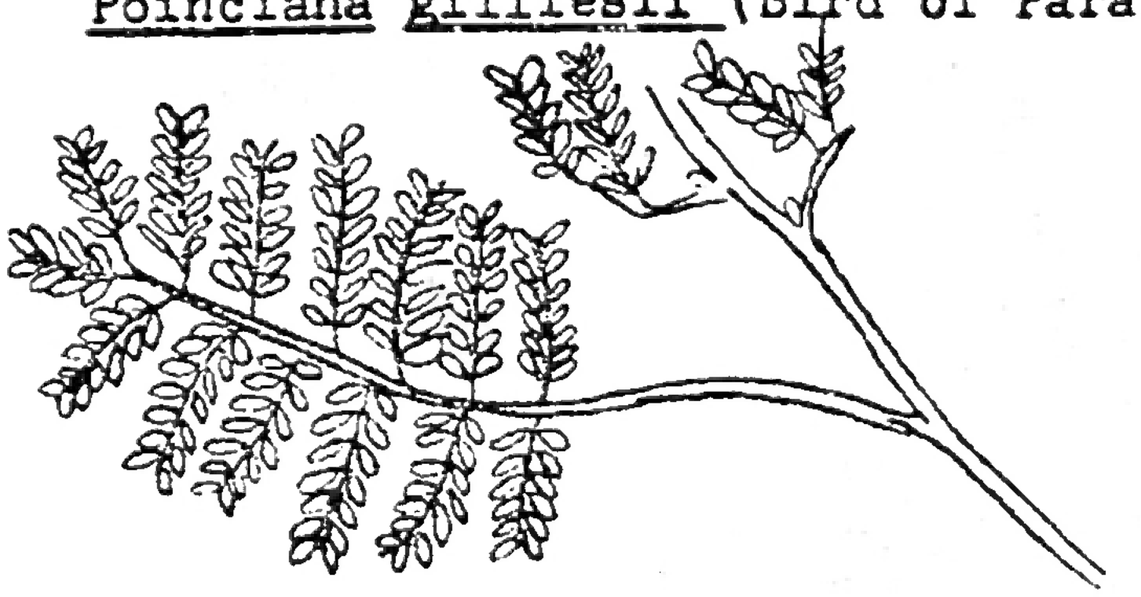


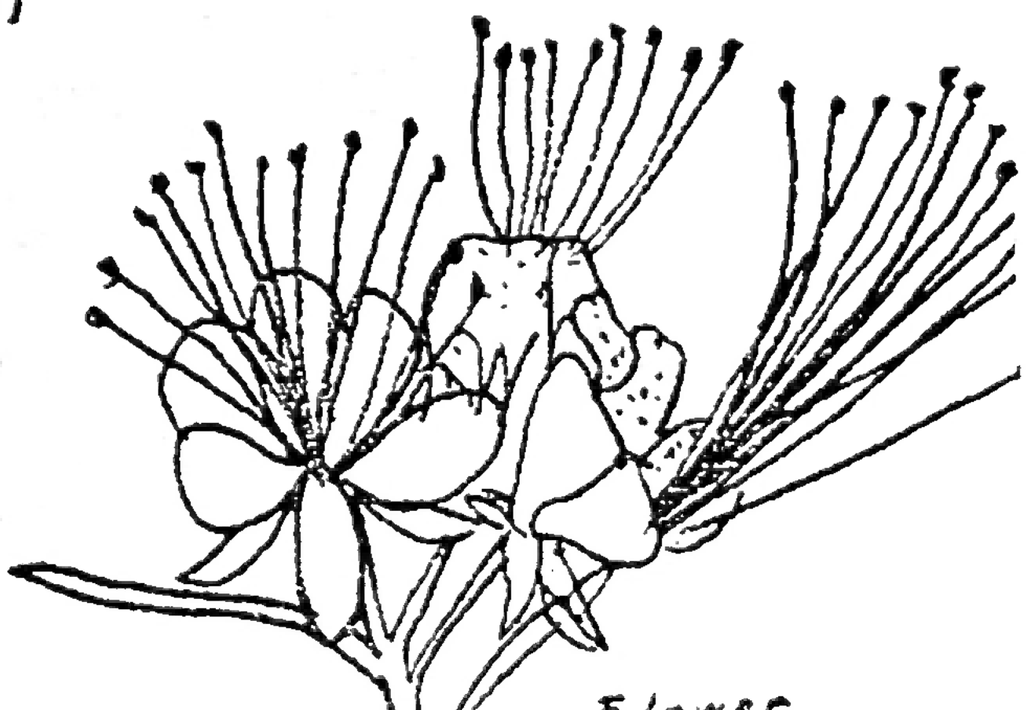
Poinciana gilliesii (Bird-of-Paradise)

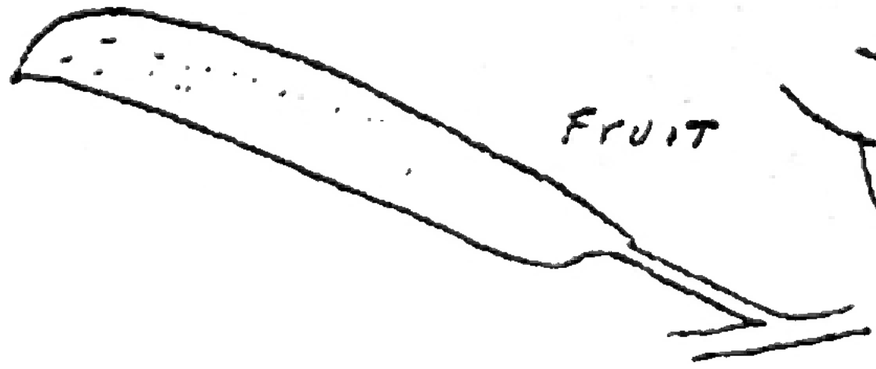
Distribution: Calif., Ariz., Texas, imported escape.
Flowers: Yellow-and-Red; May-August.
Fruit: Pea-pod type, curling after splitting.
Size: Up to 10 ft.
Wood: Unpleasant odor; no use.

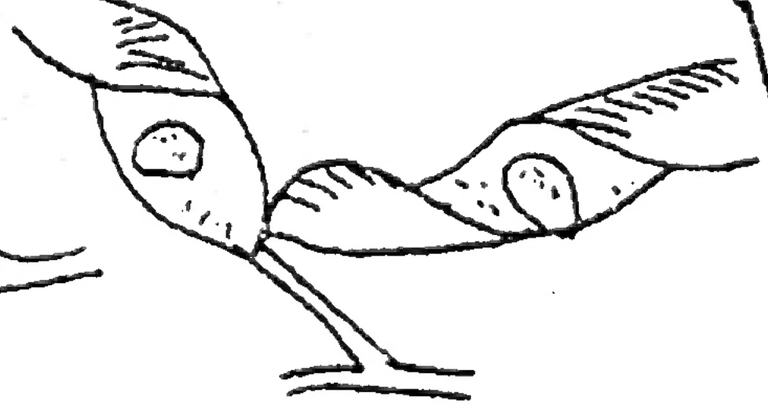
PEA TREES

Poinciana gilliesii (Bird of Paradise)



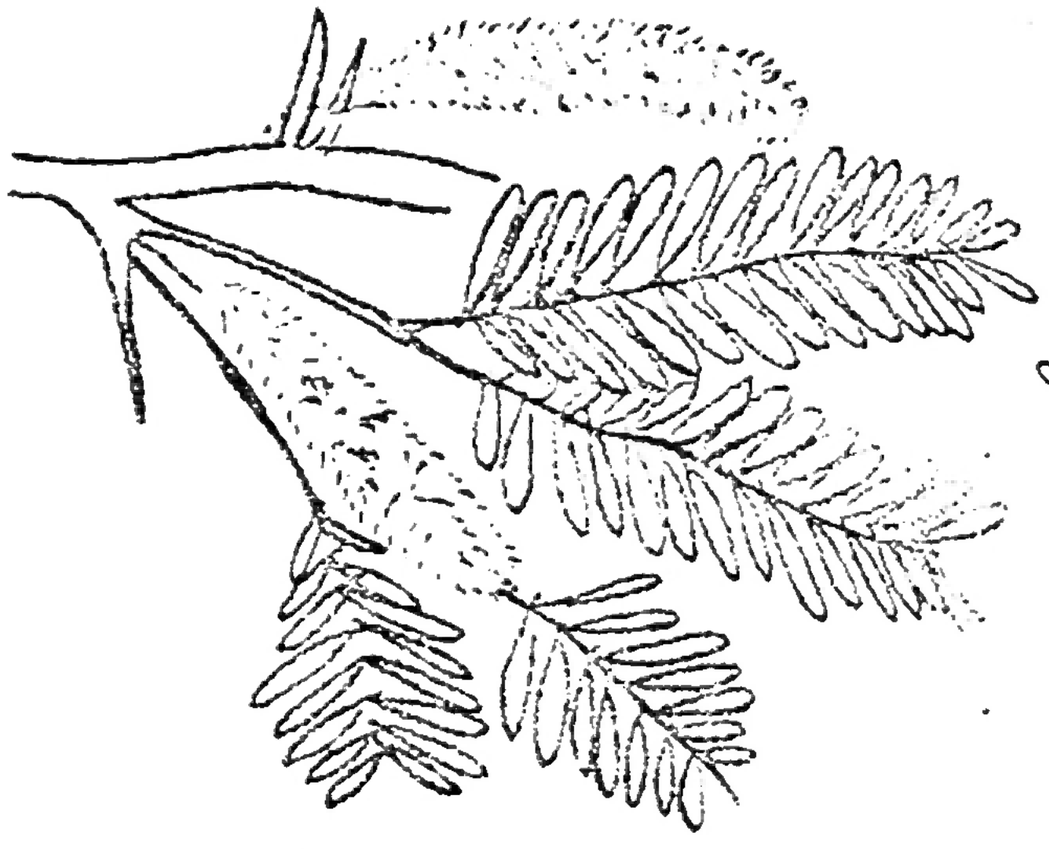


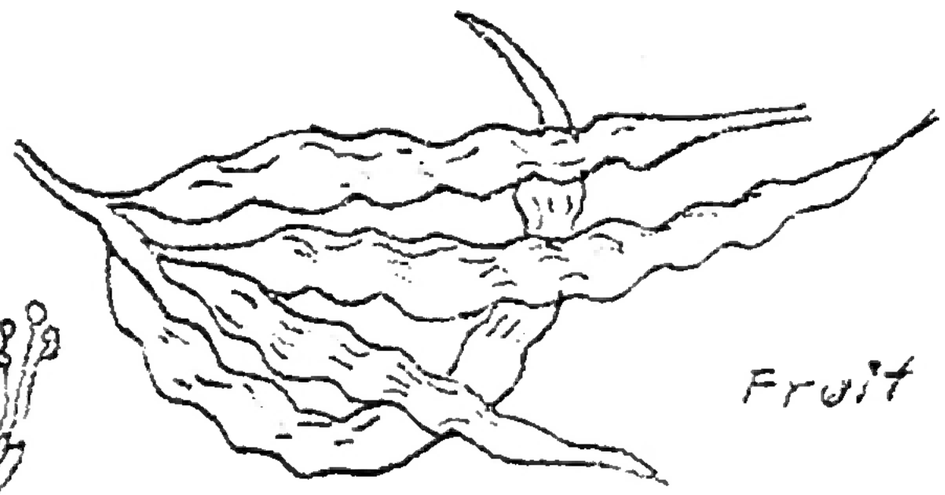




Prosopis juliflora (Honey Mesquite)

Distribution:	Calif., Ariz., Texas, below 5000 ft.
Flowers:	Yellow; April-June.
Fruit:	Bean-like pods.
Size:	15 to 25 feet.
Wood:	Hard; aromatic firewood.



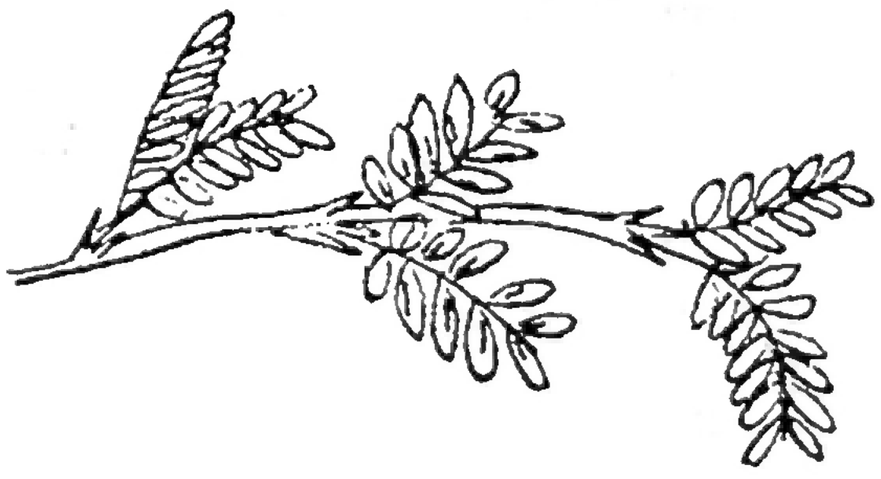


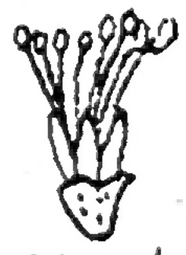
Prosopis pubescens (Screwbean Mesquite, Tornillo)

Distribution:	Calif., Ariz., Texas, below 4,000 ft.
Flowers:	Yellow; May-June.
Fruit:	Screw-shaped, tight spiral coil.
Size:	Up to 20 ft.
Wood:	Hard; good aromatic fuel.

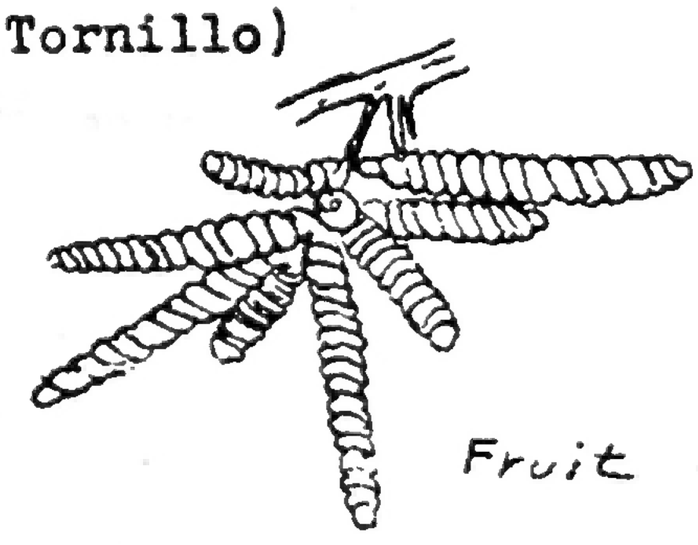
PEA TREES

Prosopis pubescens (Screwbean Mesquite, Tornillo)





Single Flower



Fruit

PLANTS INDICATE DESERT WATER

Certain plants in our Southwest deserts grow only in association with water or where the water table comes within 20 to 30 feet of the surface.

For the person who wants to locate a home where he does not have to drill to great depths to reach water, this is helpful knowledge. State wildlife conservation departments also make use of this knowledge to tap underground water sources for water holes for wildlife.

The following species are good indicators that water is present or seeps close to the surface:

- Mesquite (Prosopis species) in areas of shallow water table.
- Arrow-weed (Pluchea sericea) is an indicator of permanent water if the plants are green and without deadwood in dry periods.
- Wildrose (Rosa species).
- Reed (Phragmites communis).
- Salt grass (Distichlis spicata) and other grasses.
- Tanglebrush (Forestiera neomexicana).
- Desert baccharis, Seepwillow (Baccharia sergiloides, B. glutinosa, B. sarathroides).
- Saltbush (Atriplex species).
- Cottonwood (Populus species).
- Salt Cedar, Tamarisk (Tamarix pentandra and other Tamarix sp.).
- Palms (Washingtonia filifera).
- Willow (Salix species).
- Desert Willow (Chilopsis linearis).

NEW SLIDE SETS FROM NATIONAL

Three new sets of slides have been made available from the National Society. These are:

"Ariocarpus & Allied Genera"
"Baja California"
"Four Corners" (Ariz., Utah, New Mex., Colorado)

RENEW MEMBERSHIPS

This will be the last issue to be received by those not renewing membership for 1966.

If you cannot renew membership in person, please mail the $1.00 renewal to:

Mrs. Helen Howe, 4767½ Lantana Dr. San Diego 92105.

INDIANS SURVIVE IN DESERT

(Note: The author carried out research on the Cahuilla Indians for his M.A. thesis; this information was digested from the thesis.)

Prior to the coming of caucasians to Southern California, the Cahuilla Indians lived in the area that is now the Coachella Valley (Indio, Palm Springs), the San Gorgonio Pass area to Banning, and in the Santa Rosa Mountains. The information given here applies to the Indians who lived on the desert floor.

Inasmuch as there were few animals available for food, the Indians were forced to rely on seed gathering. When we look at the desert we may wonder how anyone could have lived off the natural plants which grow there. The Cahuilla practiced no agriculture nor did they trade for food. Meat was scarce and came primarily from lizards, snakes and rabbits, with an occasional dog thrown into the pot.

Mesquite

Mesquite was so important that the Cahuilla calendar was based on the cycle of the Mesquite. At that time, mesquite (Prosopis juliflora and P. pubescens) grew in dense thickets from the area of Indio southward to the dry basin of the Salton sink.

Mesquite blossoms were gathered in the spring and roasted in pits with heated stones before being rolled into balls for eating. In July and August, huge quantities of Mesquite fruit were gathered and spread in the sun to dry before being stored away in large baskets mounted on outdoor platforms. Mud was used to seal the baskets against insects and rain.

The Cahuilla did not use just the seed but the whole pod including the tough fibrous cover. Beans were pulverized to a rough textured flour in a wooden mortar (ironwood or mesquite) with a stone pestle. Flour was mixed with water in pottery jars and left until well soaked. It was then ready for eating without cooking or further preparation. By bulk, the mesquite bean is 25 to 30 per cent sugar, and more than half its weight is of assimilable food elements.

Another way of preparing the flour for eating was to sift it through a basket screen into a container, after which it was sprinkled with water and allowed to dry for several days. The water acted as a cementing agent which formed the flour into a dry cake after the water evaporated.

A drink was made by soaking finely sifted mesquite flour in water for a few minutes. Flour left to soak for a considerable time formed a potent fermented drink.

Flour was also mixed with other seed meals and made into patties cooked on preheated stones. Mesquite sap, collected in little balls from the tree trunks, was eaten without any preparation. Mesquite mistletoe (Phoradendron californicum) supplied small pink-white berries which were mashed, mixed with sifted ashed to counteract the stickiness and then boiled briefly before eating.

Agave

Agave deserti, which grows abundantly in the 1000 to 3000 foot level on the eastern face of the San Jacinto-Santa Rosa Mountains, bloomed during the spring. At the height of the blooming season, the desert Indians trekked from below sea level on the desert floor

(continued on next page)

up to the Agave fields. As the flower stalk emerged from the base the whole heart of the plant was cut out and roasted.

Large fire pits were lined with stones, pre-heated, and ashes removed before Agave heads were placed in the pit. They were then covered with grass, earth, and left to roast for a few days. The roasted taste has been described as that of syrup baked out of sweet apples. However, the roasted heads were carried down the mountain and pounded into cakes for storage and later use.

Agave blossoms were boiled and dried for storage, and then re-boiled before eating.

Cacti

Seeds were gathered from Ferocactus acanthodes and Mammillaria dioica, which then grew thickly at the base of the Santa Rosa Mts., and crushed into a rough flour from which cakes were made. Mammillaria dioica also furnished a s nall sweet fruit from spring through fall.

Opuntia seeds were too tough and fibrous for grinding into flour, but young joints from Opuntia basilaris, O. chlorotica, O. occidentalis piercei and O. megacarpa were sliced and cooked for eating. Fruits from the above Opuntia, except for O. basilaris, were also collected for cooking before eating. In addition, the fruits of Opuntia echinocarpa, O. bigelovii, and O. parryi were roasted for food.

Yucca

The fruit of Yucca schidigera is a large, plump, sticky, green pod, 3 to 5 inches long, filled with four rows of black seeds. While yet green it was picked and roasted in coals. It has been described as having a taste sweet, pleasant, and slightly suggestive of roasted green apples. Fresh or dried Yucca flowers were also eaten after being boiled.

Sage

By far the most important seed gathered, except for mesquite, was Salvia columbariae, a very small member of the sage family. The pulverized seed yielded a rich mucilage and oil that was combined with other foods. Seed fans and beaters were used to knock the small seeds into flat baskets. After they were parched and pulverized into an oily meal, mesquite flour or (in historical times) grain flour was added in the proportion of three parts flour to one part Salvia meal. This produced a dark flour which was baked into little cakes or biscuits that had a nutty flavor.

Other Species

Food gathering was a constant occupation of the Indians except for the colder parts of the year. Among other species which were of importance in the diet were:

Acacia greggii (Pod was used for food.)
Aphyllon ludovicium ("Cancer Root;" roots were roasted.)
Arcostaphylos glauca ("Manzanita;" fruit was dried and pulverized into flour.)
Artemisia tridentata ("Wormwood;" seeds ground into flour.)
Atriplex lentiformus ("Salty Sage;" prepared by grinding and cooking seed with salt and water.)
Chenopodium fremontii ("Saltbush;" seeds made into flour.)
Ephredra nevadensis (Tea was made from leaves.)

(continued on next page)

INDIANS SURVIVE IN DESERT (continued from previous page)

Fouquiera splendens ("Ocotillo;" ate the crimson blossoms and pulverized the seed.)
Halodiscus discolor (Seed into meal)
Lasthenia glabrata (Seed into meal)
Olneya tesota ("Ironwood;" seeds into meal)
Parkensonia torreyana ("Paloverde;" seed into meal)
Rhus ovata ("Sumac;" blossoms boiled and eaten.)
Rhus trilobata ("Sumac;" berries soaked for drink.)
Rosa californica & R. ramoscina ("Wild Rose;" capsules eaten.)
Salicornia subterminalis (Seeds into meal.)
Sambucus mexicana ("Elder;" sweet sauce made from red berries.)
Simmondsia californica (Nuts ground for a type of coffee.)
Sisimbrium canescens ("Pepper grass;" ground, cooked in a large quantity of water and eaten with a little salt.)
Sueda suffractescens & S. diffusa (Leaves boiled for greens.)
Washingtonia filifera ("Palm;" fruit pulverized.)
Yucca brevifolia ("Joshua Tree;" seeds and flowers eaten.)
Yucca whippleii ("Spanish dagger;" head and stalk roasted at beginning of the blooming stage.)
Zizyphus parryi (Fruit pounded into meal.)

Jack W. Ward

LOPHOPHORA WILLIAMSII (PEYOTE) Shirley Ward

Peyote is a small, carrot-shaped cactus, the gray-green top resembling a pincushion divided by curving radial ribs. The cactus has no spines, but on top of the divisions made by the ribs are off-white tufts of matted fuzz. Cut off horizontally at ground level, this puffy top becomes the woody, bitter and weedy-tasting peyote button.

There are two stages in the physiological effects that result from eating peyote. First, the strychnine-like alkaloids in the cactus give a feeling of excitement and exhilaration somewhat like that induced by very strong coffee. The face becomes flushed, the pupils dilate and the person tends to be talkative, light-headed and wakeful. Later, mescaline comes into action and its effects last for 10 to 12 hours. Time perception is altered and a curious sense of double existence occurs. One part of the mind remains critical and well-oriented, but when the eyes are closed and opened, elaborately beautiful designs are seen--fields of brilliantly colored jewels, vast and slowly changing geometrical constructions, as in a toy kaleidoscope.

Both Indians and whites have reported violently terrifying visions, like images of supernatural monsters. At other times these monsters may be more comical than terrifying. Other than visual hallucinations sometimes occur, such as one Indian hearing the sun come up with a gradually increasing roar.

All authorities agree that peyote is not addictive. Mexican tribes have used peyote since pre-Columbian times. Peyotism is the main present-day native religion of more than 50 American Indian tribe. The use of peyote is forbidden in a number of states; it is classified as a non-narcotic drug with no medicinal value.

N. Y. Times Magazine, Nov. 1, 1964, pp. 96-99, "The Diabolic Root," Weston La Barre.