
❖ DESERT BREEZE ❖

TUCSON CACTUS & SUCCULENT SOCIETY

NOVEMBER 1995

ELECTIONS NOVEMBER 2nd

In addition to 3 new directors, you will help elect a president, vice president, secretary, treasurer & newsletter editor on November 2.

We must also prepare for the

**35th annual Desert Harvest Community Show
November 18-19 at Park Mall
ENTRIES: 7-10 am. NOVEMBER 18**

Hosted by the Men's Garden Club / Gardeners of America, this show is open to the public 2-9 Saturday and 12-5 Sunday. Section 'C' is C&S! For more information, contact show chairman Ron McClean at 795-6417.

In October, members & guests watched a fascinating tape of Rob Wallace making sense of Taxonomy.

FREE PLANTS: Mammillaria supertexta, Sempervivum aranodeum, Crassula x ivory pagoda, Plaospilos nelii, Titanopsis calcaresm, Anacampteros telephiastrum vargieta
DOOR PRIZES: Cotyledon orbiculata, echeveria lilacina, Agave versehafolotii, Aloe harlinii.
RAFFLE PLANT: Coryphantha elephantdiens

Proceeds of our SILENT AUCTION in September netted \$170, which we donated to TUCSON BOTANICAL GARDENS, as planned.

Mary Odette, Linda Burback & Margartet Pope are planning NOW for NEXT YEAR - it should be FANTASTIC!!

THANKS TO VENDORS!!

HOLIDAY POTLUCK DECEMBER 10

Plan to bring a wrapped botanical gift - no white elephants, please - and your favorite dish to share. More detail in next DESERT BREEZE.

HAPPY THANKSGIVING!!!

NEIGHBORS by les & dale sloan

Tarantula! (For those of you who will be stopping here, See you next month!) Why is it that bears are big and cuddly, and elephants are huge and fascinating, and even horned toads are cute, but spiders are generally considered so creepy and unlikable? Maybe it's all those legs (8), or all those eyes (8), or that venom (nah!). Whatever the cause of their unpopularity, tarantulas are a rather visible reminder that you're in the desert. In the late summer and early fall, especially, when mature males go looking for females, they can often be seen in the evening stalking along the roads or in our backyards.

The reason the males go hunting for females is that females, and immature males for that matter, don't travel much. In fact, a tarantula may spend its entire life in an area of about one square yard. They set up a home, a hole in the ground, which they line with silk. When warm weather comes, anywhere from early April to the beginning of July in our yard, they open up their burrow which had been sealed for the winter, and wait for a meal. Sometimes they'll feel the vibrations of a passing victim on the silk near the opening of the burrow and pop out to grab a meal; other times, they go out and patrol up to a few yards away. That's the daily routine. Come cooler weather, they seal up the burrow again for the winter.

All of their hunting and waiting goes on at night when it's cooler and there aren't as many predators about. During the day the tarantula waits out the heat below ground. At the top of the burrow, it has woven a series of silk strands at right angles to each other. This apparently warns of the tarantula's worst enemy, the tarantula hawk, a wasp which

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Vote

CSSA

Tucson '95

"A Taste Of The Sonoran Desert and A Lot More"

Dick Wiedhopf (President: Tucson Cactus and Succulent Society)

Over 4 years ago Chuck Hanson, Board member of CSSA and then President of the Tucson Cactus and Succulent Society (TCSS) put in place the plans that would make this a memorable Convention.

This will be known as the Convention of 1st's. Chuck was convinced that a theme was necessary to tie attendees to the locality. We all embraced the ethnobotany of the Sonoran Desert as a great idea to mold this Convention around.

After approval at the San Antonio Convention in '91, we went to work on development for Tucson '95. Many of you saw our poster at San Francisco in '93 as the invitation to the Sonoran Desert and activities as the Saguaro Fruit Harvest. Over the last two years the planning process was almost consuming. The TCSS was dedicated to making this the biggest and best Convention ever. Every member contributed and this was a team effort. As I said many times at the Convention the word team isn't spelled with an "i".

This was the first Convention to have special pre and post tours available to registrants. Both tours were sold out and the participants had a wonderful experience.

This was the first Convention to use barcodes for the plant sales. The Host Convention Coordinator convinced the CSSA to purchase two barcode reading cash registers. The TCSS provided the barcode labels to all plant vendors several weeks before the start of the Convention.

This type of labeling made sales easy for the vendors and the buyers. This was a good investment in technology.

This was the first Convention to have a real handbook. It contained both local and CSSA information, biographies of all the speakers, ads from local and national businesses, and a lot more. It was a TCSS concept that was put together by local society members. There are still a few copies available.

This was the first Convention to have over 600 registrants. This is the goal that all future Conventions will shoot for. Fortunately, the Doubletree Hotel and its staff were well prepared to easily accommodate all activities of the attendees. Especially for meetings and food service. They were great.

This was the first Convention to have special recipes that took advantage of cacti, succulents and other native plants. The Chief of the Doubletree introduced his recipes prior to dinner and this was a real treat for everyone. At our farewell banquet the caterer for the Arizona-Sonora Desert Museum used the southwest influence in all their recipes.

This was the first Convention to be opened with a special Convention gavel, made from native mesquite, copper and turquoise, and presented to the Convention as a gift from the Tucson Cactus and Succulent Society. At the closing ceremony the gavel was passed to the San Diego Society who will use it for the next Convention. This new tradition will continue.

This was the first Convention to raise \$12,000+ for the research fund at the rare plant auction.

This was the first Convention to have an author book signing party. Thirteen authors were available to

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TCSS LIBRARY HOURS & LOCATION

Plants For The Southwest
9 - 5:30
Wednesday - Saturday
50 E. Blackledge
628-8773

Librarian
Myrtle Ethington
887-4507

JERI'S GEMS

Please welcome new member:

Marilyn Ann Bernzott
4878 W Cashin Drive
Tucson, AZ 85746
883-0948

remember
TCSS
drag table

**THORNY PROBLEMS.....
POINTED ANSWERS**

No new 'Thorny Problems' were reported, (but I KNOW they're out there), so here is a reprint of Sept-Oct '95 CSSA newsletter article, which is interesting, if not helpful!

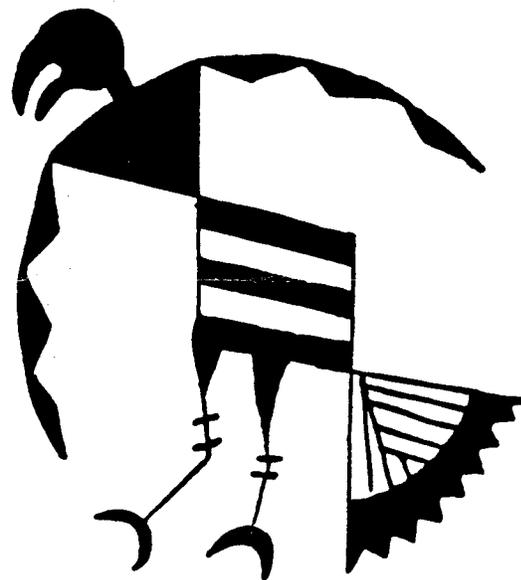
**GROWING CACTI AND
SUCCULENTS for the Beginner
Part 5 - Pests and What to do
When You Get Them**

Mac Clarke (CSSA Director, Cleveland, TN)

Note that it says 'When' you get them, not 'If' in the title of this installment. Even though cacti and succulents contain impressive arrays of natural pesticides, you will, sooner or later, be pestered by pests. Don't let that discourage you, the world's best growers have pests, but they manage to grow magnificent plants anyhow. So can you!

Most people think of fungi, insects, and other creepie-crawlies such as mites as the pests that bother our plants. But there are lots more--weeds, snails and slugs, rodents, and my neighbor's free ranging, picky chickens who devoured 3 species of *Trichodiadema* and left other

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**DESERT BREEZE**

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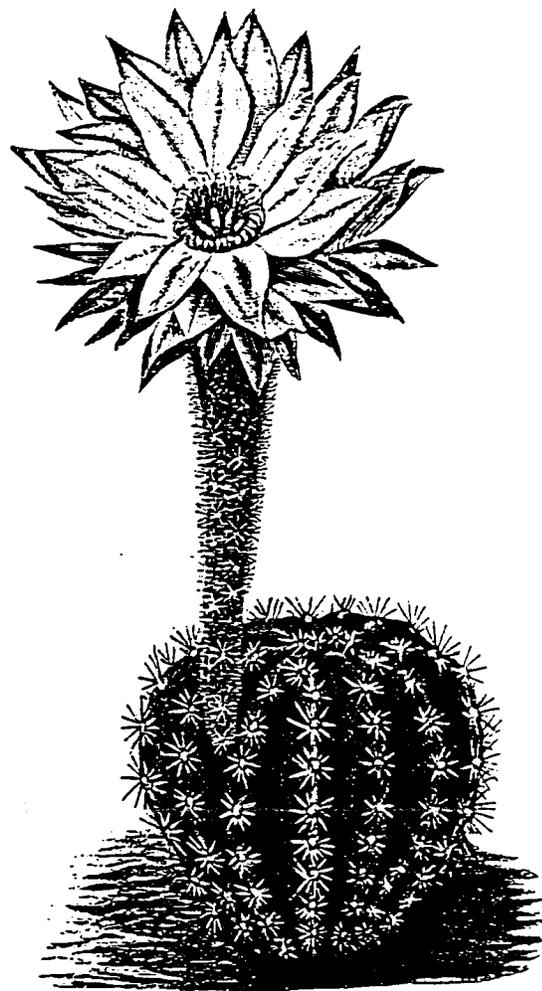
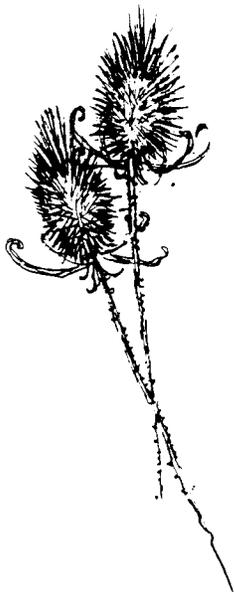
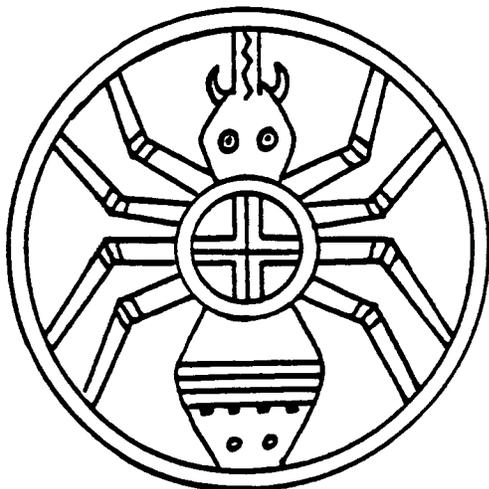
MAILING SARA PERPER

neighbors continued

hunts, stings, paralyzes, and lays an egg on the spider. Later the wasp larva will live on the hapless tarantula.

Anyway, back to that part where the males are "cruising" for females. When a male goes through his final molt (sheds his exoskeleton) he develops a small appendage looking something like a thumb on his two front legs. As he searches for a wife, he uses his senses of smell and touch to tell when he's stumbled on the burrow of a likely prospect. He then taps the ground at the burrow's mouth to let her know that he's a suitor and not a dinner. She pops up from the burrow and he uses those two "thumbs" to keep her fangs apart while mating takes place. (Black widows aren't the only spiders that eat their mates, though generally, most species party peaceably.) Come next spring, she'll lay several hundred eggs. The babies are tiny, accurate miniatures of the adults, and in a few days, they are off to stake out their own little square yard of desert paradise.

With tarantulas, as with other creepy-crawlies, it's like your mom always said, "If you don't bother them, they won't bother you." But if you want to get close enough to be fascinated, well, that's well worth the time and effort.



This newsletter is published monthly except in summer. Submit material by the 15th of month preceeding to Editor:

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I appreciate feedback (all kinds). Please help me to correct phone/address errors, also. Membership meetings (free and open to the public) are held at Tucson Botanical Gardens, 7:30 pm, first Thursday each month. No meeting in August. September & December are special - see current newsletter for details. Dues are \$20/family, \$15/individual, payable at meetings or send check to:
TUCSON CACTUS & SUCCULENT SOCIETY,
c/o TUCSON BOTANICAL GARDENS
2150 N ALVERNON WAY
TUCSON, AZ 85712 326-9255

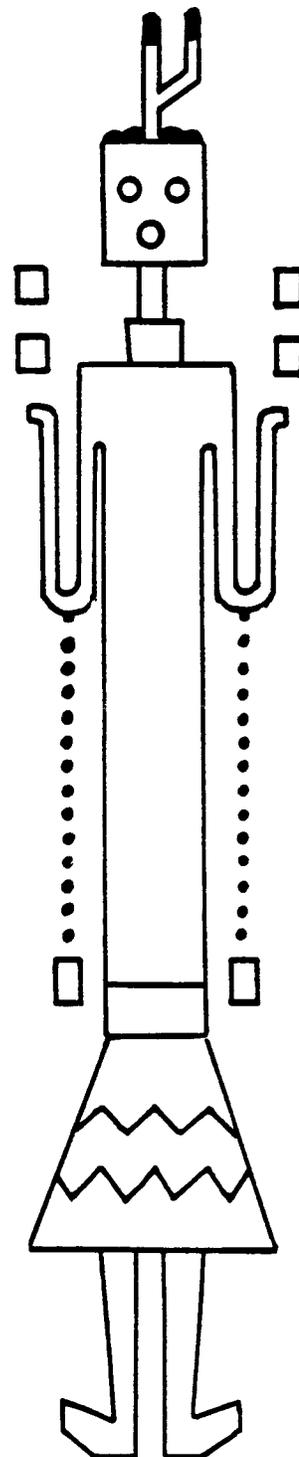
autograph their books and the book vendors graciously stayed open so that many of us could purchase books to be autographed. This was an extraordinary experience for many of the attendees.

This was the first Convention to introduce the World Wide Web, Cacti_etc. and the whole computer Internet experience. Live and in living color from KEW to Huntington and a lot more. The interest in computer communication between members, affiliates and the CSSA was enthusiastically endorsed. This was the first Convention to take attendees to a live ethnobotanical experience. Tohono O'odham (native Americans) provided an opportunity for a limited number of conventioners to participate in the Saguaro Fruit Harvest.

No one knows how much longer this ancient tradition will continue. How fortunate it was that the peak harvest time coincided with the Convention.

This was the Convention of firsts but it also had all the traditional Convention activities and especially quality speakers of local, national and international prominence. There was a great selection of new and used books and the plant vendors made Tucson, "THE CACTUS AND SUCCULENT CAPITAL OF THE WORLD" (for at least a week).

Most of all, The Tucson Cactus & Succulent Society wants to thank all who attended. You were wonderful guests, appreciative of our effort, and we enjoyed every minute as your hosts. Finally, I want to publicly thank all the members of the Tucson Society for their dedicated efforts to this Convention. Great Job!!



Pests

things alone. You can handle pests either physically, biologically, or chemically (pesticides). I used to pick bean beetles off green bean plants in the family Victory Garden fifty years ago, and my wife used to pick Japanese beetles off roses. A vacuum will suck up white flies, although to be effective, you need to do it several times a day for about 3 weeks. You've got to nab them before they lay eggs. And I have picked scale off plants with mild infestations. I don't know enough about biological control to tell you about it. Is there anybody out there who wants to write a guest column?

For me the most practical solution is to use pesticides. Warning!!! Many pesticides are hazardous to your health. Fortunately, in the USA, the law is some help. Any material sold as a pesticide must be registered with the US Dept of Agriculture and must be sold with an accompanying approved label. The applicant for registration must supply a lot of information on safety and efficacy for a specified formulation on specified crops (often only one) against a specified pest. How much is a lot of info? On the order of a million dollars worth!

Few pesticides are sold as a pure chemical. They are mixed with wetting agents, spreaders, stickers, etc, etc, sometimes 20 or more ingredients. Among the classes of formulations you will find for sale are 50% wettable powders (WP), 25% emulsifiable concentrates (EC), 70% soluble powder (SP), and 10% dust. I don't use EC's, the solvents in these formulations are toxic to too many succulents, particularly Euphorbias. The safety information includes methods for safe handling and application of the formulation and the safe methods must be described on the label. Hence the repeated exhortations to "read and follow label directions." If you do,

you are a lot safer than when smoking or when pumping gas into the family car. Not many pesticides combine gasoline's toxicity, potential carcinogenicity, flammability, and explosive vapors! If you don't follow the label you are playing Russian Roulette. Unfortunately, 9 out of 10 of us, possibly 99 of 100, including me, do not follow the directions. It is a good way for you to die young. I'm too old to die young, but it is a good way for me to die old. You would satisfy most labels if you wore long sleeves and pants, shoes and a hat, rubber or vinyl gloves, goggles, and a gas mask. The local farmers coop should have the gloves and mask that you need. Change and wash the clothes immediately after spraying, and take a shower! Do not eat, drink, or smoke while using pesticides or until you have showered. There, that isn't that bad, is it?

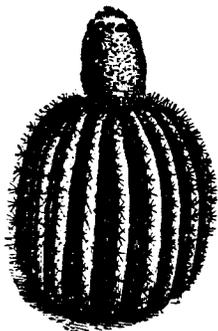
Enough generalities, now details about specific pests.

Mealy Bugs:

Probably the most ubiquitous pest facing succulent growers, mealybugs are a sucking insect like aphids. In fact, the mealy larva look like aphids, but you never see them, they are covered by white to yellow waxy scales. There used to be a pastry in the 'Twinky' class that was a vanilla wafer surmounted by a hemisphere of marshmallow, and coated with coconut. Imagine that scaled down to 1/8 to 1/4 inch (3-6mm) and that is what one mealy looks like. In heavy infestations the scales overlap and you get drifts of things. If you have only a few plants, a Q-tip soaked in rubbing alcohol can be used to scrub them off. You have to scrub to get through the wax. Incidentally, rubbing alcohol is not sold as a pesticide, so does not carry all the warnings it would if it was. It is toxic, both ingested and inhaled, and can form explosive vapors. If you happen to sell your plants, the use of rubbing alcohol

(Continued on the next page)





Pests

(Continued from the previous page) violates another of the US pesticide laws, that pesticides applied to crops that are to be sold must be registered. I have around 1000 specimens, Q-tips would be like spitting in the ocean. I spray with Orthene 70% SP, 1-2 teaspoons per gallon. I adjust my sprayer to deliver a solid stream, not a mist! Two reasons; the solid stream knocks the mealybugs loose, letting me get at their exposed bellies, thus avoiding the wax, and the solid stream is less likely to be inhaled than a mist. You should spray three times at weekly intervals to get the newly hatched larva. There are also root mealybugs, talked about in installment x of this series. I don't have root mealybugs, possibly because I add FertiLome Systemic Insecticide Granules to my potting mix, 1 teaspoon per gallon of mix, or possibly because I'm lucky. If plants look sick and you can't find any other cause, unpot and clean off the roots and look for mealybugs.

Incidentally, a systemic insecticide is absorbed through the skin of the plant and then is 'translocated' throughout the tissue of the plant. When sucking insects come along, they get a slug of insecticide with every sip of the plant's juices. Orthene is a systemic.

White Flies:

If you see a cloud of small (half the size of a fruit fly) white flies around some of your plants, you've got them. They are rare here in Tennessee, and a household bug bomb for flies and roaches is pretty effective. The one we used contained Pyrethrins, one of the less toxic pesticides. Again, repeat the spray to get recently hatched larva. Incidentally, it is not the flies that do the damage, it is their larva.

Red Spider Mites:

Individual mites are too small for me to see without a magnifying glass, but if leaves of a plant curl more than normally,

and the back has a spider web on it, get out your glass. The mites are little red dots. Almost the only advantage of the high TN humidity is that spider mites don't like it. I've only seen spider mites once, and a misting with water got rid of them. There are miticides, but try misting for awhile first.

Fungus Gnats:

If you use peat based mixes, you will get fungus gnats, a fly about the size of a fruit fly. Supposedly the adults spread fungus spores, assuredly the larva eat anything organic, including seedlings. I have a well established population of fungus gnats in my greenhouse, have had them for years, and do nothing about them. I've seen no sign of damage I could lay to them and they do a good job of pollinating my *Piaranthus* specimens. I do pasteurize my seedling mix before planting to kill fungus gnats and weed seeds. I keep the seedlings covered with a propagation dome until they are established, which keeps the gnats at bay.

Fungi:

Rot and damping off are two results of fungus infestation. Fungal spores are airborne and ubiquitous. The proper question is not why do some of my plants die of fungus infestation, but rather, why don't all of them? Answer--most healthy plants have effective natural defenses against local fungi. But break a leaf off a plant, take a cutting, or allow a feeder root to dry out for a few seconds and die, and you have created a pathway for a fungal infection that bypasses the plant's defenses. I still use Chinosol for drenching newly planted seeds, and used to use Benlate for rot. But now I accept loss from rot and try to see why the plant was weakened. Sunshine is a good fungicide.

Weeds:

In particular, *Oxalis*, a clover-like plant with yellow flowers, and a semi-succulent
(Continued on the next page)

Pests

(Continued from the previous page)
root system. Most of the mature succulents I have lost to rot have been infested with Oxalis. And mealybugs love the presence of it. Few succulents can compete effectively against it, for water, for nutrients, for space. Weed it! Especially before it flowers to set seed! Tweezers, needlenose pliers, hemostats all help when weeding close to prickly succulents. If your potting mix comes with Oxalis seeds, consider pasteurizing it, or buying pasteurized mixes. There are many weeds, all with the same treatment, weed them!

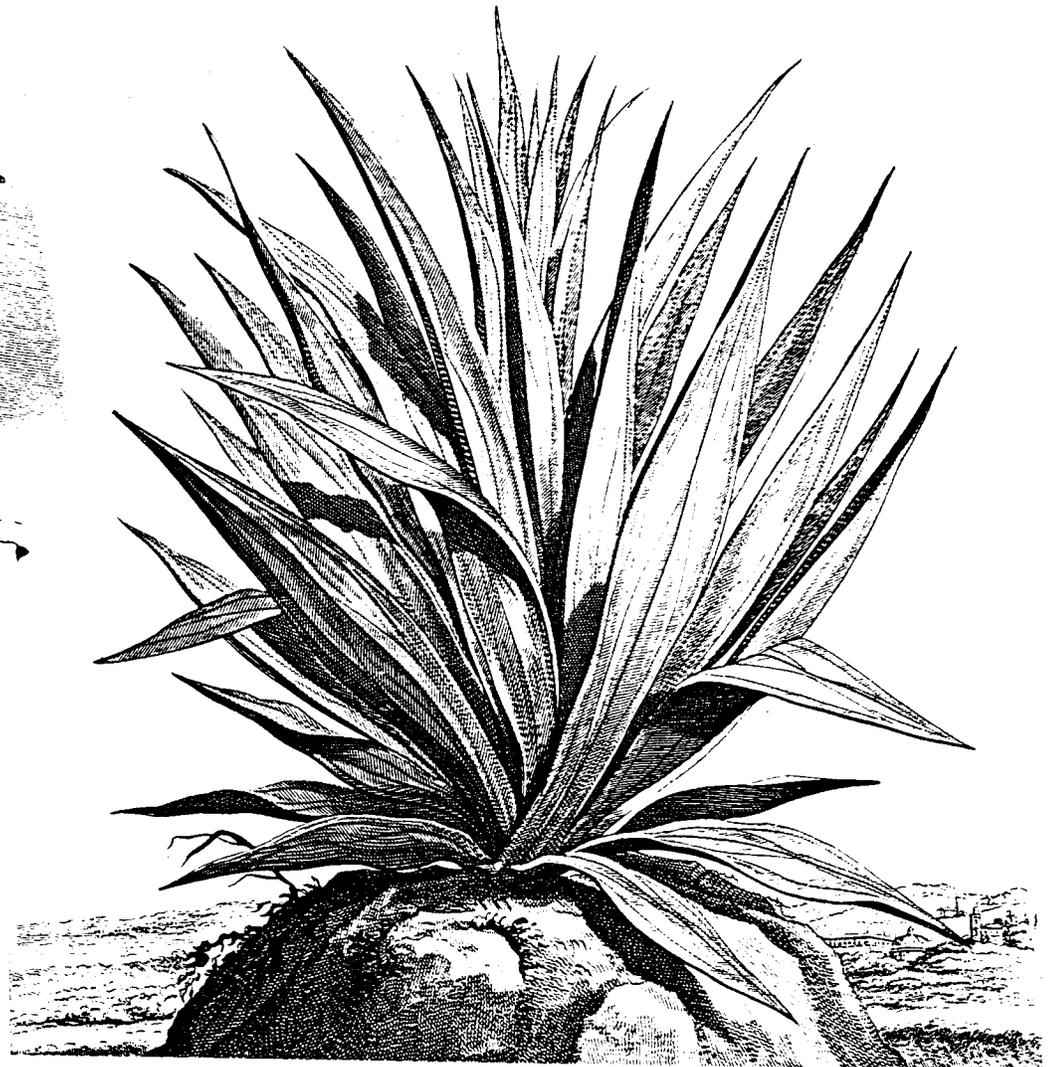
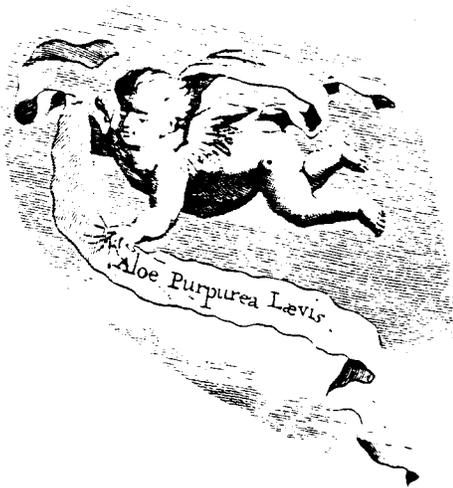
Others:

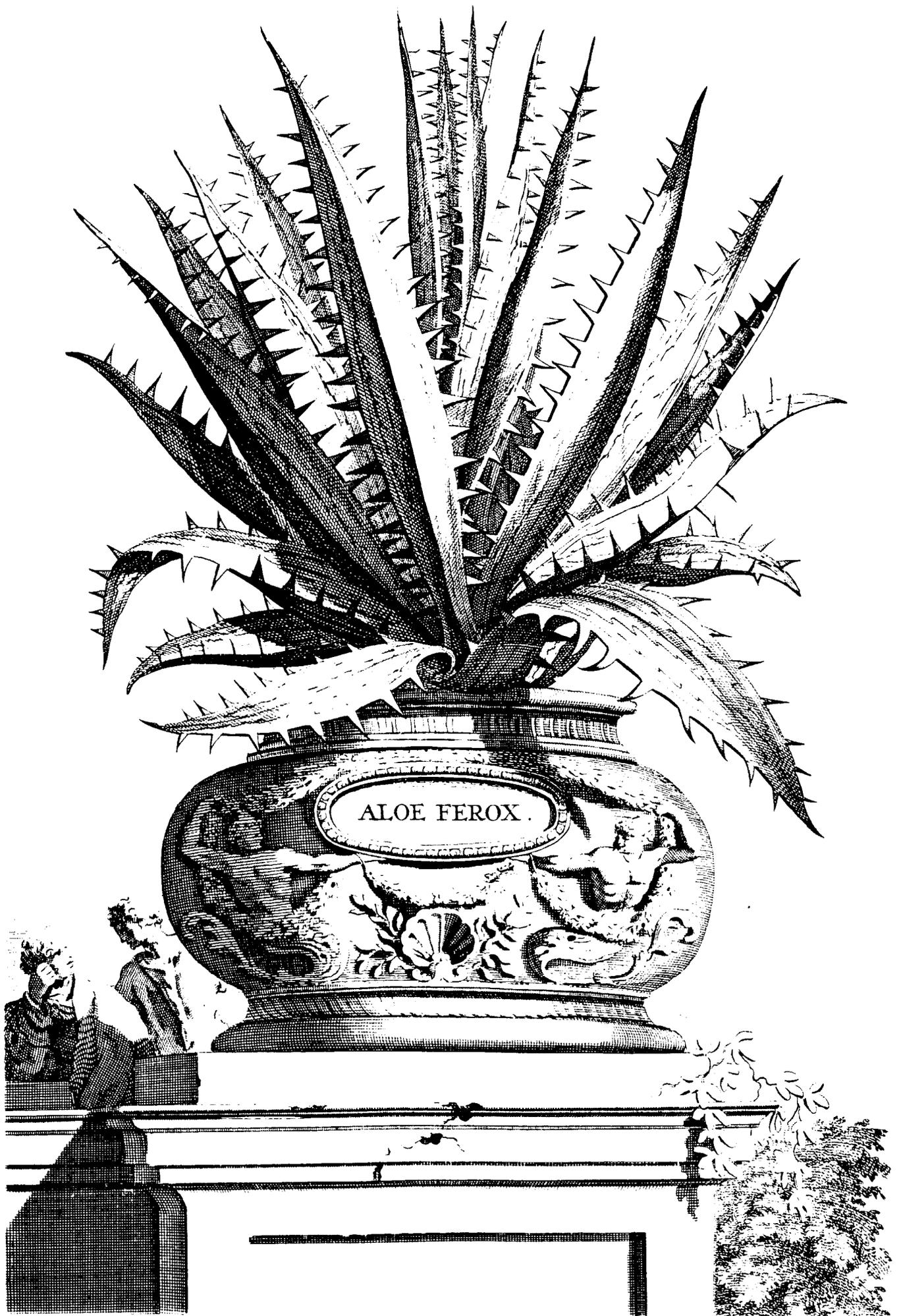
There are commercially available snail and slug baits which are more effective than grapefruit rinds. Build a fence around your outdoor plants to keep out the

neighbor's dogs. Trap or poison rodents. And if your neighbor's chickens become a problem you may have my recipe for chicken soup. Ants are known to 'farm' aphids and mealybugs so if nothing else works, consider getting rid of the ants. How you say. How should I know, I'm a plant expert, not an ant expert.

Where to get help:

Join a local C&S Club, there are lots of helpful members who know what to do locally. Most states in the USA have a County Agent system, aimed primarily at farmers and homemakers, but usually very helpful to hobbyists as well. Subscribe to Cacti_etc, the C&S mail list on the Internet. And finally, read and follow those label directions!! Even if I'm too dumb to, I'd like you around for the next installment, "How to Get More Succulents".





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