The BEGONIAN

Devoted to the Sheltered Gardens

BEGONIA
LOMA ALTA

Photographed by
Dr. W. C. Drummond

☆

November
1948

☆

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Branch Secretaries write to Roy K. Dere for A. B. S. stationery.

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The next meeting of the American Begonia Society Board will be held in the Los Angeles City Hall, Room 55, 7:30 p. m., Monday, Nov. 22, 1948. Park Lower Garage South Entrance on Main.

OVER THE EDITOR'S DESK

"If you only knew how much we of the middle west depend on you and the Begonian to enlarge our vision! Our climate may not be ideal for begonias, but we work and win out against many difficulties and we think you are doing a swell pob," writes Mrs. H. P. of Manhatten, Kansas.

"You are doing a real job with our Begonian and I also like color on the cover," writes W. T. P. of Tyler, Texas.

"I am a comparatively new member of the A. B. S. I cannot understand why I did not join years ago. I would like to purchase all back issues available, as I am delighted with the Begonian and the Bulletins. May I make a suggestion as to an easy method of sowing fine seeds, rather than mixing them with sand, road dust, etc., use salt or pepper shakers. By sharpening an ice pick on the grindstone, one may make each cap have different sized holes. Then the seeds may be placed in the shaker with the suitable size holes for sowing evenly. These shakers may be labeled as to size of seed to be sown and the labels may be covered with clear nail polish, which protects them from dampness. These are a good addition to your regular garden equipment." J. P. T., Hot Springs, Ark.

"IF YOU CAN GROW BEGONIAS, YOU CAN GROW ORCHIDS"

By Hank and Dorothy Fricker, Rosemead, California

This is the statement we make in answer to the questions of the increasing number of begonia lovers who are fast becoming interested in the hardy, outdoor orchids.

Here in Southern California, hardy orchids may be grown outdoors under the same conditions and with the same care you give to your begonias. In colder climates they may of course be grown under glass.

Following are a number of questions most often asked us about the outdoor orchids.

How Many Kinds of Orchids Are There?

All orchids may be divided into two groups; terrestials, that grow in the ground, and epiphytes, that grow in the air. Popular among the terrestials are the cymbidium, whose sprays of flowers will last for many weeks; cypripediums—known as the Lady Slipper orchids; sobralias; and of course the common Epidendrum O'Brienienum. Best known of the epiphytes in the hardy outdoor orchids are members of the Laelia family, whose flowers range from two to eight inches in diameter, and in colors from pure white through shades of rose and orchid.

Where and How Should the Outdoor Orchids Be Planted?

Under lath; in shade gardens; or under trees where they receive filtered sun or where they may have a few hours early morning or late afternoon sun.

The terrestrials should be planted in the ground or in pots and the epiphytes in pots, baskets, on pieces of bark, driftwood, tree stumps, or the limbs of living trees.

What Potting Mixtures Are Required?

The ground orchids like a well drained soil mixture containing leaf mold, pea gravel and cold manure. The epiphytes in pots (which we do not recommend due to the danger of over watering) can be in Osmunda fibre, on rafts or bark, etc. The only potting mixture required is a pad of green moss.

How Much Water Do Plants Require?

Here is the place to use your common sense. If the plants are wet—don't water. If they are bone dry, water. In summer weather the epiphytes mounted "up" may be watered every day, as the water drains away rapidly. During the winter, twice and sometimes once a week is sufficient. During the winter try to water before noon on a sunny day. At this period of the year the plants are semi-dormant and need not be kept damp at all times. When it rains, of course you won't have to worry about watering.

Do the Outdoor Orchids Need Humidity?

Yes, all orchids like humidity. In dry hot weather it is beneficial to spray the leaves of the plants or water the paths or planting around them.

How Much Cold Can Plants Stand?

Certain varieties can stand more than others. Many kinds can stand occasional light frosts. Others should be protected if there is danger of heavy frost. When buying outdoor orchids —always buy varieties that may be grown in your district.

Are the Plants Susceptible to Insects?

Very few pests bother the outdoor orchid. Only infrequently is it necessary to spray with a weak solution of nicotine sulphate for aphids —which sometimes attack the tender growth of the flower spikes.

May Plants Be Divided?

Yes; in three years time most plants will double in size.

When Do the Hardy Orchids Flower?

Each variety has its flowering season and it is possible by proper selection, to have plants in bloom throughout the year. For a year-round collection we recommend the cymbidiums, sobralias, and cypripediums for ground orchids, and members of the Laelia family for the epiphytes.

Following is a brief description of some of the best varieties of hardy outdoor orchids:

Laelia Anceps: Flowers from 4 to 5 inches in diameter, 1 to 5 flowers per spike, petals and sepals orchid color, throat yellow penciled in burgundy, lip a rich purple—winter blooming.

Laelia Grandiflora: Very large rosy orchid flowers, 5 to 8 inches, 1 to 3 per spike, late spring bloomer.

Laelia Autumnalis: Flowers 4 to 5 inches in diameter, rose orchid color, 2 to 7 blooms per spike, autumn bloomer.

Laelia Albida: Long lasting white flowers 2 inches in size, 1 to 7 flowers per spike, lip rose flushed, blooms in winter.

Laelia Gouldiana: Flowers to 5 inches in diameter, 2 to 7 per spike, rose purple with a dark lip, winter bloomer.

Laelia Purpuracea: Flowers 4 to 5 inches in size, light rose purple, autumn bloomer.

These varieties will stand light frosts for short periods; on extremely cold nights it is well to protect by placing on porch or in garage, or suspending cover above them.

Epidendrum Marie Ames: Flowers to 3 inches in diameter, 1 to 3 flowers per spike, petals a rich green, large snow white ruffled

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BEGONIA LOMA ALTA

By Sylvia B. Leatherman, El Monte, Calif.

The giant of the hirsute group and not too well known is Begonia loma alta. Begonia collectors often overlook this begonia and I think it is due to the fact they know little about the plant. It is my choice of one of the aristocrats and one of the most handsome begonias that we have.

Loma alta is a fast grower. The leaves are large, many times being 1 foot long and 7 inches wide. They are dark green above and dark red underneath with small white hairs on both sides of the leaf. The basal lobes of the leaves overlap, rounded at the top and come to a sharp point. The new leaves are puckered and cupped and as they develop they flatten out. The stems of the plant are thick and are strong enough with staking, to carry the weight of the plant. The flowers are large, white, and are covered with rose-pink hairs. They are borne on long arching dark red stems in large clusters. Being one of the colored leaved begonias it resents too much sun. You can readily tell if your plant is getting too much sun as the leaves are a drab yellowish color instead of the dark green. The leaves are thick and do not burn as readily as many of the other begonias so this is the best rule to follow. Begonias will take more sun at various times of the year. In summer when the sun is hot they naturally will not tolerate as much of the bright rays as in winter when they appreciate the benefits of the sun. It is a *scharffiana* seedling grown by Mrs. E. M. Fewkes of San Diego, Calif., in 1935.

Most people think of Begonia loma alta as a tall, leggy plant that will not branch. I think because of the rapid growth many are inclined to feel the plant will go straight up and be spindly and unattractive. With the proper pinching and pruning it will be beautiful and attractive at all times. Note picture and you will see side shoots starting to develop at the leaf nodes. Pinching the top out of this plant will encourage these side shoots to grow. When the side branches have reached a height of about one foot, again pinch the tops out and then when you have other side shoots develop and grow, pinch various ones where there is a bare space on your plant. Pinching some of the branches at different intervals in the bare spaces will fill your plant out. By this process of pinching, the nourishment that would be taken to grow the top of your plant, is then distributed to the side growth. As the plant grows, base stems will grow from the roots and in time there will be many canes directly from the roots. We have large plants that are twelve inches in diameter at the soil surface. We never cut these plants back severely, all at *one time.* They are apt to bleed to death. Pruning and shaping your plant, as it grows, is always the best with most begonias.

New plants are propagated by three eye tip cuttings. (See previous *Begonians* for cutting instructions and soil requirements). We have also grown plants from leaves of the fibrous begonias. This is a long slow process but very interesting and I shall tell of this at another time.

THE VOLATILE VIOLET

By Helen Stewart Knaus, Miami, Fla.

The African violet, or Saintpaulia, which has mushroomed into such wide popularity as a house plant bears slight resemblance to the modest garden violet, is neither shy nor shrinking and is colorful, gay and exotic. It is flamboyantly lovely and is really not a violet at all.

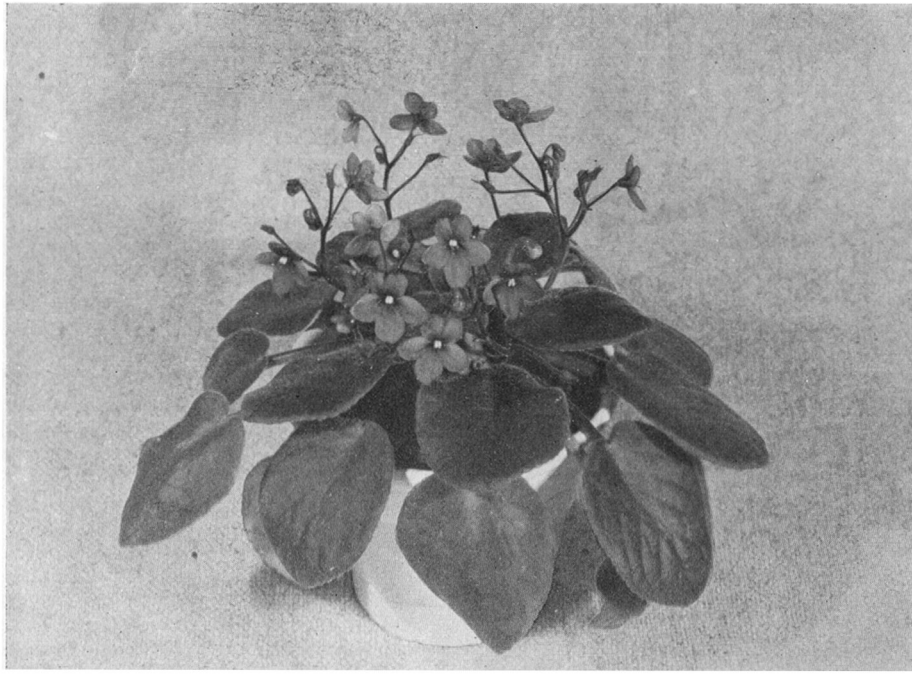
Saintpaulia ioantha is a member of a tropical and semi-tropical perennial family with a jaw-breaking name used only in botanical collections. Baron Walter Von St. Paul, for whom the plant is named, discovered it in East Africa in 1890. Seeds were sent to England and plants were developed there in the Royal Gardens in 1893. A few years later plants were brought to this country.

American florists learned of the Saintpaulia's propensity to blossom frequently and so they began to feature it as Christmas and Easter plants. However the violet was slow to find favor in the beginning as it was considered temperamental. There was a dearth of knowledge concerning its cultivation and consequently there arose many conflicting theories about it. Many lovers of the plant became confused and threw up their hands, mentally resigning the Saintpaulia to oblivion.

Since then much progress has been made but horticulturists are not yet entirely united in their theories about the plant. Opinions about soil, sunlight and feeding are still at variance. Water temperature is a moot point. An interesting and unusual fact is that widely different methods have had equally satisfactory results in many instances.

I have found that the African violet is easy to cultivate. It has proven its adaptability for me by retaining its vigor for a long time in an over-heated room.

I get best results from feeding lightly every two or three weeks with Gardenia Manna, very minute specks. I examine the plants carefully before watering as I like to have them well dried out. Then I use cool water and pour it



SAINTPAULIA—Courtesy Mrs. C. Harris

in the top of the pot. If any moisture gets on the leaves it soon evaporates without harm to the plant.

At times a healthy looking plant will refuse to bloom. If they mope too long I set the pot in quite warm water for about thirty minutes each day for several days. This usually brings good results.

Occasionally a plant will take on a limp, dispirited appearance. If repotting in a fresh mixture of sand and peat moss, with a little rich earth, fails to restore them, I get satisfactory results by placing them out of doors and directly on the ground. I choose some spot where the shrubbery is dense enough to shield them from too much direct sunlight and I let them soak up the rain and the dew and fresh air. They derive some nourishment from mother nature for very soon the leaves take on a green crispness and the plants are on their way back to health and beauty. Such treatment is not recommended for cold climates of course. The Saintpaulia is tropical and semi-tropical, therefore it does not take to brisk temperature.

Propagation of the African violet is simple. A healthy, mature leaf placed in about one-fourth depth of soil will begin to send out tiny shoots in about nine weeks. When developed enough to be transplanted, the young plant can be carefully separated from the "mother leaf" and placed in rich potting soil. The leaf can then be used to produce another Saintpaulia.

Notwithstanding its reputation as a potted prima donna the Saintpaulia continues to gain in public favor. Indicative of this is the record of the African Violet show which was held in Atlanta, Georiga, last fall.

A small group of African Violet growers planned the show, but the results were overwhelming. The place was swamped with over ten thousand visitors from fifteen states. Finally the police had to be called in to keep the traffic moving. This show proved to be the nucleus of the recently formed African Violet Society of America.

I can think of one very good reason for the enthsuiastic number of African Violet fans. It is the sheer beauty of the plant. The leaves are handsome, large and crispy green. The blossoms are dainty, yet brillant and lovely as a jewel.

There are a number of varieties of the plant but they have not yet been fully systemized. Some of the better known ones are the Blue Girl, Blue Boy, White Lady, Pink Beauty and the Trilby. The Trilby is perhaps the most glamorous of them all as it flowers into a luscious orchid shade.

When my flock of Saintpaulias flaunt their loveliness in bloom I am abundantly recompensed for any care involved in their cultivation.

Editor's note, it must be remembered the above cultural advice is for those living in comparable climatic conditions, to Florida.

FUNGUS AND OTHER DISEASES OF BEGONIAS

By D. Jerome Hunter, Rosecroft Begonia Gardens

To all of us the appearance and well being of our Begonias are of the greatest importance. In addition to the disorders caused by nutritional deficiencies there are some diseases caused by fungi and bacteria which are of importance.

Begoniaceae is a tropical and subtropical family. They grow in the warm humid atmosphere and acid soils of these climatic zones. In order for us to successfully grow the members of this family, we must provide as nearly as possible, the conditions prevailing at their nativity. Their culture depending on prevailing climate in either greenhouse, lath house or of shaded locations in the garden.

Many conditions which prevail in glasshouses and some lath houses are conducive to plant disease. We find where disease is present the following conditions prevail: High temperatures (75-85 degrees F.) associated with high relative humidity, poor ventilation, over watering, poor light and poor drainage. The slowing of growth by insufficient nutrients, or the over feeding could also be a factor in the cause of disease. It should be understood then, that if begonias are grown under favorable conditions that the plant will present better resistance to disease.

Fortunately the begonia is not too susceptible to disease. The organisms responsible for the stem rot of tuberous and other begonias is commonly known to cause 'damping off.' These organisms are favored by the same growth conditions as above mentioned. In addition to above, if one has started tubers too close together and they are kept too wet, disease may spread havoc.

The early symptoms usually are light watersoaked lesions on the lower part of the stem. This infection begins at the basal portion of the stem and works upward, staining and blackening the stem as it proceeds. In advanced cases it causes the stem to collapse. As it proceeds upward it infects the petioles and the veins of the leaves causing them to weaken and later collapse. Apparently the disease does not infect the roots or tuber.

If overhead watering is used the petals may become infected. Later a gray mold may infect the plant giving the lesion a gray appearance. However this is not indicative of the primary disease of the plant. Quite possibly the plant may have been injured allowing this secondary mold to infect.

Pythium ultimum intermedium lives in the soil and is favored by the same growing conditions in which begonias thrive. To a large extent it can be controlled by the following methods: Before planting tuberous begonias or other begonias, sterilize the soil, pots or flats with either steam or chemicals such as formaldehyde or mercuric chloride. Allow for proper spacing and ventilation, avoid excessive irrigation especially overhead watering. Lastly, the following chemicals have been suggested for control ammonical copper carbonate as a spray, Semesan dust added to the soil and Dithane placed around each plant.

The Pythium disease of the fibrous begonia is very similar to the tuberous stem rot, except that it is a stem and crown disease and causing abcission of the leaves. This organism causes the characteristic water soaked lesions extending from the crown upward, with concentration at the node. This causes the lopping off of the stem at that point. Plants are more susceptible after the autumn rains and during the winter when the weather is cold and the growth of the plant is slowed down. These attacks and symptoms also may be quite serious on the propagation bench. P. Debaruanum, P. Spleindons, and R. Ultimum, can be controlled by soil sterilization, careful watering, preventing excessive soil moisture, followed by souring of the soil and by better ventilation. In the field, if the plants are kept on the dry side, the infection will be lessoned.

There are some diseases of begonias caused by bacteria. One of these is characterized by glossy spots on the underside of the leaf. The spots increase in size with concentrically yellow rings and at the same time become pale, watersoaked regions. They eventually turn black and cause the leaves to drop. Later the stem may become infected at the nodes causing the collapse of the plant. The usual damage is that of defoliation, which eventually leads to death due to starvation of the plant. Definite proof of the presence of the disease can be seen if a leaf is torn off at the node and then squeezed; if the disease is sufficiently advanced a yellow slime will exude. This disease is most serious during the summer months when the plants are subjected to high temperature and high humidities to promote growth. It is not possible to cure a plant once infected, the only control is the prevention of further spread of the infection. If the following precautions are exercised then minimum damage will result. Removal of all infected plants, use no cuttings from infected plants, lower the humidity and temperature, give better ventilation and cause no injury to the

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plant through which infection can enter. Along with this, eradicate all insect pests which may transmit disease. The disease organism may be present in reserve water, such as rain water stored in open barrels or ponds, especially in the east. Prevent diseased plants from contaminating other plants by sterilization of the soil.

Bacterium flavozonatum is important because it destroys the beauty of the plant rather than killing it. It produces localized leaf spots on the lower surface of the leaves. These spots are never present on the stem, veins or petioles. It causes similar spots on flowers, but if they are in the bud stage it deforms them. If there is considerable moisture present a secondary blue or green mold may appear. Further spread of the disease can be checked by lowering the temperature and humidity and the removal of infected plants. Also eradication of insect pests and by avoiding excessive forcing or production of rapid growth which produces a more susceptible plant.

Spotted wilt, a virus disease, is also known to attack begonias. It produces yellowish concentric spots on the leaves and stems. Young leaves show a mottled appearance. Secondary gray molds may infect if humidity and temperature are high enough. This disease cannot be controlled successfully except possibly by destroying infected plants (as nasturtiums) harboring thrips which transmit the disease and also by cleaning up thrip infestations.

I have spoken of botrytis sp. a number of times which attacks after another organism has made the initial infection. This organism can infect initially and produce this brownish gray mold where conditions of temperature and humidity are high, such as under glass in the cutting bench. The infection may arise from a condensation drip which is formed on the under surface of the glass frames.

The important thing in the cutting bench is to avoid having the growing medium cluttered with any dead organic matter. This is excellent material to harbor this organism. Proper ventilation and the regulation of humidity and temperature are important factors in the control of Bobrytis blight. Disinfection of this soil and the spraying with Bordeaux or ammonical copper carbonate may also help control this.

Common powdery mildew (a fungus disease) is also present on begonias although it is not common it is of the greatest importance. It can be seen as small discolored, pale light brownish spots causing a chalk white appearance. Occasionally it spreads over the entire leaf. The disease is of greatest importance during the dark short days of December and January. It will cause flowers and leaves to shrivel as they are covered by the disease. Control by

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MRS. EDWARD FLYNN'S 'MUST HAVES'

B. lucerna, because of its sturdy growth and ability to thrive in most any exposure.

B. Bunchi, for the magnificent baskets it makes.

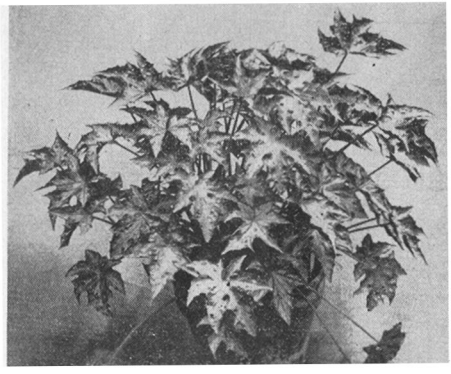
B. fireflush, for the vibrant flame red and green coloring and its resistance to extremes of temperatures.

B. rajah, for gorgeous beauty of the leaves, for purple and green shades.

B. catalina, for dainty flowers and rain-fresh shiny leaves.

B. Countess Louise Erdody, for interesting double swirls on the leaves and its rugged growth.

B. r. c. King Edward, for lovely shading of light green and dark-reddish coloring.



Begonia Bright Star
Photo Courtesy Miller's Gardens, Whittier

Begonia bright star is a hybrid, developed by Mrs. Elsie Frey in 1945. It is a cross of *B caroliniaefolia* x *B. liebmanni* of which Mexico is their native habitat.

This is a rhizomatous variety and is procumbent in habit, so that the rhizome forms new roots, from which new stems grow readily. Propagation is by cutting the rhizomes, allowing an eye and the roots to be on each division. This begonia makes a lovely specimen plant when left undivided.

It requires high humidity and likes loose, well-drained soil consisting of one part well rotted cow manure, three parts leaf mold, three parts garden loam and two parts sand.

This begonia always creates admirable exclamations when viewed, due to its unusual coloring of silver over olive green. The edges are wavy and the undersides of the leaves are red tinged and sparsely hairy.—*D. S. B.*

HEATING THE GREENHOUSE WITH OPEN FLAME GAS

Now that the cooler weather has arrived we begin to think of how we may create a little heat in our lean-to greenhouse. The frosts of last winter are still a sad remembrance of how we lost some of our precious plants. These could have been saved had we had just a little heat and at the same time grown many of the rare seed from the Seed Fund. In other words, by having a little heat in winter we can protect our plants from freezing and at the same time get an early start in the spring growth.

There are many ways of heating a small greenhouse. If cost is no consideration, electricity is fine. There is no excessive humidity created and it is cheaply and quickly installed, but the cost of operation is high in most communities. Circulating hot water is very efficient and a low cost operation where gas, coal or oil are used. Unless one can install it themselves, both material and labor will run high.

Where one has natural gas, the open flame gas has answered the question for many amateurs as well as commercial growers, especially in milder climates. It has the benefit of low cost operation and low cost installation.

In bringing gas into a greenhouse, one should remember, escaping gas is very poisonous to plant life, either in the air or in the soil. The connections should be thoroughly tested for leaks with a brush and strong soap water. Where manufactured gas is used, the unsaturated hydrocarbons called ethylene and carbon monoxide are two gases to be especially careful about. It would be wise to consult your gas company before piping gas into the greenhouse.

Most natural gases are quite free of ethylene as well as carbon monoxide. *Carbon monoxide* is very poisonous to all forms of life. It is created when there is an incomplete combustion, where the burner is not properly adjusted or where the gas strikes something too cold.

The burner need not be expensive. It should be adapted to the kind of gas used. Do not have a smokey white flame or a cracking blue flame. Your Gas Company will probably help in adjusting the burner for correct combustion.

The correct burning of open flame gas in the greenhouse creates *carbon dioxide.* This gas is used by plants when the sun shines, to create carbohydrates (sugar and starches.)

The burning of gas also creates a very high humidity. This additional humidity is of much benefit to plants during the daylight hours when plants are transpiring, but at night excessive humidity may create disease. So as to furnish the needed additional oxygen for the burning gas and to help the escape of some of the night time humidity, give a little ventilation at both the top and bottom of the greenhouse.

The size and location of the burner will depend on the size and construction of the greenhouse and also on the temperature outside and the desired temperature inside. The burner is usually located under the bench, but where wood construction of benches is used, the fire hazard must be considered. Again, your gas company will probably help you, in estimating the size burner you need.

Ethane and *Butane* gases are compressed and sold in tanks. Where neither natural or artificial gas is to be had, either of these gases can be used with a suitable burner.

When gas is used for heating, a thermostat coupled in ahead of the burner, is a regulating convenience and a real necessity. Without it we may either find the greenhouse is too cold or too hot at nights. Thermostats are made in two types, the modulating and the snap (or solonoid) valve kinds. The modulating type works satisfactorily and is reasonably priced. If the modulating kind is used it will be necessary to open the bipass of the valve. This permits the burner to burn continuously low, although the thermostat opens the main valve wide as necessity demands, to give a larger flame. If the bipass is not open, the slow opening of the main valve turns the gas on so slowly, it may back-fire into the burner. This produces a very poisonous gas and all the plants may die in one night. There is nothing complicated about the thermostat, simply connect ahead of the burner, preferably near or above the growing plants and where you wish the temperature maintained.

The night time temperature is determined by a low registering thermometer. For anything like accurate culture, this is a real necessity. They cost around two dollars and seventy five cents. With a low registering thermometer, it is an easy matter to adjust the thermostat for the correct night temperature.

Where doubt exists about burning gas in the greenhouse, one may place a fifteen gallon oil drum over the burner and ventilate with a flue. Use four inch galvanized down spouting and be sure the couplings are tight Do not run directly up, but run the spouting lateral five to ten feet and then out through the roof.

Friendship, like the successful growth of plants, must be continuously cultivated.—*Dr. W. C. Drummond, Los Angeles, California.*

TREE FERNS

By Alfred W. Roberts

These giants of the fern family are striking in appearance when given room for their development. Although there are many species which will only grow in conservatories, in cold climates, several kinds do remarkably well in the coastal sections of southern and central California and a few of the gulf states, planted out of doors.

Alsophila australis, the common Australian tree fern, native to Tasmania and Australia, often has trunks ascending to a height of eighteen to twenty six feet with fronds from eight to ten feet long. This species is the most widely planted in Southern California, due to its rapid growing habit.

Dicksonia antartica, also from Australia and Tasmania, is said to attain heights of fifty to sixty feet and are topped by heavy crowns of luxuriant dark green fronds, eight to ten feet in length. The hardiness of *D. antartica* is remarkable. It has been found with its crowns heavily covered with snow and ice without any apparent harm to the plant. It is reported to do well in parts of Ireland. It is certainly at home in the warmer coastal sections of central California.

The tallest of all the tree ferns and almost as hardy, but more demanding of wind and frost protection is *Cyathea medullaris* from New Zealand. It is said to reach a height of seventy five feet in its native habitat and is also one of the most rapid growers. The large fronds measuring from ten to fifteen feet long, are a wonderful sight to see.

Cyathea dealbata, perhaps the handsomest of all ferns, is also a native of New Zealand and requires more protection from the wind. It does well in protected coastal areas. Its fronds are a silver green on the underside and is aptly called 'the Silver King.'

Dicksonia fibrosa is a native of New Zealand and is very much like its Australian cousin, *D. antartica,* except the foliage has a crisper texture and the pinules are slightly toothed. It is said to be especially fine for the more interior situations. A fine group of these majestic ferns can be seen at the Huntington Memorial Library in San Marino, California.

Dicksonia squarrosa, also from New Zealand, is by far the rarest of the above mentioned group. Its maximum height is eight to ten feet and the fronds, which grow at right angles to the slender trunk, are silver on the underside and borne on black stems.

Cibotium Schiedei is perhaps the most tender of the above tree ferns. It comes from Guatemala and Mexico, where its trunks are known to have reached a height of eight to twelve feet. Its golden-yellow fronds are gracefully arched and touch the ground, giving it a globular outline. This decorative species adapts itself admirably to indoor use, if given ample light. It makes an excellent house plant.

Alsophila australis

There are several other kinds of tree ferns which will succeed under favorable growing conditions such as, *Hemitelia Smithii.* This fern is native of tropical America and the Philippines and resembles *Alsophilia,* but its fronds are more arched and the plant is not as hardy. A fine specimen of this fern can be seen in the Arboretum at San Francisco's Golden Gate Park.

Blechnum brasiliense is from Brazil and is a dwarf tree fern. Its trunk is inclined to branch and rarely exceeds three feet in height.

Although some of the above mentioned ferns succeed in quite exposed situations, best results are obtained by planting them in wind protected areas. *Alsophila australis* stands considerably strong sunlight near the coast, but inland, thrives better in canyons and under the protection of deciduous trees as the sycamores.

All respond to a high humidity in the atmosphere and ample moisture at the roots. A mulch of old fronds chopped up and laid over the ground to prevent the surface from drying out is of considerable benefit.

The following books may be purchased through the Librarian:

Tuberous Begonias, by Worth Brown, $2.75

Begonias and How to Grow Them, by Bessie R. Buxton—$2.25.

Begonias for the American Homes and Gardens, by Helen K. Krauss—$4.00.

SEEDING METHODS FOR BEGONIAS

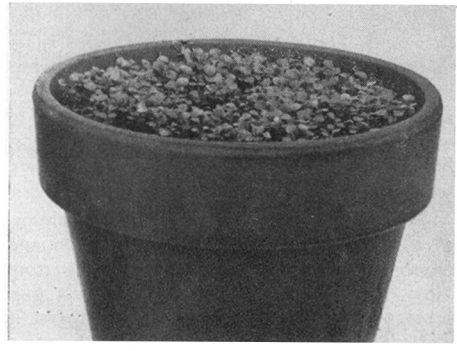
By V. T. Stoutemeyer, Division of Ornamental Horticulture, U. of C., Los Angeles

The growing of begonias from seed affords an ideal method of building up a collection of species begonias not easily obtainable by other means and is also a good way to acquire many unusual and worthwhile horticultural types. The wide range of types of begonias available is a constant temptation to experiments in hybridization, with the consequent need for growing of seedlings. Begonia seeds are small and although they are not difficult to germinate as a rule, the seedlings are often susceptible to damping-off troubles. These can be controlled by steaming of the soil or the use of certain chemical treatments, but these have certain disadvantages from the standpoint of the amateur. Two alternate methods give the same protection but are perhaps more simple and convenient.

One material which the author has found to be excellent for the germination of begonia seeds is vermiculite, a heat-expanded mineral product which has been used with considerable success for both the rooting of cuttings and the starting of seeds. Vermiculite is a light fluffy material produced by heating certain micaceous minerals which are found mostly in Montana and Wyoming, but also in a few places in the eastern U.S.A. This mineral has a laminar structure which expands greatly upon heating, resulting in a large amount of pore space which holds both air and moisture. Because of the structure, the material has been much used for house insulation and as an aggregate for the preparation of plaster and concrete. Since some of these types incorporate a waterproofing material, the manufacturers have prepared a number of types for horticultural purposes which may be found in the seed stores and nurseries under a variety of trade names.

The preparation of a flat or pot of vermiculite for seeding is very simple. The material should not be firmed or packed down as this would destroy the structure. Vermiculite is biologically sterile because of the heat used in its preparation. It is almost inert and will not support the growth of plants unless mineral nutrients are used. The nutrient can be added either before the seeds are sown or after germination takes place. The various liquid fertilizers now on the market can be applied at the recommended dilution for pot plants. Feeding at intervals of a week or less will be needed to keep the seedlings growing rapidly. On the other hand, the nutrient can be withheld in order to slow down the growth of the plants. With an occasional feeding, the plants can often be held in a pot or flat of vermiculite for an amazingly long time.

Although the seeds may be germinated with top watering, subirrigation works best. All that is needed is to set the pots or flats of vermiculite in a pan of water. If the vermiculite is moistened, the water will rise to the surface by capillary action and will keep the surface uniformly moist. This is one of the most important factors in seed germination regardless of the method used. With subirrigation there is no need of covering the seed, which may be sown directly on the surface. It is amazing how rapidly a large collection of seeds can be sown by this method, and also how little attention is required. If amateur horticulturists would try this method of seeding, it probably would be adopted as a regular rooting medium in most cases.



SEEDLINGS GROWING IN SPHAGNUM

Vermiculite is also excellent for the rooting of cuttings, but the use of a too fine grade should be avoided for this purpose. The particle size does not appear to be particularly important with seeds, and very fine seeds can be germinated quite well on rather coarse particles.

The second seeding medium which deserves some attention on the part of begonia growers is shredded sphagnum moss. If a good quality of Wisconsin or New Jersey sphagnum is used, *no method* of seeding can give finer results. Either living or dried moss can be used. If the material is not obtainable in shredded form, it should be prepared by rubbing through a screen having about three meshes per inch. Large quantities can be prepared by running through a hammer mill.

The sphagnum should be placed in a flat or pot with good drainage and the surface should be smoothed and pressed down slightly. It is well to water the surface repeatedly several hours or even a day in advance of sow-

ing since large amounts of water are absorbed. The seeds can be either sown on the surface or covered with a thin layer of fine moss. One very important point is to cover the pot or flat with a glass or other translucent material to reduce surface evaporation. This should be raised gradually after germination to prevent etiolation or spindling of the plants. Subirrigation cannot be used with sphagnum moss and the material would become waterlogged. However, water can be applied to the surface freely if the drainage is good. The few failures which the writer has observed with it were usually due to insufficient watering to keep the surface moist. A nutrient solution to promote growth is helpful, but is not quite as essential as with vermiculite. The plants can be kept in a state of suspended growth even longer than would be possible with vermiculite.

With both vermiculite and shredded sphagnum moss, the young plants can be removed easily from the seeding medium without injury. With both, the root systems are often surprisingly large, doubtless because of the excellent aeration.

Your friends moving into a "new" home will appreciate the Begonian as a gift.

IT HAS BEEN SAID . . .

Now is the time to secure catalogs from growers of tuberous begonias. Plant seed of tuberous begonias December and January. Start tubers February, March and April depending on location and outside spring temperatures.

If your B. sutherlandi drops its leaves and some branches and wants to go dormant, withhold water and keep them just a little damp.

Keep your begonia tubers at or near 50 degrees F. Do not let them freeze and never let them completely dry out, when dormant.

B. socotrana, the Christmas begonia, should be growing well now. For Christmas bloom, keep it in a warm greenhouse and feed well at this time.

Where begonias are planted outdoors in the garden or lath house in mild climates, (where there is an occasional frost) fit a cardboard carton over them in the daytime so that the soil fits tight. By having it ready, one may place it over the plant when a frost is contemplated. This will protect against several degrees of frost.

Do not overwater plants kept at low temperatures.

As an emergency measure against an anticipated frost, in mild climates, a lath house or shelter may be heated by an oil burner stove or orchard oil heater. A covering of canvas, cloth or heavy paper should first be placed over the lath.

It is important that you allow your tuberous begonia stalks to stay on the tuber until they die back completely. Do not cut them off, allow them to *fall off.*

The 'trial and error' method is the hard way of learning gardening, however it has its advantages, as once learned by that process it usually sticks with us. The easy way should be to read and gain by the experience of others. The Begonian trys to give you the best of the teaching of others.

There are many chemical elements needed for plant growth. To be assimilated by plants, these elements should be soluble in water. In most soils there are tons of iron, yet many plants will starve for iron in the same soils, because the iron is insoluble. In the case of iron the pH (the acidity or alkalinity of the soil) has much to do with its solubility. Iron keeps the soil pH around 6. When the soil is around 5 to 5.5 many plants will become poisoned by iron. So study your plant requirements, do they need acid or neutral soil.

When your begonias grow tall and leggy, it is often because they are not receiving enough light.

WHAT'S NEW IN FUCHSIA BREEDING

By Jack Evans, of Evans & Reeves

During the past several years a great many new varieties of fuchsias have been introduced by hybridizers in different parts of California and offered to the public through the various nurseries. In common with new varieties of many other plants, not all these new varieties possessed sufficient merit to entitle them to a permanent place in the fuchsia family. Many have since been dropped from retail catalogues after garden testing disclosed they were not as satisfactory as some of the older types.

The hybridizer is naturally an enthusiastic individual and at times is inclined to let his enthusiasm run away with him. This is a very natural trait born of the thrill of seeing a new flower bloom for the first time and perhaps they should not be blamed too much. The answer is thorough testing *before* new varieties are introduced in the trade. I hope some day there will be available, in at least two sections of the State, test gardens for fuchsias; where all new varieties may be given a trial under varying garden conditions and judged by impartial gardeners and horticulturists, before they are released to the public.

Awards should be made for definite merit, on the basis of form and character, color, type of flower, season of bloom, constitution, habit and foliage. No new variety should be recommended for introduction unless it is entirely different or an improvement over existing varieties. Otherwise the net result is confusion and disappointment to the Nurseryman and the public alike.

The general aim of most of the fuchsia hybridizers has been to develop new colors and larger flowers. The specific aim of a few has been to develop a new strain of fuchsias that will be tolerant of dry air and heat, thus making them available to many thousands of garden enthusiasts who cannot now grow them successfully. It seems to me that this latter objective will prove to be quite valuable and it certainly is a challenge to the skill of the hybridizer.

Probably the most successful of the fuchsia breeders is Victor Reiter, Jr. of San Francisco, who for the past several years has introduced many fine new varieties, notable among them, being the "all whites." This year he has achieved a breeding triumph in the introduction of the first 50 per cent Triphylla hybrid, a beautiful trailing variety he has named *Mantilla.* His *Seventeen* was the first distinct break in fuchsia colors.

Every hybridizer is of course hoping to be the first to produce a yellow fuchsia and a blue fuchsia! Possible? Yes, I am inclined to think it is, and I have been working on this for several years, coming close to blue in several recent seedlings. The late Mr. Neiderholzer of San Francisco introduced several fuchsias with quite blue tones, notably *Honeymoon* and *Wonderblue.* New varieties in this color range will indeed be novelties!

Mrs. Lovel Swisher

While it is more or less assumed that fuchsias must be grown in cool, shady parts of the garden, that does not necessarily hold true. I have been particularly interested in developing a strain that could be adapted for use as garden "shrubs" to be used very much in the same manner as Syringa, Spirea, etc. With their profuse flowering habit, their long season of bloom and the multicolors of their blossoms, they would serve a valuable purpose if they could be used in this manner.

If fuchsias are to be used for this purpose, they must of necessity possess more vigor, be tolerant of sun and have less fragile blossoms than most of the varieties now in the trade.

In the most recent introductions the flowers are attaining size and great beauty. I predict that the next few years will see "hard" fuchsias with fine large blossoms comparable to the best of the shade loving types. Both Victor Reiter and I have had this in mind as a major objective of our breeding program and undoubtedly others are also following this lead. By 1950, there should be some very interesting results.

Several years ago, in testing out various hybrids and species, I found several possessing the characteristics I wanted, particularly the species F. lycioides. After a few generations we had several varieties that showed a tolerance of heat and introduced them as *Glendale, Mrs. J. A. Fredricks* and *Mrs. Lovel*

See Next Page

FUNGUS—Cont'd from Page 257

Swisher. The flowers of these varieties were in dusting with sulphur or spraying with lime sulphur, covering the undersides of the leaves.

Throughout the review of environmental factors favorable to the different diseases, poor ventilation and excessive moisture are instrumental in producing favorable conditions for the growth of disease. If these are corrected many of these diseases may be controlled.

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large clusters, but small in size; however they made a good show planted out in the full sun as garden "shrubs."

Some of my varieties that have already proved to be fairly heat resistant and tolerant of dry air are *California, Cardinal, Titania,* and *Avalon.* Victor Reitor's *Mazda* and *Sacramento* are the two outstanding "hard" fuchsias from the north. I have a new variety this year, *Dr. Jules Welch,* a large double in the blue-violet shades which has proved to be particularly vigorous and resistant to heat. I should like to see it tested more.

HYBRIDIZING BEGONIAS

By John Zweifel, Mayville, Wis.

One of the easiest plants for the beginner in hybridization is the Begonia. It has many advantages over other plants. It grows well and matures seed either in pots in a window or out of doors. It blooms constantly and is a large family of closely related species. Young seedlings may be brought to bloom in about four months, so there is no long wait for results. The seeds can be planted as soon as ripened and though very tiny, germinate in a short time. The actual work of hybridizing is made easier because the plant bears two distinct types of flowers. One a flat bloom with stamens, is the male flower producing the pollen, and the other, usually with smaller petals, has the ovary of which will ripen into the seed pod, is the female flower. It is an easy matter to pluck a ripened male flower, as shown by the yellow, powdery pollen grains and rub it on the cluster of curled stigma, usually yellow too, that form the center of the female flower.

It is a good idea to fertilize either one or two female blossoms in a cluster, pinch off the rest. They can then be marked by pinning a slip of paper to the stalk Seeds may be planted a few days after the ripe pod has been gathered. Ordinary rich soil to which some leaf mold and sand has been added is a good planting soil. Because of the fineness of the seed it is a good idea to sterilize the soil in an oven and then screen it before planting.

Sometimes seedlings which show undesirable characteristics as well as desirable ones make excellent seed parents for crossing back to one of the parents or another plant, since they have the ability to transmit desirable characteristics. In fact a great many of the finest plants produced were results of crosses with parents that were hybrids themselves, but not good enough for introduction altho having certain outstanding characteristics which they transmitted to their progeny. In fact these second generation hybrids usually more closely resemble their grandparents than do their parents, so when the original plants were outstanding varieties, unsually fine results can be expected from crossing the hybrids resulting. However, the element of chance and the waiting for the new plants to mature, adds much to the fascination of producing hybrids.

ARE YOUR BEGONIAS SITTING PRETTY?

Pollyanna Cooper, Excelsior Springs, Mo.

Some of your beautiful begonias have probably grown so big, with your care this summer, that they have become too large for the window garden. They need not become merely a memory.

Night Blooming Cereus

The beautiful specimens or groups of small varieties can sit for their *portrait.*

It is so interesting to take kodak pictures. Try to do it this way: recently the information came to me that the method I had used could be followed by those having other types of cameras and kodaks. There is a small attachment, a portrait lens that will fit all types and is very inexpensive. All good camera stores have them, but take your camera in and let them fit it on your camera. Full instructions come with the lens and it is wise to follow these instructions exactly.

The night blooming Cereus was photographed at 12 noon, in full sun. The night before, a glass jug was filled with Hi-grow solution, giving a beautiful green sparkle as well as nutriment to the flower. When the flower was fully open it was placed in the jug and then in the refrigerator, where it was left until the location was prepared. An end table in the garden, a milk bottle as a "stand in," a small step ladder to set the camera on and a yard stick to measure the exact distance, was all the required material.

Then the jug with the flower, was taken from the refrigerator and placed where the milk bottle has served as "stand in." The photograph was made of a night blooming cereus at high noon!

Daytime blooming flowers do not need such preparation. Regular camera and portrait pictures can be taken on the same film, by just removing the lens.

The same use of the lens can give you beautiful portraits with color film also. These must be taken between 11 a. m. and 1 p. m for more exact color reproduction.

What grand begonia pictures we could have and we could also contribute some to the photobook in the A. B. S. Library. We will all be able to identify our unnamed plants easily in this manner, by borrowing the book.

BRANCH MEMBERS, PLEASE NOTE

It is found by Branch Treasurers that many of their members send dues directly to Mr. Roy K. Dere . . . this causes them to lose a chance to check how the Branch stands as well as to lose touch with those members. It is better to give or send dues to your own Branch Treasurer and in turn it will be relayed to Mr. Dere who will see that your Begonian goes forward without interruption and both will have a check on each other, for the benefit of the member.

Any member unfortunately not affiliated with a Branch will naturally send dues direct to Mr. Dere . . . and other checks, such as for CULTURAL BULLETINS will also go direct to Mr. Dere.

PROPAGATION BOX OR SEED INCUBATOR

By W. T. Pledger, Tyler, Texas

Across each end of an apple box nail a cleat on the inside 4" from the bottom of the box. Place on the cleats a box 3½" x 11¼ x 17½ inches. Fill the box with soil.

Place several small flats about 1 inch deep —fill with soil suitable for starting seed upon the large box of soil. Pour boiling water over the whole, to partly sterilize the soil.

A 40-watt bulb in a No. 2 can is placed on the bottom of the apple box, beneath the large flat. The sides and bottom of the apple box are covered on the outside with one layer of pasteboard and two layers of composition roofing, to insure insulation.

A glass fitted snuggly over the top of the box retains heat and necessary humidity sufficient to bring up the seed.

This has produced excellent results.

IN MEMORIAM

Nellie Callon, formerly of Daytona Beach, Florida; came to California in 1924 and has been an active member of the Hollywood Branch for several years. She was Branch Representative Director, pro tem, in 1947. Sincere sympathy is extended to her mother, Mrs. Anna Callon.

Branch Secretaries are urged to send a list of their newly elected officer's names and addresses, to the editor.

NOVEMBER SEED FUND NEWS

We have exciting news for you this month. At last, a source for *B. cathayana* seed has been found, also for these other Chinese species. *B. aptera,* a tuberous type with white flowers; *B. Handelii,* rhizomatous with broad ovate leaves red veined underneath, fragrant pinkish-white flowers; *B. Hemsleyana,* creeping plant with palmately divided leaves, flowers light rose; B. *Henry,* tuberous pink flowers; *B. yunnaneniss,* erect growing to 3 feet with large leaves, flowers pink; *B. circumlabata,* rhizome succulent, grows 2 feet high with fleshy palmately large foliage, flowers white. These are all quite new to us with the exception of *B. cathayana, w*hich we know from a distance and have hoped some day to grow in our greenhouses. Let me explain, these seeds are ordered and when received, will be available to members of the Seed Fund *only.* The reason for this statement is that many have taken advantage of inexpensive rare seeds and yet have not contributed to our Seed Fund. You all realize the price of everything has increased, which applies to rare seed also. It costs much more now, to send collectors out to gather seed for us. This is all done as a service to A. B. S. members to bring new plants into our gardens. So far, it has been "nip and tuck" to keep up with expenses. None of our members have received any pay for their long hours of work. Did you know that Mrs. E. T. Boeshar of Hollywood has made far over 5000 small envelopes for our Society. Not all for the Seed Fund however, as many were used in the President's Christmas letter last year. She is not the only one however, many more have helped but we need the help of more of you.

We have contacted some new collectors who promise to search out the rare seed for us in Mexico, Guatemala, Puerto Rico, Colombia, Brazil, Australia, etc. Expenses for all this runs high and so does airmail postage for we have been sending out hundreds of letters recently, inquiring for new sources of rare seeds for you. Help us out with your contribution right away, those of you who have neglected to do this.

In January, we will send out not less than twenty packets of Begonia seeds to all Seed Fund members . . . rare seeds of begonias, many never before introduced into our country. We are gambling big stakes now on finding something really outstanding in begonias for you. Those of you who took advantage of the very low price on bulbs recently are expected to contribute to the Seed Fund. Take care of this now.

Regional departments of your Seed Fund are being organized, one member in each section will act as headquarters for reports on seed germination, soil conditions, plant growth, identification of new begonias, reports on hybridizing, new ideas, suggestions, etc. Those who wish to incorporate this department into your Branch Societies, *write to me.* For the localities without Branches, we will advise you of the member who will work in this capacity. Watch your Begonian next month.

Some of your Begonias are going dormant now, withhold water from your tuberous and dry off your bulbs, store tubers in a cool, dry place until spring. Be sure the tubers are well dried before putting away or they may rot. You may cut back the bedding begonias now, and they will make strong bushy plants next spring.

The rex may lose their leaves. Do not give fertilizer during this period, let them rest and they will reward you with more vigorous growth in the spring. Take off leaf cuttings of rex and stem cuttings of fibrous now and put in your hot beds, even glass casseroles with covers will do. Use sharp sand for rooting cuttings.

Seed specials for this month:

Streptocarpus, calceolaria, gloxinia, fuchsia, bromeliad, solanum (lovely violet species), Tibouchinas mixed, Isoloma, Asclepias (Guatemala), Aloe, Echeveria, new fern spores from Puerto Rico, Guatemala and Brazil. Special price 6 pkts. for $1.00 Mixed begonia seed . . . large packet for 25 cents.

Cheerio until next month, your Skipper,
Florence Carrell.

IF YOU CAN GROW—Cont'd from Page 253

lip with deep green throat. Blooms in summer. Requires same growing conditions as Laelias.

Cattleya Citrina: Flowers 3 to 5 inches, brilliant yellow, very fragrant, blooms early summer. Requires same culture as the Laelias, but plant must be mounted upside down as flower is pendant. Protect from heavy frost.

Cattleya Skinneri: Flowers 3 to 4 inches in diameter, many to spike, orchid color, blooms in spring. Does best in pots, planted in Osmunda fibre. Must be protected in winter, unless in very mild climate.

Odontoglossum Grande: Flowers 5 to 7 inches, 4 to 7 flowers per spike, petals and sepals a golden yellow barred with chestnut brown. Blooms in autumn.

All flowers mentioned above are excellent to use as corsage flowers.

In closing may we give you one bit of advice, to bear in mind when just beginning an orchid hobby, don't be afraid of the orchid plants—pretend they are petunias, and don't kill them with kindness!

BEGONIA PRONUNCIATIONS

In pronouncing these names keep in mind the following rule:

à as in lane	í as in bin
á as in fan	ò as in tone
è as in eve	ó as in mom
é as in get	ù as in cute
ì as in line	ú as in cut

hùmilis—hùme-ih-liss
hydrocotyifòlia—hydro-coty-ih-fòhl-eeah
imperiàlis—im-peeree-ày-liss
incàna—in-kày-nah
incarnàta—in-car-này-tah
íngramii—ín-gramee-eye
isóptera—is-óp-tera
kewénsis—kew-éhn-sis
laciniàta—la-sin-ee-àte-ah
Lièbmannii—lèeb-manee-eye
Lindleyàna—lindle-yàne-ah
Llóydii—lóy-dee-eye
lobàta—lob-ày-tah
Lucérna—loo-sér-nah
luminòsa—loom-in-òh-sah
luxùrians—lux-ùree-ans
Macbéthii—mac-béthee-eye
maculàta—mac-kew-lày-tah
magnífica—mag-níf-ih-cah
malabárica—mala-báre-ih-cah
manicàta—man-ih-cày-tah
Mánnii—mán-ee-eye
Margarìtae—mar-gar-eye-tay
Martiàna—marty-àne-ah
metállica—met-ál-ih-cah
nelumbiifòlia—nee-lum-by-ih-fòlee-ah
nígricans—níh-grih-cans
nítida—níh-tih-dah

See the September and October issues of the BEGONIAN for additional begonia pronunciations.

Mention the Begonian when patronizing our advertisers.

ROUND ROBIN NEWS

Since the Annual National Convention, our Round Robin membership is increasing. Many of these members are new A. B. S. members and learned of the Robin Clubs at the Convention. We are grateful to those who spoke so kindly, regarding the Robins. The House Plant Robin for north, east and mid-west members will soon start flying. A capable director has been secured for this group.

The General Begonia Advanced No. 1 has completed its quota. General Begonia Advanced No. 5 is being formed, but needs a director.

The Advanced Begonia Robin No. 1 has room for several members.

The three members of the Apartment Dwellers Robin No. 1 correspond with one another, but they are longing for a real Robin Club with at least ten members and a Director!

Directors are needed also for the Hardy Primrose Robin and the Soils Robin.

The General House Plant Robins are gaining many new members. No. 4 will soon be started.

Are any of you interested in a Swap Robin?

To all Directors—please send me at your earliest convenience, the name of each A. B. S. Robin Club you direct and the names and addresses of the members. By checking with you once a year it is possible to keep a fairly accurate record of our Round Robin membership.

Any member of the A. B. S. interested in joining any of the Robins, are urged to write to Mrs. Frances Downing, Route 1, Box 11, Calera, Alabama.

You will find many Christmas gift items for your friends listed in the Begonian. Implements for the garden, bulbs, plants, seeds, insecticides and fertilizers would be welcomed by garden lovers.

FAIR BEGONIAS

By Winifred A. Harding, East Derry, N. H.

So it's "HI-HO—off to the Fair! During this season of the year all New England is headed toward the county agricultural fairs held throughout the six state area. Not to be outdone, the Begonias headed in the same direction. West Rockingham Fair held from Sept. 3 to 6 inclusive was the place. Of course New Hampshire was the state and if we do say so, very Begonia conscious.

Now we all know that no Yankee would be guilty of attending any social function in anything but their best bib and tucker and in spite of California's adoption, there are still a goodly number of Begonias whose family trees sent their first roots down in New England. So, when it comes to being decked out we take no back seats; in fact these particular ones had already had a preliminary showing in August when they greeted the New Hampshire meeting of the New England Branch of the A. B. S. on the 21st and helped themselves to an award of merit. Now this preview was not just any old meeting you understand, for the previewers included Bessie Buxton, our N. E. sec. Joyce Logee, sister of the famous Ernest and our President W. E. Starr, as well as more than twenty others. Now you can see why they simply had to be well dressed, to meet such critical eyes, all eighty four of them. Bless their blooming hearts! Not a petal out of place, not a leaf curled in the wrong direction; just the perfect ladies and gentlemen they always are, when properly guided in their extreme youth. These first hurdles over with, we said a small prayer (mostly for rain) and entered them in the fair.

Appearances were not quite enough, we wanted to show the traveling ability and the background of these superior plants, so we did a little stage setting. Using a backdrop seven feet long by two and a half feet wide, we mounted two hand drawn maps, one of the Eastern hemisphere and one on the Western. These had the continents watercolored, as well as the islands, etc. In front of this drop, on graduated levels, we placed the varieties to be found in the different countries with narrow ribbons running from plants to map and giving name, place and year of discovery. Well what do you know! We have hanging from the bench now, a Blue Ribbon for the most educational exhibit at the fair.

The New England Branch also had an exhibit using some of the latest hybrids as well as some of the odd and interesting types, Kellermani, incana, etc. Now they too have a Blue Ribbon to sport at the next meeting.

The rock garden with its evergreen background, flagged terrace and little pool planted with tuberous, rex, ferns and gloxinias, arranged by the co-chairman Mrs. E. G. Davis and yours truly, took a Blue Ribbon which hardly seems worth mentioning, but you see how it is. Give those Begonias an inch and they will take seventy-five feet and always in the winning place. Confidentially, it is very hard to beat them. Beauty, education, distinctiveness, any class at all, they are always winners.

Oh yes, and having their picture taken with our Gov. Dale didn't bother them in the least. Just another man paying homage to royalty.

Sheltered Garden Book Reviews . . .

BEGONIAS AND HOW TO GROW THEM. By Bessie Raymond Buxton. Published by Oxford University Press.—$2.25.

The author of this book needs no introduction to begonia enthusiasts. A recognized authority in her field, she has written a book which should find a place on every plant lover's book-shelf. Six chapters are devoted to the description of the various species and varieties of begonias with methods for their propagation from seeds, cuttings, preparation of soil mixtures, etc. Mrs. Buxton's use of practical, easy-to-understand language is highly to be recommended as well as her liberal use of excellent photographs and sketches. A seventh chapter devoted to Begonia Shows, an appendix concerning the American Begonia Society and a good index conclude what this reviewer considers a 'must' for every begonia grower whether beginner or professional.

Frank W. Overton.

EVA KENWORTHY GRAY BRANCH—Reports for their past yearly activities. Their theme is "Show An Interest in the Community and It Will Show an Interest in Us." They cooperated in staging a flower show with the San Diego Orchid Society and displayed Begonias at the Fair. Plans for philanthropic activities included parties for the children at the La Jolla Welfare cottage. Throughout the year plants and baskets of fruit are given shut-ins and at Christmas time, wreaths, plants and baskets of fruit are donated to the Camp Elliott Custodial Unit. The annual summer open house activity was doubly important this year. Two gardens were displayed: Mrs. Charles Calloway's and Mrs. D. C. Kerr's. Refreshments were served at Mrs. Kerr's garden and a hundred shade plants were on sale at Mrs. Calloway's garden, together with the popular raffle prizes of choice begonias and fuchsias. "We are represented at every planning Council meeting, for we plan to construct and maintain a Community Lath House when we have sufficient funds."

Mrs. R. James Pfeiffer, President

HOLLYWOOD BRANCH—Was happy to have Col. C. M. Gale, National President, install the new officers for the coming year, at their October meeting. Miss Charlotte Hoak talked on begonias and Jimmy Giridlian talked on bulbs and showed many lovely colored slides.

The new officers are: President, George A. Milne, 553 S. Western Ave., L. A. 5; Vice President, Josephine Steinman, 6551 Homewood Ave., Hollywood 28; Treasurer, Zella Otto, 7758 Waring Ave., L. A. 46; Rec. Secretary, Marjorie Robinson, 1137 No. Orange Drive, L. A. 46; Corr. Secretary, Harriett Yost, 1111 Ridley Drive, L. A. 35; Nat'l Representative, Raymond T. Wilson, 950 N. Kings Road, L. A. 46; Branch Director, Mrs. R. Holmes, 1210½ N. Mansfield, L. A.; Membership, Mrs. E. Flynn, 1319 N. Ogden Drive, Hollywood 28; Librarian, Vera Lynde, 1030 N. Orange Grove, L. A. 46.

Mrs. Edith Pedgriff, Secretary

Do your Christmas shopping from the ads in the *Begonian.*

SAN FERNANDO VALLEY BRANCH—Held their first meeting in September, after their vacation this summer. A good crowd turned out for an interesting speaker, Dorothy Louise Black of Van Nuys. She outlined flowers for winter color. A nominating committee was appointed which was followed by a good plant sale and refreshments. S. F. V. Branch extends an invitation to all visitors and members. Nel Schoenbrom, *Vice President.*

PETALUMA BRANCH—Had a very interesting meeting in September. Mrs. Muriel Waltz of Ross spoke on fuchsias and rex begonias, showing many varieties of the hardy as well as the less hardy. Mrs. Wakefield reported on the Annual Convention and Flower Show held in Glendale. Meeting the National Officers were one of the highlights and Petaluma intends having a good representation at the 1949 Convention in Ventura.

Mrs. Cuma D. Wakefield, Secretary

Tuberous, Fibrous and Rex Begonia Bulletins may be obtained for 15 cents each, by writing to Roy K. Dere, 1618 Fickewirth St., El Monte, Calif.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946

Of The Begonian, published monthly at El Monte, California for September, 1948.

State of California

County of Los Angeles—ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Mrs. Dorothy S. Behrends, who having been duly sworn according to law, deposes and says that she is the Editor of The Begonian and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management (and if a daily, weekly, semiweekly or triweekly newspaper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (section 537) Postal Laws and Regulations), to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, El Monte Printers, 131 Lexington Ave., El Monte, Calif. Editor, Mrs. Dorothy S. Behrends, 1633 Golden Gate Ave., Los Angeles 26, Calif. Business Manager, Frank S. Moore, 425 No. Avenue 56, Los Angeles 42, Calif.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

The American Begonia Society, Inc., 1618 Fickewirth Street, El Monte, Calif. Lt. Col. Carroll M. Gale, President, 40 No. San Rafael Ave., Pasadena 2, Calif. W. E. Walton, President Elect, 1415 Acacia Ave., Torrance, Calif. Fred J. Bozon, 3139 Illinois Street, Southgate, Calif.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

MRS. DOROTHY S. BEHRENDS, Editor.

Sworn to and subscribed before me this 1st day of October, 1948.

H. KINLEY MARTIN, Notary Public in and for the County of Los Angeles, State of California. (My commission expires May 17, 1952).

Condensed minutes meeting National Board, A. B. S. held in the City Hall, Los Angeles, Sept. 27th, 1948, President Gale presiding.

Present for the meeting—President Gale, Treasurer Bozon, President Elect Walton, Membership Fees Chairman Dere, Business Mgr. Moore, Secretary Hartwell, Directors Sommerfield, Hixon, Bailey, Representatie Directors from Bellflower, Inglewood, Southgate, Pasadena, San Gabriel Valley, Foohtill, Ventura, Santa Barbara, Glendale, Parent Branch, North Long Beach, Hollywood. Director Pub. Relations Schwerdtfeger, Slide Library Grace Bayer. Absent, Editor Behrends.

Salute to the Flag and statement of Aims and Purposes of the A. B. S.

Pres Gale reported following appointments for the coming year—Gonda Hartwell, Secretary, Membership Fees Roy Dere, Editor Dorothy Behrends, Business Mgr. Frank Moore, Research Director and Seed Fund Chairman Florence Carrell, Public Relations Director Louise Schwerdtfeger, Vice Presidents and Technical Directors Mrs. Helen Krauss and Mrs. Henry Buxton, Historian Rose Hixon, Publicity Mrs. Jay C. Jenks, Speakers Bureau and Koda. Slide Library Grace Bayer, Mrs. Drummond Coordinator between the Nat'l Board and the Committee of Awards. Due to the resignation of Mrs. Pinnell, the Chairmanship of Exhibits and Flower Shows still open—to be filled at a later date.

Appointment of standing committee consisting of Messrs. Walton (Chairman) Bozon and Moore whose duties shall be "aiding the Treasurer in preparing the budget, receive and present to the Board for approval any additional requests for appropriations not covered by the budget, and to, in all respects, maintain strict control of expenditures."

Mr. Walton asked to understudy the duties of Capt. Dere's office to enable him to conduct the mailing out the the BEGONIAN etc., etc., in case of emergency.

Report of Verna Johnson, as Advertising Chairman, read and ordered filed. Frank Clark and Mrs. Sills appointed to audit the books of this office and report at next meeting.

Mr. Knecht reviewed, briefly, the script for the Pest Control Bulletin and felt it covered the subject very ably and would be a real addition to the Bulletins. President felt Mr. Moore should also be on this Pest Control Committee and added, with the approval of the Board, the name of Frank Moore (chairman.) Secretary instructed to notify Dr. Drummond of this appointment.

Mrs. Bayer stated new sheets for the Speakers Bureau would soon be sent to the branches. Also reported considerable activity in the Kodachrome Library—many branches using the slides and also donating additional slides.

Branch reports showed for the most part good attendance at the meetings; ability to put on good programs and good plant sales; branch begonia shows, Country Stores and pot-lucks.

President Elect Walton read Tentative Budget and explained same; to be submitted for approval of Board at a later date.

Bills read and turned over to Bus. Mgr. for checking and approval prior to payment.

Letter from MacMillian Co. read and turned over to Bus. Mgr. for attention.

Public Relations Director instructed to issue duplicate Charters to Branches Riverside and Santa Barbara—originals misplaced.

Repre. Director Foothill Branch called attention to their Country Store program November meeting and invited everyone to attend.

Mrs. Korts reported someone had left a fine Staghorn Fern at the Civic Aud. which she took home for attention until claimed. Asked everyone to pass the word around.

President Gale called for discussion of the Round Robins; many suggestions offered but no action taken.

Mr. Clark called attention to the Pasadena Branch meeting Oct. 17; members to bring their best begonias and their poorest for constructive criticism and discussion.

Supply of tuberous bulletins ordered printed.

Many expressions of appreciation and pride for the very fine Annual Meeting and Flower Show put on by the Glendale Branch.

Meeting adjourned to meet again same place Oct. 25, 1948.

Gonda Hartwell, Secretary.

Branch Meeting Dates and Places

BARTON, DOROTHY PIERSON BRANCH
Regular meetings, Quarterly, 1st Fridays
Flint, Michigan, Nov. 5th.
Mrs. S. V. Clark, Sec.,
1919 Zimmerman St., Flint 3, Mich.

BELLFLOWER BRANCH
1st Monday, Nov. 1, 7:30 p. m.
I.O.O.F. Hall, Ardmore and Palm Sts.
Mrs. Margaret Hanson, Sec.
9652 E. Center Street, Bellflower, Calif.

EAST BAY BRANCH
3rd Thursday, Nov. 18, 7:30 p. m.
Willard School, Ward Street
Mrs. E. Carlson, Sec.-Treas.
2130 McGee Ave., Berkeley 3, Calif.

EL MONTE COMMUNITY BRANCH
3rd Thursday, Nov. 18, 4 p. m.
Columbia Grammar School, Rm. 64
Mrs. Mary Bradley, Cor. Sec.
701 Asher St., El Monte, Calif.

FOOTHILL BRANCH
1st Friday, Nov. 5, 8:00
Woman's Club House, 1003 Azusa Ave., Azusa.
Mrs. Phyllis Heth, Secretary
228 Bonita Ave., Azusa, Calif.

GLENDALE BRANCH
4th Tuesday, Nov. 23, 8 p. m.
206 West Cypress
Mrs. Joyce Lorenz, Secretary
5227 El Rio Ave., Los Angeles 41, Calif.

GRAY, EVA KENWORTHY BRANCH
3rd Monday, Nov. 15
Community House, LaJolla
Tillie Genter, Sec.-Treas.
7356 Eads St., LaJolla, Calif.

GRUENBAUM, MARGARET BRANCH
Mrs. W. E. Jones, Sec., Willow Grove, Pa.

HOLLYWOOD BRANCH
2nd Thursday, Nov. 11, 7:30 p. m.
Plummer Park, 7377 Santa Monica Blvd.
Mrs. Marjorie Robinson
1137 No. Orange Dr., L. A. 46.

HUB CITY BRANCH
3rd Monday, Nov. 15, 7:30 p. m.
Roosevelt Hi Sch. Cafe., 1200 E. Olive, Compton
Mrs. Eloise Scheller, Sec.-Treas.
3586 Imperial, Lynwood, Calif.

HUMBOLDT COUNTY BRANCH
2nd Monday, Nov. 8, 8 p. m.
Lanes Memorial Hall, 1st Christian Church
Miss Margaret Smith,
P. O. Box 635, Ferndale, Calif.

INGLEWOOD BRANCH
2nd Thursday, Nov. 11, 8 p. m.
325 No. Hillcrest, Inglewood, Calif.
Harry B. Fasmer, Secretary
5129 So. Manhattan, Los Angeles 43, Calif.

LA MESA BRANCH
2nd Monday, Nov. 8, 8 p. m.
La Mesa Grammar School, La Mesa, Calif.
Mrs. Edna F. Barker
89 Central, Lemon Grove, Calif.

LONG BEACH PARENT CHAPTER
3rd Tuesday, Nov. 16, 7:30 p. m.
Robert Louis Stevenson School, 5th & Atlantic
Cafeteria. Lime St. Entrance, Long Beach, Calif.
Mrs. Rose C. Hixon, Sec.-Treas.
Box 572, San Fernando, Calif.

MIAMI FLORIDA BRANCH
4th Tuesday, Nov. 23, 8 p. m.
Simpson Memorial Garden Center
Mrs. Elizabeth S. Hall, Sec.
2572 Trapp Ave., Miami 35, Fla.

MISSOURI BRANCH
4th Tuesday, Nov. 23, 2 p. m.
Mrs. Bruce Dill, Secretary
3715 Harrison, Kansas City, Mo.

NEW ENGLAND BRANCH
Mrs. H. H. Buxton, Sec.
114 Central St., Peabody, Mass.

NEW YORK SUBURBAN BRANCH
Sec.-Treas.: Mrs. Norman Hedley
71 Willard Terrace, Stamford, Conn.

NORTH LONG BEACH BRANCH
2nd Monday, Nov. 8, 7:30 p. m.
Houghton Park Club House
Harding & Atlantic, No. Long Beach
Miss Evelyn Peterson
1414 E. 68th St., Long Beach, Calif.

ORANGE COUNTY BRANCH
1st Thursday, Nov. 4, 7:30 p. m.
Farm Bureau Hall, 353 So. Main St., Orange.
Sec.-Treas., Mrs. Ethelyn Morgan, 250 N. Center
Orange, Calif.

PASADENA BRANCH
1st Tuesday, Nov. 2, 7:30 p. m.
2031 E. Villa Street
Mrs. Frank Clark, Sec.-Treas.
2168 Cooley Place, Pasadena 7, Calif.

PETALUMA BRANCH
3rd Friday, Nov. 19, 7:30 p. m.
Danish Hall, 19 Main St.
Mrs. Cuma Wakefield, Secy.
47 Fifth St., Petaluma, Calif.

PHILOBEGONIA CLUB BRANCH
Mrs. Lillian Watts, Sec., 405 Cotswald Lane
Wynnwood, Pa.

RIVERSIDE BRANCH
2nd Wednesday, Nov. 10, 8 p. m.
Mrs. Wm. Allen, Sec.-Treas.
7904 Magnolia Ave., Riverside, Calif.

ROBINSON, ALFRED D. BRANCH
4th Tuesday, Nov. 23, 8 p. m.
Ocean Beach Community Center
4726 Santa Monica Ave., Ocean Beach, Calif.
Mrs. Louise Gardner, Secretary
3212 James Street, San Diego 6, Calif.

SACRAMENTO BRANCH
3rd Tuesday, Nov. 16, 8 p. m.
Garden Center, McKinley Park
Mrs. A. Boyd Collier, Secy.
2777 Harkness Way, Sacramento, Calif.

SAN DIEGO BRANCH
4th Monday, Nov. 22
Hard of Hearing Hall, 3843 Herbert Ave.
Mrs. L. J. Elliott, Sec.-Treas.
3794 Grim Ave., San Diego 4, Calif.

SAN FERNANDO VALLEY BRANCH
2nd Monday, Nov. 8, 7:30 p. m.
Pierce Jr. College, 6201 Winnetka Ave.
Canoga Park. Mrs. Frank Ecker, Secretary
21003 Devonshire St., Chatsworth, Calif.

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

SAN GABRIEL VALLEY BRANCH
4th Wednesday, Nov. 24, 8 p. m.
Masonic Temple, 506 S. Santa Anita Ave.
Mrs. Myrtle Jones, Secretary
132 May Ave., Monrovia, Calif.

SANTA BARBARA BRANCH
2nd Thursday, Nov. 11, 7:30 p. m.
Rm. 5, Com. Center, 914 Santa Barbara St.
Santa Barbara, California
Mrs. Bertha Ayersman, Secy.
1120 Olive Street, Santa Barbara, Calif.

SANTA MARIA BRANCH
Sec.-Treas.: Mrs. Peter Mehlschau

SANTA MONICA BAY BRANCH
2nd Wednesday, Nov. 10, 7:30 p. m.
University High School, Room 232
11800 Texas Ave., West Los Angeles
Mrs. Denman Bemus, Sec.-Treas.
345 So. Anita Ave., Los Angeles 24, Calif.

SANTA PAULA BRANCH
4th Thursday, Nov. 25, 6:30 p. m.
Steckel Park
Margaret Richardson, Rt. 2, Box 242A
Santa Paula, California

SHEPHERD, THEODOSIA BURR BRANCH
1st Tuesday, Nov. 2, 7:30 p. m.
Alice Bartlett C. H., 902 E. Main, Ventura, Calif.
Miss Carolyn Peyton, Secretary
335A So. Evergreen Dr., Ventura, Calif.

SO. ALAMEDA CO. BRANCH
3rd Thursday, Nov. 18, 8 p. m.
Scout Room, Markham School, Hayward, Calif.
Mrs. Dorothy Bayliss, Corr.-Sec.
26706 Monte Vista Dr., Hayward, Calif.

SOUTHGATE BRANCH
4th Tuesday, Nov. 23, 8 p. m.
Girls Scout Clubhouse, Southgate Park,
Mrs. Mary Casey, Sec'y-Treas.
4085 Tweedy Blvd., Southgate, Calif.

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WESTERN RESERVE BRANCH, CLEVELAND, O.
4th Wednesday, Bimonthly, Nov. 24th, 8 p. m.
Garden Center, 10013 Detroit St., Cleveland, O.
Mrs. Fred McCune, Secy., 1470 Waterbury Rd.
Lakewood, Ohio

WHITTIER BRANCH
4th Tuesday, Nov. 23, 8 p. m.
Union High School, Room 19
Lindley Ave. Entrance, Whittier, Calif.

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