

The BEGONIAN



JUNE, 1971

Devoted to the Sheltered Garden

VOL. 38 NO. 6



Symbegonia species, collected by J. F. Zieck (see page 127)

Photo by R. Jansen

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Views expressed in this magazine are not necessarily those of the Editors, the Society or its officers.

AN UNUSUAL BEGONIACEOUS PLANT

by J. Doorenbos, *Wageningen, The Netherlands*

In July 1969, Mr. J. F. M. Zieck sent us stems of two *Begonias* collected in mountainous country south of Wau in New Guinea. The material was barely alive, but under the care of Mr. J. J. Karper it was slowly revived, and a year later we had strong healthy plants. Both proved very shy to flower. So far, only one species has formed a female flower. This, however, had a surprise in store; it is sympetalous which shows that our plant is a species of *Symbegonia*.

This genus was set up by Warburg in 1894 for a species which he had previously described as *Begonia fulvo-villosa*. It is characterized by the fact that the female flowers are more or less bell-shaped, because the five petals are joined over most of their length. Our picture shows this very clearly. The two petals of the male flower are either free, or fused at the base, dependent on the species.

Twelve species of *Symbegonia* have been described, all from New Guinea. Our species has been compared with each of these descriptions, but it does not conform to any of them. Its leaves are oblong to oval, very oblique at the base, and doubly serrate. Their most striking

characteristic is that they are bronze green with a sharply defined broad white band along the edge. The whole plant is densely pubescent with long, pale green hairs. In this respect it differs from all species described, which (if pubescent at all)



Unidentified *Symbegonia*
donner unknown

have brownish hairs. The plant has 44 chromosomes, the prevalent number of the Papuan species of *Begonia*, section *Petermannia*, which the species of *Symbegonia* closely resembles in their vegetative characteristics.

This is not the first time a *Symbegonia* has been cultivated. In 1911 a plant flowered in England and was pictured in the *Botanical Magazine* (tab. 8409) as *Symbegonia fulvo-villosa* Warb. Later, Ridley pointed out that it does not tally with the

(SEE NEXT PAGE)

AIMS AND PURPOSES OF THE AMERICAN BEGONIA SOCIETY, INC.

The purpose of this Society shall be:
TO Stimulate and Promote interest in *Begonias* and other shade-loving plants;
TO Encourage the introduction and development of new types of these plants;
TO Standardize the nomenclature of *Begonias* and companion plants;

TO Gather and Publish information in regard to kinds, propagation and culture of *Begonias* and companion plants;
TO issue a bulletin which will be mailed to all members of the Society; and to bring into Friendly contact all who love and grow *Begonias*.

ENZYMES

by Thelma O'Reilly, *Research Committee*

PART II

Yes, you can manufacture enzymes for plant food! It is a simple process requiring five ingredients: MATERIAL, CONTAINER, WATER, YEAST and TIME.

Mr. Howard says, "The three best materials are flowers, fruits, and nuts. Fruit contains the greatest abundance of vitamins and hormones". Whichever material you decide to use must be ripe, free from rot, raw, and unpeeled.

The container can be made of any durable material except metal. Make a small opening in the cover to prevent pressure build-up.

For one to ten gallons of water add one tablespoon of dry active yeast (granular form). This helps to start fermentation. It is absolutely necessary to use rain or distilled water. Do not fill container more than three fourths full. Stir the ma-

terial, yeast and water. Place a cover on the container and set it aside.

Now, add the final ingredient, time. It will take from one to two years to complete fermentation. After a year it can be checked. The solution of most fermentating mixtures start to clear as it nears completion. The odor leaves the liquid and goes into the by-product which has settled in the container bottom. Filter the contents of your product through cheesecloth and you should have a clear enzyme solution, there are exceptions. Bottle this solution but do not close it tightly. There could be some action left in the liquid which would cause a tightly sealed bottle to burst.

Mr. Howard says, "The best results are obtained by starting the enzyme feeding with five drops of solution to one cup of water. This formula is used for seedlings. As the plant matures, the dosage is slowly increased to the plants liking. If a particular variety does not respond properly, try a different kind of enzyme. There are a few *Begonias* that do not like certain enzymes.

Some proliferation is evident on many *Begonias* fed normally because enzymes encourage cell growth. I have observed unusual traits on *Begonias* that were deliberately over-fed with enzymes. It has caused excessive proliferation, male and female blooms on *Begonias* that normally produce one sex, opening of male blooms that normally drop before opening, three to six sectioned ovaries, and fertility".

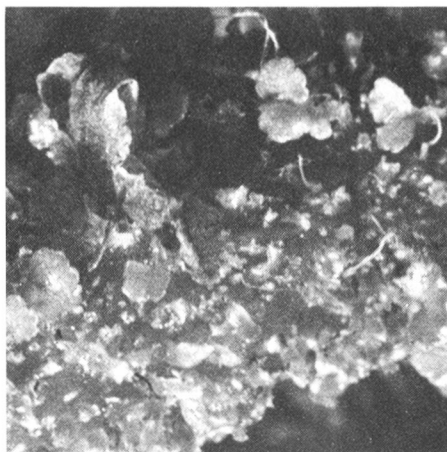
To his knowledge, Mr. Howard

(CONTINUED FROM PAGE 127)

description of this species and suggested that it was *Symbegonia mooreana* Irmsch. However, it also differs from this species in several respects. Apparently it disappeared from cultivation long ago.

The present *Symbegonia* is easy to grow and very ornamental with its white-edged leaves. Unfortunately, it appears to be shy flowering and it seems unlikely that we will soon be able to distribute seed. Nevertheless, it seems worthwhile to report on this plant, as it may well be the only *Symbegonia* cultivated at present.

has not lost a single plant from over-feeding. The adventitious growth can be worked out of the plant by curtailing the enzyme feeding. His successful crosses between *Begonias* of questionable fertility were accomplished by watering with 100% straight enzymes. Full strength applications produced fertile blooms which caused successful polination.



Adventitious growth on the petiole of a *Begonia*.

Photo by Gene Daniels, Black Star

The Howards have started an exciting project for the Westchester Branch. At the January, 1971 meeting, they had 30 kits made up with a folder, instructions, bottle of enzyme solution, eye dropper, and four *Begonias* of the *Semperflorens* type. A kit was distributed to each member. Six different members will bring their plants to each meeting for examination. In July all members will bring their plants for discussion and comparison. As none of the participants know what kind of enzyme was included in their kit, the results should be very interesting and informative.

When the Westchester Branch President, Irene Nuss, asked Mr.

Howard to be the Branch Research Director, he had a special reason for accepting. It is his "goal" to encourage other American Begonia Society Branches to start an "Enzyme Project". He hopes enough members will participate so that an enzyme bank can be established for storing and sharing enzymes throughout the Society. What an exciting and worthwhile goal!

Let's give Mr. Howard our cooperation! Let's gather our fruits, flowers and nuts! Let's make enzymes and help him build an enzyme bank for the benefit of the American Begonia Society.

**39th ANNUAL A.B.S.
SHOW AND CONVENTION
"WORLD OF SHADE PLANTS"**

September 4th & 5th

**Pioneer High School
10800 Ben Avon Ave., Whittier, Calif.**

There will be lots to see; lots to learn . . . About *Begonias* and other shade plants. Spend the Labor Day week-end with us!

Advance reservations for Hotels or Motels are available for out of town members planning to attend the Convention and Show. Write to Mrs. Martha Rader, 10934 E. Flory St., Whittier, Calif. 90606.

BOOK REVIEW

Fluorescent Light Gardening by Elaine C. Cherry tells what lamps, where to place them and how to grow from seed to flowering plant. Published by D. Van Nostrand Co., Inc., Princeton, New Jersey.

TIPS – TECHNIQUES – IDEAS

by Helen Matsubu, *Fruitland, Idaho*

Figure 1.

If you are growing plants under fluorescent lights, here is a way to take care of a few cuttings from your own stock. Cuttings are prepared in your regular moistened cutting medium in plastic sandwich bags then fastened to your light fixture with snap clothes pins. This may not be a good idea for cuttings you may not be sure of in case of disease or insects as it is near established plants. This method of treating cuttings has its draw backs however, if your light-set-up is against a wall where you have access to only one side of it. The bags hanging down sometimes gets in the way when you water. It is convenient however, in that it does not take up needed room and the cuttings can be watched for rooting or need of moisture. They can also be left in the bags for a length of time.

Figure 2.

If you plant seedlings in community flats, a potato peeler is a handy tool for pricking out the larger seedlings.

Figure 3.

Look over those items you buy at the store; cottage cheese cartons, plastic food containers*, the plastic cups on many spray items and bleach bottles have many uses. Some may be useful for wick watering for *Achimenes*, *Episcia* and African Violets. A large bleach bottle is useful for measuring fertilizer. Be sure to write the contents on the bottle.

Figure 4.

Fertilizer can be mixed a gallon at a time according to the direction on the bottle of fertilizer, then diluted according to the needs of your plants. A waterproof marking pen is a good item for marking the container.

Figure 5.

Most of us use coffee cans, juice cans, any size of cans and they too can be used for most everything. Coffee cans for measuring soil parts, juice cans too for this purpose. A handy carry all for odds and ends can be made with various sized cans to keep things neat and tidy in indoor and outdoor gardens.

Figure 6.

Plastic bottles of various size and shape can be cut to make decorative pots. The plastic caps from the spray cans can be used for the tiny *Sinningias* or other small plants.

If you have any good tips, techniques or ideas to share, let me hear from you. Write to me at Route 1, Box 120, Fruitland, Idaho 83619.

*Editor's note: It is advisable to thoroughly wash in soap and very hot water, all containers that have held food or other ingredients.

DEADLINE for all material submitted for "The Begonian" is the 1st of the month preceding the next months issue.



Figure 1.

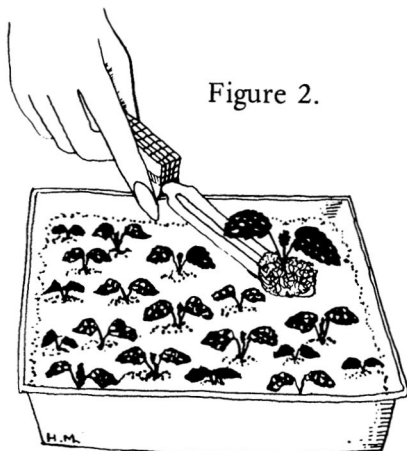


Figure 2.



Figure 3.

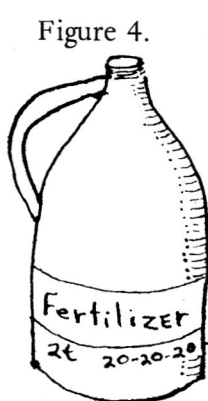


Figure 4.

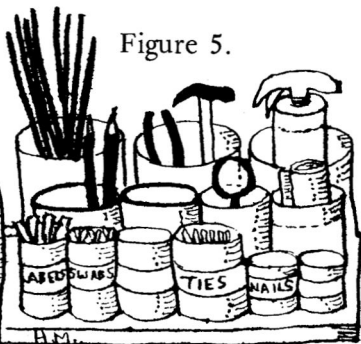


Figure 5.



Figure 6.

Sketches by the Author

TERRARIUMS FOR BEGONIAS

by Mae Blanton, *Mesquite, Texas*

PART II

Part I gave the type of terrariums suitable for growing *Begonias* and/or companion plants with various types of covers for the different sizes of containers. Additional kinds of covers are as follows:

Take exact measurements of cover needed and have window glass cut to fit at a building supply center. The sharp edges may be polished away with fine sandpaper. Ask a salesman for the correct grade for this purpose. Saran or other plastic wrap may be used but it is better to apply it loosely to admit a little air or put a few small air holes in the wrap. If any glass cover fits too snugly, small round rubber erasers make good "bumpers" to hold the cover at a slight elevation. They may be glued or slit to slide onto a thin glass rim. The eraser keeps the glass top from slipping off easily too.

A glass cover on an old fish aquarium can be turned slightly to admit air at two opposite corners.

Some plants prefer an uncovered bowl. A potted plant may be placed on a moist layer of perlite and/or vermiculite, sand, gravel or moist long-fibered sphagnum. Do not have the soil in the pot too wet when placing it on a moist media. The pot may be concealed by the media. A group of plants, cuttings and seedlings may share the same container when in pots. This is an excellent way to root leaves of the fragile, delicate texture of some of the miniature *Begonias* and furnishes good protection for the more delicate seedlings.

Potting mixes:

For growing plants in a terrarium in your potting mix, I offer the following instructions which may have to be modified according to the mix used. If the mix is one you formulate using compost or soil (loam from your yard), it must be sterilized before using. Instructions here are for the packaged mixes available at nurseries or dime stores for growing house plants or African Violets. These are already sterilized.

Landscapes:

If you are planning a landscape design, wash the colorful rocks or driftwood you want to use. Have the container sparkling clean too. A vinegar rinse gives a squeaky clean surface. If using a jar that once contained food, sterilize it on the stove as you would jars for canning: upside down on a cloth in a pan containing a few inches of water kept boiling for thirty minutes, then cooled. Lining terrariums three quarters of the way down inside with plastic wrap will keep the glass clean inside and allow you to see what you are doing and can easily be removed when the job is completed.

In the bottom of the container, place a layer of drainage material one or two inches thick, depending on the size of the container. Perlite and/or vermiculite, rocks or gravel are excellent to use. Sprinkle with a few bits of horticultural charcoal.

Mix a generous portion of perlite, vermiculite, sand or a combination of these ingredients with your pot-

ting mix. A very airy, fluffy, well-drained mix is your goal. I prefer plenty of perlite to admit air to the roots. These products are all sterile and weakens the rich potting mix. This is to be desired as you want your plants to get only the nourishment they need for slow, healthy growth but certainly not so much food that they will burst into vigorous growth with the additional humidity they love. The principal of bonsai can be applied here to keep plants small and in scale with

the surroundings. In nature these plants are often found growing in a small bit of leafmold or humus in very rocky terrain. That is what we are aiming for in our terrariums — only enough “mix” to maintain healthy growth. This layer is kept shallow, only an inch or two with our rocks placed deep into the mix to the best advantage to support plants and give a realistic landscape. Have the mix moist, neither wet nor dry.

(To be continued)

BEGONIA BASICS

for Beginners

by Elda Haring, *Greenwich, Connecticut*

How to rejuvenate an old plant:

The inexperienced pot plant grower often wonders what to do with an old plant that has outgrown its pot. Roots are pushing through the top layer of soil; stems have thickened; lower stems are devoid of leaves. Yet it is a cherished plant and one that we are most reluctant to relegate to the trash can. In photo No. 1 you will see an old



plant of B. 'Richard Robinson'. It has been in the same pot for several years. The photo will show how I went about rejuvenating this cherished plant. First, top growth was cut off, some pieces discarded, some of the lower leaves were removed and approximately 2 inches of stem left.



Photo No. 2 shows the plant after

(SEE NEXT PAGE)

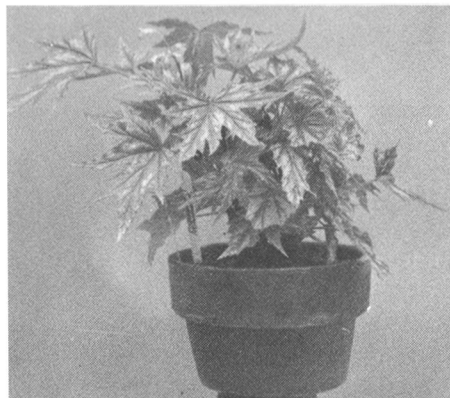
(CONTINUED FROM PAGE 133)

it was trimmed. In this photo, notice the number of old stems left on the plant. Photo No. 3 shows cuttings ready for inserting in rooting medium and photo No. 4 shows cuttings in container with stems inserted up to the first pair of leaves.

After cuttings were taken, the old plant was knocked out of its pot; the bottom of the root ball and the soil around the crown removed. Then it was repotted into fresh soil, placing the original crown so that the old stems covered about 1½ inches, leaving a space of about ½ inch in the top of the pot. Photo No. 5 shows the old plant one month later. Incidentally, this plant won a blue ribbon 3 months later at the Begonia Show held at the Eastern Convention of the ABS.

Because B. 'Richard Robinson' begins to show rapid new growth in summer, it was cut back on June 3rd. Probably had I cut it back in late fall no new growth would have shown until spring. Many old *Begonias* can be rejuvenated in this way. If new growth does not begin immediately, be patient and give it plenty of time and it will reward you by again becoming a "thing of beauty".

All photos courtesy of Walter J. Haring



LEAF ANATOMY OF BEGONIA

Fred A. Barkley¹ and Beverly Hozid²

Since their first introduction about 500 years ago, the *Begonia-ceae* have attracted much attention as garden plants. Although they have from time to time been used as an astringent in hemorrhages, scurvy and low fever, their principle utilization is that of beauty, both for their flowers and especially for their attractive and colorful leaves.

In the genus *Begonia* with its many (1200+) species, it is not too remarkable that there should be the variety of size (laminae 1 cm. to 30+ cms.), shape (narrowly lanceolate to broadly orbicular, sometimes peltate, usually not), and form (simple to compound) (Barkley & Boghdan 1968), however, the differences in internal structure are unexpectedly varied.

The genus has been the classical example of multilayered epidermis (Fellerer 1892, Solereder 1908, Haberlandt 1928, Metcalf & Chalk 1959, Foster & Gifford 1959, Esau 1960, Esau 1967). This is in contrast with the covering (epidermis) of a single layer stated as the "universal" structure of leaves of flowering plants (Anthophyta). In a previous study (Barkley & Boghdan 1968) the variation found in the

leaf anatomy was considerably varied. The cross sections of the leaf-blade (lamina) of *Begonias* as there described, show a photosynthetic region of mesophyll consisting of short, conical, comparatively tightly packed palisades parenchyma cells above the loosely arranged layer (see Plates) or layers of spongy parenchyma cells below, between the upper and lower epidermis which consists of one to many layers of cells usually devoid of the green chloroplasts (except in the guard cells of the leaf-pores or stomata).

There was sufficient variation found in the anatomy of the laminae of the leaves in the previous study so that further examples seemed called for. The present study is a start toward further elucidation of the leaf anatomy of *Begonia*. (Feeling that a study of the development of leaves from the time of their appearance on the growing point would give us a better understanding of the multicellular epidermis, such a study is underway at the present time).

Portions of the lamina of a number of species³ were taken from between the veins at about 1 cm. from

(SEE NEXT PAGE)

¹Department of Biology, Northeastern University, Boston

²Sharon, Massachusetts

The writers are grateful to the American Philosophical Society for two grants which have indirectly benefited this work, and to the Research Division of Northeastern University, for the use of equipment and materials at the University where this work was done.

³The specimens were obtained from greenhouse grown specimens of Michael Kartuz's Greenhouse and from the Northeastern University Greenhouse.

the junction of the lamina with the leaf-stalk (petiole). The specimens were killed in Craff I fixative⁴, then transferred to Craff II solution⁴ (Sass 1958), and aspirated for an hour in vacuum to remove any air in the tissues. The tissues were dehydrated in gradations of ethyl alcohol following the schedule of Johansen (Johansen 1940), changed to toluene and imbedded in paraffin. Fifteen micron sections were cut, stained with safranin and fast green, and mounted in Canada balsam. The sections were subsequently studied and eventually *kamera lucida* drawings were made from the slides.

As a comparison of laminar anatomy, comparable sections were made of a species of *Saintpaulia* and *Gloxinia*, of the *Gesneriaceae*.

The internal anatomy of the laminae of *Begonia* leaves was found to be extremely varied. In each there is an upper layer of more or less closely packed palisade parenchyma cells and loosely packed spongy parenchyma cells, both layers of which contain many chloroplast giving the green color to the leaves (see the shaded portions in the drawings depicted in the plates). The epidermis (except for the guard cells of the stomata) do not usually contain chloroplast, although a few chloroplast were noted in the uppermost cells of the lower epidermis of *Begonia floccifera* Bedd. (see plate

V. fig. 1).

It was noted that in multiple epidermis the outermost layer is composed of cells smaller than those beneath. In *Begonia evansiana* Andr., *B. cathayana* Hemsl., *B. maculata* f. *argentea* (Klotzsch) Voss, *B. masoniana* Irms., *B. lubbersii* E. Morr. (see Plate I) and *B. goegoensis* N. E. Br. (see Plate III) there was a single layer of epidermis on both surfaces of the leaf. *B. parilis* Irms. (see Plate I), *B. peltata* Otto & Dietr., *B. "tuberhybrida"* (see Plate II), *B. socotrana* Hook f., and *B. ulmifolia* Willd. (see Plate IV) were found to have a double epidermis above and a single layer below, while *B. luxurians* var. *sampaioana* Brade had a partly double upper epidermis and a single layered lower epidermis. *B. pustulata* Liebm. (see Plate II) had a single layered upper epidermis and a partly double epidermis below. *B. herbacea* Vell. (see Plate II) has a triple layered epidermis above with a single layered one below. *B. "Chimborazo"*, *B. vellozoana* Brade (see Plate II), *B. hispida* var. *cucullifera* Irms., *B. mannii* Hook. f., and *B. nelumbifolia* Cham. & Schlecht., have a double or mostly double epidermis both above and below. *B. acetosa* Vell. (see Plate III) has a triple epidermis above and below, *B. paulensis* A. DC. has a double epidermis above and a triple epidermis below, while *B. macdougallii*

(SEE NEXT PAGE)

	<u>Craff I</u>	<u>Craff II</u>
1% Chromic acid	20	20
1% Acetic acid	75	0
10% Acetic acid	0	10
Water	0	65
40% Aqueous formaldehyde (added immediately before using)	5	5

Ziesen. (*see* Plate IV) has a double epidermis below and a triple to multiple layered epidermis above. *B. venosa* Skan. *ex* Hook. has a triple to multiple epidermis above and a quadruple to multiple epidermis below, while *B. floccifera* Bedd. (*see* Plate V) has an upper epidermis of six or more layers and a lower epidermis of twelve or more layers.

Lamina anatomy would seem to be quite as individual a characteristic of *Begonia* species, as leaf size and shape, flower structure, fruit structure and chromosome numbers.

In hopes of elucidating the origin and development of the multiple epidermis in *Begonia*, a study⁵ on the developmental anatomy of such leaves is underway.

⁵A doctoral study by Mr. Kalil S. Boghdan.

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EXPLANATION OF PLATES

Cross-sectional drawings of *Begonia* leaves. The green tissues containing chloroplasts are indicated by shading. All X100.

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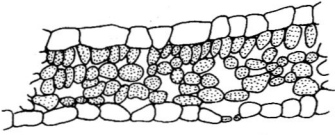


Figure 1
Begonia evansiana Andr.

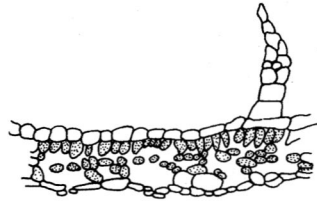


Figure 2
Begonia cathayana Hemsl.

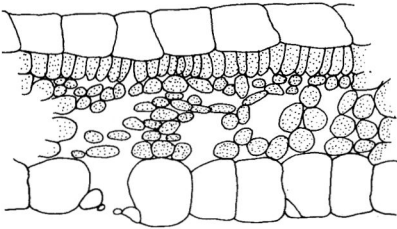


Figure 3
Begonia maculata f.
argentea (Klotzsch) Voss

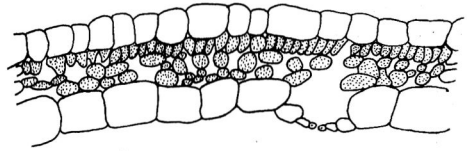


Figure 4
Begonia masoniana Irms.

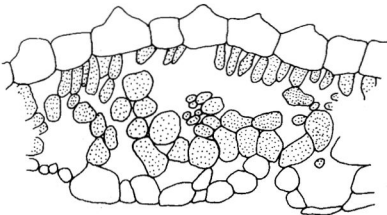


Figure 5
Begonia lubbersii E. Morr.

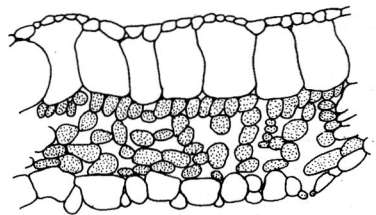


Figure 6
Begonia parilis Irms.

PLATE I

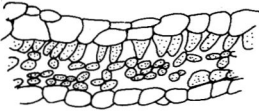


Figure 1
Begonia luxurians var.
sampaihana Brade

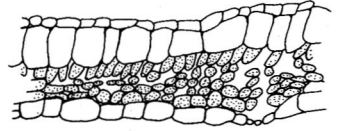


Figure 2
Begonia peltata Otto & Dietr.

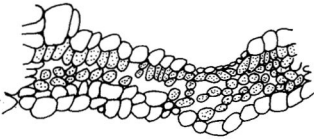


Figure 3
Begonia pustulata Liebm.

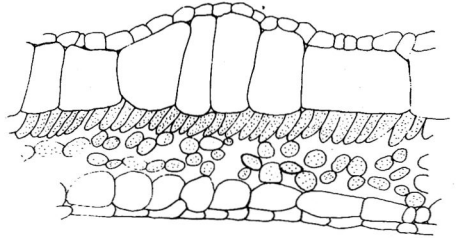


Figure 4
Begonia "chimborazo"

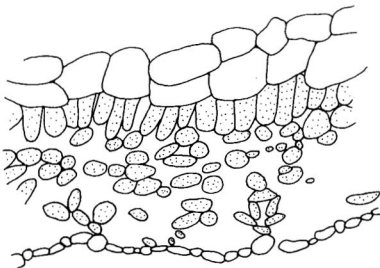


Figure 5
Begonia "tuberhybrida"

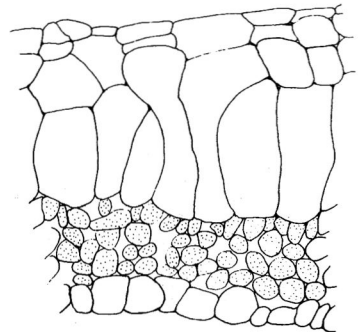


Figure 6
Begonia herbacea Vell.

PLATE II

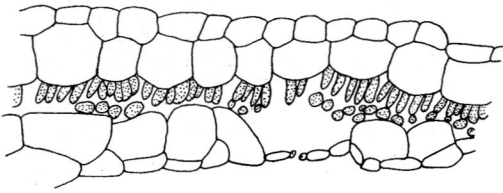


Figure 1
Begonia hispida var.
cucullifera Irms.

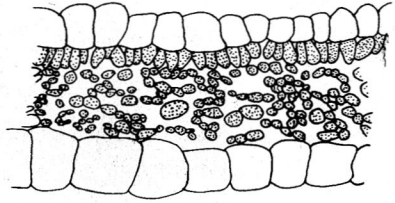


Figure 2
Begonia goegoensis N. E. Br.

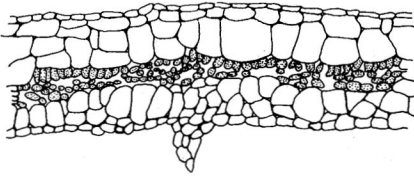


Figure 3
Begonia acetosa Vell.

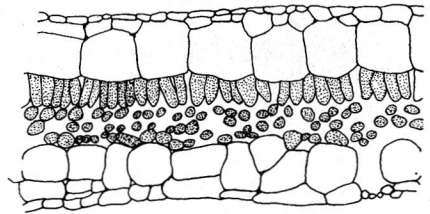


Figure 4
Begonia mannii Hook. f.

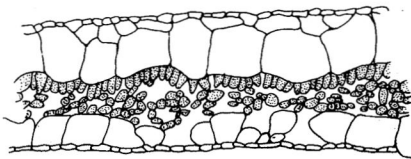


Figure 5
Begonia nelumbifolia
Cham. & Schlecht.

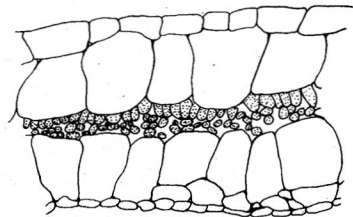


Figure 6
Begonia vellozoana Brade

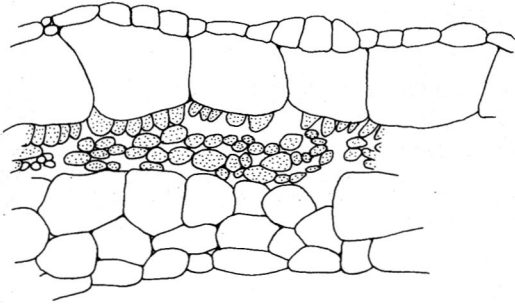


Figure 1
Begonia paulensis A. DC.

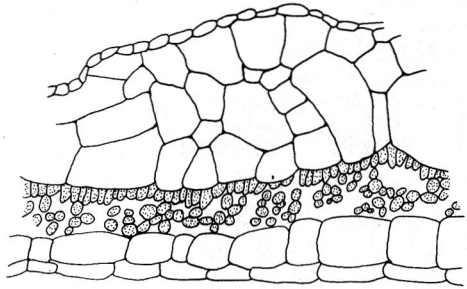


Figure 2
Begonia macdougallii Ziesen.

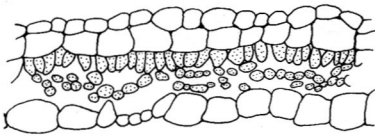


Figure 3
Begonia socotrana Hook f.

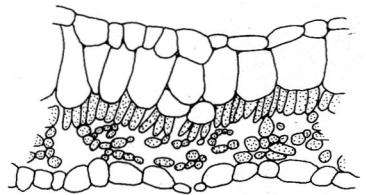


Figure 4
Begonia ulmifolia Willd.

PLATE IV

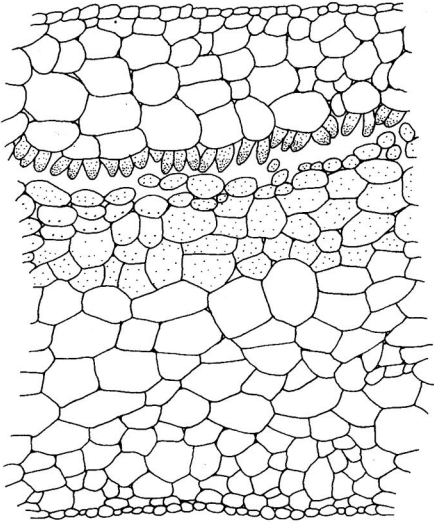


Figure 1
Begonia floccifera Bedd.

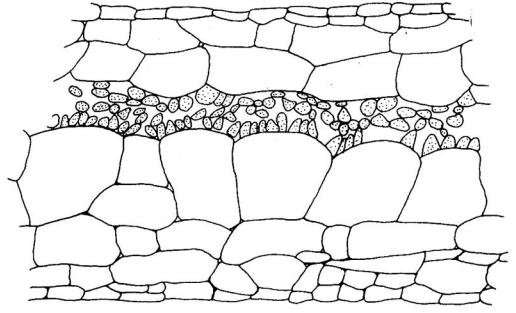


Figure 2
Begonia venosa Skan. ex Hook. f.

PLATE V

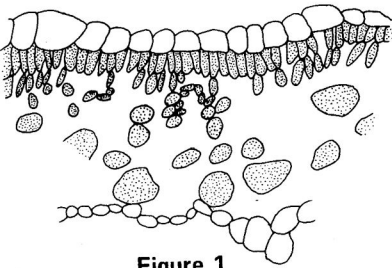


Figure 1
Gloxinia

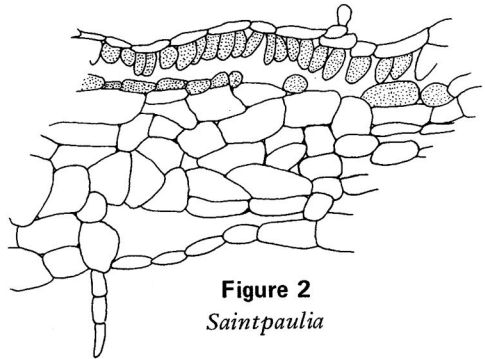


Figure 2
Saintpaulia

PLATE VI

CLAYTON M. KELLY SEED FUND

Begonias From Seed — Sowing and Growing, gives step-by-step easy to follow instructions and encouragement for beginning seed growers. Price 25¢

No. 1 — *B. solananthera* A. DC.

Trailing stems, smooth, oval leaves; very floriferous in winter with white flowers with a crimson center. A choice species. (see photo) Price \$1.00 per pkt.



B. solananthera
Photo by R. Jansen

No. 2 — *B. pavonia*

Imported by Mrs. Jane Neal of England from Malaya. A rhizomatous species with smooth, bronze-green leaves which turn peacock blue when old. (Hence the name.) Flowers large, pinkish. Price \$1.00 per pkt.

No. 3 — *B. plebeja*

Rhizomatous species. Leaves green with black markings. Small white flowers in winter. (The seeds

distributed as 'Panama' sp., rhizomatous is very similar, but without black markings.) Price \$1.00 per pkt.

No. 4 — *B. gigantea*

A species from the Himalayas, much less gigantic than the name implies, although the largest among the Indian species. Price \$1.00 per pkt.

Please note: This is the true *B. gigantea*; the seed distributed under this name in May 1969 was *B. griffithiana*.

No. 5 — *B. platanifolia* Schott

Often confused with *B. aconitifolia*. See photo in August 1970 "Begonian" for proper identification. Price \$1.00 per pkt.

No. 6 — *B. tenuifolia*

A rhizomatous species from India. Upright and short branched. Many pointed tapering leaves, deep green above, lighter below, with rosy veins. Large abundant delicate pink flowers. Formerly offered under *B. rubro-venia* which is incorrect. Price \$1.00 per pkt.

No. 7 — *B. crispula* Brade

Produces a short rhizome and the short stalked round leaves, 5 to 6 inches in diameter, spread out more or less flat on the surface of the soil. New leaves spread out over the older ones, almost touching them or even resting on them. In consequence, moisture easily stays between them and the rough surface increases still further the danger of leaf rot to which this species is subject. *B. crispula*, therefore, must never be sprayed and water must be applied strictly to the soil, never

(SEE NEXT PAGE)

splashed on the plant. Keep moderately moist. The inflorescence is reddish, peduncle appressed, hairy, 6 inches high; male flowers, white inside, pinkish outside, are slightly more than ½ inch in diameter; female flowers still smaller. The floral display, therefore, is insignificant, but the deeply crisped, shiny green foliage is very attractive and this species certainly represents an interesting addition to the great multitude of different shapes the genus *Begonia* is able to produce. Price \$1.00 per pkt.

No. 8 — *B. versicolor* China

Miniature terrarium plant. Three inch leaves are toned mahogany, emerald, silver, apple-green and maroon. *B. versicolor* will not survive in dry conditions, temperatures should be from 70-75 degrees and humidity should be high. Seed requires 3-6 weeks to germinate where conditions are favorable. Price \$1.00 per pkt.

Please note: *B. versicolor* is becoming more plentiful now and we are getting seed back as in this case.

No. 9 — *B. rajah* Malaya

Charming, dwarf, rhizomatous species with roundish, rich reddish-green, bullate, silky leaves and contrasting veins of yellow-green; under surface dull red; flowers pink. Rare species requiring greenhouse or terrarium care with warmth and humidity. Price. \$1.00 per pkt.

PLEASE: A member in Texas grew *B. rajah* from seed originally from Seed Fund and has now produced a very small amount of seed which, according to her records, were tested and germinated in about 3 weeks. Don't be surprised if you find only about 6 seed in your pkt. as the only reason we offer them is for the plant

to be more widely grown so that seed can become more plentiful. If you cannot provide proper growing conditions, please let someone else who can have the seed.

WE GET LETTERS

(1) Very often letters come to the Seed Fund asking why we offer seed of *Begonias* with such long hard names to pronounce. We would like to say that the Seed Fund has nothing to do with the names that appear on the list. This is done by Scientists and Botanist all over the world wherever *Begonias* are grown. They have spent many years in collecting and research, trying to properly identify *Begonias*. Sometimes a species will be identified by the general characteristics of the plant or by the location where it was found. Serious *Begonia* growers do not refer to their plants as the "Turkey-foot" *Begonia*, "Guinea Wing", "Angel Wing" or any of the many names that were given them in the early days before we had the proper means of identification. Certainly the wonderful *Semperflorens* growers in Europe would be shocked to hear their beautiful plants called "Wax *Begonias*". The ABS maintains a Library of many books on the subject where information on pronouncing of names is available so why not take advantage of this service?

(2) Why don't you offer seed of easy to grow, inexpensive *Begonias*?

It depends on the person who is growing the seed whether it is easy or difficult. However, we have gone over the files and have selected seed especially for those who are new or inexperienced at seed growing. Most of them will grow whether you want them to or not. They do not re-

quire special care and as a matter of fact, will germinate if tossed on the open ground in the garden. When requesting them, please refer by number on the "Easy to grow List". They are as follows:

EASY TO GROW LIST

No. 1 — *B. leptotricha*

Also called *B. 'Manda's Woolly Bear'* — will grow anywhere and under almost any condition. Price 35¢ per pkt.

No. 2 — *B. schmidtiana*

Grow in basket and popular for its apple-blossom flowers. Price 50¢ per pkt.

No. 3 — *B. odorata* Brazil

Charming vine type with fragrant white flowers. Price 50¢ per pkt.

No. 4 — *wallichiana*

Smallish plant that covers itself with many white flowers. Price 35¢ per pkt.

No. 5 — *B. mollicaulis*

Medium plant with soft fuzzy leaves and white flowers. Price 50¢ per pkt.

No. 6 — *malabrica*

A very floriferous plant with smooth, rather small leaves and pink flowers. (The plant grown under this name in the U.S. is often called *B. dipetala*). Price 50¢ per pkt.

No. 7 — *B. egregia* (syn. *B. quadrelocularis*)

Has long pointed leaves and large bunches of white flowers in winter. One of the most fragrant *Begonias*. Price 50¢ per pkt.

No. 8 — *B. sc 'Carmen' semperflorens*

Dark leaves and bright pink flowers, grows small. Price 35¢ per pkt.

No. 9 — *B. franconis*

Interesting to the collector of species. Small, hairy, ovate leaves. Flowers white or pink tinged. Price 35¢ per pkt.

No. 10 — *B. evansiana*

One of the easiest that will grow outside; large pink flowers and attractive leaves. Price 50¢ per pkt.

Please send request for seed to:

Mrs. Florence Gee
Seed Fund Administrator
234 Birch Street
Roseville, California 95678

ROUND ROBIN NOTES

The birds are flying thick and fast. New flights are being formed and new members are being added to flights.

Crosses and seedlings:

Wanda Welch, California, reported *B. taylori* seedlings bloomed with male flowers hanging over female bloom resulting in fat seed pods. She hopes to have seeds to share.

Arline Peck, Rhode Island, reported *B. rajah* bloomed inside a bowl. Her cross of *B. rajah* x *goegoensis* is growing and blooming. She feels it might be as good a bloomer as *goegoensis*. Her cross of *B. lubbersii* x *listida* has a seed pod and is anxiously waiting for it to

ripen to plant the seed. She has seedlings of *B. 'Lula Bower'* selfed and of *B. goeensis* x *B. 'Lula Bower'*.

B. paulensis:

Olive Lever, New Zealand, had *B. paulensis* seed and divided planting in "Jiffy Mix" and live sphagnum moss, in closed glass containers; both germinated at the same time.

Begonia propagation:

Olive reported no success rooting cuttings of *B. 'Rudy'* (*B. popenoei* x *lugwigii*), it rotted; portions of three leaves rooted and all made plants. Cut up portions of thriving *B. versicolor* leaf rooted on vermiculite in plastic container; every piece rooted and surface was covered with baby plants.

B. crispula:

Pat Burdick, Minnesota, took ten leaves from *B. crispula* and put them to root in bowls in peat moss, vermiculite and a bit of charcoal. She reports no trouble rooting this *Begonia*.

B. 'Abel Carriere':

Priscilla Beck, Connecticut, had a nice plant of *B. 'Abel Carriere'* and decided to put it in a wire basket lined with long moss; it tripeled in size within a year. She thinks it was due to better air circulation.

If you want to be a part of the growing and sharing through the mail in a flight, write to:

Mrs. Anita Sickmon
Round Robin Director
 Route 2, Box 99
 Cheney, Kansas 67025

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Kusler cvs.

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Barbara Ann
Dorothy Barton
Esther Albertine
Jill Adair
Laura Englebert
Leonore Olivier
Margaret Stevens
Martha Floro \$2.00
Nora Hanson
Peggy Stevens \$1.50
Sophie Cecile

7 my choice \$7.50

OTHER BEGONIAS

(m) miniatures or small growing

Bow Ariola (m)
Bow Joe (m)
Bow Nigra (m)
metachroa (m)
Rutherfordiana (m)
Silver Star (m)
Whirly Curly (m)

7 miniatures my choice \$7.50

Crestabruchii \$2.00
listida \$1.50
purpurea \$1.50
species Z-2 (Brazil)
Stash \$1.50

REX BEGONIAS

(L) Leatherman cvs
American Beauty
Fireflush
Helen Lewis
Herzogin Von Sagon
(Can Can)
Koenig Heinrich
Lady Francis Jean (L)
Lady Margaret Lee (L)
Lavender Glow \$1.50
Leatherman's Reiga (L)
Oregon State University #6
Pink Taffeta (rex cv.
#10 Germany)

Purple Petticoats \$2.00
(Lee's cv.)

Sir John Ekstrand (L)
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Sir Pinky Harrison (L)
new, \$1.50
Dew Drop (m)

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FERNS \$1.50

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Phyllitis scolopendrium cv. *cristatum*
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5 ferns my choice \$5.00

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All plants named and labeled. Please list substitutes. Customer pays postage . . . You may send 20% of your order towards postage . . . or you will be billed for it . . . or your order can be sent C.O.D. for postage only. Catalog 25¢, lists and describes these and many other *Begonias*, Ferns, African Violets, Gesneriads and Geraniums (including miniatures).

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echinosepala
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 Helen
 Helena
incarnata
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**CONDENSED MINUTES OF THE
BOARD OF DIRECTORS
April 25, 1971**

A Regional Meeting was held at La Mesa, California hosted by the San Miguel Branch. After opening ceremonies 8 officers and 8 Branch Representatives answered roll call. Minutes of March meeting read and approved.

REPORTS

Treasurer: Receipts \$847.66; disbursements \$988.57; balance \$1,429.26.

Membership Secretary: Funds deposited \$639.87.

Advertising Manager: Receipts \$96.00 unpaid accounts \$55.00.

Awards Committee: Awards Booklet printed and sent to Branches.

Editor: Report read. Suggestion from Board that Branches cooperate by sending Representatives to Board meetings, keep Board informed and send in list of Branch officers.

Judging Course Director: Reported on Judging Classes and Show Schedule.

Nomenclature Director: Work progressing on Catalog of Begonias; announced members working on various facets of research as: Mrs. May Taft Drew, Jack Golding, Mrs. James McCann, also assisting in preparation are Miss Alva Graham, Mrs. Alice Musy, Mrs. Margaret Ziesenhenné and Mrs. Olive Miller in typing the final draft. The species catalog should be completed this year.

Research Director: Research Fund \$697.52; Corresponding with Universities regarding research.

Round Robins Director: Continued interest in flights, new R.R. members.

Seed Fund: \$75.00 remitted to Treasurer.

Public Relations Director: Recommended a booklet be printed on How to Start a Branch. Submitted a letter of resignation. Committee to be appointed to study recommendation.

Recommendation made to raise funds to pay expenses of Mr. Rudolf Ziesenhenné to represent the ABS at the Eastern Convention.

MOTIONS

Motion to authorize printing of 200 extra copies of the Show Schedule, carried.

Motion to continue complimentary membership to Frederick G. Meyer of the U.S. National Arboretum, Washington D.C., carried.

After Branch reports, meeting adjourned.

Respectfully submitted
Irene Grannell, Secy.



**A.B.S.
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BOOKSTORE**

**The following selection of books are
FOR SALE**

- *Gesneriads And How To Grow Them. \$7.95
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- *Rex Begonias As House Plants \$1.00
by Virginia Withee
- *All About Begonias \$5.95
by Bernice Brilmayer
- *So Say The Experts \$2.00
by Ruth Pease
- Classification Guide Compiled by . . . \$1.25
the Westchester Branch, A.B.S.
- *Ferns We Grow by Sylvia \$3.85
Leatherman and Dorothy Behrends
- *Begonias Slanted Toward the \$3.00
Beginner by Dorothy Behrends
- *Platynerium Fern Facts \$4.95
by Wendy Franks
- *The Tuberus Begonia \$10.80
by Brian Langdon

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Pamphlet — Begonias From Seed —
Sowing and Growing25

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Mrs. Herbert Hurley, Secy.
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CONNECTICUT BRANCH

4th Sunday of each month
Mrs. Priscella Beck, Secy.
R D No. 1, Box 121,
Mystic, Conn. 06355

DALLAS COUNTY, TEXAS BRANCH

3rd Monday, 10 a.m., Members' Homes
Mrs. George W. Hopkins, Secy.
1619 S. Beckley Ave., Dallas, Texas 75224

EAST BAY BRANCH

2nd Thursday, 7:45 p.m., Willard School
Telegraph at Stuart, Berkeley, Calif.
Charles Badcock, Secy.
2325 Esmond, Richmond, Calif. 94804

EASTSIDE BRANCH

4th Wednesday, 7:30 p.m.
590 116th Avenue N.E., Bellevue, Washington
Grace Fisher, Secy.
770 Monroe Ave. N.E., Renton, Wash. 98055

EL MONTE COMMUNITY BRANCH

3rd Friday, Members' Homes
Mrs. Gladys Mattuket, Secy.
1801 Azalea Drive, Alhambra, Calif. 91801

FOOTHILL BRANCH

3rd Thursday, 8:00 p.m.
First Methodist Church, Marshall Hall
3205 D Street, La Verne, Calif.
Mr. Robert I. Wilson, Secy.
1646 Charliinda St., West Covina, Calif. 91790

FORT, ELSA BRANCH

1st Saturday, 1:00 p.m.
Miss Lola Price, Secy.
628 Beach Ave., Laurel Springs, N.J. 08044

GLENDALE BRANCH

2nd Tuesday, 8:00 p.m.
Glendale Federal Savings, 401 N. Brand
Mrs. Frances Perkins, Secy.
3712 Revere Ave., Los Angeles, Calif. 90039

GREATER BATON ROUGE BRANCH

Mrs. Charles H. Smith, Secy.
4177 Flannery Rd., Baton Rouge, La. 70814

HOUSTON TEXAS BRANCH

2nd Friday, 10:00 a.m.
Garden Center, 1500 Herman Drive
Mrs. B. A. Russell, Secy.
5926 Jackwood, Houston, Texas 77036

INGLEWOOD BRANCH

2nd Wednesday, 7:30 p.m.
Western Federal Savings Building
355 E. Manchester Blvd., Inglewood, Calif.
Lola Somes, Secy.
4849 W. 130th Street, Hawthorne, Calif. 90250

KNICKERBOCKER BRANCH

3rd Tuesday, 7:30 p.m.
McAlpin Hotel, New York City
Mrs. Philip Sarna, Secy.
37 East 30th Street, New York 10016

LONG BEACH PARENT CHAPTER

3rd Sunday, 1:30 p.m.
Great Western Savings and Loan Bldg.
6300 East Spring St., Long Beach, Calif.
Mrs. Paul E. Powell, Secy.
3031 Shakespear Dr., Los Alamitos, Calif. 90720

LOUISIANA CAPITAL BRANCH

1st Friday, Sear's Garden Center
6201 Florida St., Baton Rouge
Mrs. John Blythe, Secy.
1823 Madras Drive, Baton Rouge, La. 70815

MESQUITE BRANCH

Mrs. Billie Lyles, Secy.
928 Calle Reale, Mesquite, Texas 95149

MIAMI BRANCH

4th Tuesday, 8:00 p.m.
Simpson Memorial Garden Center
Mrs. Marie Evans, Secy.
610 63rd. Drive, Hialeah, Florida 33012

MISSOURI BRANCH

3rd Tuesday, 11 a.m., Members' Homes
Kansas City, Mo.
Mrs. Lynne K. Wood, Secy.
626 W. Charles, Independence, Missouri 64055

NORTH LONG BEACH BRANCH

1st Tuesday, 7:30 p.m.
525 Ocean Blvd., Long Beach
Barbara Welty, Secy.
4741 Hazelbrook
Long Beach, Calif. 90808

ORANGE COUNTY BRANCH

2nd Thursday, 7:30 p.m.
Garden Grove Grange Hall, Century and Taft Sts.
Garden Grove, Calif.
Mrs. Ronnie Nevins, Secy.
1913 Aspen Circle, Fullerton, Calif. 92631

PHILOBEGONIA BRANCH

2nd Friday, Members' Homes
Mrs. Anne Stiles, Secy.
East Delaware Trail, R.D. No. 2, Medford, N.J. 08055

PORTLAND BRANCH

Mrs. Lavene Jenkins, Secy.
9920 S. W. 53rd Ave., Portland, Oregon 97219

REDONDO AREA BRANCH

4th Friday, 7:30 p.m.
R. H. Dana School Cafetorium
135th St. and Aviation Blvd., Hawthorne, Calif.
Mrs. Juanita Spunaugle, Secy.
4248 Mentone Ave., Culver City, Calif. 90230

RHODE ISLAND BRANCH

1st Saturday, Homes of Members
Miss Marcella Flynn, Secy.
7 Fairfield Ave., East Providence, Rhode Island 02914

RIVERSIDE BRANCH

2nd Wednesday, 6:30 p.m.
Dales Recreation Center
3936 Chestnut Street, Riverside, Calif.
Mrs. Margaret K. Elmore, Secy.
3935 McKenzie, Riverside, Calif. 92503

ROBINSON, ALFRED D. BRANCH

3rd Friday, 12 noon, Homes of Members
Constance D. Bower, Corr. Secy.
1609 W. Lewis St., San Diego, Calif. 92103

SACRAMENTO BRANCH

3rd Tuesday, 8:00 p.m., Garden Center
3300 McKinley Blvd., Sacramento, Calif.
Mrs. Annette M. Winston, Secy.
2519 Aramon Drive, Rancho Cordova, Calif. 95670

SALINE COUNTY BRANCH OF KANSAS

4th Monday, 2:00 p.m., Homes of Members
Mrs. Jesse Harper, Secy.
Route 3, Salina, Kansas 67401

SAN FRANCISCO BRANCH

1st Wednesday, 8:00 p.m., Garden Center,
Golden Gate Park, 9th Avenue and Lincoln Way
Mr. Allen Sweet, Secy.
303 La Serena Way, Sonoma, Calif. 95476

SAN GABRIEL VALLEY BRANCH

2nd Friday, 8:00 p.m.
Los Angeles State and County Arboretum
501 N. Baldwin Ave., Arcadia, Calif.
Marie McCooney, Secy.
3043 Center Ave., Arcadia, Calif. 91006

SAN MIGUEL BRANCH

2nd Wednesday, Porter Hall, 7:30 p.m.
University & La Mesa Blvd., La Mesa
Mrs. Maynette Hodgins, Secy.
1829 Granit Hills Dr., El Cajon, Calif. 92020

SANTA BARBARA BRANCH

2nd Thursday, 7:30 p.m.
Santa Barbara Museum of Natural History
2559 Puesta Del Sol
Mrs. Helen Yost, Secy.
888 La Milpita Rd., Santa Barbara, Calif. 93105

SEATTLE BRANCH

3rd Tuesday, 7:45 p.m., Loyal Heights Field House
21st Ave., N.W. and N.W. 77th Street
Virginia Level, Secy.
13770 1st Avenue N.E., Seattle, Wash. 98125

SHEPHERD, THEODOSIA BURR BRANCH

1st Tuesday, 7:30 p.m.
Y.M.C.A. Bldg., 5200 Telegraph Rd., Ventura, Calif.
Mrs. Oakley Murphy, Secy.
119 E. Simpson, Ventura, Calif. 93001

SMOKY VALLEY BRANCH

4th Thursday, 7:30 p.m., Members' Homes
Mrs. Henry Flaherty
606 South Third, Salina, Kansas 67401

SOUTH CAROLINA BRANCH

Mr. E. B. Garrigues, Secy.
2907 Blossom St., Columbia, South Carolina 29205

SOUTH SEATTLE BRANCH

4th Tuesday, 7:30 p.m., Wm. Moshier Field House
430 South 156th Burien
Sally Harding, Secy.
11632 1st Ave. S., Seattle, Washington 98168

TARRANT COUNTY BRANCH

2nd Monday, 10:00 a.m., Members' Homes
Mrs. R. M. Bennisson, Secy.
Rt. 2, Box 155 Dickinson, Texas 77539

TEXAS STATE BRANCH

4th Thursday, Sabine National Bank Bldg.
Port Arthur, Texas
Mrs. R. J. Wilson, Secy.
4620 Evergreen St., Port Arthur, Texas 77640

TEXASTAR BRANCH

3rd Thursday, 10 a.m., Garden Center
1500 Herman Dr., Houston, Texas
Mrs. V. O. Harman, Secy.
306 Cody, Houston, Texas 77009

WESTCHESTER BRANCH

1st Thursday, 7:30 p.m., Westchester Women's Club
8020 Alverstone St., Los Angeles, Calif.
Barbara Mack, Secy.
424 Oregon St., El Segundo, Calif. 90245

WESTERN PENNSYLVANIA BRANCH

2nd Wednesday, 11:00 a.m. every other month
Pittsburg Garden Ct., 1059 Shady Ave., Pittsburg, Pa.
Mrs. Irene Fediaczko, Secy.
125 Arlington Ave., Butler, Pa. 16001

WHITTIER BRANCH

1st Thursday, 7:30 p.m.
Palm Park Community Center
5703 South Palm Avenue, Whittier
Miss Anne Rose, Secy.
14036 Ramona Drive, Whittier, Calif. 90605

WILLIAM PENN BRANCH

4th Tuesday, Noon Homes of Members
Mrs. Murdock Davis, Secy.
256 Broughton Lane, Villanova, Pa. 19085

CALENDAR

June 10 — Orange County Branch, 7:30 p.m. 30th Anniversary Celebration. A cordial invitation is extended to all to attend. Speaker; Mrs. Sylvia Leatherman.

June 11 — San Gabriel Valley Branch 8 p.m. Speaker: Mrs. Ruth Pease, "Grooming your Plants for Show".

June 15 — Seattle Branch, 7:00 p.m. Research Project by Charles Tusler.

June 17 — Foothill Branch 8:00 p.m. Speaker: Bob Schmidt, "Californian Native Plants".

June 20 — Long Beach Parent Chapter, 1:30 p.m. Speaker: Mrs. Sylvia Leatherman.

June 28 — ABS Board of Directors meeting. 7:30 p.m. South Gate City Auditorium, 4900 Southern Ave., South Gate, Calif. Meetings are always open to members.

July 1 — Whittier Branch, 7:30 p.m. Combined Fuchsia and Begonia Societies meeting. Speaker: Sylvia Leatherman, "Preparing Begonias, Fuchsias and Ferns for Shows."

July 1 — Westchester Branch, 7:30 p.m. Speaker: Mrs. Dorothy Behrends, "Asparagus Can Be Beautiful".

July 6 — North Long Beach Branch, 7:30 p.m. New meeting date and place (see Branch Directory). Speaker: Sylvia Leatherman, "Rex Begonias".

Visitors are always welcome at these meetings.

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