

# The BEGONIAN



AUGUST, 1971

*Devoted to the Sheltered Garden*

VOL. 38 NO. 8



*B. solananthera*

Photo by R. Jansen

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GENERAL OFFICES, dues, address changes, or magazines: Cliff Ebeling, Membership Secretary, 6157 Lime Avenue, Long Beach, California 90805.

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Contributing Editors . . . . Mrs. Elda Haring  
120 Cutler Road, Greenwich, Conn. 06830  
Mrs. Helen Matsubu  
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Views expressed in this magazine are not necessarily those of the Editors, the Society or its officers.

## WEEK END OF JOY

The American Begonia Society wishes to extend an invitation to MEMBERS and FRIENDS to attend the 1971 Begonia Show, A WORLD OF SHADE PLANTS, on September 4th and 5th. Show time is 9:00 a.m. to 6:00 p.m. Saturday and 10:00 a.m. to 5:00 p.m. Sunday.

Pioneer High School Boy's Gymnasium is the location and it is easy to find. It is just off the 605 Freeway between Washington Blvd. and Slauson Ave. in Whittier.

The public is invited to enter plants. The Pioneer High School's class in Natural Science is working diligently on a display for the Show. We are very excited about student participation in the show this year. The Pioneer High School P.T.A. is providing the snack bar so come and plan to spend the day and attend the seminars on Saturday and Sunday by some of the knowledgeable experts. A Garden Tour is also planned for your enjoyment.

Grand prizes of \$100.00, \$50.00 and \$25.00 will be given away at 5:00 p.m. Sunday as well as intermittent prize drawings during the two days of the Show.

The Annual Meeting of the Board of Directors will be held on Saturday at 1:30 p.m. Saturday evening the Banquet will be held at the Elks Club with the "Happy Hour" starting at 6:00 p.m. Jack Golding, President of the Knickerbocker Branch will be the speaker with Tim O'Reilly serving as Master of Ceremonies. The Installing Officers will be Mrs. Dorothy Behrends of Encinitas, Calif.

Come and bring a friend or two and enjoy "A World of Shade Plants."

## BEGONIAS

### THE SCARSE, THE RARE AND THE UNUSUAL!

THE SCARSE, THE RARE AND THE UNUSUAL will be the title of a seminar given at the National Convention and Show, September 4th and 5th in Whittier, Calif. In conjunction with this lecture, the plant sale table will put the emphasis on these unusual *Begonias* that everyone wants but are hard to find. A special effort is being made by Plant Table Chairman, Gene Daniels, to locate a limited number of these plants, new species and new hybrids. A special table for "bubble bowl" *Begonias* will be a feature of this years sale table.

If time permits, following the completion of the judging on Friday afternoon, September 3, the plant table will be open to members who are working on the show and also those members who arrive early for the Preview showing on Friday evening. This will be for a limited time only depending on the state of completion of the Show in general.

Special propagation is being done right now to make this the best Plant Table we've ever had at a National Show. There will be special selections by Sylvia Leatherman and Leo Porter who will be manning their own display and sales.

Donations of plants of all types from members for the Plant Sales Table will be greatly appreciated. Please contact Gene Daniels, Box 83, Camarillo, Calif. 93010 or Everett Wright, 838 B, N. Market St., Inglewood, Calif. 90302 for more information.

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### 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*.

# BEGONIA BASICS

## for Beginners

by Elda Haring, Greenwich, Connecticut

### LIGHT:

*Begonias* in general are not sun loving plants but the beginner must keep in mind that this does not mean that *Begonias* will become lovely specimens if kept in a dark and dimly lighted room. In checking through the many house plant books in my collection I was amazed to discover that very few dwelt in detail on proper lighting for indoor plants. In some of the books the statement is made that *Begonias* need all possible sun in winter. Certainly that is true if *Begonias* are growing in living room windows in the northerly areas, but with the possible exception of the *semperflorens* type, none of them can take full sun out of doors in areas where winters are mild but the sun is strong and bright. Even in northerly areas a sun porch on the south side with no shading could be too bright for many *Begonias*. Trying to think how best I could help beginners all over the country with their problems of light for *Begonias*, it seemed to me that I could only tell you some of my

own experiences in the areas I know best; southeastern Connecticut and Florida. In the East window in my living room here in Connecticut, *Begonias* grow nicely the year around. In winter there is sun for four hours each morning. When days are not sunny, light is adequate for them because of the large expanse of glass. In summer a flowering crabapple tree provides filtered sun. In this window rhizomatous and others grow beautifully but the *semperflorens* do not get enough light to keep them compact. These do better in the South window in my workroom unshaded by trees or foundation planting. The South window of my living room does not get much sun being partly

shaded by evergreens and deciduous trees whose bare branches even in winter diffuse the light coming into the window and they shade it in summer. Here, some of the darker leaved varieties are happy. My entry hall gets only the light from two narrow windows on either side of the solid door. Yet on a chest on one wall adjacent to one of the panes, I grew lovely rex *Begonias* for years with no additional light.

My workroom windows, South and West, are covered with sheer glass curtains. Many varieties of *Begonias* have been grown in this location yet I have found that although the room seems to get adequate light, plants do become leggy here.



Photo by Walter Haring  
B. Mercury — Left — Grown on South window sill.  
Right — Grown in Greenhouse.

In the photo of B. 'Mercury', the plant on the left was grown in this location. Notice how leaf stems have elongated and compare it to the one on the right which was grown in my greenhouse. It is much more compact. Both are handsome plants and if I had no greenhouse, my windows would be full of plants even though they might become a little leggy.

*Begonias* in the greenhouse are lightly shaded in winter. Those that can take considerable winter sun such as B. 'Feast' and the rhizomatous group that bloom in winter or early spring are placed on East or West benches, but the center bench has a canopy of muslin over it at all times for those *Begonias* that are damaged by too

much sun, notably the rexes. By early March it is obvious that light and sun in the greenhouse are getting too strong. Deep coloring of leaves begin to lighten and turn yellow and those like B. 'Cleopatra' with definite markings and patterns begin to pale and lose their markings. Get in the habit of really observing your plants and when such danger signs develop take immediate steps to remedy the situation. In the greenhouse it is my signal to add additional canopies over the East and West benches protecting them from the sun overhead, yet allowing them to get enough from either side to give adequate light.

In summer, trees shade the West side of the greenhouse. Shading paste is put on the glass in May on the East and South sides to keep the greenhouse cool and to protect plants from the intense rays of the summer sun. In October this shading is removed for the winter months.

Those *Begonias* I plant out of doors in the summer months in Connecticut are always planted under trees where sunlight is filtered. There is a planter box along the terrace and I usually plant *Begonias* in it so that we can enjoy them at close range. Sunlight is filtered through the fern like leaves of a Moraine locust. Under old apple trees with no low hanging branches, *semperflorens* and the maple leaved kinds bloom all summer. I have, on occasion, tried *semperflorens* in full sun but our garden is quite open and the leaves burn in full sun. But to grow well, *Begonias* in Florida, as I am sure must be the case in other areas where bright sun is constant almost all year, they are best grown in a lath house or on covered patios and porches for exposure to too much light and sun damages the leaves. In many areas of the lower south particularly, sun is satisfactory in winter but in summer *Begonias* need to be shaded by trees or shrubs or grown at the North foundation where the hot sun of summer cannot reach them.

Symptoms of too much sun are browned or dry tips of branches; papery or almost translucent leaves with the leaves curled; typical spots and markings fading; the entire leaf becoming yellowish-green and sickly. Symptoms of inadequate light are failure to bloom; stems elongating and stretching up with spaces between leaves

becoming longer; leaf stems usually long; the plant leans toward the window. In the case of the latter, turning the plant several times a week will keep it straight. There are also many *Begonias* that can be grown at windows where there is a little or no sun but good light. Some of these include *B. scharffi*, *B. metallica*, *B. pustulata*, and *B. imperialis*, *B. cubensis*, B. 'Rutherfordiana'; the star leaved kinds like B. 'Maphil' and B. 'China Doll'. The rexes, of course, can take dimmer light than any of these. Examples of *Begonias* that can take quite strong sun, particularly in winter, are B. 'Feasti', B. 'Crestabruchi', *B. heracleifolia*, B. 'Catalina', B. 'Richmondensis', B. 'Preussen' and 'Sachen', *B. semperflorens*, *B. schmidtiana* and canes.



Photo by Walter Haring

A group of *B. imperialis* cultivars under a Gro-Lux Table Lamp.

If there is not adequate light for your *Begonias* to bloom you should not deny yourself the pleasure of growing *Begonias*. Depending on your pocket book, there are inexpensive or costly fluorescent light set ups that any handyman can install in bookcases, under the kitchen counter, in room dividers, in old cabinets, and in a number of nooks and crannies. There are so many diversified shapes of foliage and growth to keep you enthralled with their many colors and hues. Few or many, there is a place for *Begonias* in your home.

Bring a friend to the Begonia Show, Saturday, September 4th, 9 a.m. to 6 p.m., Sunday, September 5th, 10 a.m. to 5 p.m.

# STERILITY IN BEGONIAS

by W. Grant McGregor, *Research Committee*

Sterility, the inability to reproduce offspring should not be confused with the vegetative method of plant production as by leaf and stem cuttings. The latter is simply an asexual means of prolonging the life of the same plant. In sexual reproduction marked differences exist in the fertility between cross fertilization of two different plants and self fertilization of the same plant. Self fertilized plants without exception have good fertility. Cross fertilized plants often give rise to plants with defective characteristics. Few *Begonia* species are commonly self fertilized. The separation of male and female flowers aids cross fertilization.

In many cases sterility is partial, the female flowers are normally formed but the pollen is infertile or missing. Season and environment may effect the level of fertility. Some years under unusual conditions some plants considered sterile will set seed. In some species the male flowers drop prematurely.

In all plants it is conventional to represent the number of chromosomes in the pollen and in the egg by  $n$  and refer to them as the haploid. When these unite the resulting plant has  $2n$  chromosomes and may be referred to as the diploid, with  $3n$  as triploid and with  $4n$  as tetraploid. The chromosome is believed to be made up of tiny particles which determine the characteristics of the plant and these are referred to collectively as genes.

In over half of the plant families intensively studied in certain cases the genes of one species cooperate so poorly with the genes of other species that the sexual organs become defective. In other instances incompatibility occurs as the result of arrested growth of the haploid pollen tube in the diploid cells in the pistil. When a pollen grain contains an incompatibility gene that is present also in the style, pollen tube growth is arrested. Only when the gene in the pollen is not present in the style can fertilization occur. We have not had sufficient study in the *Begonia* family to uncover this type of situation.

In some plant families instances have

been found where chromosomes become broken, the section remaining free, or as more often happens it becomes attached to the opposite member of the pair. Insignificant changes in the chromosomes compliment are sufficient to kill pollen grains which acquire such deviating constitutions. The egg is affected the same but to a lesser degree than the pollen. I have been unable to find any species or variety of *Begonia* in which this has been shown to occur. Arends<sup>1</sup> in reporting on 'Elatior' *Begonias* explains in part the situation, "Although it remains possible that structural mutations occur, it seems unlikely that, considering the nature and size of the chromosomes, structural changes such as deletions or inversions can be demonstrated microscopically."

Legro and Doorenbos<sup>3</sup> have given us the most comprehensive study of chromosome numbers to date. In summarizing they state, "On the whole, crosses can only be successful when the parents have the same number of chromosomes." However many hybridizers believe that considerable cytogenetic damage is done by vegetative propagation. Sharma<sup>4</sup> appears to confirm this in a study of several species which included the popular rex species. In this species he found counts of 32, 33, and 34 in one series and 42, 43, and 44 in another. Since this species is continually propagated by leaf and rhizome cuttings the utility of sexual reproduction has gradually become obsolete. As the plants are used for ornamental purposes the more rapid method of vegetative propagation is desired instead of seeds. He considered therefore, that during vegetative propagation some of the cuttings from the mother plant contain cells with altered chromosome compliment which are therefore, responsible for the origin of new individuals with altered constitutions. It could be possible then to have a very high degree of sterility between varieties within the same species.

Summarizing the work of Legro and Doorenbos<sup>3</sup> we find that the most common chromosome number in *Begonias* is  $2n=28$  (35.5%) and the next is  $2n=56$

(17.5%). The range is from 22 to 156. Listing the successful crosses reported in The Begonian for the past 10 years, of those in which the chromosome number of both parents is known, we find that 48% are with parents with 28 chromosomes; 12% with 56 chromosomes. Five hybrids were reported between a 28 chromosome parent and one with 56 which would produce a triploid with 42 chromosomes. These are *B. metallica* x *B. mazaе*, *B. limmingbeiana* x *B. dichroa*, *B. baumannii* x *B. limmingbeiana*, *B. micranthera venturii* x *B. echinosepala* and *B. micranthera* x *B. limmingbeiana*. In three of these the 28 chromosome parent was female. Two hybridizers have been successful with *B. dregei* (2n=26) x *B. olbia* (2n=56). Various other crosses of parents of different chromosome combinations were listed, in all about 25% of the crosses were between parents of different chromosome combinations. These I would expect to be completely sterile or nearly so. *Begonia cathayana* (2n=22) and *B. dregei* (2n=26) appeared more than once among these crosses. Legro and Doorenbos<sup>3</sup> add *B. lubbersii* (2n=56), *B. corallina* (2n=56), *B. socotrana* (2n=28) and *B. sulcata* (2n=72) as species which have been exceptions to the rule of even numbers of chromosome between parents.

The disadvantages of sterility in *Begonias* is that the sterile plants must be propagated by vegetative means and in this way systemic pests such as nematodes and viruses are carried along from year to year. Further the possibility of selection for improved varieties is greatly diminished if little seed is formed. Leaf and stem cuttings usually require a long time to become established as compared to seed which germinate quickly and seedling growth is rapid. There is also an added advantage in increased vigor in hybrid seed.

Sterility can be an advantage in that the plants are usually more floriferous. Zeilinga<sup>5</sup> found that the triploid chromosome number was the most practical condition for the improvement of *B. semperflorens*. Doorenbos and Legro<sup>2</sup> also suggest that the most successful hybrids of cane *Begonias* *B. 'Lucerna'* and of *B. 'Gloire de Lorraine'* are also triploids. Arends<sup>1</sup> gives the same explanation for the improved varieties of 'Elatior' or *Be-*

*gonias x biemalis*.

1 — Arends, J. C. Somatic Chromosomes Numbers in 'Elatior' *Begonias*.

Mededelingen Landbouwhogeschool, Wageningen, Nederland 70 — 20 (1970).

2 — Doorenbos, J. and R. A. H. Legro. Breeding Gloire de Lorraine *Begonias*.

Mededelingen Landbouwhogeschool, Wageningen, Nederland 68 — 19 (1968).

3 — Legro, R. A. H. and Doorenbos. Chromosome Numbers in *Begonias*.

Neth. J. agric. Sci. **17**. (1969) 189-202.

4 — Sharma, A. K. Cytological Studies in *Begonias*.

La Cellule, Aug. 1957 — 58; 305-329.

5 — Zeilinga, A. E. Cytological Investigations of Hybrid Varieties of *Begonia Semperflorens*.

Euphytica **11**. (1969) 126-136.

(The above article is in reply to the Initial Set of Research Questions, compiled by Herb Warrick and sent to Branches and individuals as part of a Research Project of the Research Department directed by Mr. M. Carleton L'Hommedieu, Ed.)

## ADDENDUM

### Enzyme notes:

Place desired amount of material in container. Add just enough water to cover material. Combination of material and water should not exceed three quarters of the container.

Fermentation will be hastened if fruit is sliced and nuts are shelled. Pits can be used if desired.

**All questions concerning enzymes should be sent to the Research Director, M. Carleton L'Hommedieu, 370 Locust Avenue, Oakdale, Long Island, N.Y. 11769.**

Thelma O'Reilly, *Research Committee*

## NOTICE

Beginning September 14, 1971 the Knickerbocker Branch will meet on the 2nd Tuesday at 7:30 p.m. at the Horticultural Society of New York, Inc., 128 West 58th Street, New York, N.Y. 10019.

## BEGONIA BARTONEA

by Phyllis Wright, *North West Editor*

It does seem that a great many more folks are becoming interested in the miniature plants these days. There are many good reasons for this, they are always a conversation piece.

Most *Begonia* growers love the large cane type but here in the northwest, we just do not have the space to grow them. I found one that is just right for even the ordinary windowsill. It is *B. bartonea*. What a beautiful "baby" it is! It is especially lovely when grown in a terrarium. With the moist conditions the leaves are a shimmering silver color and it also blooms well. I find it grows too tall for me and must be cut back often. A small plant will completely fill a gallon jar in no time at all.

Grown as a pot plant (mine is in a 2½ inch pot), it is easy to keep small by letting it become root bound. The plant is kept well pinched and is turned every few days to keep it symmetrical. When I pinch my plant, I only take out a few tips at a time, then when these have filled out, a few more are removed. This keeps the plant from becoming leggy.

If you should plan to use this "jewel" of the cane family in a terrarium and you are going to use some other plant with it, be sure it is placed well toward the back of the container because it does grow rapidly and will reach the top in no time.

It is very easy to start from either a cutting or a leaf with a little of the petiole left on it. I have had leaves fall off of the plant in the terrarium and they rooted on top of the soil with just the moisture in the terrarium. It likes a rich porous soil. I use sterilized leaf-mold and add just a little sand to it. It also likes plenty of water but not wet feet. The plant needs a small inconspicuous stake.

*Begonia bartonea* has small green and silver pointed leaves. These measure 3 to 3½ inches long and about 1½ inches wide. They are born on tiny cane like stems. The very small delicate pink flowers bloom in clusters well above the foliage and it blooms constantly. Try this little one and you will love it as I do.

## BOOK REVIEW

Fluorescent Light Gardening by Elaine C. Cherry and published by D. Van Nostrand Company, Inc., Princeton, New Jersey is a comprehensive book on all you want to know about gardening under lights. It discusses in great detail the equipment needed and where to buy it. The effect of the different types of bulbs on the growth of plants and the relative quantities of light emitted is charted for easy reference. It tells about the proper temperature, humidity, ventilation, culture, propagation and the type of plants most successfully grown under lights.

This is a must book for the amateur and experienced grower alike. Any book store should have it for sale, if not, they can order it for you. Ask for it at your local Public Library, they may have it on their shelves. Request the ABS Librarian for it; if it isn't in the Library she may want to add it to the Library.

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## IN MEMORIAM

Mr. and Mrs. W. Stark of the North Long Beach Branch were killed in an accident. Mr. Stark was Vice President and Mrs. Stark served as National Branch Representative. They will be missed by the Branch and their many friends.

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## SPECIAL EVENT

### SAN FRANCISCO FLOWER SHOW

The members of the various Begonia Societies are cordially invited to attend the

#### ANNUAL

#### FIESTA de las FLORES PREVIEW

"An Affair of Flowers"

to be held at the Hall of Flowers

GOLDEN GATE PARK

9th Avenue & Lincoln Way

Thursday, August 26, 1971

6:00 — 8:00 p.m.

Refrescos y Aperitivos

\$3.50 Donation

# TERRARIUMS FOR BEGONIAS

by Mae Blanton, *Mesquite, Texas*

## Care of terrariums:

Do not place where sun can shine on terrariums unless it is an uncovered one. Many directions say to keep the excess moisture wiped from the glass inside. I do not do this unless I want to remove some of the water from the growing media. I prefer to give them a little more air by tipping the top to one side or even removing it for thirty minutes or so. If you do put your hands or a cloth into your terrarium, be sure they are spotlessly clean before you do so, so that you will not accidentally introduce rot or insects.

When soil looks dry on top, give plants a light sprinkling of water and wait a day or so before adding more if they need it. A closed container seldom needs water although a well ventilated one may dry out more quickly.

## Landscaping hints:

Place larger rocks at back with potting mix mounded up higher for a contoured "mountain" effect. Smaller rocks in front of larger ones can be placed to give a cascade or "Waterfall" effect. Have growing media low and shallow at front of container. If in a round bowl to be viewed from all sides, place mound in center or slightly off center with low areas next to the glass. Plant taller plants at back, lower growing ones in front. Rocks of all one color or blending closely are better than mixing different colored rocks or those of very different structures and textures. Have strata of rocks placed as they would be found in natural formations. Colors of rocks can be matched to colors of *Begonia* leaves to accent the *Begonias*. Black rocks are lovely with *B. bowerae nigramarga*. Rocks with pink hues compliment the silvery rose color of some of the miniature rexes. The combinations are endless.

Shells make delightful additions to such a miniature landscape. If recently collected from the beach, soak and wash them thoroughly several times to remove the salt of the sea from them before using. They are easily placed down the side of your "mountain" to give a graduated pool effect. A large one nestled in the potting mix with baby tears around it can

make a lovely pool, if kept filled with water. A large terrarium with such a pool could even accomodate a small lizard if you keep him fed after he eats up any bugs accidentally introduced on plants. I like to keep a baby spider in mine to eat gnats and other tiny things that are prone to hatch in warm, moist humus in the potting mix.

Green sheet moss can be placed with green side next to the glass to hide the potting mixes at front and sides. A piece of natural cork available at some florists, or a piece of flat driftwood also gives a pleasing effect when used for this purpose. A small piece of wood with mosses and lichen growing on it may be used to simulate a very natural looking log. Let your imagination bring out the artist in you. You can create a living growing picture in three dimensions. A little judicious pinching and pruning now and then can keep it that way.

Its fun and exciting . . . a new way to enjoy your smaller *Begonias*. Put them in a jewel case and admire them often, gems in your own miniature "Garden of Eden".

## Plants for tropical terrariums as companions for *Begonias*:

### Miniatures\*:

Bromeliads*	Selaginella	Mosses
Ferns*	Maranta	Small Aralias
Gesneriada*	Fittonia	Liverworts
Orchids*	Pileas	Sundews
Peperomias*	Helxine	Cryptanthus
Baby Ferns	(baby tears)	

## Most miniature *Begonias* such as:

<i>B. bowerae nigramarga</i>	<i>B. bartonea</i>
<i>B. 'Emerald Jewel'</i>	<i>B. Griffithii</i>
<i>B. 'Silver Jewel'</i>	<i>B. imperialis</i>
<i>B. ficicola</i>	<i>B. pustulata</i>
<i>B. hydrocotylifolia</i>	<i>B. rotundifolia</i>
<i>B. metachroa</i>	<i>B. undisylvestris</i>
<i>B. nurii</i>	<i>B. 'Zee Bowman'</i>
<i>B. 'Skeezar' group</i>	<i>B. rajah</i>
<i>B. violafolia</i>	<i>B. rc 'Baby Rainbow'</i>
<i>B. rc 'Granny'</i>	<i>B. rc 'Louise Closson'</i>
<i>B. rc 'Calico'</i>	<i>B. rc 'Lucy Closson'</i>

Young rexes from cuttings or seedlings for a time until they outgrow allotted space.

**Conclusion**  
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## CLAYTON M. KELLY SEED FUND



*B. platanifolia*

*B. Platanifolia*

Photo by J. Doorenbos

### No. 1 — Rex — American hybrids

From a collection of fine rexes which includes all of the popular colors and brilliant leaf patterns both spiral and plain leaf. Price \$1.00 per pkt.

**Please note:** The following seed are carried over from the June "Begonian". There are great many of them so do yourself a favor and try growing these beautiful species. They are as follows:

### No. 2 — *B. solanthera* A. DC.

Trailing stems, smooth, oval leaves, very floriferous in winter. White flowers with a crimson center, choice. Price \$1.00 per pkt. (See cover picture)

### No 3 — *B. plebeja*

Rhizomatous species. Leaves green with black markings. Small white flowers in winter. (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 giant among the Indian species. Price \$1.00 per pkt.

### No. 5 — *plantanifolia*

Schott

Often confused with *B. aconitifolia*. (See photo) 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 name of *B. rubro-venia*

which is incorrect. Price \$1.00 per pkt.

### No. 7 — *B. odorata* Brazil

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

**Correction:** The proper spelling for *Begonia* No. 2 in the June "Begonian" should be *B. pavonina*.

**Note:** We offer the following Multiflora type *Begonias* and if seed is sown early they will start flowering within 4 or 5 months. They are invaluable for bedding and for pots, low growing, do not require staking and will take much more sun than the large type.

**B. 'Mrs. Helen Harms'** — Double canary-yellow flowers produced in great abundance on dwarf bushy plants. Sun proof and beautiful. Price 50¢ per pkt.

**B. 'Tasso'** — (double) A F<sub>1</sub> hybrid, heat and sun resistant, all double, medium sized, deep blood red flowers produced freely on dwarf bush plants. Price 50¢ per pkt.

**B. 'Nana'** — Double mixed. Medium sized double flowers in many colors, freely produced on dwarf bush plants. Price 50¢ per pkt,

**Please note:** The Bromeliad seed did not arrive from Germany in time to be listed by name, however, if you wish them the name and short description will be included with your request. There will be 4 different kinds, all named varieties at 50¢ per pkt.

#### Greenhouse plants:

*Smithiantha (Naegelia zebrina)* 'Success' — Often called Temple Bells. Fiery vermilion red, long bell-shaped, golden throat with red dots. Dark green mottled leaves have a very decorative effect. Grow the same as Gloxinias (Gesneriad). Price 50¢ per pkt.

*Crossandra infundbuliformis* — Valuable pot plant with large orange-salmon flowers and glossy Gardenia-like foliage. Germinates best at temperatures from 70-80 degrees heat, requires about 3 or 4 weeks. Do not shade the seed pan; artificial light is recommended for germination. Needs rich well drained soil and a warm location to flower. 5 seeds for 50¢.

*Pelleae rotundifolia* — Small growing terrarium fern with graceful fronds consisting of round leaflets. Price 50¢ per pkt.

*Pteris argyrea* (Silver fern) — Easy to grow, attractive silver; terrarium fern. Price 50¢ per pkt.

*Streptocarpus* — Wiesmoor hybrids (Cape Primrose). New hybrids present something exceptional, the noble blooms rich in their forms and colors resemble orchids.

Exceptional in pots and excellent for cutting. Price 50¢ per pkt.

*Cordyline* — Mixed colors (also called Hawaiian Ti-Plant). Seeds came directly from Hawaiian Islands and are beautifully cleaned. Tropical foliage plant widely used as house or greenhouse plants. Leaves long and sword-shaped, or broader, wholly without teeth or prickles, in some the tips gracefully arching. Colors are red, pink and white, with green. Requires from 3 to 4 weeks to germinate and plants should have ample light if grown indoors. Price 50¢ per pkt.

Please send request for seed to:

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

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#### NOTICE!

Reservations at Motels or Hotels will be made for out of town guests planning to attend the Convention and Show September 4th and 5th. Please write to Mrs. Martha Rader, 10934 E. Flory St., Whittier, California 90606  
(Special rates only if made with Martha Rader)

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Plants to be entered in the show will be accepted:

September 2nd from 10 a.m. to 10 p.m.  
September 3rd from 7 a.m. to 9 a.m.

Pioneer High School, Whittier is the place; September 4th and 5th are the dates for the 39th Annual ABS Begonia Show.

#### GARDEN TOUR

Whittier gardens will be on parade Sunday, September 5th. Transportation will be furnished. Meet at Pioneer High School at 10:00 a.m.

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

# THIRTY-NINTH ANNUAL BEGONIA SHOW

in conjunction with the

## 1971 AMERICAN BEGONIA SOCIETY CONVENTION

SEPTEMBER 4th and 5th, 1971

PIONEER HIGH SCHOOL

(Boy's Gymnasium) \* Whittier, California

Just off the 605 Freeway on Pioneer Blvd.

Going North — Slauson Avenue off ramp

Going South — Washington Boulevard East off ramp

### PROGRAM

#### Thursday, September 2

10:00 a.m.—10:00 p.m. Preparation of displays.  
Begonia Show entries accepted.

#### Friday, September 3

7:00—9:00 a.m. Begonia Show entries accepted.  
(no entries will be accepted after 9:00 a.m.)

9:00 a.m. Judges and Clerks coffee in the Boy's Gym.

10:00 a.m. Judging (no one allowed in the gymnasium without permission of the Show Chairman).

1:00—1:30 p.m. Judges, Clerks and Display personnel luncheon, hosted by the Whittier Branch — Cafeteria.

4:00—6:00 p.m. Preview for members — refreshments.

#### Saturday, September 4

9:00 a.m.—6:00 p.m. SHOW OPEN TO THE PUBLIC

10:00—12 a.m. Seminars (2) directed by Mrs. Pearl Benell, cafeteria.

1:30—4:00 p.m. Annual Meeting — open to all members, cafeteria.

6:00—7:00 p.m. Social Hour — Glow Room — Elks Club, 13620 East Whittier Blvd., Whittier, California.

7:00 p.m. Convention Banquet — Elks Club  
Jack Golding, Speaker — Menu, sliced Sirloin of Beef — \$5.00 per person — order tickets from Pearl Benell, 10331 South Colima Road, Whittier, California 90604 or Everett Wright, 838 B. N. Market Street, Inglewood, California 90302.

#### Sunday, September 5

10:00 a.m.—12:30 p.m. Garden Tour — Meet at Pioneer High School. Transportation Furnished.

10:00 a.m.—5:00 p.m. SHOW OPEN TO THE PUBLIC

2:00—4:00 p.m. Seminars (2) directed by Mrs. Pearl Benell.

5:00 p.m. Major Prize Drawing.

6:00 p.m. till? All entries removed during this time.

**EVERYONE WELCOME \* NO ADMISSION CHARGE \* FREE PARKING**

**PLEASE PLAN TO ATTEND**  
the  
**SIXTH ANNUAL EASTERN BEGONIA CONVENTION AND BEGONIA SHOW**  
*Hosted by the Buxton Branch of the American Begonia Society*  
at the  
**SHERATON MOTOR INN**  
near Highway 128, Lexington, Massachusetts

**PROGRAM**

**Thursday, October 7, 1971**

- 3:00-9:30 p.m. Colonial Room - Enter *Begonias* for the Show and competition.
- 5:00-9:00 p.m. Outside of Colonial Room - Registration

**Friday, October 8, 1971**

- 8:00-9:30 a.m. Outside of Ballroom - Registration.
- 8:00-9:30 a.m. Colonial Room - Enter *Begonias* for the Show and competition.
- 9:30 a.m. Ballroom - Talk by Mrs. Elda Haring, "Growing Begonias from Seed".
- 10:30 a.m. Ballroom - Workshop led by Mr. M. Carleton L'Hommedieu on the "Propagation of Begonias".
- 12:30 p.m. Ballroom - Luncheon - Official Welcome - Fred A. Barkley.
- 2:00 p.m. Ballroom - Talk by Mr. Carleton M. L'Hommedieu on the "Research Department of the American Begonia Society".
- 3:00 p.m. Colonial Room - Official opening of the Begonia Show.
- 6:00 p.m. Ballroom - Fellowship and cocktail hour.
- 7:00 p.m. Ballroom - Supper - Introduction of guests.
- 8:30 p.m. Ballroom - Talk by Dr. Lyman B. Smith on "Problems in Begonia Classification".

**Saturday, October 9, 1971**

- 8:00-9:00 a.m. Outside of Ballroom - Registration.
- 9:00 a.m. Trip by bus to Wellesley College - Mr. Joe Jennings, host.
- 10:30 a.m. Wellesley College - Talk by Dr. Harriet Creighton on "Abnormal and Anomalous Growths on the Epidermis of Begonias".
- 11:30 a.m. Wellesley College - Workshop by Mr. Jack Golding on "Light Gardens".
- 1:00 p.m. Trip by bus to Northeastern University Greenhouse and Botanical Institute - Mr. Eugene Courtney, host.
- 1:30 p.m. Northeastern University Greenhouse - Box lunches.
- 2:15 p.m. Northeastern University Greenhouse - Talk by Mrs. Logee Martin on "Kinds and Culture of Rex Begonias".
- 3:00 p.m. Northeastern University Greenhouse - Talk by Mr. Rudolf Ziesennehenne on "Recent Introductions of Begonias".
- 3:00-6:00 p.m. Colonial Room - Begonia Show
- 6:00 p.m. Ballroom - Social Hour
- 7:00 p.m. Ballroom - Banquet - Introduction of Buxton Branch Members.
- 8:15 p.m. Ballroom - Awarding of Trophies - Mrs. Raymond C. Cronin.
- 8:45 p.m. Ballroom - Talk by Mrs. Belva N. Kusler on "Adventures in Begonia Hybridizing".
- 11:00 p.m. Ballroom - Official close of Convention - Fred A. Barkley.

For complete information, including registration and reservation forms, show schedule and entry forms, write to: Mrs. Marvin O. Campbell, 37 Moore Rd., Wayland, Mass. 01778.

## ROUND ROBIN NOTES

Robins are flying amid the heat of summer; they are full of new tries at crossing, new seedlings developing and many very interesting things. New members are needed for an all male flight and a new International flight to be formed by fall.

### Florida flight:

Members are exchanging photos of their plants and especially enjoying the benefit of Patt Schumacher's pictures made by her husband "Sparky", a free lance photographer.

### Seed germination:

Lillian Bergeron of Louisiana, reported germination on: *B. deliciosa* (7 days), *B. corallina* (6 days), *B. 'Kalla King'* (7 days), *B. richardsiana* x *B. dregei* (15 days).

### Propagation:

Yvonne Wells, Texas, reports the rooting of the following leaves with plantlets: *B. staudtii*, *B. 'Rudy'*, *B. serratipetala*, *B. versicolor*, *B. quadrialata*, *B. cathayana* and *B. griffithii*.

### B. versicolor:

Yvonne reports that she could not get *B. versicolor* to accept any pollen but its own, the female flowers fell while still green. She tried four times with *B. herbacea* (spotted), *B. bartonea*, *B. subnummularifolia*, and *B. johnstonii*.

### B. Nurii:

Yvonne and Mae Blanton were comparing their plants of *B. nurii* and find them so different, yet they were both acquired from the same source.

### Growing Begonias in bowls or terrariums:

A new flight on this subject was launched and made rounds. It has some very interesting finds in it. The members are compiling a list of *Begonias* they are growing and must be grown in an enclosed areas. *Begonias* that will grow in a covered container is also being discussed.

### Growing mounted Begonias:

Another new flight was launched to meet the request for this interesting aspect of growing *Begonias*. Some members are growing on rocks, on boards, on tree bark, in tree crotches and in wall pockets. A list was compiled on epiphyte *Begonias* and it is being shared.

### B. serratipetala:

Jim Bleakley, Australia, reported he had *B. serratipetala* covered with male and female bloom but seed did not germinate.

### In a bowl:

Yvonne reported *B. 'Victoria Kartack'* had bloomed all winter in a covered bubble bowl in a south window in her home. It started blooming about a month after the leaf put up plantlets. She has the bowl covered with Handi-wrap. She has *B. bartonea*, *B. imperialia smaragdina*, *B. violaeifolia* and a duffin (?) fern growing in there too.

The hybridizing flights are studying inherited traits, chromosome numbers and their effect on offsprings, sterility in species, bloom time and its effect by hours of light and much more. If you want to be a part of these flights, write to:

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

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## NOTICE

While attending the Eastern Convention and Show October 8th and 9th, 1971, leave time to visit the many places of interest in the Boston area. At the Convention, Mrs. Nancy Alvord will have complete information about them. The autumn colors will be at their height in the Boston area. Don't miss them!

# OBSERVATION UPON THE STRUCTURE OF BEGONIACEAE

reviewed by R. Zieshenne, *Nomenclature Director*

“Bemerkung über den Bau der Begoniaceen”, translated, “Observation upon the Structure of Begoniaceae”, a paper written by Dr. H. F. Neubaure of the Botanical Institute of the Justin Liebig-University, Giessen, Germany, which appeared in *Deutschen Botanischen Gesellschaft* 1967, Volume 80, number 2, pages 80-97, explains why some *Begonias* grow easier than others under particular growing conditions.

I The first division of the article deals with *Begonia* leaves which Dr. Neubaure states, “because of their very thick upper epidermis, have all the stomata (breathing pores) on the underside of the leaf.”

**#1. Epidermis and hypoderma:** (hypoderma, water storing tissue between the epidermis and the parenchyma layer) and epidermis of 122 different *Begonias* were examined and the findings are listed in the first table together with the number of stomata in a group, the number of hypodermal cell layers on the top as well as on the underside of the leaf, leaf thickness, hypoderma about or over 50 microns in thickness, and hypoderma lacking with epidermis about or more than 50 microns in thickness.

In this listing the author states 52.5% of the *Begonias* lacked the hypoderma of the 64 species examined, 60 had water storage facilities in the epidermis over 50 microns in thickness. Examples of these are *Begonia tomentosa* with the upper epidermis 320 to 350 microns thick, and the under epidermis 160 to 190 microns thick; *B. schmidtiana* upper surface 255 to 263 microns thick while the underside was 178 to 208 microns thick.

Only six species without hypoderma had relatively thin epidermis with *B. sutherlandii* having a thickness of 16 to 22 microns on the upper surface. Only 46% of all the plants had hypoderma present. Of these 26% had the hypoderma only on the upper surface. Fourteen percent had several layers of hypoderma on both surfaces. Half of the plants had the same number of layers of cells in the hypoderma on each surface; the other half

had more hypoderma on the upper surface than the under surface.

**#2. Grouping of stomata:** The second table, which analyzes the distribution of the stomata on the lower surface of *Begonia* leaves, shows 56.5% of the *Begonias* had the stomata placed singly. In the other specimens stomata were found in groups of 2, 2 to 5, 2 to 10 and 10 to 20. Every leaf had some stomata produced singly.

**#3. Stomata on embryonic and primary leaves:** The author found that the cotyledons (seed leaves) and the first primary leaves had single stomata. As more leaves develop, the characteristic grouping of stomata for the species or variety of *Begonia* was produced.

**#4. The development of the guard cells in the stomata:** The guard cells of *B. isoptera* were examined because the stomata are produced singly and it lacks the hypodermal tissue thus presenting a simple subject.

II Observations on the leaf stem.

The number and arrangement of the vascular bundles and stone cells in the stem were discussed; also the fibers in the petioles.

III Observations on the anatomy of the *Begonia* stems.

The lenticles, stomata, and the various tissues are discussed. The author found air chambers on all the subterranean rhizomes and aerial stems examined.

This paper is the most recent one published, to the reviewer's knowledge, discussing the anatomy of *Begonia* plants and should be of interest to any serious *Begonia* student.

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## MARK YOUR CALENDAR

September 4th and 5th are the dates. Pioneer High School is the place in the Boy's Gymnasium for a week end of enjoyment planned just for you.

# A GLOSSARY OF TERMS FOR THE BEGONIST

by Fred A. Barkley, *Research Project*

In answer to a frequent question as to what terms one needs to speak correctly about the *Begoniaceae*, the answer must be that there are many concepts and terms concerned with the many facets of *Begonia* culture.

This is an attempt to give a brief survey of terminology of taxonomy and related fields consistent with the necessities of speaking correctly of the botany of the *Begonia*.

The classification of the *Begoniaceae*<sup>a</sup> is in the realm of TAXONOMY or the science of *classification*, while the name of *Begonia* is in the realm of NOMENCLATURE or the naming of organisms. This is rigidly controlled by international agreement<sup>b</sup>. The kinds of plants of any region constitutes the FLORA of that region. A flora is usually published as a *manual*, with keys for the determination of the plants<sup>c</sup>, their proper nomenclature, description, and notes of their distribution. A VEGETATION refers to a quantitative study of the plants of a region, the study of the interrelationship of the vegetation, the micro-organisms, animals, and physical environment, and constitutes a study of ecology. When a taxonomist studies intensively the species of a particular group and for a particular region, the resulting compilation of all the known information concerning these organisms (history, paleobotany, anatomy, keys<sup>c</sup> and descriptions), is published as a monographic study, a MONOGRAPH. MORPHOLOGY is the study of the shape and form of living organisms and how they grew to that form. PLANT ANATOMY, a special study of morphology, is the study of the internal structure of plants, and it may be either descriptive or developmental. CYTOLOGY is the study of cells, the ultimate structural unit of living organisms. GENETICS is the study of heredity, and is intimately related to the study of cytology<sup>d</sup>, especially reproductive cytology. CYTOLOGY is the study of cells, including chromosomes, the bodies carrying the genes or determiners of heredity. The growing of *Begonia* is in the field of HORTICULTURE, literally the cultiva-

tion of plants and on the one hand is applied plant physiology and on the other is the stimulus for physiological studies. *Botanical species* which are found growing in nature and those forms produced in cultivation (*horticultural varieties*) are named with different sets of rules.

In regards to the classification of organisms in general and of *Begonia* in particular, the **hierarchy** of mandatory CATEGORIES in classifications are six. Each grouping (always carrying a name) irrespective of rank or inclusiveness, is termed a **taxon** (plural **taxa**). Thus both DICOTYLEDONAE and BEGONIACEAE are taxa, although of different rank. It should be noted that the genus and species names are printed in *italics* or if written or typewritten are underlined (as they are considered to be Latin). Names of all *other* taxa are **not** italicized as they are considered to be in the language in which the article is written. The terms concerning the genus and species are of particular importance since they are most frequently used incorrectly. The singular of *species* is **species** when referring to a kind of living organism (the word *specie* refers *only* to hard monies!). The plural of *genus* is **genera**.

As to the hierarchy of a mandatory in classification, using the *Begonia* as an example, there are the following:

Kingdom<sup>1</sup> METAPHYTA (*Plantae*)  
Division<sup>2</sup> ANTHOPHYTA (*Angiospermae*,  
*Magnoliophyta*)  
Class DICOTYLEDONAE (*Magnoliatae*)  
Order<sup>3</sup> DATISCALES (*Begoniales*)  
Family<sup>4</sup> BEGONIACEAE  
Genus<sup>5</sup> *Begonia*  
Species<sup>6</sup> *Begonia davidsoniae* Standley ex  
Smith and Schubert

## Footnotes

a The history of *Begonia* taxonomy includes dozens of persons of great importance to that history. A few of these are:

F. Otto	F. Liebman
A. Dietrich	Prof. Oliver
J. Dryander	A. Engler
W. Aiton	O. Warburg

J. D. Hooker	E. Irmscher
J. F. Klotzsch	R. Ziesennehenne
A. DeCandolle	P. C. Standley
C. B. Clarke	E. D. Merrill
H. F. Link	A. C. Brade
N. J. Jacquin	L. M. Perry
D. C. L. Willdenow	L. B. Smith
C. L. l'Hertier	D. G. Schubert

**b** The international rules of botanical nomenclature are published as: J. Lanjaouw *et al.* *International Code of botanical Nomenclature*. International Bureau for Plant Taxonomy and Nomenclature, Utrecht, 1966.

**c** A key is a device whereby one may determine the identity of a particular taxon. The botanical terms are too many to include here. Such terms with illustrations may be found in numerous books. Since these terms do not change through time, many botanist go to the older texts to check their usage. Three of these are: Asa Gray, *Elements of Botany*, American Book Company, N. Y. 1887; A. Wood & O. R. Willis, *New American Botanist and Florist*. American Book Company, N. Y. 1889; E. A. Apgar & A. C. Apgar, *Apgar's Plant Analysis; adapted to Gray's Botany*, Ivison, Blakeman, Taylor & Company, N. Y. 1874.

**d** Like phytophysiology (plant physiology) cytology has become a very sophisticated science which now requires advanced knowledge in statistics, advanced mathematics, computer programming and the ultimate knowledge of biochemistry.

**1** There are by recent classifications five **kingdoms** accepted: **MONERA** (the blue-green algae, bacteria, and Rickettsia), **VIRA** (all are parasites, but parasitic on bacteria, vertebraes, insects, and plants), **PROTISTA** the higher algae, (slime molds, fungi, protozoa and sponges), **METAZOA** or *Animalia* (jellyfishes, worms, insects, vertabares, etc.) and **METAPHYTA** or *Plantae* (hepatics, mosses, club-mosses, horsetails, ferns and seed plants). (For bibliography see: F. A. Barkley, *Outline Classification of Organisms*, 1970.)

**2** **DIVISION** is used by botanist, unfortunately, while the more appropriate word used by microbiologists and zoologists for this hierarchy is **PHYLUM**.

**3** Among plants the **order** is composed

of the stem of a genus in the order, with the suffix-ales. With the families now composing the order, **Datiscales** being the first name published for them must be used, even though begonianist would prefer *Begoniales*.

**4** The name for a **family** of plants is composed of the stem of a genus in the family with the suffix of-*aceae* (or in the case of about ten long used family names there are allowable alternative names, as the Lamiaceae where the alternative name is Labiateae).

The **Tribe** is a category of classification which is not mandatory, but where a family is large (such as the Asteraceae, where it is convenient to divide the family into grouping of genera) such grouping is called tribes.

**5** The **genus** is a grouping of similar species. The latest classification of the *Begoniaceae* (Smith & Schubert) consolidates all of the species into three genera, *Hillebrandia*, *Symbegonia*, and *Begonia*. About 1850 there were several dozen genera recognized by some botanist. These, for the most part, now are considered optional divisions of the genus, called a **section**. A clear-cut and modern division of *Begonia* into sections is difficult to find, although most publications indicate what sections they consider each new species is to be affiliated with.

**6** The **species** name consists of three parts (1) the genus name, (2) the *species epithet*, and (3) the *authority*. The generic epithet is *always* written with an initial capital letter and is written in *italics*. The species name may always begin with a capital letter, although there are cases where it may be written with an initial capitol (but this is controlled by some complicated "rules". The species name is always written in *italics*. The author or authority is *not* italicized. It follows the species epithet **without** punctuation of any sort. It is the name of the person (or the names of the persons) who described the species, or if the species was originally placed in another genus or at a different rank, then the original authority is placed in parenthesis and is followed by the name of the persons placing it in its present combination.

In everyday parlance a species is a  
(Please Turn Page)

"kind" of plant, animal or microorganism. However, a species is a very difficult grouping to define in botanical practice. Theoretically it is a population of freely interbreeding individuals. In practice it would be more than rather difficult to prove the sexual isolation of the individuals of over a thousand species growing over most of the tropical world. Most taxonomist have to be satisfied with treating as a species a group of similar individuals which are separated by observable characteristics from other species, leaving the more precise studies experimentally to a few select individuals with facilities to pursue such detailed studies.

Where a group of individuals within a species differs consistently in two noticeable characteristics, it is often separated as a variety. This is a practical method, and does not coincide with theoretical criteria of varieties. The originally described members of the species are then automatically the "typical" variety.

When the members of a variety consistently differ from the other members of the variety, such as the difference of the color of flower, they are sometimes given a special name as a *form*. (This is not particularly desirable in most cases and is being used much less than previously.)

Where a new kind of plant is produced in horticulture by hybridization or other horticultural means, it is termed a *horticultural variety* and the name given to it is in a modern language. This varietal name follows a species name and is preceded by the expression "hort. var." The species name is italicized, but the horticultural variety name is **not** italicized.

7 These names given in parenthesis after the name of the taxa, are synonyms. They vary from undesirable to unusable due to the rules of nomenclature. For instance, while we would like to use "begoniales", we cannot for the group of families included in the order require the use of the oldest acceptable name, which in this case is Datiscales.

PLEASE NOTE: These are the most used terms, with the concepts and usage that accompanies them — in a most abbreviated form. They should serve the practicing begonianist well. However, they do not

cover many of the rarer exceptions nor do they cover all of the terminology of botany. For most of these, there are many general works giving complete terminology. (See footnote c.)

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## Condensed Minutes of the Board of Directors of the American Begonia Society June 28, 1971

The meeting was called to order with President Pearl Benell presiding. After opening ceremonies, 11 officers and 9 Branch Representatives answered roll call. Minutes of May meeting approved as corrected.

**Correspondence:** An invitation was received from the Buxton Branch to hold a Board meeting in conjunction with the Eastern Convention in October. Discussion was favorable and the Board agreed that this would be desirable depending on the presence of a quorum of 15 members of the Board in accordance with the By Laws. It was agreed that this would be an excellent opportunity to hear the ideas and opinions of the Eastern Branches.

### REPORTS

**Treasurer:** Receipts \$866.56; disbursements \$1,119.38; balance on hand \$1,143.49.

**Advertising Manager:** Receipts \$69.95; unpaid accounts \$45.00.

**Editor:** Requested \$60.00 for 4 additional pages for the June magazine. Motion made and carried to approve.

**Judging Course Director:** Receipts \$49.75 from sale of courses, books etc., expenditures \$43.65.

**Librarian:** Reported \$184.09 on hand, receipts \$191.27, expenditures \$197.46. Reported effort to persuade publisher to reprint Brilmayer's "All About Begonias" or release the copyright to the ABS.

**Begonia Boat Editor:** Reported a suggestion by Prof. Barkley to hold the 1972 Convention and Show in the Missouri Botanical Gardens.

**Research Director:** Balance of \$722.52 in Research Fund.

**Seed Fund Director:** Receipts \$75.00, expenses \$25.00, net \$50.00.

**Show Chairman:** Tickets for Banquet printed and sent to Branches, Arrangements made with Motels, advertising planned. Motion carried to authorize the Treasurer to advance \$400.00 to the Show Treasurer for show expenses. Arrangements made to have plants on consignment from several sources to sell at the show.

The Branch Director of the North Long Beach Branch proposed a change in their By Laws and as it is not in conflict with the ABS By Laws, motion carried to approve.

Adv. Mgr. reported that the supply of stationery was low, authorized to check for prices.

After Branch reports, meeting adjourned at 10:00 p.m.

Respectfully submitted  
Irene Grannell, Secy.

*Palos Verdes*

**Begonia  
Farm**

4111 - 242nd St., Waleria, Calif. 90505

**TUBEROUS BEGONIAS**

COMPLETE SELECTION OF BEGONIAS  
AND SHADE PLANTS  
FUCHSIAS—CAMELLIAS—FERNS  
OPEN DAILY

*Complete Nursery & Garden Supply Shop  
1 1/2 Miles E. of Redondo Beach  
Hi-Way 101*



**AMERICAN  
BEGONIA SOCIETY**

INSIGNIA PINS . . . . . \$4.50  
EMBLEM STICKERS . . . . . 50  
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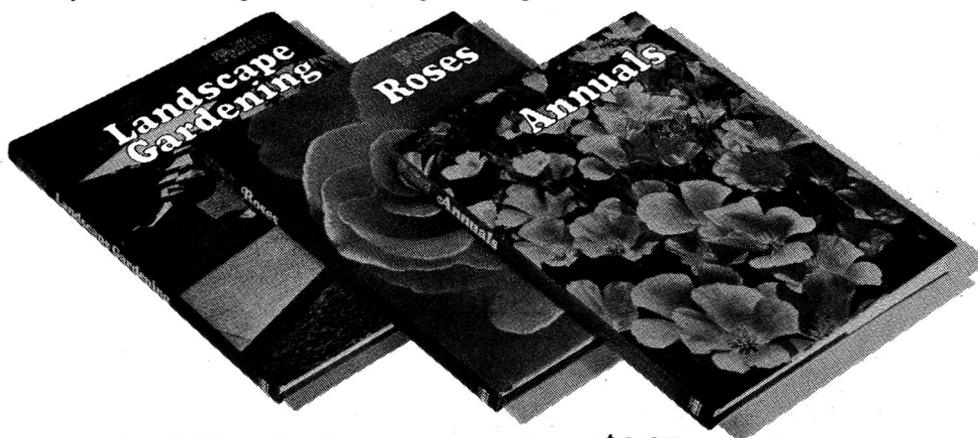
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Telegraph at Stuart, Berkeley, Calif.  
Charles Badcock, Secy.  
2325 Esmond, Richmond, Calif. 94804

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Grace Fisher, Secy.  
770 Monroe Ave. N.E., Renton, Wash. 98055

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1801 Azalea Drive, Alhambra, Calif. 91801

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3205 D Street, La Verne, Calif.  
Mr. Robert I. Wilson, Secy.  
1646 Charlinda St., West Covina, Calif. 91790

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610 63rd. Drive, Hialeah, Florida 33012

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Lighthouse and Dickman Sts., New Monterey, California  
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P.O. Box 527, Pebble Beach, Calif. 93953

## 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.  
Lions Club, Walnut St. and Garden Grove Blvd  
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4th Friday, 7:30 p.m.  
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Mrs. Juanita Spunaugle, Secy.  
4248 Mentone Ave., Culver City, Calif. 90230

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Dales Recreation Center  
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3rd Tuesday, 8:00 p.m., Garden Center  
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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

# CALENDAR

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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 McCooley, Secy.  
3043 Center Ave., Arcadia, Calif. 91006

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

## SANTA BARBARA BRANCH

2nd Thursday, 7:30 p.m.  
Santa Barbara Museum of Natural History  
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Mrs. Helen Yost, Secy.  
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3rd Tuesday, 7:45 p.m., Loyal Heights Field House  
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Miss Anne Rose, Secy.  
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4th Tuesday, Noon Homes of Members  
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**August 13** — San Gabriel Valley Branch, 7:45 p.m. Speaker, Mr. Cliff Ebeling: "Fuchsias That Will Grow in the San Gabriel Valley".

**August 15** — Seattle Branch, 1:00 p.m. Annual Picnic — Langrell Home — 9257 29th S. W.

**August 23** — ABS Board; South Gate City Auditorium, 4900 Southern Ave., South Gate, California. Meetings are always open to members.

**September 9** — Westchester Branch, 6:30 p.m. POT LUCK, meeting 7:30 p.m. Speaker; Mr. Rudy Ziesenhenne.

Notice: This meeting will be on the 2nd Thursday only.

Is this space where your Branch meeting notice should have appeared? This space is not reserved for Western Branches only! It is for all the Branches.

Please send in the date, the Branch, the time, the speaker and the topic to the Editor.

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