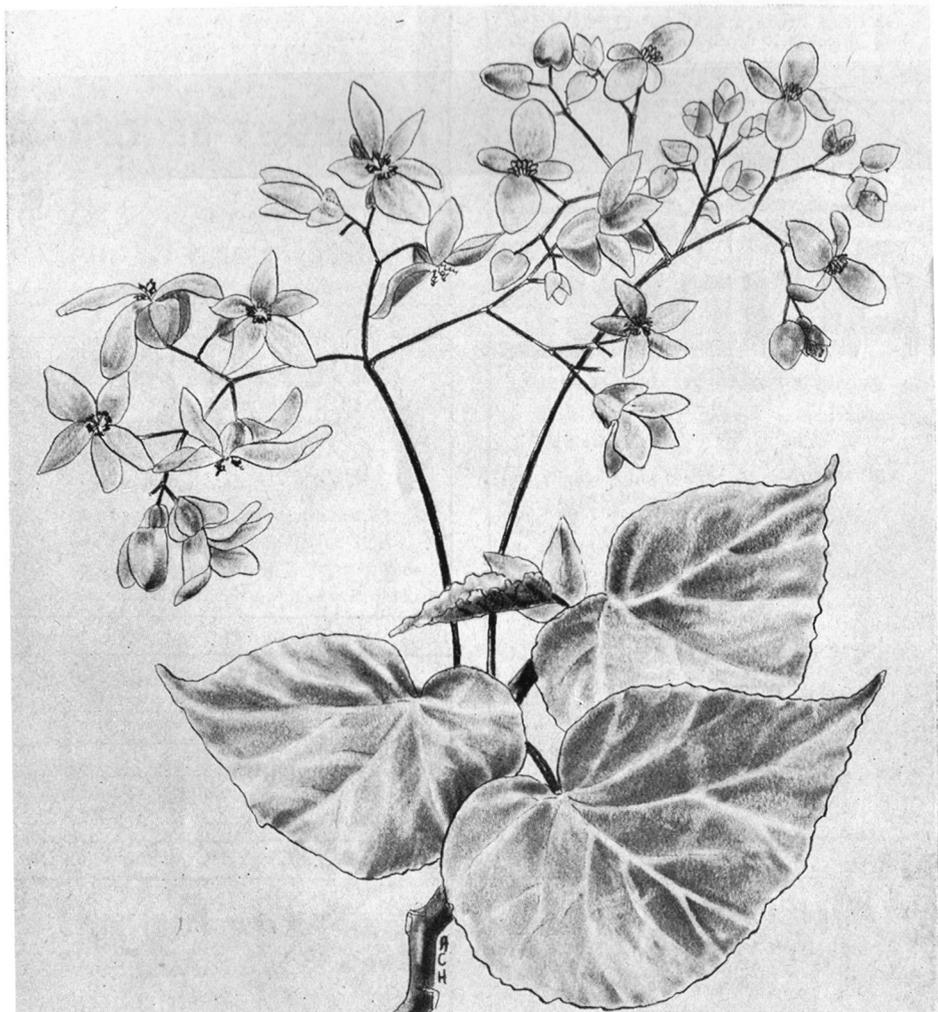


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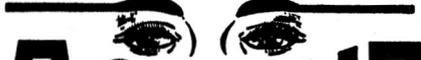
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Sketch by Alfred C. Hottes

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Founded by Herbert P. Dyckman, January, 1932

General Offices: 1618 Fickewirth Ave., El Monte, Calif.

Affiliated with the American Horticultural Society

- Annual Subscription Fee: One Dollar and Fifty Cents.
- Entered as second-class matter, September 21st, 1946, at the Post Office of El Monte, California, under the act of March 3rd, 1879.

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DWARF TREE CULTURE

By Fred Kaye, Glendale, California

Dwarfing your own trees is an interesting American hobby! Neglected in this country through a lack of information, the interest in dwarfing is nevertheless gaining ground thru the exhibition at flower shows, of some of the finer, older trees from private collections. More of an art than a secret, the Japanese have long held the laurels for centuries. Artistic arrangement and loving care have paid them well in the beauty of their trees. It seems natural then, that we find their arrangements to be the base for our own efforts, with such variations as the individual may choose.

Few of the older trees are to be found for sale. Rarely, except on the death of an owner do they change hands, so attached do they become to the trees. In viewing a tree two or three hundred years serenely living away in a tray, one can not but be impressed by the lives that must have gone into these trees. A living thing sometimes hundreds of years old that can be held in the hands! Therein lies the intrigue of what we start today.

The most impressive thing about dwarf tree

culture, is that these trees, if properly cared for, actually outlive their brothers in the field. Pomegranate, running thru their life's cycle in thirty to fifty years in the ground, live to the grand old age of five hundred or more in pots. One such specimen sold for \$20,000.00.

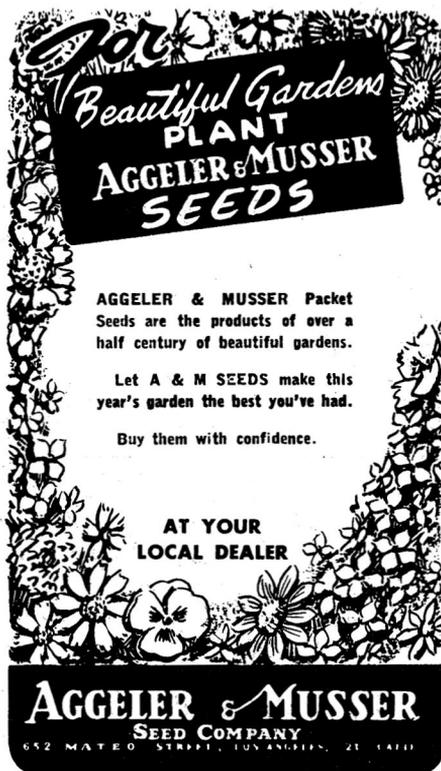
Pines, whose life cycle vary from one hundred fifty to three hundred fifty years, have been established in pots six hundred years. This is easily understood when the circulatory problems of an ever increasing bulk reaches its limit and declines. The little trees have a problem of only a few feet.

Who guarantees these ages? In Japan, among the owners of the trees, to misrepresent any tree age is to destroy confidence in them all, so ages are religiously recorded. In this country, while it is possible to cut the top out of a low-branched thick trunked tree and cause it to re-branch, healing of the huge scar will take so long, that nothing is gained and the faking obvious for years to come. A thick trunk and tapering branches can be produced only by age, which, within itself, varies with the species of tree used. Dwarfed pines, built from a two or three year old tree, have most of their mature framework when they are first shaped. The network and branches is a labor of years of half inch growth and forking.

Not all pines make good dwarfing stock. The best results have been with those from wet lands. The Japanese Black Pine, *Pinus thunbergi*, The Japanese Red Pine, *Pinus densiflora*, are the most widely used. The Japanese Rough-bark, short-needled pines are not available in this country. Of the American varieties, the water tolerant Bishop's Pine *Pinus mauricata*, The eastern *Pinus rigida* or black pine, and the Austrian pine, *Pinus Austriaca*, should be the most favored. The Aleppo pine, *Pinus halpensis* is willowy and easily shaped, tolerant, but will never show an aged bark, as will the preceding varieties. The Monterey pine suffices, but is short lived if too wet.

By virtue of being a pine, the trees should love full sun, but being planted in a shallow tray the roots become too hot if so exposed in the afternoon heat. Choice spots being a patio location with morning sun and afternoon shade, a sunny lath or a light-shade tree. Pines once established in a container will stand an occasional dry spell, and some sogging in summer, but will drown if overwet in winter.

They must have drainage. These are some of the growing requirements, now you must supply the enthusiasm and loving attention to produce these fascinating dwarf trees.



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BEND, WORK STEM TO SOFTEN AND LOOSEN FIBRES, MAKING STEM SUPPLE.

WIND 3 GAGE WIRE ABOUT BASE. TWIST ABOUT SLOWLY, TO FULL LENGTH OF TRUNK.

BEND WIRED TRUNK TO SHAPE DESIRED.



PRUNE EXCESS BRANCHES, TWIST 12 GAGE WIRE AROUND, SHAPE REMAINING BRANCHES.



THE SECRET OF FORMING IS TO REMOVE ALL STRAIGHT LINES. THIS GIVES TREE THE CHARACTER OF AGE. HEAVY TRUNKS AND WAVY, TAPERING BRANCHES ARE A PEAK PERFECTION AND COME ONLY WITH AGE.

TIME TO TRAIN; START BEFORE NEW GROWTH BEGINS. WIRES MAY BE REMOVED AFTER ONE FULL SEASON OF GROWTH TO POT; SAME RULES FOR-REPOTTING APPLY-HERE.

ROOT PRUNING - ONLY WHILE DORMANT, DURING COOL MONTHS

THE SECRET OF POT CULTURE IS TO PRODUCE FIBROUS OR HAIR ROOTS, AND TO REMOVE TAP OR LARGE ROOTS. REPOTT PINES EVERY 4 TO 6 YRS.

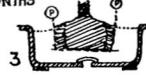
FIELD OR WILD PINES HAVE LONG RANGING ROOTS, CAN SELDOM BE POTTED SUCCESSFULLY.



1 ORIGINAL PLANTING NOTE WATER BASIN, GRAVEL BASE.

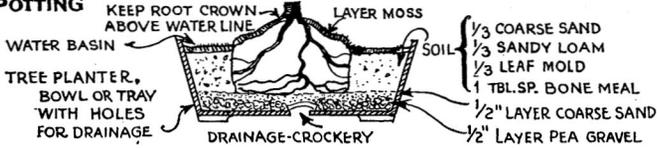


2 BOTTOM GROWTH PUSHES UP SOIL, DESTROYS BASIN, ENGULFS GRAVEL. (3 TO 5 YEARS)



3 ROOT PRUNE TO LINE SHOWN. "P" REPLANT AS #1 CUT AWAY 1/3 TO 1/2 OF ROOTS. USE TIN SNIPS.

REPOTTING



PRUNING

NEW GROWTH IS A TONIC TO A TREE, RESTORES CIRCULATION, THICKENS TRUNK.



ALLOW SHOOT TO FORM. WHEN NEEDLES BEGIN TO SHOW, CUT BACK TO 1/4 INCH. STUB WILL THEN ~



NEEDLES MAY BE PRUNED TO 1 OR 1 1/2 INCHES. WATER PLANT WELL PREVIOUSLY. SHOULD A MAJOR BRANCH DIE, LET IT WEATHER AWAY, NEVER CUT IT OFF.

CARE

KEEP MOIST, NOT CONTINUOUSLY WET SOIL. MORNING SUN UNTIL NOON IN PATIO. LIGHT LATH OR TREE SHADE. NOT IN HOUSE. FEED LIQUID FERTILIZER IN MARCH AND AUGUST, TO IMPROVE FOLIAGE COLOR.

FRED KAYE

PRESIDENT'S MONTHLY MESSAGE

By Mary Hazel Drummond

Begin now to make preparations in the soil for next spring. The addition of leaf mold, bone meal, manure and some sulfur will work wonders if done now and allowed to fallow over the winter months. One can safely add 5 lbs. bone meal and 4 lbs. soil sulphur to every 100 square of ground. This addition will both serve as a corrective and fertilizer. Many shade loving plants or acid loving plants may show signs of yellowing foliage due to chlorosis caused by excess alkaline salts deposited by the local water supply; A little tonic not only at this time but at reasonable intervals dependent upon the amount of watering necessary, will work wonders in your plants. Make a mixture of the following ingredients, Four ounces of magnesium sulfate, (Epsom salts), eight ounces of ferrous (technical grade salt) one fourth of an ounce of zinc sulfate and one sixteenth ounce of manganese sulfate, mix thoroughly together and add four ounces of the mixture to five gallons of water and pour into the soil around the plants. This can be repeated at intervals of six to eight weeks and you will be gratefully surprised at the results. Good luck. More next month.

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• Someone once said "Experience is the best teacher, but the tuition is high." Read and study The Begonian. The tuition is only \$1.50 per year. You will learn from the experiences of others what to do and not to do.

SPEAKING OF SHADE VINES

By Peggy Sullivan, Los Angeles, California

Let us discuss these garden wall-papers first from the landscape effect desired, and then fit the vine to the effect. Do not plant a vine over or in the lathhouse just because it is the custom. Instead, ask yourself, is a vine going to add beauty to the lathhouse (and not add weight so it collapses sooner); must it add complete shade, or merely break the light. There is no object in allowing a vine to become so thickly matted that it becomes an apartment house for birds. Vines are usually most effective when occasionally pruned; the resulting tracery allows the architecture of the support to appear through the vine, enhancing both vine and support.

Vines, thoughtfully selected and grown, are desirable to prevent bareness, hard lines, and the coldness of bare white walls. The distinctive designs of Philodendron species create a focal point of interest against shady walls. Do not, however, ignore proportion; large leaved vines should rarely be used in small lathhouses since the great difference in scale causes an illusion of decrease in size of the lathhouse.

If the architectural design of a lath-house or wall is badly proportioned, the lines of a trained vine will reduce the errors. Horizontal lines carry the eye across the undesirably tall lathhouse. But should the garden present a flat or low appearance, and a small tree is undesirable, relief can be obtained by using vertical vine patterns. These lines or patterns must be maintained by pruning or by tying wires against the wall and then fastening the vine to the wire frame.

Cautions must be exercised not to ruin the attractive growth pattern of a vine by allowing high bushes to obscure all but an upper fringe of the vine growth. A tropical jungle effect is better created by tossing in a few parrots and monkeys, rather than by overplanting the design, resulting in a spindly, cluttered effect.

In choosing a specific vine to serve a definite purpose, consider the foliage and texture contrasts of the vines to be used in carrying out the planting scheme. To place the dark leaved Trachelospermum in a gloomy corner of the garden is ignoring the possibilities of a bright contrast of Gelsemium's light green leaves. The delicate tendrils of Clematis Jackmannii would not grace a large brick wall as would Thunderbergia grandiflora. Do not allow monotony to creep onto your shady walls by planting different vines with the same types of textures and leaf shapes throughout. Variety is also the spice, in your garden! Therefore, when several vines are to be used on the shady wall, it would be better to plan distinct contrast, or else strengthen the design by growing the same species throughout.

Since coolness frequently coincides with subdued light, the use of warm colors in shade garden vines will greatly aid in warming the design. No one can deny the charm and restfulness of an all green, shady garden but the same garden will assume much added warmth and beauty by the addition of yellow, rose, and red blossoms.

Let us remember that one or two well grown and appropriate selections will do more for your garden design, than a tangled conglomeration of several vines poorly placed and neglected.

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Telephone 3811

SEED FUND NEWS FOR DECEMBER

Dear Armchair Explorers:

Here it is December and I am still promising you Begonia seed in January. At this writing (November 5th) these kinds are on hand. *B. Venosa*, 3 species from the island of Dominica, species from Columbia, *B. Popenoei* from Hawaii, *B. gigantea* from India and several named kinds of tuberous hybrids and species, *B. Immense* and some small lots of India begonia seeds which will be sent out as far as they go. Our Mexico collector writes that he will have a great many types of begonia seed for us, but possibly cannot send them until late in January or February. On order are many kinds of India seeds, such as *B. cathcarti*, *B. picta*, *B. Josephi*, *B. megaptera*, etc. Getting seeds from foreign countries is a real task and as time goes on it becomes more and more apparent that to continue with the seed distribution more seed must be saved by our members. Please keep this in mind and save as much Begonia seed as possible.

While it is great sport to watch the tiny seedlings grow and change, a great thrill comes in finding that different plant that shows up from time to time, sometimes it is a variegated one. I have a nice variegated *heracleifolia* among my seedlings and have learned to keep a close watch for anything unusual among my seedlings.



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ODONTOGLOSSUM GRANDE—Borne 3 to 4 on a stem. Individual flowers about 5 inches across. Yellow, lined and spotted dark brown. Deep golden yellow throat. Each \$5.50 Prepaid.

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VAN NUYS NURSERY

6133 Ethel Avenue Van Nuys, Calif.

The Armchair Explorer's Correspondence Club is going strong—two groups of letters are "sailing." Your skipper called on Mrs. Minter a few weeks ago and was happy to find what a good plant grower she is. She has grown some very nice plants from our Seed Fund seed and is very interested in getting together a representative group from the Armchair Explorers. If you haven't already sent your name to Mrs. Minter, then get busy—that is if you have the time for correspondence with others growing this seed. Mrs. Marie Minter, Route 1, Box 180, Encinitas, Calif.

We have over 100 members in the Seed Fund now—it will be a lot easier on your skipper if you, who will be wanting seed get your name on the list before January, but after that date the seed is sent out as far as it will stretch—but at no reduction of fee—so it really costs more by waiting. Send your contribution of \$2 to the Seed Fund NOW if you will be wanting a share of the Begonia seeds. New members will find your skipper's address in the list of officers at the front of your Begonian.

Again I want to tell you how much I appreciate the nice letters you send along with your contributions—good seed growing fun to you all. Your skipper, Florence Carrell.

Dear Skipper: Here is my check for \$2 again, for one of the armchairs this year. Results from seed last year contained some disappointments, since I was away a good bit of the summer, but am richer by quite a good many fine plants nevertheless. The seed itself proved far more viable than some for which I paid \$1 per packet. We Armchair Explorers owe a debt of gratitude to you and your assistants. Wish I could have attended the meeting. For myself, I would prefer less seed in a packet and if available, more kinds. The amateur needs sprout only very few successfully of each kind to be happy. As to variety—any type for me, less tuberous, which do not suit our Chicago conditions. Had especially good luck with the calla lily *semperflorens*, raised a lot of plants, nearly all beautifully variegated.

Sincerely yours, H. P. Dutton, 2242 Pioneer Road, Evanston, Ill.

Mr. E. J. Wimmer of Manhattan, Kansas, sends in his vote also for more kinds of begonia seeds and smaller packets.

Still time to send your dues to Roy K. Dere before they become delinquent.

BEGONIA SEED GROWING MEDIUMS

By *W. C. Drummond, Hollywood, Calif.*

The growing of Begonia plants from seed is not difficult once one has learned the way. By this method one can produce hybrid varieties and can acquire new and rare species of begonias at very small cost.

To be successful in the growing of seed one must not only consider the seed compost or soil medium, but also the other environmental factors of plant growth, as the physical condition of soil, amount of light, temperature, soil acidity, air movement, air (oxygen) in soil, soil nutrients, and humidity.

In writing this paper it is not the intention to cover the whole subject of seed germination or begonia culture, but to give an outline of some dependable seed growing mediums, as soil mixtures, and to mention some of the more vital environmental factors.

SOIL MIXTURES

To those of you who never have grown begonias from seed the following are presented as dependable methods. Here then, is the first growing medium or soil mixture. By bulk measure, use two parts of loam which is not too heavy or too sandy, yet when moistened and molded, it should retain its shape, but be easily broken, only slightly sticky when moist and readily rolled into long slender rods. Soil a little heavier than silt is about right. Heavy black soil is not loam, it is clay. Loam used for this purpose should originally contain about 20 per cent clay, and on the other hand the loam should not contain too much sand. It need not be too rich in organic matter, compost sod soil would be good. The other parts are one part acid peat moss, and one part clean washed sand. Mix the sand and loam together and sterilize by pouring over it $3\frac{1}{2}$ gallons of boiling water to each standard flat, which is 18 x 18 x 3 inches deep.

STERILIZATION OF MATERIALS

In growing begonia seed do not sterilize the organic matter, as peat, leaf mold, or a garden compost by prolonged heat. The cooking of the organic matter may liberate too much nitrogen, as ammonia, or too much nitrogen from the dead bacteria contained in the soil, as well as other compounds not too well understood, which may cause a chemical damping off of begonia seedlings, as pre-emergence damping off. In this case the seed may never show above the soil line. Ammonia is quite alkaline and retards seed germination. Many quick growing seeds are greatly benefited by sterilization of organic matter. By using organic matter as peat, instead of leaf mold, or garden compost, we add organic

matter and get a good growth of seed without sterilization.

FERTILIZERS ADDED

To a part of sterilized sand mix about 2 level teaspoonsful super-phosphate as a fertilizer to each flat of mixture of peat, sand and loam. In addition to the superphosphate, Lawrence and Newell in their book, "Seed and Potting Composts," recommend the addition of $1\frac{1}{2}$ teaspoonsful of chalk (calcium carbonate) to each flat. It is thought that for most California soils this chalk should be eliminated. Do not sterilize the fertilizer. Mix the whole three or four times through hardware cloth, having four meshes to the inch. The top $\frac{1}{4}$ inch of growing medium should go through a fly screen. If possible moisten well with rain or distilled water, and place in flat.

SOWING BEGONIA SEED

Plant seed evenly by first mixing with a small amount of sterile sand. Do not cover the seed, just spray lightly. Cover the flat with a sheet of paper to exclude the light and catch the drip and cover with a pane of glass. (Or ground glass will serve for both). Keep at 65 to 70 degrees F. When the seeds emerge remove the paper and give more light and air, but no direct sunlight at any time. Keep seed flats in a warm place. Always, in growing begonia seed keep the soil just moist never too wet, as this encourages damping off and drives the air out of the soil. Oxygen as air in the soil is necessary for root growth. Begonia seedlings require a high relative humidity, a few hours of dry air and they are gone. Remove glass gradually. If the seedlings grow tall and spindly, they are not receiving enough light. Where sand or vermiculite are used alone the seedlings should be fed.

Here is another seed growing medium which I have used for some time with good results. Screen through hardware cloth, 4 mesh to the inch, dry sphagnum moss, or use screened leaf mold, using it in the bottom of the flat, for the top $\frac{1}{4}$ inch of flat use sphagnum only, screen through a fly screen. Wet well, using rain or distilled water if possible. After wetting thoroughly and then squeezing by hand, the moisture left in the moss will be about correct for planting. Add the same 3 level teaspoonsful superphosphate and according to soil reaction 2 level teaspoonsful of chalk or gypsum, mix well by sifting several times. Place evenly and with a little pressure in flat. Sow begonia seed, not too thick, on top of sphagnum, using no covering, simply spray

lightly with a rose spray, again cover the glass, etc. Be sure not to over-water the sphagnum medium. Write for leaflet 243, Sphagnum Moss for Seed Germination, U. S. Plant Industry Division, U. S. D. A., Beltsville, Md.

Another way of growing begonia seed, and one I call the automatic way, is to grow the seed in a square, large mouthed, gallon glass bottle. A round bottle may be used. I have used this method with success many times. Always have the bottle lying on its side. Place your preferred growing medium in the bottle about $\frac{3}{4}$ inch thick, level and sow seed. Well screened sphagnum is a good medium in which to grow seeds in bottles. To sow seed, mix with a little sterile sand and use a long knife. Do not sow too thickly. Moisten the soil mixture before placing in the bottle, squeezing out excess water from sphagnum. Do not cover the seed, but spray lightly to settle them. Replace lid after sowing. Remove to a dark warm place, 65 to 70 degrees F. Use the fertilizer of superphosphate and chalk or gypsum according to soil reaction, in above mentioned proportions. There will be no need to water at any time. In transplanting so as not to damage seedling roots, where sphagnum is used, remove from seed bed by lifting with a knife a fair sized piece, then carefully break apart.

Another method quite similar to the bottle method, for small lots of seed, is to use a glass cover dish with tight fitting glass cover. Soil temperature, fertilizers, etc., all remain the same.

In the moist brick method use one or two porous building bricks. Enclose them with a box like affair to hold soil. Have the sides about $1\frac{1}{2}$ inches high with no bottom or top. The bricks are set in a pan filled with one inch of water. The bricks act to keep the soil moist. Have soil moist to start with. Cover with a sheet of glass, otherwise the same cultural care.

Terra-lite, brand of *Vermiculite* as expanded mica seems to be a promising medium. It is silica, a mineral, heat treated and expanded. It has great water and air holding capacity, for this reason wet well then do not compress as to drive the air out of it. It works well by capillary attraction, that is, it will draw water up to itself. One can make use of this property by having it over moist bricks which stand in water or coarse gravel. On the other hand do not keep too wet. Once watered it stays wet a long time. Use the same as soil, but do not pack it. Fifty-fifty with clean, sharp sand is better. It has also been mixed with soil or sphagnum for seed growing. The fine grade is best for seeds. It is also very good for cuttings. Read *California Agriculture* of September, 1947, Dr. V. T. Stoutemeyer.

Also *Florist Exchange* for May 29, 1943 or the *Florist Review* for May 27, 1943. *Soilite* and *Perlite* are similar purpose mineral substances heated and expanded. Use the same as vermiculite. These minerals are sterile, that is they contain no live substance as bacteria when made. Cuttings once rooted and seedlings should be fertilized with weak solution when grown in terralite or soilite.

In growing begonias from seed success will largely depend on attention and care given.

There are many other ways of growing begonia seed, such as growing them in pots with glass wicks, in clean beach sand. In leaf mold alone. In a large pot with a smaller one inside filled with water. In various other mediums, as various garden composts. If you know any one of these methods and are having success, stick to it.

The words "dry sphagnum" are used to distinguish from the green or live sphagnum, and the word lime is used as a synonym for calcium.

For watering flats of growing seeds, when soil becomes dry, use Dunlap's solution which is one teaspoonful each superphosphate and potassium nitrate to each gallon of rain water, especially where sand or sphagnum are used separate and alone.

Those of you interested in acquiring new varieties of begonias join the Seed Fund, and for those of you wishing to practice growing begonia seed, send a self-addressed stamped envelope to the writer for a free sample of *semperflorens* begonia seed.

SUMMARY

In the growing of begonia seed several mediums have proven successful. A mixture of loam, sand and peat; dry sphagnum, because of its tendency to prevent damping off; and terralite brand of Vermiculite.

Some good authorities have proven that for some seeds the organic matter is best not sterilized by prolonged heat as steam on account of the liberation of too much ammonia as nitrogen and other compounds retarding seed germination.

Also these same authorities have proven the addition of superphosphate, and lime, where the soil is acid or deficient in lime, gave superior results.

For those interested in further reading the following references may be helpful and informative. Most bulletins are free.

Seed and Potting Composts, by W. J. C. Laurence, \$1.40.

Commercial Flower Forcing, Laurie & Kiplinger, Page 198.

Seed and Potting Soils, Bulletin 217, Cornell Univ. Ithaca, N. Y.

Bulletin 321, Agri. Exp. Sta., Fort Collins, Colo.

The New Garden Dictionary, Page 393.
Technical Bulletin USDA 443, Steam Sterilization.

How to Use Formaldehyde, E. I. DuPont de Nemours, on Seed Sterilization, Wilmington, Del.

Circular 186, New York State Agri. Exp. Sta., Geneva, N. Y.

Farmer's Bulletin 1862, USDA, Govt. Printing Office, Washington, D. C.

Horticulture Magazine, Sphagnum & Damping Off, Page 32, Jan. 15, 1944.

Home Garden Magazine, How to Prevent Damping Off, Page 32, Feb., 1944.

Bulletin 511, Page 14, Ohio Agri. Exp. Sta., Wooster, Ohio.

Introduction to Plant Pathology, by Heald, P. 91, 1943.

Farmers Bulletin 1371, USDA.

1001 Garden Questions, by Alfred C. Hottes. Propagation of Plants, by Kaine and McQueen, 1939.

Collecting and Handling of Seed & Wild Flowers, Forestry Publication No. 2, USDA, Washington.

A Propagating Case, Begonian, July, 1947, by Wallis.

Transplanting Begonias, Begonian, Sept., 1947, by Schwertfeger.

BRANCH NEWS

The Miami Branch, Florida: The speaker, on Soil Testing, Mrs. E. Peterson also gave a demonstration on the mixing of suitable potting soils for various shade plants as well as the testing of soils for the PH. She advised a Ph of 6 for most begonias in Florida.

The A. D. Robinson Branch: A change of meeting date to the 4th TUESDAY has become necessary. Because the day comes so close to Christmas, it has been decided that there will be no meeting in December, but mark it for your 1948 calendar.

The Inglewood Branch: This Branch has changed its meeting evening back to the second Thursday of the month. Please note on your calendar.

The SANTA MONICA BRANCH of California has enjoyed programs by Mr. W. C. Cocke, president of the Hollywood Branch, who showed beautiful colored pictures of tuberous begonias. Mr. Raymond T. Wilson, also of the same branch has spoken on shade plants with detail as to color, texture and culture. Mr. James Giridlian of San Gabriel Valley Branch, illustrated his talk on shade plants with excellent colored pictures as is his wont. Mr. Richards of Evans & Reeves brought valuable information on another group of shade plants: *Impatiens oliveri*, Hybrid *clivias*, *cymbidium* orchids, *primula polyantha*, ferns, and the improved begonia *digswelliana*.

CHRISTE HERBE THE CHRISTMAS ROSE

By Maria Wilkes, Los Angeles, California

Why this beautiful and interesting plant is so seldom seen in gardens is a mystery. Of course, it is difficult to find in any ordinary nursery but the specialty firms here and there are wise enough to propagate it for the discriminating gardener.

The 12 by 12 by 18 inch rosette of large palmately divided leaves arise from the base of the plant on long petioles and are in themselves a decoration in the shade garden border or rock garden, but when, at this season, one discovers the very attractive white or flushed with violet flowers on tall stems coming through the foliage, it is distinctly a thrill.

Helleborus niger and its several varieties make no special demand on soil or grower after its initial planting in good rich earth in which a handful of 50-50 bone and cottonseed meals have been incorporated and adequate drainage has been arranged. Other than this, divide only when it becomes crowded and overburdened with hungry roots.

The various species of the Hellebore come from Europe and W. Asia and offer some variety on the theme of the single rose bloom in various tones, some larger than others and some more branched than the rest. A moist, leafy, moderately rich soil where a little sun may reach the plants is perfect and they will prefer to remain comfortable and well if undisturbed for years and continue to bloom from late December through Easter, according to type. It lasts well as a cut flower—always drawing admiration to itself.

The *Helleborus niger* is an especially valuable plant to the HERB GARDEN as it is one of the shade flowering plants for difficult places. This Christmas rose is a powerful purgative but should only be used by those who know how to handle the rather poisonous drug. The best position for this *Christe Herbe* is in the foreground of a bed, especially near an entrance where the beautiful blossoms and fine evergreen foliage is sure to be enjoyed through the long flowering period and the rest of the year.

The Black Hellebore used to be associated with the mystic rites of sorcerers who were supposed to render themselves invisible by scattering the powdered herb about them. Among other recorded uses, was the power to ward off evil from cattle, hence these animals were blessed with it.

Whether we are interested in its medicinal powers or not - it remains a neglected beauty that we should seek and thereafter enjoy in our own shade garden.

B. TENUIFOLIA, DRYANDER

By Alice M. Clark, San Diego, California

Begonia tenuifolia, our subject this month, is one of the oldest known begonias. It was brought from Java under the auspices of Sir Joseph Banks and described by his curator, David Solander. Dryander included it in his "Observations of the Genus *Begonia*," published in 1791. Through the courtesy of Mrs. Frey and Mr. Zeisenhenne, I have a photostatic copy of the original drawing for comparison. The flower is not shown; only one of the leaves is similar and the seed pod does not seem quite the same. Perhaps our plant was imported lately. The species could have undergone some slight changes in a century and a half!

The name, *tenuifolia*, means "thin leaf." I am indebted to Robert Calvin, former head of our local Robinson branch, for the plant of my sketch. I chose the smallest of his three large specimens in 8 inch pots. Even then I could only show a third of it, besides leaving out two big leaves on each side that would have extended off the paper. It is now one and one-half feet high and still growing taller.

The large leaves that were omitted sprang directly from a thick rhizome that is smoother than most, as the stems do not leave such rugged scars. There are small white dots on the surface of the brown rhizome. The plant stalk does not branch. It is a rich green, streaked with white, internodes are 3 to 4 inches apart with a swollen base. A pair of thin wrinkled bracts protect the new growth at each intersection, leaving a red line when they fall. Out of this comes a leaf stem, another stalk and an inflorescence. This pattern repeats, with the leaf on the opposite side each time.

The petiole that emerges from the rhizome is over a foot long; those from the stalk are shorter. They are very round, succulent and yellow-green, with long white streaks. The leaves average 5 by 7 inches. They are a smooth light green with strongly elevated veins on top, rising from a light center. The back color is fainter and the veins are transparent, like slightly pink tendons. The leaf shape varies. It is one-sided, heart-shaped, with the main veins extending out into hooked points or lobes. These are more pronounced on the wide side. The tip is a long point. When young, the leaf edge is outlined in red. This fades and the border rounds back a little so the little bristle at each vein's end can be felt easier than seen.

The flowers of *B. tenuifolia* are different and very lovely, with the most consistent

growth of any I have observed. The peduncles average 5 inches. They are pale green, smooth, and round. The bloom unfolds from two tightly packed greenish bracts. First on a 1½ inch pink pedicel, there is a central male flower that spreads its sheltering wings over the two budded divisions below. Promptly, from the middle of each branch comes another bloom, to make a beautiful long-lasting trio that never closes, even at night. This group is followed by a quartet, a pair from each side, guarding the two female flowers beneath, until they need no further protection. There are no other bracts.

The two main petals are a bright rose, with a cupped part on the outside, strongly highlighted on the bud.

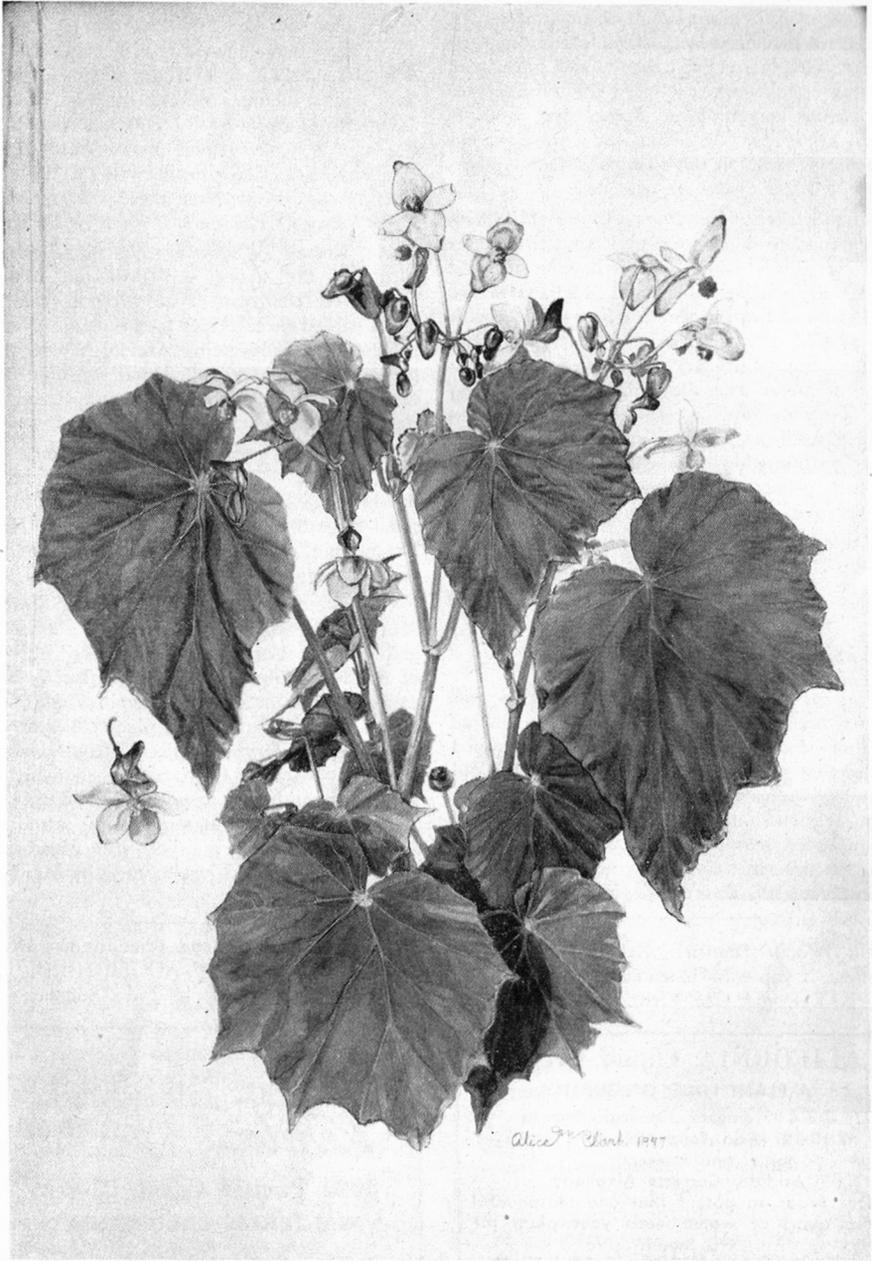
Instead of opening sideways, these concave petals unfold up and down, so the lower one is against the pedicel, like a cyclamen. Each petal is an inch-long tapered oval of rich pink with a deeper tint at the end. The two side petals are narrower and lighter, giving the flower the poise of a bird in flight. This illusion is furthered by the stamen of many yellow filaments forming a rounded head on a short neck.

An enlarged female blossom, showing the five oval, rose-pink petals of fairly even size, may be seen at the left of the sketch. The pedicel is slightly shorter, but a small shank gives it more length. The capsule is a distinct departure from the usual shape. Two of the wings are very immature, incurved so one side of the ovary is hollow, like a hoof. The other bright rose wing is extended like a rounded fin, and longer than the entire ovary. The latter is white. There were no ripe pods to observe, but there are said to be two instead of three cells.

When *B. tenuifolia* is as well grown as this one of Mr. Calvin's, it can vie with the best of the bulbous Christmas types. The pink and green color effect is similar to that of Marjorie Gibbs. The flowers are plentiful and just tall enough to peep above the leaves. I seem to recall that this begonia bloomed later last year when the foliage was not as fine. All flowers seem to be rushing the season this fall.

Mrs. Frey and Mrs. Schwerdtfeger of Santa Barbara are doing some very interesting rex hybridizing, the results of which Mrs. Robinson and I enjoyed seeing when we were there last spring. They were using *B. tenuifolia* so I asked for more details. Our new and very enterprising director of Public Relations took time to send me this data.

(Continued on Page 240)



B. TENUIFOLIA, DRYANDER

(Continued from Page 238)

Three years ago Mrs. Frey put pollen of a rex on *B. tenuifolia* without the influence of the latter being apparent. At the same time Mrs. Schwerdtfeger used *B. tenuifolia* pollen on *B. r-c Evelyn*, a large silver curl from Mrs. Frey's seed. Mrs. Frey then grew some seed of this cross which produced the lovely rexes we saw in her lathhouse. Some have gorgeous curls, all are upright. The leaf texture, greenish-brown spots on the stems and center markings of *B. tenuifolia* are evident.

Mrs. Schwerdtfeger crossed *B. tenuifolia* with a rex four years ago, with one outstanding result she calls "Inspiration." It has the growing habit of *Rex-Evansiana* type. The leaves are the shape and fine texture of *B. tenuifolia* with the flowers a bit larger, of delicate pink. It is vivid green, with darker center, a few markings of silver and sometimes a silver V on the point. She now has 800 young *B. tenuifolia* hybrid seedlings coming along. What energy! Keep your eye on this begonia and the Santa Barbara group. They have an up-and-coming, cooperative spirit.

Christmas joy and good begonia growing in the New Year!

STAR BEGONIAS

By Emma M. Carleton, Berkeley, California

Our program for November meeting will be a symposium on *Star Begonias*. Mrs. George C. Reed, Mr. Harry Swager and I are detailed to provide plant specimens of some of the old standbys with some of the newer varieties and after a discussion, questions and answers will be in order. Some of Mrs. Elsie Fry's "Stars" are very beautiful right now, as is also *B. Mrs. Mary Peace* and *B. caroliniaefolia*.

Hollywood Branch: Xmas Cake Baking Contest. If you want to enter or applaud....You will be welcome. Dec. 11th.

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NEW YORK ANNUAL MEETING

By Louis J. Kuester, New York, N. Y.

The Fall meeting of the New York Suburban Branch was held on Sunday, November 9th, in the lounge of the Crestwood Public Library. The program included a talk by Alice L. Dustan, Garden Editor of *House Beautiful Magazine* and a member of our branch. The talk "Gardens of Friends & Neighbors" was illustrated with color slides made from photos taken by Miss Dustan on her visits to the many fine gardens throughout the U. S. including California and Florida.

Mr. Russell L. Schwing, our vice-president, furnished the screen and projector. Mrs. J. C. Stilwell, chairman of the program committee, awarded three prizes to the members most successful in propagating African Violets from leaves distributed at our June meeting. Mrs. Norman Hedley, our able secretary, read our first annual report.

Mrs. R. C. Kline, who returned from a visit to California only about a few hours before the meeting opened, conveyed to us the personal regards and best wishes of Mary Hazel Drummond, president of the American Begonia Society and other members.

Our guests included Mr. and Mrs. Starr of Southbridge, Mass., and Mr. T. A. MacDougall of New York. Mr. Starr is the president of the New England Branch of the A. B. S. and one of its most active members. Mr. MacDougall, horticulturist and plant collector, has for a number of years collected tropical plants in Mexico. Among them have been many begonias, some being new to horticulture. Begonia "Mazae," at present being introduced by Mr. Ziesenhenné, a beautiful plant, is a new species collected just recently by Mr. MacDougall.

Xmas Party Spirit and Friendliness: Hollywood Branch: SILENT AUCTION!!!!!! IT'S HAM. You will enjoy it. 2nd Thursday.

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FERNS—From a Talk By Mrs. Fewkes

Reported By Sally Bancroft, San Diego, Calif.

Mrs. Ella Marguerite Fewkes of Montalvo Gardens was persuaded to discuss ferns at the October meeting of the A. D. Robinson Branch. We were so delighted with the talk that we would like to share what was learned with other lovers of shade plants.

Although thought by some gardeners to be swamp lovers, ferns nevertheless will be most successful with excellent drainage. It is best to properly prepare the soil with a basic layer of stones, compost of well-rotted oak leaf mold, bean straw, and fertilizer. Shelter the ferns from wind and sun, although the sun's rays will be less damaging near the coast.

When wild ferns are attempted all environmental conditions must be maintained as similar to their native habitat as is possible.

Mrs. Fewkes controls snails, slugs, and sowbugs with an economical and stable mixture of twenty pounds of white corn meal, one pound of Paris Green, two pounds of powdered sugar, and the ground rinds of five oranges. After moistening the poison, place it on bare ground. Foliage is burned by it, so use care.

In spraying ferns an important precaution is to apply the liquid only in early morning or evening hours, otherwise burning is apt to result.

Fertilizers had best be used only three to four times a year, liquid fertilizers are fine if not overdone.

Spores from the underside of the fern frond are germinated on a mixture of sifted leaf mold and green moss and after sterilizing with boiling water, the frond is laid on a screen placed over the soil mixture. Cover with glass and keep constantly quite moist. The prothalli which develop may be transplanted individually into flats or two inch pots.

Fronds which develop small bulbs are propagated by layering. (*Asplenium bulbiferum*).

The division of maidenhair fern is best attempted by breaking upward from the base of the crown. Maidenhair is cut back each year at the beginning of the growing period. With all other ferns keep the old and bent fronds cleaned out.

In conclusion Mrs. Fewkes presented the following comments on what not to do: Allow no cultivation, overpotting, dry spells, standing water, quick reacting fertilizers, nor excessive sun exposure through window glass.

BRING YOUR EXTRA PLANTS TO HOLLYWOOD. WE'LL ALL "Go Hollywood" Dec. 11th to the Christmas party. Time? 7:30 p. m.

DIRECTORS' NOTES From Fern Round Robins

FERNS: Members of this Robin are learning to identify many of the ferns they grow by sending pressed leaves of their plants to the others of the same club at every round.

One member finds that her ferns and all other house plants have been in much improved condition since she has increased the humidity about them through watering every other day and spraying the foliage with a fine mist of water through a hand-pump sprayer on the alternate days. Ferns make lovely subjects for hanging baskets but they prefer to be placed in shallow containers of the wire basket variety so that they can force themselves out all over the basket through the moss-lining, completely hiding it.

Fern spores are not difficult to grow on a brick that has been baked in the oven for half an hour. It is then placed in a pan with about an inch of water and the spores are sprinkled over the brick and the whole is covered with a pane of glass.

SELAGINELLAS: These beautiful mossy plants are grown luxuriantly by a Fla. member. Both the peacock blue and the plain green need deep shade and much moisture.

BEGONIA NITIDA, (DRYANDER) Variety, *Odorata Alba*

Sketch by Alfred C. Hottes, (Front Cover)

B. nitida, has been sketched for you by one of the nation's best-known horticulturists, Alfred C. Hottes, who now lives in La Jolla, California, and belongs to the Eva Kenworthy Branch there. He has written books and lectured on garden subjects and is also known for his "Pacific Coast" page in "Better Homes and Gardens," with which magazine he has long been associated. He has developed an original technique for drawing plants that is not only accurate and realistic, but definitely decorative.

All sources seem agreed that *B. nitida* was the first begonia to be introduced to horticulture. It was sent by William Brown, an English navy doctor, from Jamaica to Kew Gardens in England in 1777. It is mentioned in one of the very earliest publications on begonias by Jonas Dryander in 1791. *B. nitida* was one of the three living specimens the author had seen out of the twenty-one he described. *A. Clark*.

Please send list of new officers with address and office held to the editor as soon as possible. Also notify change of meeting place and date.

BEGONIA MAZAE

Begonia (sec. *Magnusia*) *Mazae* Ziesenhenné, spec. nov., herba erecta, perennis, evado ligensis, 45 cm. alto, raro-ramus, totus nudus; cauli 5 cm. longo, inter nodo, 1 cm. in seco, rotundo, apaco; stipulis persistentibus carnosus, semi-amplexicaulis triangularis 2.2 cm. in basis, 2.5 cm. longis, integris asymmetricis, apicis acutis, aristis, marginibus deflexi, obliquis-inversis, carinatis subtis; petiolo glabro, nitido rotundo 15.5 cm. longo, 4 mm. in seco; lamina obliqua, summa ovata, acuta basa profunda cordata, cum magna rotunda lobata, palminerva 8-10 nervis, 9 cm. lata, 2.5 cm. longa, summa remota dentata, reflexa, apica longa acuminata; pedunculis axilaribus, 18 cm. longis; cymus multifloris, excederis laminis, floris tempis ad tempus; bracteis deciduis, similis, basis semi-amplexicaulis, triangularis 2 cm. lata ad basam, 1.5 cm. longis, marginibus deflexis, integris, apicis acutis; tepalis masculinis 2, rotundis, 7mm. diamertis, albidis ad puniceis, sutis punctatis ruber ribis; staminibus 11, oblongis 1.5 mm. longis, connectivo non-prominentis; filamentis liberis 1.5 mm. longis; tepalis femineis 2, rotundis 7mm. diamertis, albidis ad puniceis, subtis punctatis ruber ribis; stylis 3 persistentibus, as basis connatis, semi-tubaeformis, stigmatibus-papillis formis continuis fascis externis; ovario trilobularis; placenti bilamellatis undique ovuliferis, ellepsoideis, 5 mm. latis, 7 mm. longis; tri-alatis, ala majoribus 7 mm. lata, 7 mm. longo, deltoideis.

Collected in 1946 by Mr. T. M. MacDougall as specimen C.41 from Marcho Aguajito only at "Pico Carrizal" on the upper slopes of a hill at the 600 meter elevation in the Ocozocoautla rain forest in the state of Chiapas, Mexico.

Begonia Quiz Program

By Charlotte M. Hoak, So. Pasadena, Calif.

1. Name three species of *Begonias* native of Mexico?
2. What *Begonia* is called the *Italian Begonia*?
3. What does the specific name "manicata" mean?
4. What is a mutant? Name a very handsome *Begonia* mutant.
5. Name three outstanding rhizomatous *Begonias* which are fine Spring bloomers.
6. What is a cultorum?
7. Name the two *Begonia* cultorum.
8. From what regions of the earth do nearly all the *Begonia* species come?
9. Name three good BASKET *Begonias*.
10. Which type of fertilizers are generally to be preferred for *Begonias*?
11. Name some of the outstanding species which are native of Brazil.
12. Name six *Begonias* with which a beginner may succeed easily.

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SOME TERRARIUM AND DISH GARDEN PLANTS

By Maria Wilkes, Los Angeles, California

Some of the plants used are very small rooted cuttings of what later turn out to be large garden shrubs such as Japanese boxwood and some viburnums. The same may be said of the general run of plants suggested, but they will remain small for quite a while in terrariums or dish gardens if they are kept just moist enough to keep them alive and healthy but avoid feeding the soil medium to make them grow.

This is the best season for collecting these plants and the dull days may be greatly enjoyed while making interesting landscapes in glass or in open dishes. They make delightful gifts for rich and poor and may be made to suit any interior.

Place a half-inch layer of crushed or chicken charcoal at the bottom of the dish and then pack the following soil mixture around and below the plants as they are arranged in the container: 1 part soil, 1 part sponged peat moss, 1 part leaf mold that has been screened through a quarter-inch mesh, 1 part sand that has been washed clean. Add a half-teaspoonful of cottonseed meal and 1 teaspoonful of tobacco leaf dust to each quart of soil mixture. Try to form an interesting contour and avoid a flat arrangement.

When the dish is all planted finish the surface of the soil with any of the following ground covers: moistened Oregon Green Moss, Helxine, any of the matted green mosses from the north side of the garden, including the leafy duck-weed, dichondra or bits of sod that has just begun to sprout which may be clipped later or replaced.

There is no end to the ingenuity that may be employed in the making of these planted indoor gardens, from the small bottle garden or large demijohn of old, to the two-foot by fourteen inches platter-like flower arrangement dishes of oriental design, or the discarded fish-bowl or tank. A sheet of glass for cover will help to maintain moisture in the terrariums so that they will need watering very seldom.

Naturally, the watering must be done very judiciously since there is no drainage. The lightest daily sprinkle all over the leaves of an open dish garden is fine if evaporation is assured, the soil must not be watered until it has become dry enough to need remoistening.

- Acorus gramineus (ribbon grass).
- Aglaonema commutatum and A. simplex (Chinese Evergreen).
- Anthericum mandianum.
- Aralia elegantissima.
- Aralia guilfoylei.

- Aucuba japonica (Gold Dust plant).
- Billbergias and Bromelias.

Ferns:

- Asplenium nidus avis (Birdsnest Fern).
- Adiantum in variety (Maidenhair).
- Pteris ferns in variety.
- Crotons in various forms and colors.

Dieffenbachias:

- Picta, Silver Leaf, Rudolph Roehrs and Leoni.

Dracaenas:

- Massangeana, frangrans, craigi, rothiana, sanderiana, Warnecki and Godseffiana.
- Fittonia argyroneura.

Ivies, green and variegated in many forms:

- Maple Queen, Pin Oak, Fluffy Ruffles, etc.
- Maranta Kerchoveana.
- Maranta vanderheicki
- Nephtytis Emerald Gem.
- Ophiopogon jaburan green and variegated.
- Pandanus veitchi (Screw Pine).
- Pellionia pulchra.

Peperomias: green, variegated, microphilla, pericota and Sandersi.

Philodendrons: cordatum, dubia, erubescens.

- Pothos aureum Wilcoxi.
- Phoenix Roebelini

Sansevierias: Laurenti and Zeylanica.

- Saxifraga (Strawberry begonia).
- Syngonium

Some of the larger plants have been omitted to be discussed later as potted plants for the house or sheltered porch.

TO EVERY MEMBER OF THE AMERICAN BEGONIA SOCIETY EVERYWHERE: A MERRY CHRISTMAS AND A HAPPY NEW YEAR WITH SPECIAL GOOD WISHES FOR GREATER SUCCESS IN THE CREATION OF FINER SHELTERED GARDENS INDOORS AND IN THE GREAT OUTDOORS.—From the Officers of the American Begonia Society.

American Begonia Society Cultural Bulletins—
3 at 15c each — Tuberous Begonias; Rex Cult.;
and Fibrous.

**BEGONIAS, FERNS, DISH-GARDENS,
FUCHSIAS and allied garden needs**

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REX ROBINS

A Rex Robin member from the mid-west writes:

"Prior to joining the Rex Robin club a little more than a year ago, my efforts to grow the Rexes were discouraging and expensive. During a visit to California I had seen these plants flourishing like mad. I simply had to succeed with them. Purchase after purchase however failed and passed away. NOW, after a year with the Robins, I am having a modest success with the Rexes though they do not attain the size of those I saw in California and the rest period lasts longer. They *do* live and grow though, and the colors are gorgeous."

CONDENSED MINUTES

Meeting National Board, American Begonia Society, held in the Clark Hotel, Los Angeles, Calif., Oct. 27th, 1947, with President Drummond in the chair.

Present for the meeting—Messrs. Lawrence, Johnson, Bailey, Hixon, Dere, Parker, Walton; Mesdames McRae, Wilkes, Schwerdtfeger, Crowder, Bayer, Morant, Drummond, Hartwell.

Branches represented: North Long Beach, Parent Branch, Inglewood, Hollywood, Ventura, Santa Barbara, San Gabriel Valley, Pasadena, Glendale.

Reports of Editor, Membership Fees Chairman and Treasurer accepted as read and ordered filed.

President announced appointment of Etta Pinnell as Chairman Flower Shows; Mrs. Lillian Ashe as Chairman Tuberous Begonia Section.

REPORTS

Grace Bayer for Speakers' Bureau: I have asked the Branch Program Chairmen to mail me a list of the speakers they have had lately and I will contact them and see if they are willing to have their name placed on the Speakers' list. I would like the Board's approval to include the following subjects on my list—Landscaping for Shade Gardens, Cymbidiums, epiphyllums, begonias and other shade plants. I am also trying to secure colored slides to add to the list.

Librarian reported she had 14 Krauss books with her should any one desire to purchase.

Mrs. Schwerdtfeger—reported good prospect for two new branches—one in Flint, Mich., and one in Vancouver.

Ventura—Had election of officers and a very good speaker. Everybody still interested in our Society.

Col. Gale of Pasadena called attention to the forthcoming Flower Show and stated the Pasadena Branch had entered an exhibit.

Mrs. Weber for Santa Barbara—Mr. Longmeier talked on compost; he had just returned from the East and had taken some wonderful pictures. Mrs. Summerfield the new President; more begonia shows coming up than we have ever had; November installation of officers and later on the Christmas party.

Mr. Hixon reported for North Long Beach and Parent Branch. Mrs. Drummond the last speaker for the Parent Branch; everyone enjoyed her talk. Election of officers next month. For the North Long Beach Branch—had a speaker on ferns and Begonias. Mr. Hixon also stated that two weeks ago he and Mr. Dyckman had delivered 27 rex begonias to the hospital; these plants were sent down by the Foothill Branch and were certainly nice plants and there is a promise of about 25 more for the hospital.

Glendale—We had a very successful show last month; Mrs. Sims is the next speaker. Everyone invited to attend.

Hollywood—The garden tour held Oct. 19th was very interesting; 4 gardens visited. We have formed study groups in our branch of the different classes of begonias and everyone seems to be interested.

San Gabriel Valley—We have 163 members; last meeting had a speaker on fuchsias; very much enjoyed. Had a Country Store instead of the plant table at our last meeting and this proved a great success.

Committee on special advertising held over for one month in order to secure additional information. Committee on printing of Begonia Glossary asked for more time. Granted one month.

Mrs. Kortz asked to correspond with Mrs. Fewkes relative to nomenclature of the miniature rex begonias.

Bills read and ordered paid.

Capt. Dere authorized to go ahead and prepare membership cards subject to approval by the Board.

Letter from El Monte Printers stating it would be necessary to raise price for printing Begonian. On motion duly seconded "new price schedule accepted."

George Johnson suggested Representative Directors take to their branches the matter of giving subscriptions to the Begonian as Christmas presents and also to see if they can secure some advertisements for the December issue. It was also suggested that each Branch take an ad for the Dec. issue as a Greeting Card.

Mrs. Drummond spoke briefly on a New Pest Control Bulletin—a committee be appointed to prepare such a bulletin. Committee to be announced later.

The need for a Society Historian was brought up and discussed, and the President will report at next meeting naming a Historian.

President Drummond announced that soon there would be another meeting on the matter of the Robinson Memorial plaques and medals, as she would see Mrs. Clark, of San Diego, in a week or so.

Meeting adjourned to meet again Nov. 24th. Watch your Begonian for announcement of a new meeting place.

Respectfully submitted, Gonda Hartwell, Sec.



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Sat., KECA, 8:45 A.M.

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with Perfect Ease*

Likwid GRO evenly fertilizes each plant as you water. Ask your dealer about Likwid GRO today.

Price: 1 qt., 75c; 1 Gal., \$1.75

PESTLESS PRODUCTS CO.
PASADENA 2, CALIFORNIA

AIMS OF THE ROUND ROBIN CLUBS

By Frances Downing, Calera, Alabama.

We need to review our highest ideals periodically if we want to maintain helpful, constructive and informative chains of correspondence about plants and to keep the Round Robins "in line."

The given subject is of paramount importance, other things are irrelevant and as weeds in a beautifully planned but neglected garden.

The American Begonia Society sponsors so many kinds of Round Robins to interest all kinds of members and their friends. We pride ourselves in covering most of the fields of activity in the *sheltered Garden and House Plants* and there are several grades of each so that no matter how amateurish or how advanced a newcomer may be, we have the right place for each one. Some of our members are also interested in plants not strictly shade lovers and to please them we have one or two such as Roses and Iris R. Rs. in our big family.

Each member tries to contribute her very best and soon mistakes and failures are turned into assurance accompanied by success. If members do not know what to write of interest, or lack personal experiences to relate as guidance to others, they put themselves out by going out to seek something in connection with the subjects under discussion—so as not to be one of those "I don't know and I-don't-have-time people."

We try not to become greedy when other members offer exchange plants or seeds by doing or giving something in return, that the satisfaction may be mutual. Many personal friendships are made through these Round Robins of ours and private correspondence then develops in order not to clutter the Round Robin letter package or subject. Rules are established for the benefit of all and we expect everyone to abide by them. The closer they are observed the better will our clubs function. We are very happy that we seldom have occasion to drop any member for persistent infringement of our rules. Generally, they are a wonderful group of flower and garden lovers bent on improving their knowledge and enjoyment of gardening.

The Director of each group guards the members from pitfalls and guides them to better and finer achievements the while trying to detect outstanding ability for leaders of other groups that are constantly being formed. Our leaders are of especially fine caliber and capability. They try to imbue each new member with the sense of responsibility that only worthwhile knowledge should emanate from our correspondence clubs or most of our effort would be lost.

We enjoy our volunteer work and welcome new members. Send for our list of Round Rob-

LETTER FROM FREER COX

Devonshire Parish, Bermuda

• Through the Saturday Evening Post article about Frank Reinelt and a friend with Home and Garden who put me in touch with The American Begonia Society, I am writing for information about tuberous rooted begonias.

As you probably know, we have, in Bermuda, a shallow and porous soil, yet it is amazing what we can grow here. The fibrous rooted begonias thrive well here either in tubs or in the ground where this is possible. So far, we enjoy about ten different varieties, but of course, more could be imported.

The tuberous rooted begonias last only a year with us. I found that putting them away in white sand was absolutely useless. I was so impressed with the lovely ones I saw some years ago at the Peace Palace at The Hague and other places I visited including the States. At the time we had no refrigeration facilities in the country which might be the answer to the keeping problem, anyway, I am at a loss to know how to keep the tubers in Bermuda where we have, at times, so much moisture in the air that the tubers and bulbs just do not keep. I am determined, however, to make another start by importing tubers at the proper time. I think the yellow tones are exquisite and shall not mind much if they last only a year, but it would be nice to be able to keep special ones. The fibrous begonias do so well here that they slip easily. They are most decorative on the grounds and a delight in bowls anywhere in the house. (Answers welcome).

SEASON'S GREETINGS TO ALL BEGONIANS

The happiest hours we count are those spent with you at our meetings, or flower shows, or in our gardens.

—COME OFTEN—

**THE GLENDALE BRANCH
CALIFORNIA**

in subjects. Maybe you too, can learn while you help others.

I have had to move again. Perforce I have had to learn a lot about transporting plants also. It is hoped that we shall stay in Calera, Alabama for some time.

To one and all: A MERRY CHRISTMAS AND A HAPPY NEW YEAR WITH PLENTY OF LOVELY FLOWERS AROUND YOU.

GLASS HOUSES AND CONSERVATORIES

By T. John Parker, Los Angeles, California

In resuming this discussion in the cause of glass houses and conservatories let us repeat one precautionary measure that so often seems to be overlooked in reference to air conditions.

I have noticed that in many cases attention to bottom ventilation is forgotten or neglected. There should be some vents provided underneath the benches near to the floor, preferably the type that can be closed or opened at will. It is as important, where the inside growing of plants is concerned, to wash the air as it is to wash yourself from undesirable accumulations.

• Let us assume that the house is now ready to receive its tenants. If it is a house capable of holding comfortably and healthily fifty plants, then do not plan for a hundred. If you are going to raise your plants from the embryo stage you must keep in mind that while you can place easily one hundred plants in three-inch pots and if you intend to raise these plants to maturity under controlled conditions only one third that number will have room at maturity.

We will begin at the beginning and assume that you would like to raise plants from seed. The first thing to realize is that the most important part is done before you touch the seed.

It has been said that, compared to a seed, the most ingenious time-bomb ever assembled is but a clumsy affair. In this tiny shell so small at times as to be almost microscopical, is stored material which is capable of exploding the shell when placed in proper conditions. To do that it will be necessary to provide a soil that will not make a crust. Ordinary garden soil, as a rule, is absolutely unsuited for the starting of fine seeds.

The favorable conditions, of course, are moisture and temperature in the right degree and an abundance of light. Light and temperature in the modern glass house are readily controlled. The thing one must take the most pains in providing is the right moisture and not only that but also of feeding the delicate organism produced until it can support itself in its own wonderful way from the soil.

The recommended procedure is to procure some well-rotted leaf mold and rub it through a one quarter inch mesh wire screen. Next procure some rich mellow soil, if possible some soil-lite terralite or redwood bark and sand. Mix 1 part of each and sift this also through the quarter inch mesh screen. This mixture, it will be found, will readily allow any surplus water to run through and

still retain enough moisture to render repeated watering unnecessary for a long time, nor will it form a crust. To those who have found a successful mixture and had gratifying results, I recommend, naturally, make no change. The recommended receptacle is the regular wooden flat or professional seed pan. In preparing the flat or pan it would be beneficial to place in the bottom, a layer of the coarse residue left after screening the leaf mold. After filling the pan or flat, tamp down the soil thoroughly, seeing that all corners and sides are properly filled and give the soil a thorough watering previous to sowing the seed. After sowing and lightly pressing into the soil, then very lightly cover with a thin sifting of soil, the amount depending upon the size of seed sown, the general rule being to cover the seed to a depth of two or three times the diameter of the seed. It is better to cover the pan or flat leaving just a little chink for air, until the seed germinates. The temperature at which most seed germinates is from 60 to 65 degrees (night temperature). If bottom heat is available it will of course assist in the germination process.

Immediately the seedlings break through, they must be given light and also plenty of fresh air. At this stage the greatest care must be exercised as to watering, using a very fine spray. Water early in the morning and only on bright days. This allows sufficient time for the leaves and the surface of the soil to dry off before night. This reduces the liability of starting damping off fungus. If you have sown seed too thickly, it would be advisable now to thin out the plants, remembering that it is far better to have a few healthy and thrifty plants than a panful of sickly weak ones. At the time first true leaves begin to show one must think of transplanting to other flats or thumb pots. Several hours before transplanting it is advisable to water thoroughly sometimes using a solution containing food elements in weak quantities, this stimulates and acts as what is known as a starter and often helps to obviate wilting or checking the growth by the move. Most seedlings are set deeper in the shift than when in the seed flat, generally down to the first two leaves. Immediately after transplanting give a thorough watering and set in partial shade for a day or so, at which time give plenty of light and fresh air.

When you have a glass house there is no need to ask what seeds shall I start now. The field is yours and you are at the wheel. This is the first good reason for a glass house.

ANSWERS TO THE BEGONIA QUIZ

By Charlotte M. Hoak

1. *B. manicata*, *B. heracleifolia* and *B. Barkeri*.
2. *B. manicata aureo-maculata* (Lemoine). Introduced by Lemoine in 1884, originating possibly in Turin, Italy.
3. *Manicata* or *manicata* means manicate or long sleeved, covered densely with thick hairs. Very prominent in the above species.
4. A mutant is a "break" with the aid of man. *B. Bunchi* is a handsome mutant of *B. erythrophylla* with a ruffled and crested margin.
5. *B. heracleicotyle*—syn. *Mrs. Townsend*, *B. verschaffeldii* and *B. Sunderbruchi*.
6. A *cultorum* is a tribe of hybrid forms which have assimilated characteristics of other species and their varieties but show their relationship to the primal type or common ancestor.
7. *B. semperflorens cultorum* (Krauss) and *B. Rex cultorum* (Bailey).
8. Tropical and semi-tropical.
9. *B. Limminghei*, *B. Sutherlandi* and *B. dichroa*.
10. Organic.
11. *B. Scharffi*, *B. sanguinea* and *B. luxurians*.
12. *B. scharffi*, *B. lucerna*, *B. Nelly Bly*, *B. Argentio-gutta*, *B. Thurstoni* and *B. Sunderbruchi*. This gives you some of the hardiest. There are more than one hundred of these which can be grown without codling.

Start 1948 right—send for our cultural bulletins—Roy Dere.

Question: I would like some information on the STRAWBERRY WEEVIL. Is there some way to combat it while the tuberous begonia tubers are in storage?

Answer: The strawberry weevil is a small snouted beetle, dark reddish brown to black.

Its favorite breeding or hibernating place is probably under the mulch of the strawberry bed or in any undisturbed litter. The egg is laid in an unopened bud which falls off due to cutting of the pedicel, the grub feeds on the pollen, pupating in the bud and advances into hibernation in the midsummer.

Hydrated lime and calcium arsenate in the proportion of 80 to 20 is recommended at the first indications of bud drop repeated in 7 to 10 days. After the fruit forms, use a good pyrethrum or rotenone dust. This is also fine used on stored tubers of begonias.

EASY SOLUTION TO THE CHRISTMAS GIFT PROBLEM

What gift can you buy for as little as \$1.50 that would equal a membership in the American Begonia Society?

Christmas gifts are often looked at, exclaimed over, and then promptly forgotten. Not so with a membership in the American Begonia Society including THE BEGONIAN. Each copy is a reminder of the spirit of Christmas and our thoughtful friends.

Simply tear off and fill in the attached Christmas gift order form and mail to Mr. Roy K. Dere, 1618 Fickewirth St., El Monte, Calif., and a lovely Christmas card will be sent to your friends with the first next issue of "The Begonian."

NAME OF PERSON SENDING ORDER _____

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SEND THE BEGONIAN AS MY GIFT TO:

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SIGN MY GIFT CARD: FROM _____

NAME _____

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SIGN MY GIFT CARD: FROM _____

Meeting Dates and Places

The next meeting of the American Begonia Society Board will be held in the Los Angeles City Hall, Room 55, 7:30 p. m., 4th Monday in January, 1948. Park Lower Garage South Entrance on Main Street

BELLFLOWER BRANCH

1st Monday, Dec. 1st, 7:30 p. m.
Washington Street School Cafeteria
Sec.: Mrs. Edna Leistner, 610 Nichols Street
Bellflower, Calif.

THEODOSIA BURR SHEPHERD BRANCH

1st Tuesday, Dec. 2nd, 7:30 p. m.
Alice Bartlett C. H., 902 E. Main, Ventura, Calif.
Mrs. Harry Meyer, Secretary, 111 Leighton Dr.

PASADENA BRANCH

1st Tuesday, Dec. 7:30 p. m.
2031 E. Villa
Lester F. Harrell, Sec.-Treas.
668 Bellefontaine St., Pasadena, Calif.

SAN FRANCISCO BRANCH

1st Wednesday, Dec. 3rd, 7:30 p. m.
American Legion Hall, 1641 Taraval St.
Sec.: Mrs. Walter Ashe
1855 33rd Ave., San Francisco 22, Calif.

SANTA MONICA BAY BRANCH

1st Wednesday, Dec. 3, 7:30 p. m.
University High School Horticulture Dept.
11800 Texas Ave., West Los Angeles
Mrs. Denman Bemus, Secy.-Treas.
345 So. Santa Anita Ave.
Brentwood, Los Angeles 24, Calif.

ORANGE COUNTY BRANCH

1st Thursday, Dec. 4th, 7:30 p. m.
Farm Bureau Hall, 353 So. Main St., Orange.
Doris Burdick, Sec.-Treas., Rt. 4, Box 296,
Anaheim, Calif.

FOOTHILL BRANCH

1st Friday, Dec. 5th, 8 p. m.
Woman's Club House, 1003 Azusa Ave., Azusa
Mrs. James M. Reed, Secretary
643 No. Wabash Ave., Glendora, Calif.

NEW YORK SUBURBAN BRANCH

2nd Sunday, March, 2:30 p. m.
Crestwood Public Library, Crestwood, N. Y.
Sec.-Treas.: Mrs. Norman Hedley
71 Willard Terrace, Stamford, Conn.

LA MESA BRANCH

2nd Monday, Dec. 8th, 8 p. m.
La Mesa Grammar School, La Mesa, Calif.
Sec.-Treas.: Dr. Constance Holmes
133 Prescott, El Cajon, Calif.

NORTH LONG BEACH BRANCH

2nd Monday, Dec. 8th, 7:30 p. m.
Houghton Park Club House
Harding & Atlantic, No. Long Beach
Mrs. Harry H. Boyd, 5670 Walnut Ave.
Long Beach 5, Calif.

HUMBOLDT COUNTY BRANCH

2nd Monday, Dec. 8th, 6:30 p. m.
Lanes Memorial Hall, 1st Christian Church
Sec.-Treas.: Dorothy Lark
Box 16, Scotia, Calif.

RIVERSIDE BRANCH

2nd Wednesday, Dec. 10th, 8 p. m.
Mrs. T. W. Gall, Sec.-Treas.
4518 Bandini Ave., Riverside Calif.

HOLLYWOOD BRANCH

2nd Thursday, Dec. 11th, 7:30 p. m.
Plummer Park, 7377 Santa Monica Blvd.
Mrs. Vera Lynde, Rec. Sec.
1030 N. Orange Grove Ave.
Los Angeles 46, Calif.

SANTA BARBARA BRANCH

2nd Thursday, Dec. 11th, 7:30 p. m.
Community Institute Centre
Room 5, 914 Santa Barbara St.
Santa Barbara, Calif.
Mrs. E. H. Mercer, Secretary
2019 Bath St., Santa Barbara, Calif.

INGLEWOOD BRANCH

2nd Thursday, Dec. 11th, 8 p. m.
325 No. Hillcrest, Inglewood, Calif.
Mrs. Laura Crandall, Secretary
2730 Redondo Blvd., Los Angeles 16, Calif.

EVA KENWORTHY GRAY BRANCH

3rd Monday, Dec. 15th
Community House, LaJolla
Tillie Genter, Sec.-Treas.
7356 Eads St., LaJolla, Calif.

LONG BEACH PARENT CHAPTER

Third Tuesday, Dec. 16th, 7:30 p. m.
Robert Louis Stevenson School, 5th & Atlantic
Cafeteria, Lime St. Entrance, Long Beach, Calif.
Sec.-Treas.: Mrs. Rose C. Hixon
Long Beach, California

PHIOBEGONIA CLUB BRANCH

Irregular Meetings
May T. Drew, Pres.
Box 331, Narbeth, Pa.

SO. ALAMEDA CO. BRANCH

3rd Thursday, Dec. 18th, 8 p. m.
Scout Room, Markham School, Hayward, Calif.
Sec.-Treas.: Mrs. Dorothy Bayliss
26706 Monte Vista Dr., Hayward, Calif.

EAST BAY BRANCH

3rd Thursday, Dec. 18th, 7:30 p. m.
Council Chambers, Berkeley City Hall
Mrs. Emma Carlton, Secretary-Treas.
1430 Oxford St., Berkeley 9, Calif.

SAN DIEGO BRANCH

4th Monday, Dec. 22nd
Hard of Hearing Hall, 3843 Herbert Ave.
Mrs. A. P. Carlton, Sec.-Treas.
624 Arroyo Dr., San Diego, Calif.

MISSOURI BRANCH

4th Tuesday, Dec. 23rd, 2 p. m.
Mrs. Bruce Dill, Secretary
3715 Harrison, Kansas City, Mo.

MIAMI, FLORIDA, BRANCH

4th Tuesday, Dec. 23rd, 8 p. m.
Simpson Memorial Garden Center
Mrs. W. G. Coffeen
1742 S. W. 10th St., Miami 35, Fla.

WHITTIER BRANCH

4th Tuesday, Dec. 23rd, 8 p. m.
Union High School, Room 19
Lindley Ave. Entrance, Whittier, Calif.
Madeleine Hall, Secretary
509 Friends Ave., Whittier, Calif.

MARGARET GRUENBAUM BRANCH

Mrs. W. E. Jones, Sec., Willow Grove, Pa.

GLENDALE BRANCH

4th Tuesday, Dec. 23rd, 8 p. m.
329 No. Brand Blvd., Glendale, Calif.
Charles Richardson, Secretary
1441 Fairfield, Glendale 1, Calif.

SAN GABRIEL VALLEY BRANCH

2nd Wednesday, Dec. 10th, 8 p. m.
Masonic Temple, 506 S. Santa Anita Ave.
Mrs. Myrtle Jones, Secretary
132 May Ave., Monrovia, Calif.

SANTA PAULA BRANCH

4th Thursday, Dec. 25th, 7:30 p. m.
Memorial Hall High School
Mrs. C. F. Crang
907 Pleasant St., Santa Paula, Calif.

ALFRED D. ROBINSON BRANCH

No Meeting December
Loma Portal School
3341 Browning St., San Diego, Calif.
Mrs. J. P. Stibolt, Secretary
3788 Wawona Drive
San Diego 7, California

SANTA MARIA BRANCH

Sec.-Treas.: Mrs. Peter Mehlschau

NEW ENGLAND BRANCH

Mrs. M. W. Stewart
224 Armington St., Edgewood, R. I.

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 49c each; 3 for \$1.25

Scilla campanulata mixed colors,
 in deep shade, each 10c; doz. 98c
 Soleil D'or Narcissus for house pots
 each 20c; doz. \$2.00

Babiana coerulea doz. 60c
 Sacred Lily of China, ea. 15c; doz. \$1.50
 Madonna Lilies..... each 49c; 3 for \$1.25
 Please add 25c for mailing plus Calif. tax.

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 Fine plants.

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medora75	manicata crispa	1.00
Marjorie Daw	1.00	rotundifolia	1.00
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seedling75	plebja	1.00
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A HAPPY HOLIDAY SEASON TO EVERYONE

Through our Branch meetings, our Shade Gardens and our Shows we have enjoyed the visits of our co-gardener-members everywhere. We shall continue to look for you with a WELCOME.

The SANTA BARBARA Branch, Calif.

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Just Arrived from Belgium

10 Varieties of
LARGE PLUMP TUBERS
1½" to 2" in Diameter

While They Last, Specially Priced at
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'GRO-QUICK' ELECTRIC SEED BED HEATER

"ROOT CUTTINGS IN 6 DAYS"
"SEED UP IN 30 HOURS"
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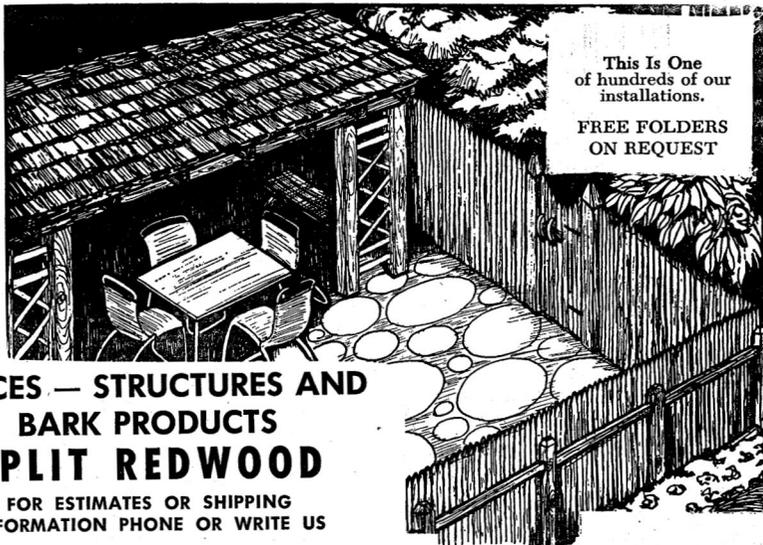
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