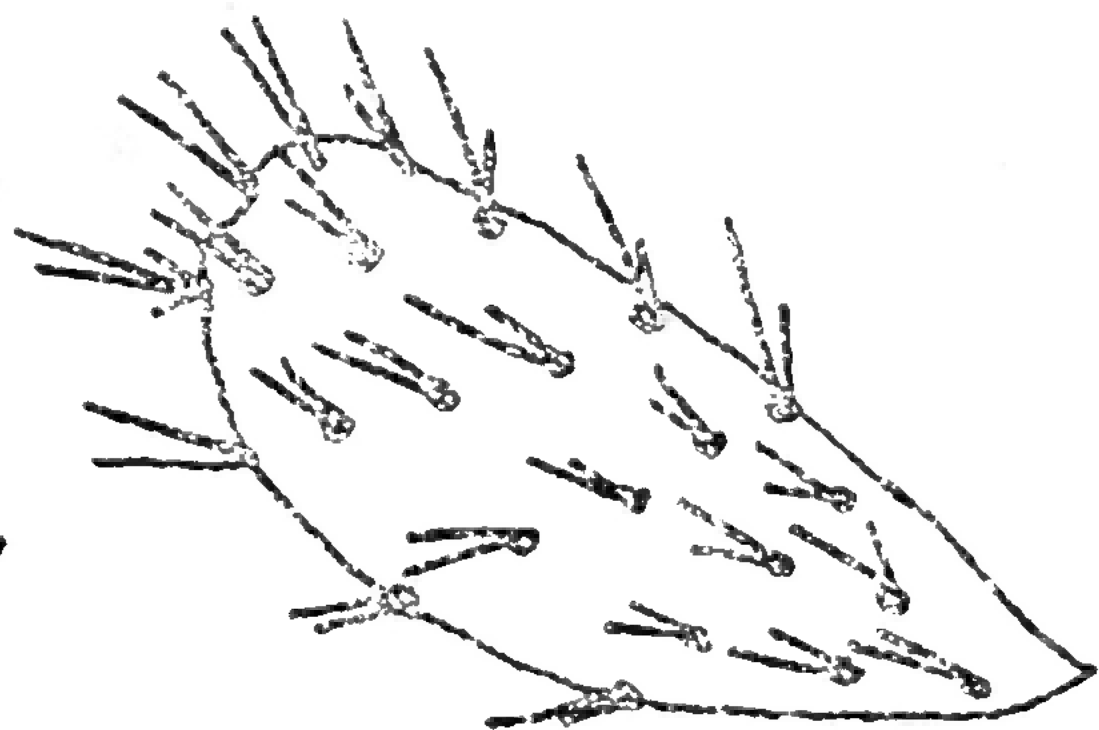


# CACTOS

# Y

# SUCULENTOS



OFFICIAL PUBLICATION OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY

November, 1965

Vol. 1, No. 4

## NOVEMBER MEETING

November 6, Balboa Park Floral Building at 2:00 p.m. Mrs. Ruth Cuzner will show slides of Madam Gana Walska's Lotusland at Santa Barbara, California.

Bring a plant for the exchange table. Bring a guest. Refreshments will be served.

Display plants will be distributed to members for grooming.

## DECEMBER MEETING

Saturday, Dec. 4, Balboa Park Floral Building, 2:00 p.m.

Christmas Social arranged for Society by Mr. and Mrs. William Hoffman. Also election of officers for 1966.

## LAST MEETING

Don Skinner spoke on "Soils". See article on page 2.

## VOLUNTEERS CALLED

Dr. Vaughn will be expecting a large turnout of members at the Balboa Park Desert Garden from 8:00 a.m. to noon, this Saturday, November 6.

Bring hoes, water hoses, rake, and lawn sprinklers. After last week's Santana, the plants are in need of a good soaking.

Those who turned out for October's work party were Doc Vaughan, Ruth Cuzner, Mr. Greenwood, Mr. & Mrs. Nelson, Mr. and Mrs. Scott, Mr. Waite, and Mr. and Mrs. Ward.

## CULTURE-DISPLAY PLAN BENEFITS MEMBERS

Approximately 80 plants will be distributed to club members at the November meeting of the Society.

Plants were purchased at club expense as the beginning of a long range plan to involve a larger number of Society members in public displays.

Since the inception of the Society, a handful of members have carried almost the whole burden of supplying plants for the county fair and other public displays.

This has often resulted in the loss of plants or damage to them, and also a financial loss to individual members who have supplied almost all the plants for particular displays.

Members who take plants will become the owners of them, but owners with an obligation. The obligation will be to give them special care and to bring them for public displays when requested.

Some of the plants are too small to be ready for display at the next county fair, but most of the plant collection is expected to be large enough.

It is hoped that members will learn more about culture, become more display conscious, and take a more active interest in public displays as an outcome of this project.

Members will assume no financial responsibility for loss of any specimens.

# SOILS

(Based on a talk by Don Skinner to the SDCSS, Oct. 2, 1965)

Note: Liberty was taken to fill in details which Mr. Skinner was not given time to elaborate.

All cacti and succulents are dependent upon the essential factors of light, water, temperature, air and minerals. The composition of the soil greatly affects water and mineral intake of the plant, and it also determines whether the roots can get air or "breathe".

Originally, all soils were rocks. The endless work of ice, wind, water, temperature, vulcanism, and organic processes have worn down the rocks to form all of our present soils. Different kinds of rocks are composed of different minerals or elements. For instance, limestone is composed chiefly of a mineral known as calcium carbonate mixed with some quartz and feldspar; quartz rock is mainly silicon dioxide but may contain fine elements of iron, copper, gold and silver.

The geologists classify all rocks into three basic categories, igneous, sedimentary, and metamorphic.

Igneous rocks are those which were molten before becoming solid. The most widespread of this type are granite, lava, and basalt. Igneous rocks which contain a great amount of quartz are light colored and those high in ferro-magnesium minerals are dark.

Sedimentary rocks are composed of sediments, such as on the sea floor, or particles which have accumulated, layer by layer, over a long period of time. They become solid rock through pressure, heat, or chemical action. The best known of this type are sandstone, limestone, shale, and conglomerate.

Metamorphic rocks are ones which undergo a change from their original igneous or sedimentary condition. They change form through heat, pressure, cementing by underground water, or crustal deformation. Granite becomes gneiss; sandstone changes to quartzite; limestone becomes marble; and shale becomes slate.

Many people tend to take soils for granted, recognizing little difference in the soils from one place to another. They may have noticed some difference in colors, or in hardness or sandiness, or in rockiness and fineness, but they have usually done this without realizing how much difference exists in the origin and chemical composition of such soils.

Soil is more than just a collection of decomposed rock or minute rock particles. Even the most finely powdered rock is not soil. It becomes soil only when organic matter, air and water are mixed with it. In some soils the mineral elements dominate; in others, organic matter, both living and dead, dominate.

Soil is constantly changing in composition. Time, vegetation, climate, water, chemical composition, bacteria, and cultivation all contribute to its change. One can start with the ideal soil for cultivation and ruin it within a short time; one can start with poor soils and make them good soils through good gardening practices.

The looseness or compactness of soil is dependent upon both its basic mineral composition (size of soil grains) and the amount of organic matter decomposing in it or living in it. Sand is the coarsest, and clay is the finest. In order of fineness to coarseness soils run from clay, silty clay, clay loam, silty clay loam,

(continued on next page)



## SOILS (Skinner: continued)

silt loam, loam, sandy loam, loamy sand, through sand. Loam soils are generally considered to be the best in terms of drainage and plant response.

Fineness or coarseness of soils affects their moisture retention and the ability of plants to use minerals in the soil. Fine soils provide a larger feeding area for plant roots and retain a greater percentage of water for a longer period of time. However, it is their retention of excess water which usually make them undesirable for most plants. Coarse soils provide little feeding area for plant roots and retain very little water. For plants which require very quick drainage, these coarse soils are suitable, but for most plants there is not enough food and not enough water. Loam soils strike a compromise between the two extremes.

Here in California, we meet many different types of soil, but on the southern coastal slope we primarily have problems with clay or "adobe" soil, and alkaline water. Clay soils retain a greater percentage of salts than any others. The greater the accumulation of alkalis in the clay soil, the harder it becomes for plants to grow and thrive in it. Alkalis create a chemical reaction with the clay which makes it difficult for the plants to assimilate the abundance of minerals. Excessive accumulation of salts has other adverse effects such as making it harder for soil organisms to thrive and to keep the soil loose. Drainage becomes increasingly worse, preventing the roots from breathing, and trapping increasingly greater amounts of alkalis.

If you have an adobe-clay soil with poor drainage, you may break it up by using lots of humus and nitrogen fertilizer, accompanied with frequent heavy watering. As a rule, mixing sand with such soils will have little effect in breaking them. Artificial soil breakers may work temporarily but usually do not last very long. By combining gypsum and sulfur with humus and deep watering, one may keep the soil friable. Deep watering, by itself, will have the beneficial effect of helping to clear the soil of excessive salts.

Humus can be any plant or animal matter which promotes the growth of bacteria and worms, which are necessary to convert organic matter to plant food. Using regular mulches of straw and wood shavings helps to form a good humus level in the soil. In addition, such mulches help to control the weeds, and help water drainage by keeping the surface from caking.

One can prepare his own compost for mulching. Leaves, grass cuttings, etc. may be allowed to decompose to a point where they lose their original structure before using as a compost or mulch. Diseased plants or weeds going to seed should not be used in the compost pile.

Composts have plant nutrients which are released gradually as further decomposition takes place. The most important element released is nitrogen. Other actions of composts are reduction of surface crusting and breakup of the soil for easier water and root penetration.

Bacteria, fungi, and other microbes are the agents of decomposition in organic materials. To decompose properly and uniformly, the compost pile needs favorable temperature, proper air, and moisture. For this reason, the material should be kept damp but not soggy, and it should be turned a few times for aeration. As decomposition takes place, the plant materials lose their original structure.

(continued on next page)

## SOILS (Skinner: continued)

Plant nutrients become concentrated as the compost material turns dark brown to black.

When the compost is friable, dark brown, and breaks easily, it is ready for use. If compost is placed in the soil before adequate decay, microbes completing the decomposition in the soil compete with the plants for available nitrogen and other nutrients. If allowed to decay too long, many of the essential elements are lost.

Any dried, dead organic material may be used for a surface mulch without preliminary composting. It is important that green materials not be used for mulching because these promote fungus and microbial growths which rob the plants of essential soil nutrients.

Most of the water we use for soil irrigation comes from the Colorado and Owens Rivers. This water has a high alkaline content. When improper watering practices are followed, alkaline salts may build up rapidly in soils with poor drainage. Salts must be removed from the soil through periodic leaching, which involves heavy, saturation watering. This may have to be as often as every three weeks for areas where salt content of water is as high as 1000 parts per million. A standard watering procedure for all of Southern California, to avoid salt build-up, is to water deeply at every watering.

Shallow watering practice has a doubly damaging effect on plants. It not only causes salts to build up to damaging concentrations near the surface, but it causes plant roots to turn upward toward the surface where the salt concentration is heaviest, and where they are more subject to desiccation between infrequent waterings.

Salt buildup may also occur through the use of inorganic fertilizers. All fertilizers, including organic fertilizers, must be converted to salts before plants can utilize them. In excessive amounts, fertilizer salts are just as harmful as natural salts. When you use both fertilizers and alkaline water, it does not take but a short time to damage your plants if you follow improper watering procedures.

Soil management also involves the control of unwanted grasses and weeds. In small areas and pots, weeding may be done by hand, but in large yards, the gardener may have to use chemicals.

Diquat is the best annual weed killer in areas where spray will not touch ornamental plants. It will burn anything it touches, so don't spray on windy days or spray carelessly. It will not harm the soil because it dissipates almost immediately. 2,4,5-T and 2-4D are very good for use on brush, bramble, poison oak, sumac, and other broad leaved plants. Watering should be held off with both these sprays.

Dalapon (Dowpon) and Sodium TCA are best for control of grasses. They are more effective when mixed with oil, liquid detergent, or spreader. Dalapon, sprayed on dry grass, kills by carrying poison to the roots. The grass should not be watered for a week or two after application. Several applications may be necessary. TCA kills through the poisons being absorbed by the roots, so water is necessary to aid its effective penetration of the soil and the roots. Both of these grass killers may also damage many ornamentals and trees, so be careful in their use.

Dalapon and 2-4D may be mixed together to kill all weeds and grasses simultaneously. Allow two weeks after application before watering, and allow thirty days to clear the soil for planting.



# HENEQUIN AND SISAL: A DYING INDUSTRY

Two succulent plants formerly of great economic importance are *Agave fourcroydes* (henequin) and *Agave sisalina* (sisal). The fibers extracted from the leaves are primarily used for binder cord and lari-at rope.

Henequin is a yellow leaf-fiber and sisal a white leaf fiber. Henequin is used for binder twine for harvesting machinery (binding of bundles of harvested grain between the cutting and threshing). Sisal is also used for binder twine, but it is chiefly used to make hard cordage and lariats.

## HENEQUIN

Up until the 1930's, Yucatan had almost a world monopoly of binder-cord production. In 1935, the Mexican government took the large henequin-sisal plantations from the 400 to 500 wealthy families, limiting the largest farms to 360 acres, and distributing most of the land in small 10 acre plots to the peasants (ejidatarios) which proved to be less efficient.

Most of the henequin production comes from the northwestern part of the Yucatan peninsula. This area receives 20 to 35 inches of rainfall per year, most of it coming between June and October. *Agave fourcroydes* is grown primarily in thin, stony, porous limestone soil which drains away water very rapidly. Where the soil is not loose enough for planting, holes are blasted out of solid limestone, and young plants are supported by pebbles until roots penetrate cracks in the bedrock. Because soil conditions are so poor and the water drains away so rapidly, plants take about five to seven years to reach maturity.

Two crops of leaves are harvested annually after the seventh year, up until the plant is 20 years old. Each mature plant yields a total of 12 to 18 leaves at each harvest. Cuttings are taken year around to keep the mills operating full time.

At the mills, machines separate the long, tough fibers from the freshly cut leaves, but 96 per cent of the total weight is waste. After separation, fibers are dried on outdoor racks for about 24 hours before being baled and shipped to Mexican or foreign cordage and rope factories.

## SISAL

Sisal is more important than henequin because higher quality cordage and rope are made from it. In addition to Yucatan, it forms a commercial crop in the Bahamas, Haiti, Jamaica, Kenya, Tanganyika, Nyasaland, Mozambique, Senegal and Java.

*Agave sisalina*, the sisal plant, is not as drought hardy as henequin. It has thinner leaves, and does not produce as great a percentage of fiber.

As the henequin agave, it is planted in limestone soils, and processed in the same manner.

The chief centers of production for henequin and sisal in Mexico are inland from the ports of Progreso and Merida in Yucatan, and in the extreme northern part of Campeche state near the port of Campeche. A railway connects the three ports, with inland spurs; Merida handles the greatest volume of processing and shipping.

## PROBLEMS

As pointed out in the last issue, the henequin-sisal industry is declining rapidly in Mexico due to competition from synthetic fiber manufacturers outside of Mexico. The future of several hundred thousand Mexicans, dependent upon these two plants, does not look happy.

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## HENEQUIN AND SISAL: A DYING INDUSTRY (continued)

The Mexican government is temporarily paying subsidies to prevent mass economic ruin in Yucatan and Campeche.

The poor limestone soils and inadequate rainfall make it almost impossible to find suitable replacement crops. An attempt is being made to plant pineapples (*Ananas comosus*), but Yucatan does not have optimum growing conditions for this plant as do the prime producing areas such as Hawaii, the Philippines, Java, the Malay peninsula, and the Guinea Coast of Africa. Another handicap here is the limited world market for pineapples. Hawaii already blankets the U. S. market, and European countries are supplied primarily by Africa. There is no market in south Asia because they are grown there for local consumption. The same is true of most of the Latin American countries.

Another possibility might be the planting of medicinal aloes (*Aloe vera*). The juice of this plant has recently come into widespread commercial demand as an ingredient of unguents and salves. In Florida, it has become a commercial crop only in the last five years.

Actually, decline in the industry started in the 1930's. First there was the Great Depression which curbed world demand. Second, there was the Mexican land reform program which created small, less efficient farms. Third, there was the widescale introduction, in the U. S. and Canada, of the combine-harvester which cut and threshed grains in one operation without making use of binder cord. In addition, baling wire almost completely replaced binding cord for hay baling and many other farm needs. Fourth, increased use of standardized containers, staples, glue, and wire, largely replaced the use of binder cord on packages in shipment or mail. Fifth, World War II, coming in the late 1930's, cut off European markets, forcing those countries to find substitutes for henequin-sisal fibers.

The finishing blow came indirectly as a result of WWII. During the war, artificial-fiber industries expanded rapidly. After the war, rayon, nylon, and other ersatz fibers were pushed into every possible market area. The henequin-sisal market continued to shrink in proportion to the degree of cost reduction of artificial fibers. Superior artificial fibers are now produced more cheaply than henequin-sisal.

No matter how one looks at the plight of the poor Yucatan farmers it is certain that their industry is gasping for salvation or revival where none exists. The sooner that the Mexican government and the farmers convert to other agricultural crops, the better off they will be.

In our mass production, science-oriented push into the future we marvel at all the superior new products, and we take readily to the use of them. This is as it should be, but I think that we hardly ever realize that we may seriously affect the economic well being of many thousands of people in distant parts of the world, especially when it comes to the use of something so seemingly insignificant as a small piece of binder cord.

J. Ward



# KNOW YOUR GARDEN ENEMIES: ANTS

Order Hymenoptera      Family Formicidae

Many gardeners consider ants their friends instead of their enemies. It is true that ants will attack and kill many harmful insects and carry many weed seeds underground for food. But it is also true that various species of ants protect aphids, leaf hoppers, scale insects, and mealy bugs from natural enemies. Ants love a substance commonly called "honey dew" which they extract or milk from these insects; this extract is produced constantly by such insects, whether milked or not, when they overstuff themselves on plant juices.

Some species of ants disturb plant roots with their diggings, or cultivate root aphids out of sight of the gardener. They act as vectors or carriers of such plant diseases as fire-blight bacteria. Here in San Diego county, there is a small species of black ant which bores inside the stems of cylindropuntias, cultivating a fungus rot inside the stems. This probably serves as a source of food. In one area east of Chula Vista, I observed that this species of ant not only bores into the stem, causing a slow death for the stem or the plant itself, but also makes large den networks under the plants, possibly feeding on the root system through fungus culture underground.

Outside of nematode, the biggest group of plant pests are those protected by the ants. Therefore, even though the ant does not suck plant juices or chew leaves, it ranks as a formidable enemy.

The Argentine ant (*Iridomyrmex humilis*) is the biggest pest in our area. It is an imported ant which has spread itself rapidly, even wiping out native species of ants in large areas where it has established itself. It is small, 1/2 to 1/8 inch long, slender, brown, and has a one-segment pedicel. It makes large colonies in dark, moist places, preferring house foundations. It travels in definite trails, sometimes entering the kitchen. It is very injurious to fruit and shade trees, attacking blossoms. It distributes aphids, mealybugs and scale. Even though it is brown, it appears red to most people, and is the most common small "red ant" to be encountered. Its sting is very painful.

Another small ant commonly found in shallow nests around foundation areas of buildings is *Tapinoma sessile*. It is 1/10 to 1/8 inch long, deep brown to black, with a broad abdomen. It may also be found in houses. It cultivates scale, mealy bug, and aphids. *Dorymyrmex pyramicus*, the pyramid ant, is also small. It is commonly found in lawns and houses. It has a black abdomen and reddish-black head and thorax.

The two most common large ants found in this area are the California Harvester Ant (*Pogonomyrmex californicus*), and the Western Red Harvester Ant (*Pogonomyrmex occidentalis*). Both have painful bites and stings. The California Harvester is the more common of the two, and is widespread in agricultural areas. It is 1/4 inch long, pale red, and collects seeds from freshly planted areas. It protects the plant sucking insects. The Western Red Harvester is reddish brown. It is from 1/4 to 1/2 inch long. It is primarily a seed collector but it may kill plants when subterranean nests occupy root areas of plants.

I have not been able to identify the small species of black or dark brown ant which nurtures the fungus culture inside the cylindropuntias.

## CHEMICALS

From my own personal experience, I know that ants are hard to eliminate. I spent six months of constant effort ridding the walls of my house of a wood boring ant (ants, not termites), but not before a desk and a wood lamp-base had been riddled with holes. In my yard, I am

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## KNOW YOUR GARDEN ENEMIES: ANTS (continued)

still trying. At my last home, I had problems with the Argentine ant.

At my present home, I have tentatively identified the dominant ant as *Tapinoma sessile*. It never enters the house, but forms shallow, sparsely populated dens every place. I have observed it on every plant in the yard. It gives tender care to aphid colonies. I no sooner wreck one fertile aphid pasturage when another pops up. First, there was a concentrated attack on the *Fouquieria splendens*, next on the tender leaves of the cotyledons, etc. Just today, I discovered a new outbreak on the *Carpobrotus edulis* coming up as a weed among the *Opuntias*; there were the faithful ants, in large numbers, collecting their honey dew.

The most widely used ant poison is chlordane. It is purchased in both liquid or powder form. It may be raked into soil around nest areas and then watered down. Another way of applying it is to use a two to five per cent chlordane mixture in deodorized kerosene.

Other poisons in powdered form are sodium flouride and Dieldrin. Sodium flouride is reputed to be the best dust. Dieldrin is a wettable powder used as a tree spray.

Liquid poisons, in addition to chlordane, are malathion and heptachlor. Heptachlor is poisonous to animals, including birds.

The most commonly used fumigant is methyl bromide, but this requires special equipment and more work.

A poison non-hazardous to animals, Mirex, is mixed with corncob grits and soybean oil and spread as a bait. It is carried into dens where the poison slowly kills many ants.

I have found that liquid ant baits do not seem to attract the particular species found in my yard. Since chlordane is the easiest to find, I use it as both a spray and in powder form. It kills ants quickly, but as I mentioned a few paragraphs ago, I can't get rid of them. As soon as I think they are gone, they pop up someplace else.

J. Ward

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## ICE PLANT PUTS CHILL ON BLAZE

(This article appeared in the San Diego Evening Tribune of Fri., October 22, 1965)

Golden Hills residents aware of the dangers of living on the edge of a dry-brush canyon, helped save a 25-block area from damage with greenery. They had grown iceplant down their backyard terraces, Assistant-Fire Chief O. H. Lusk said.

"Anytime ice plant is on a canyon, it's really a deterrent to fire," Lusk said.

"Wherever we had it yesterday, it stopped the flames. With that much fire and only seven houses damaged and one destroyed, it was really a miracle."

Councilman Harry Scheidle, who visited the fire scene between Juniper St. and Frederick Drive southeast along Marlton Drive and 33rd St., said:

"Look at that? Do you notice that every house where they planted ice plant, the fire went around it. The fire stops where the ice plant begins." (Editor's note: "Ice Plant" is *Carpobrotus edulis*.)



# MESEMBRYANTHEMA ESCAPES IN SO. CALIF.

On a recent trip into Baja California, I was exploring a gully near the ocean near Descanso, between Tijuana and Ensenada, when I spotted a very familiar plant, *Carpobrotus edulis*, growing wild. It was rather a shock, because the immediate area was not populated, and it was some distance from the highway.

*C. edulis* is the most commonly used groundcover for banks and hillsides in Southern California. At my present home I have been fighting this species as a weed for two years. Seedlings are constantly coming up every place in my yard (The subdivision builder planted it as a ground cover.)

Other *Mesembryanthema* which come up as weeds in my yard are *Aptenia cordifolia*, *Mesembryanthema crystallinum*, and *Drosanthemum ambiguum* (I planted this one as a mound cover.)

Descriptions of the *Mesembryanthema* most commonly found as escapes in Southern California:

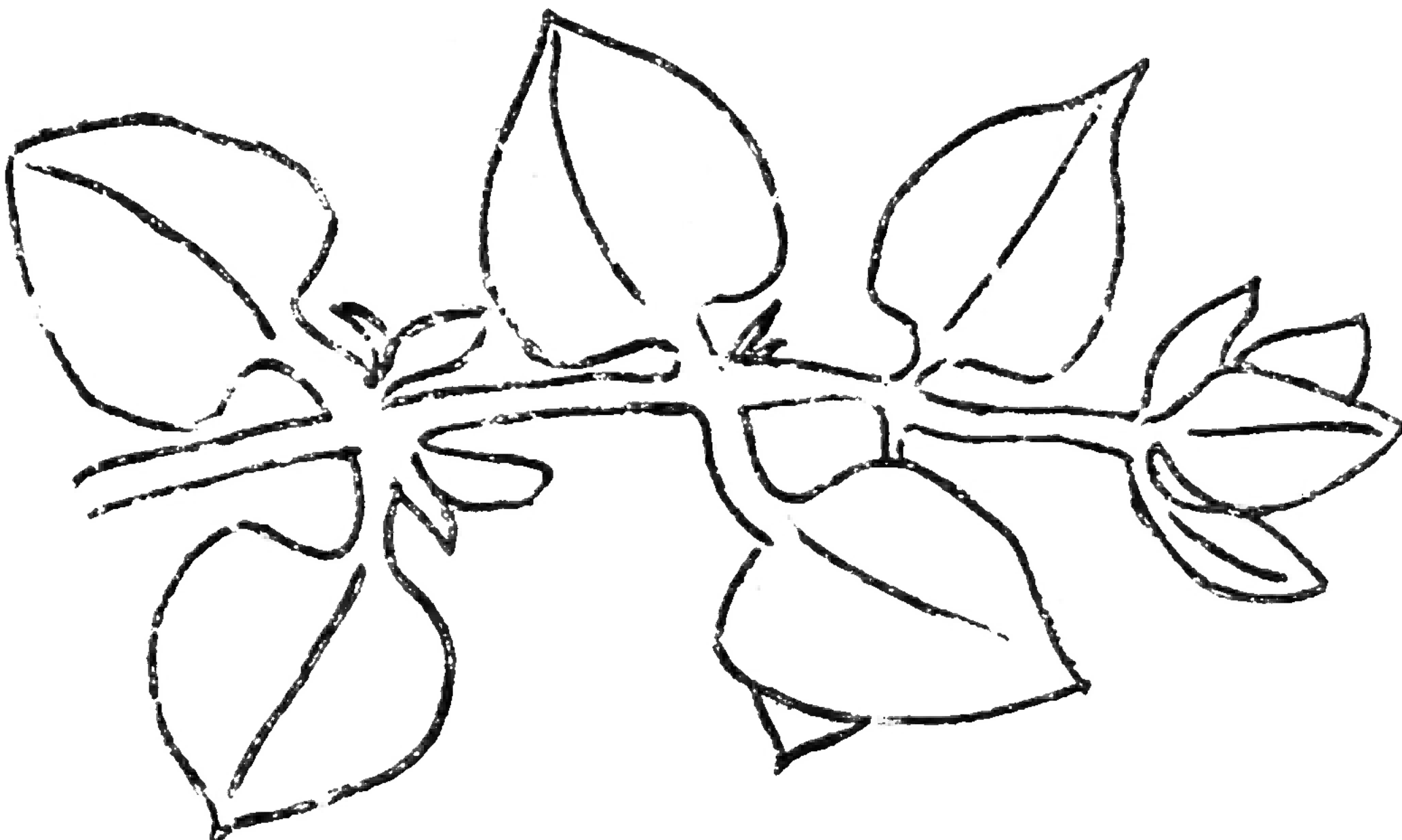
## *Aptenia cordifolia*

Found growing wild near the coast as a perennial. May be found inland in some frost areas where it grows as an annual. It comes up easily from seed or may be propagated artificially by cuttings. This is one of the few *Mesembryanthema* which grows well in the shade, and it may be watered heavily without any adverse results.

When well fertilized and watered in cultivation it forms a beautiful green mat. It is frost sensitive and grows well only in protected areas, but once started, seedlings will come up in endless numbers.

Description: Freely branching, with old branches forming dead mat beneath new growth. Branches prostrate, up to 3/4 meter long, cylindrical, green, minutely papillate, later greyish-green; leaves opposite, distant, petiolate, cordate-ovate, up to 2 1/2 cm. long and nearly as wide, fresh green, fleshy, minutely papillate; flower terminal or lateral, 1 cm. wide, short-stalked, purple to purple-red.

Found from Santa Barbara into Baja California near the coast.



*Aptenia cordifolia*--natural size  
(continued on next page,

## MESEMBRYANTHEMA ESCAPES IN SO. CALIF. (continued)

### *Mesembryanthemum crystallinum*

Grows in thick mats along the sea shore from Santa Barbara into California. May be seen at the Pt. Loma light house from early spring into the summer. This is an annual, dying back in late summer, fall and winter.

Description: Stems cylindrical, repeatedly and shortly forked, set with bright papillae. Leaves are connate, ovate or ovate-spatulate, narrowed into a short, wide stalk 2 to 4 cm. long, narrowed to a short amplexicaul base; the lowest leaves 5 to 10 cm. long, and nearly as broad and with a subcordate petioled base; leaves are covered with crystalline-dewy vesicles, and the margins are somewhat waved or undulent. Calyx campanulate,  $3/4$  to  $1\frac{1}{2}$  cm. long; flowers 3 to 5 together, subsessile, 2-3 cm. wide, white to reddish, blooming from June to August.

### *Mesembryanthemum nodiflorum*:

Annual about 20 cm. high with slender succulent branches, grey-green. Leaves are linear, semicylindrical, bluntish, ciliate at the base, covered with minute shining vesicles. Lower leaves are opposite, upper leaves alternate, 1-2.5 cm. long and 1-2 cm. wide; flower is alternate, short-stalked, white, solitary in the axiles; flower petals are minute, much shorter than the calyx-lobes. Found from Santa Barbara into Baja California.

### *Carpobrotus aequilaterus*

Commonly called Sea Fig in South Africa. Along with *C. edulis* is used quite commonly as a ground cover. It is similar to *C. edulis*, but has smaller leaves and reddish flowers.

Description: Stems up to one meter in length, spreading out, prostrate, forming extensive mats; leaves 3-sided, with almost flat faces, thicker than broad, 4 to 5 cm. long; flowers red to rose-purple, terminal subsessile or shortly peduncled, fragrant and showy, 3 to 5 cm. broad.

As with *C. edulis*, the fruit is said to be edible. It is found wild along cliffs and in canyons near the ocean from Marin County into Baja California.

### *Carpobrotus edulis*

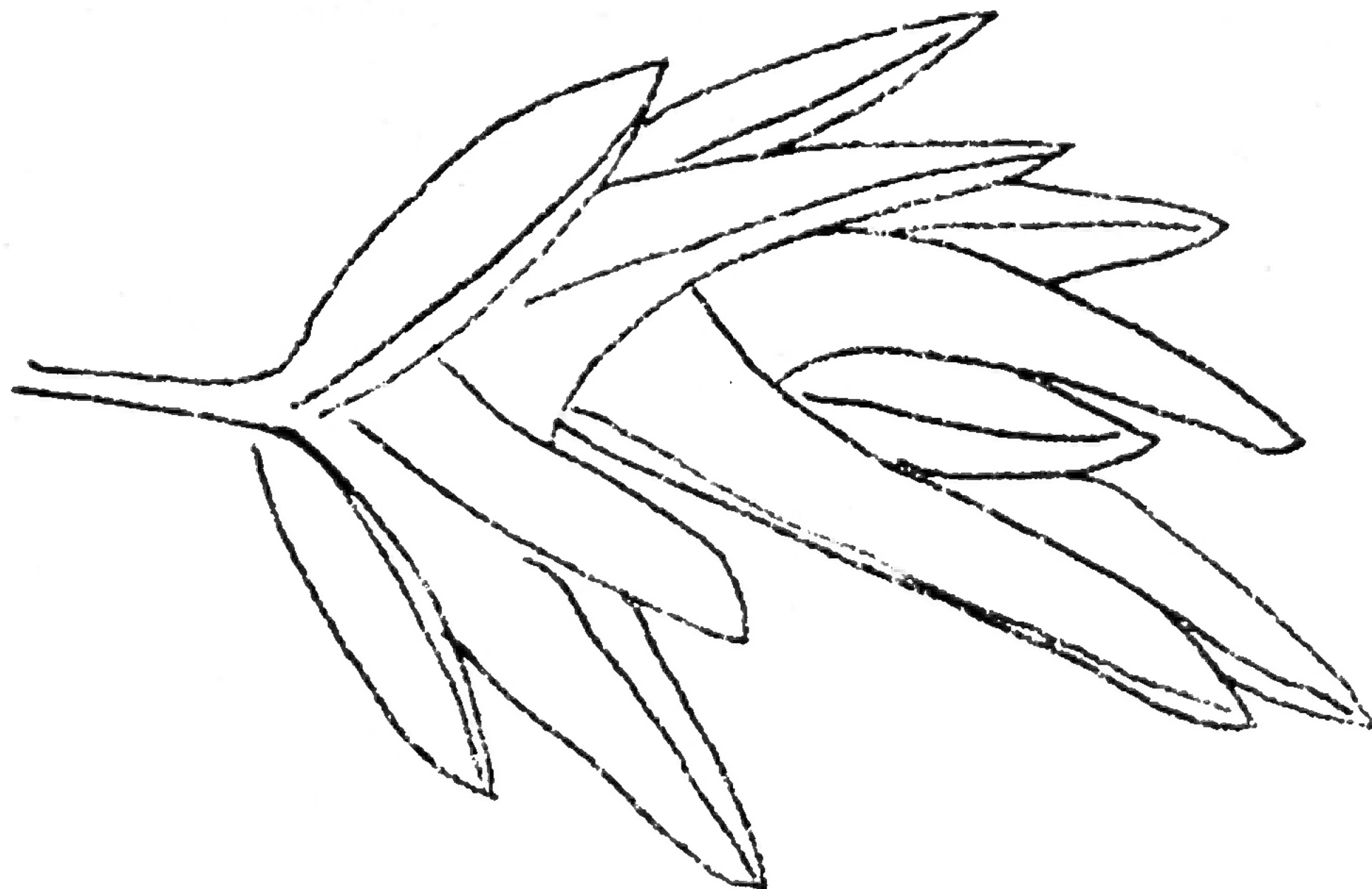
Commonly called the Hottentot Fig in South Africa. This is by far the most commonly found *Mesembryanthema* in ground cover areas. It is found growing wild near the ocean from Santa Barbara into Baja California.

Description: Stems angled, up to 2 meters or more in length. Leaves opposite, dorsally carinate, curved or bent inwards, equally 3 angled, 8-12 cm. long, up to 15 mm. thick, keel minutely serrated on the lower angle; leaf and stem surface is smooth, grass green; flower is 8 to 10 cm. wide, light yellow, yellowish pink, or purple; stamens 8; fruit is edible.

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MESEMBRYANTHEMA ESCAPES IN SO. CALIF. (continued)



*Carphrotus edulis*--natural size

*Drosanthemum floribundum*

This perennial is now widespread in Southern California coastal areas because of its extensive use as a ground cover on hillsides, mounds, and slopes, and because of indiscriminate dumping. It is one of the most beautiful of the Mesembryanthema because of its small leaves forming soft green carpets and its massed pale pink flowers in spring and summer.

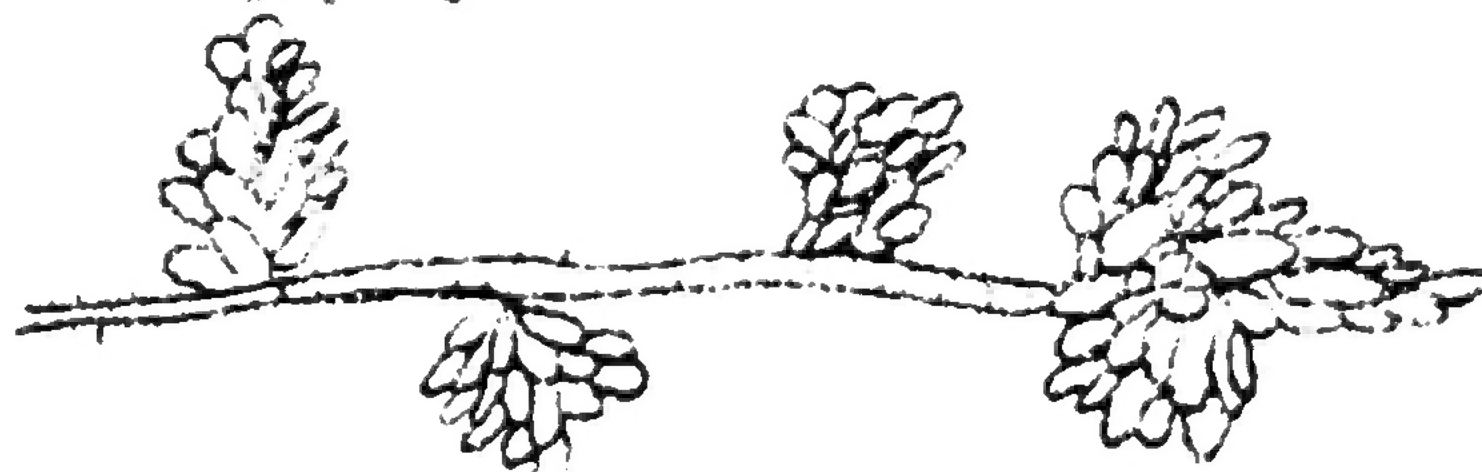
Descriptions: Forming cushions, stems filiform, prostrate or creeping densely branching, at first green, later brownish, with rough white hairs, leaves cylindrical, slightly thickened towards the apex, ascending, blunt, slightly connate at the base, 10-14 mm. long, 2.5 mm. thick, light green; pedicels 1-3 cm. long; flowers very numerous from the lateral short shoots, 18 mm. wide, pale pink.

*Drosanthemum ambiguum*

This perennial is similar to *D. floribundum* and is usually sold under that name in the nurseries. One sees it on almost every block with its massed carpet of bright purple blooms from late spring into the summer. It is much more common than *D. floribundum*.

It spreads rapidly when well watered and may have to be trimmed often to keep it out of surrounding flower beds. Because of indiscriminate dumping it is often found growing wild in the most unexpected places.

Description: Stem 5 mm. thick, branches procumbent, stiff, rooting dainty, 1.5-2 mm. thick, elongated, up to 55 cm. long, older branches roughly papillate, internodes 15-20 mm. long, floral branches 2-leaved; leaves inclined to spreading, semicylindrical, narrowed, blunt, bright papillose, 1.5-2 mm. thick, sheath 0.5 mm. long; pedicels 3-7 mm. long, flower 24 mm. wide, purplish.



*Drosanthemum ambiguum*--natural size  
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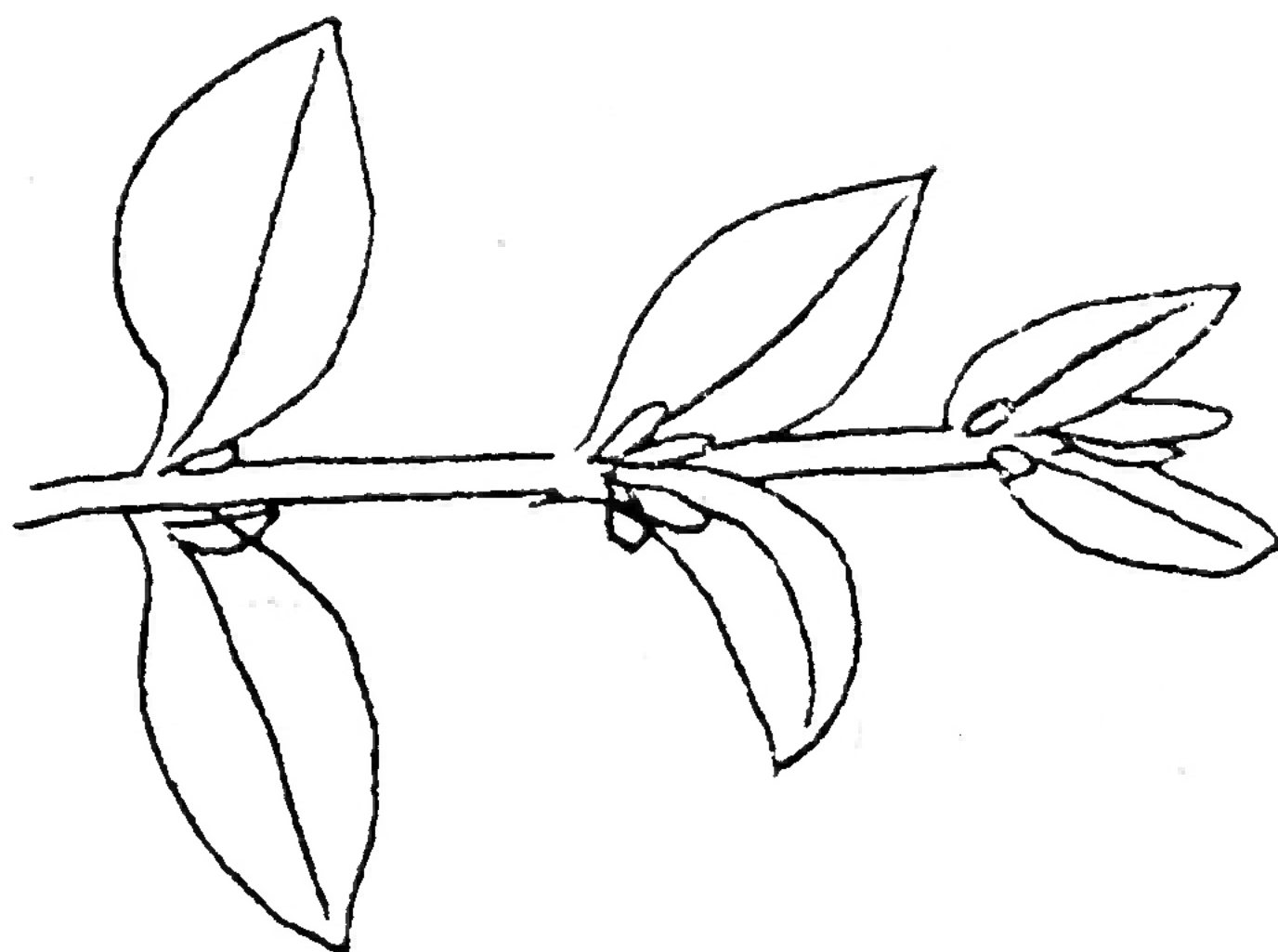
## MESEMBRYANTHEMA ESCAPES IN SO. CALIF. (continued)

Also growing wild, but not so widespread, are *Cephalophyllum* species, *Delosperma* species, *Lampranthus* species, *Malephora* species, *Nycteranthus* species and additional species of *Carpobrotus* and *Drosanthemum*.

From personal experience and observation, one mesembryanthemum which will probably become a common weed within a few years is *Delosperma tradescantiodes*.

### *Delosperma tradescantiodes*

Freely branching low plant, branches and branchlets creeping and rooting at the nodes, light grey-brown skinned when young; young shoots green, finely papillose, internodes 20 mm long; leaves united into a sheath for 3-4 mm., ovate, tapering, teretely narrowed towards the base, upper surface flat, often furrowed at the center, back surface with an indistinct keel-like central nerve, 25-30 mm. long, 12 mm. wide at the center, 1-2 mm. thick, light green, very finely papillose; fruit solitary, lateral, subsessile, 15 mm. wide, white.



*Delosperma tradescantiodes*--natural size

In Presidio Park, near the hilltop monument one may see two very pretty mesembryanthema which may prove eventually to be hardy wild species. From my limited and sketchy sources, I have tentatively identified them as *Glottiphyllum neilii* and *Neohrine pillansii*.

J. Ward

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### ON CONTRIBUTING ARTICLES...

Do not be afraid to contribute articles to the Society paper. If you run across an interesting item which might be appreciated by other members, make a note of it for the paper.

Also, do not fear being embarrassed by attempting research articles. After all, your editor has attempted to write such articles with a paucity of resource material available. Perhaps limited information

is better than none, although I do try to avoid false or misleading information.

Articles on your trips, expeditions, impressions, and personal collections would be of especial interest to the members.

Give or mail, or telephone, all items to Jack Ward, 323 Halecrest Drive, Chula Vista, 92010, Telephone 420-5513.