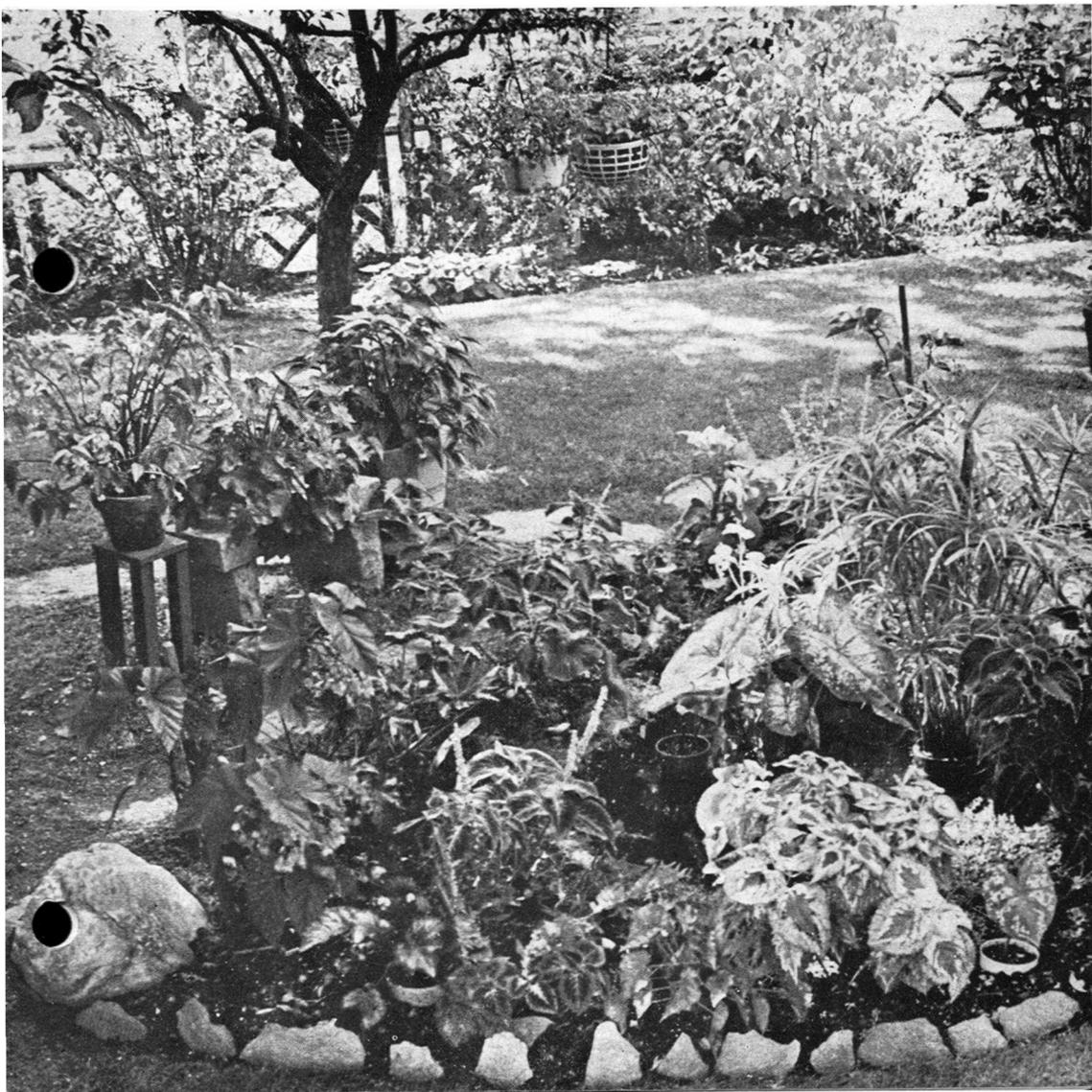


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Editor.....Mrs. Mae Tagg
2123 W. West Ave., Fullerton, Calif. 92633
Eastern Editor.....Mrs. Hertha Benjamin
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Southern Editor.....Mrs. Don Wagner
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Northwestern Editor.....Richard Hammond
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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; 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.

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

BEGONIAS ON LONG ISLAND, NEW YORK

By JAMES WYRTZEN

Around Christmas time a light snow covers the ground on Long Island, New York but on the porch and in the greenhouse, Begonias, Christmas cactus, gloxinias, streptocarpus and many other plants are in bloom. The rex Begonias with their quiltwork of colors grow beautifully in the low light of the porch. The rhizomatous and semperflorens are placed where they get the most light and sun during the winter months. This helps to initiate the formation of buds which come into bloom in the spring and summer.

The cane type Begonias, if placed in the window or greenhouse, will bloom all year round. The only problem I've never been able to conquer is the dropping of the lower leaves on cane Begonias, but I'm working on it. One way to cover the bare canes is to cause the plant to send up new shoots from the soil surface. This can be accomplished by pinching back the canes when they are four to six inches high. In the fall, B. 'Corallina de Lucerna' reaches a height of eight feet. Before bringing it in, it is cut back to about ten inches. The tops are placed in a rooting medium and many plants are started.

Most Begonias can be propagated in this manner. Quite a few varieties, such as rex, can be propagated by cutting up the leaves with a pair of scissors. These should be placed in a bag with some rootone. Shake well to make sure all parts of the leaves are covered as rootone contains a fungicide which prevents rotting. Place them on top of a good rooting medium such as half vermiculite and half perlite. Cover and place a fluorescent light about

eight inches above the soil. New plantlets will appear where the leaf veins have been cut. For best results maintain a temperature of 75° to 85° with plenty of light and humidity. In this manner about fifty plants of B. 'Cleopatra' were rooted. This can be done with most of the rhizomatous and rex Begonias. At present, plantlets are forming on B. *sunderbruchi* and B. *olsoni* (*vellozoana*).

Many people find rex Begonias difficult to grow. But this is not my experience. I converted my porch exclusively for growing plants. A thermostat maintains a temperature of 62° to 65° during the night hours and on cloudy days. When the sun is shining temperatures will rise to 75° to 80°. Humidity is maintained at about 65% with the use of a humidifier. All plants are on a shelf two feet wide by twenty feet long that faces south. The shelf is lined with polyethylene hardware cloth two inches above the stones. Plants are fertilized with a 20-20-20 chemical fertilizer at the rate of ¼ teaspoon per gallon at each watering. About once a month they are washed through with clear water. It is most important to remember that every time a plant is watered, with or without fertilizer, that it should drain out the bottom of the pot. This helps to prevent salt build-up in the soil.

All plants are sprayed every two weeks with an all purpose spray, such as Isotox. Occasionally they are sprayed with Karathane to prevent mildew. Mites can be controlled by spraying with Kelthane.

By Memorial Day weekend most Begonias decorate the redwood fence and the hanging baskets suspend from the trees. Some are placed in the ground in their pots around the fishpools. They remain there until the second week in September when they are all sprayed thoroughly before be-

COVER PICTURE

Fishpool with border of Begonias and tropical plants grown by James Wyrzten.

Photo by HERTHA A. BENJAMIN

(Continued on Page 175)

BEGINNING WITH BEGONIAS

By CHARLES A. LEWIS

Director of Horticulture and Design, Sterling Forest Gardens, Tuxedo, N.Y.

The early stages of Begonia seedling production can be difficult due to small seedlings which may easily damp off. The balance of sufficient air, light, and moisture can spell the difference between healthy or weak spindly seedlings. At Sterling Forest Gardens we grow thousands of Begonias, tuberous and semperflorens, from seed germinated in polyethylene bags. The system includes a container of sterilized, heavily watered medium of equal parts of sand, German peat moss, peat humus, and leafmold on which seed is sown, then enclosed in a polyethylene bag—Jumbo Turkey size holds a flat extremely well (Fig. 1). Note the two wires stapled to the

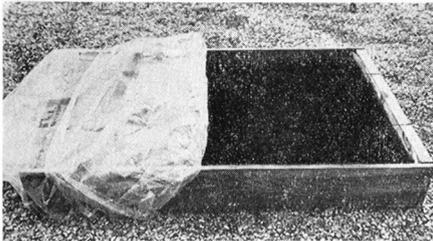


Figure 1—Flat with seeds sown, about to be covered with polyethylene.

top of the flat to prevent the polyethylene from resting on the surface of the medium and cutting off the air to the seedlings. The ends are closed with rubber bands and it is set in a light warm place. The enclosure provides almost ideal conditions for germination. Moisture evaporating from the surface creates a 100% humid atmosphere inside the bag which condenses as droplets on the plastic and drip down to water the seedlings. Often you will see a little plant growing encased in a drop of water. The bag acts as a barrier against fungus spores which might infect the sterilized medium. The enclosed flat is placed in full light but must be protected from exposure to direct sun.

The rays would quickly heat up the inside to a temperature that would cook the seedlings.

Seeds will germinate and the tiny plants grow in this protective environment, but there must always be sufficient light to permit stocky growth. With tuberous Begonias, we leave the enclosure in place until the first true leaf is well evident. After the bag is removed the plants should be watered well with a gentle spray to settle the soil. Seedlings are transplanted when the leaves are as big as a dime, to one inch centers, in a flat. When large enough, they are transplanted to pots in which they flower (Fig. 2). The



Figure 2—Five month old seedling Tuberous Begonia. Notice the many vigorous shoots and resultant bushy growth obtained in plants from seeds.

time span is usually five weeks from sowing to removal of plastic cover, six weeks to transplanting, nine weeks to potting, and six weeks to flowering. One should allow at least six months from sowing to flower in tuberous Begonias from seed.

The soil medium for both transplanting and potting is one part each of perlite, sand, leafmold, peat moss, and soil, plus half a part of vermiculite. The mixture is well aerated and yet retains moisture. When the plastic cover is removed from the seedlings a half strength solution of 20-20-20

fertilizer is applied. As the plants grow they are fertilized every three weeks with full strength 20-20-20. (Follow the package instructions.) After transplanting, the fertilizer is applied once every two weeks. It is important to keep the plants in an active state of growth, allowing no checks due to lack of water, temperature, light, or fertility. A deficiency of any of these factors during the first six months of growth causes premature hardening of the tissues, preventing full development of the plant.

Semperflorens Begonias produced in the same manner are twice as fast as tuberous. (Fig. 3 and 4.) Blooming

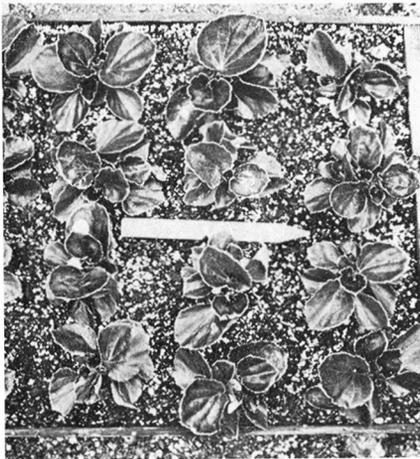


Figure 3—Six week old transplanted semps.

equally well in sun or shade, they require almost no care other than water and fertilizer. The dark leaf type semps with white flowers such as 'Capuchino' and 'Whiskey' provides a fine contrast for orange and yellow tuberous Begonias. The green leafed white flowered Scandinavian White works extremely well as an interplant with orange tuberous Begonias. The new Danish semps, 'Scarletta,' bright scarlet, and 'Linda,' bright rose pink, have also been used to good effect. (See Seed Fund, ed.)

Whenever Begonias or other fine

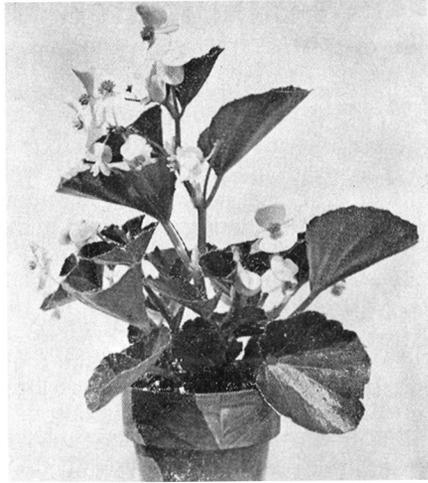


Figure 4—Potted semp B. 'Capuchino'.

seeds are to be planted, we find the polyethylene bag method of germination to be exceedingly simple and almost foolproof. Try it next time you plant small seeds.

Photos by HERTHA A. BENJAMIN

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'PERMANENT' BEGONIA BOUQUET

By FRED A. BARKLEY

Dept. of Biology, Northeastern University, Boston, Massachusetts

The ability of Begonia leaves to root and be used for propagation is well known and has been used commercially and by hobbyists for many years. Such leaves can either be rooted in water or in porous soil. In recent years dipping the cut ends of the petioles in auxin powder speeds rooting and increases the percentage rooting. In any case, the first event after cutting the leaf is the production of a callus if the leaf is going to survive. Next is the production of adventitious roots, either on the callus, along the petiole, or both. The production of adventitious buds, which develop into new plants may be from the callus at the base of the petiole, at the soil callus on the petiole, at the junction of the petiole and lamina of the leaf,

or on cut veins in the lamina.

The leaves of Begonias are very attractive and they are grown for their attractive leaves as much as for their flowers. Thus it is rather surprising that growing Begonia leaf bouquets is rare if not unknown.

Begonia leaves from various types were cut off near the bases of the petioles, and the cut ends dipped in rooting powder. The petioles were then placed in glasses of water. As they rooted, they were planted into a pot of soil, so that there was a collection of growing leaves gradually accumulated. They are still quite attractive after several months. Of course they will either die or put out plants eventually (see lower right leaf in illustration) and then die.



Growing Begonia bouquet.

Photo by Prof. PATRICIA MORSE, Dept. of Biology, Northeastern Univ., Boston, Mass.

NORTHEAST BEGONIAS IN SEPTEMBER

By ELDA HARING

Here it is September, and although it seems that only yesterday we consigned most of our collection of Begonias to out-of-doors growing areas, it is time to return them to their places indoors. Here in the Northeast it is not wise to wait later than September 10 to 15, for while days are balmy, nights grow chilly. Cool night temperatures seem to produce a chemical change in the stems of many of the Begonias and they are irreparably damaged. It is very important that all house plants be brought inside before it becomes necessary to have the heat on all day, so that the plants will become gradually accustomed to the change from their out-of-doors location. Before bringing Begonias and house plants into the house or indoor areas, spray them with a solution of Isotox or an insecticide containing Malathion and Kelthane. It is also a wise precaution to quickly dip the plant, pot and all into half-strength insecticide in order to kill any grubs which are in the soil. Many a good plant is lost because of grubs damaging the stem and roots. This dip also will kill any eggs of white fly which might be attached to the underside of the plants' leaves. **BE SURE TO USE RUBBER GLOVES** to do the dipping and handling of the pots when using these insecticides as they are easily absorbed through the skin and can cause illness or distress.

While it is preferable to take cuttings in spring or early summer, they may, if desired, be taken now. Personally, I prefer my favorite mix of equal parts of milled sphagnum, vermiculite, and peat moss for most cuttings but if you have had Begonia cuttings rot from being kept too moist, a mix of half peat and half sand will do. Sand alone is inclined to dry out quickly and cuttings may be lost. The added peat acts as a sponge to

hold the moisture, yet the mix does not stay so moist that rotting results.

Expect the calla lily types of Begonias to "stand still" at this season and do not overwater. They will start to grow vigorously again in the early spring. I usually make divisions of my calla lily Begonias in September if time has not permitted this to be done earlier. These should become specimen plants by April or May. These divisions grow slowly, so do not try to hasten their growth but let them take their time to become established. Old plants which have finished their blooming cycle may be cut back sharply and allowed to grow again from the crowns.

Keep the winter flowering types slightly on the dry side at this season and do not start a regular feeding program until January. In this category are the so-called star type Begonias, the heraclifolia type, many of the canes and rhizomatous kinds. *Semperflorens* types should be divided and cut back sharply for active growth to begin. If repotted into fresh soil and fed once a month, they will soon start to bloom again. Adequate sunlight is necessary for them to set blooms.

For potting soil I use two parts good garden loam to one part builder's sand and one part peat moss. To this is added one four inch flower pot of superphosphate to each bushel of soil. Not everyone has available the materials to prepare a planting medium and must resort to the prepared potting mixes. It has been my experience that these are inclined to dry out rapidly so that I like to add one pint of vermiculite to each two quarts of mix. I feed Begonias growing in these mixes just as I do those grown in the soil mix. I prefer to use Ra-pid-Gro, Peters Plant Food for House Plants, and Plant Marvel, alternating these

(Continued on Page 175)

ROUND ROBIN NEWS

The newest fern robin started off by sharing a fern glossary (ditto copy for each member) and fern fronds of spores—as well as many questions on culture.

Bob Shatzer of Albright, West Virginia, has learned that spores of fern cultivars do not come exactly true, but produce many variations. He uses the same potting mix for ferns as for Begonias and gesneriads, plus a few oyster shells in the bottom. His mix is equal parts of perlite, commercial soil mix, sphagnum, and vermiculite, with a little lime and two pounds of dried cow manure when the other ingredients are each about one scrub bucket full.

Humidity: Dora Lee Dorsey of Tampa says that *B. cubensis* (Holly-leaf fibrous species from Cuba) is quick to fall apart in late summer if not cared for just right. Another member asked if humidity is what it needs. *B. bartonea* ('Winter Jewel'), a small species from Puerto Rico, tended to behave the same way for Dora Lee until she learned never, never to let it get dry. She now grows it on a tray of moist sand, sphagnum, or vermiculite, and it grows like a weed on the greenhouse bench.

B. listida: Dora Lee's *B. listida* (new, small, Brazil species) colored beautifully during the winter, and she rooted several cuttings. When the sun became hot and bright, it began to lose the sharp contrast between the pale center vein (which gives its distinctive stripe) and the outer leaf zone, and to curl under at tips. Moved to a shadier spot, *B. listida* has regained some color contrast. She concludes that it does not like strong light.

Muriel Perz of Long Beach, California, adds that *B. listida* does not like wet feet and that, without good air circulation, it can get mildew. It makes a beautiful hanging basket—where it gets both good air circulation and good drainage. Others that like this treatment are rhizomatous *B. ma-*

soniana (Iron Cross) and *B. 'Norah Bedson'*.

B. boweri nigramarga: Anita Sickmon of Cheney, Kansas, had difficulty rooting this distinctive little Mexican species in sphagnum moss, so experimented. She put fifteen leaf cuttings into a market pack of wet perlite and filled another with little pieces of rhizomes, covering both loosely with sheets of Handi-wrap. She didn't learn much, she said—every leaf rooted, not one rhizome was lost to rot. She also has good results rooting angel-wing Begonias in perlite.

Origin? Geraldine Daly of Conventry, Rhode Island, would like to know the origin of *B. 'Midas Touch'*—which Ruth Wille of Jackson, Mississippi, described as "rather maple-leaved and blotched heavily with white."

B. socotrana: Jane Cullen of Hinsdale, Illinois, does not find this winter-blooming bulbous species difficult when grown under lights (Gro-Lux Wide-Spectrum). In fact, she admires its constitutional strength. It reacts most positively to plant foods. For a while, Jane used food rather high in potash and phosphorous, which produced marvelous bloom but also excessive brittleness and little pollen. After return to a more neutral food, she finds things normal again.

B. schmidtiana: May T. Drew of Narberth, Pennsylvania, calls *B. schmidtiana* (everblooming fibrous) easy to grow, though naturally short lived. She raises some from seed every year—in fact, they often raise themselves from seed dropped into another pot during the summer. She gets better plants from seed than from cuttings.

B. luxurians: Ruth Wille had heard that this palm-leaved species from Brazil liked to be potbound, and was growing it that way; but one she put in the flower border was growing madly, sending up growth at the base.

Gesneriads: Lily Fine of Brooklyn says that *Columnea* 'Early Bird' seems

to be the easiest of the columnneas to bloom. Hers was already in bud when very young, a few inches below Wide-Spectrum fluorescents. Her C. 'Oriole' and 'Yellow Dragon' were opening in May, very lovely.

Bob Shatzer was able to root a leaf of exotically variegated *Episcia* 'Cleopatra' in a wide-mouthed canning jar, in unshredded sphagnum, covered. Most grow this plant in a bubble bowl or something of that nature. Seedlings seem to come white and die off right away. Bob was worried because the first leaflets from his leaf-cutting were nearly pure pink with lots of white, but then a few little green leaves appeared.

Rexes: Grant McGregor of Ottawa, Canada, has most of his rexes in bloom most of the winter, while rexes go dormant for many. After two years with disheartening luck in California, Thelma O'Reilly of La Mesa finally brought twenty of twenty-two rex Begonias through the past winter in her outdoor conditions. Seven lost not one leaf. In the potting house, twelve made it without full dormancy, just rest. Five of the rexes that withstood her winter were Sylvia Leatherman's Begonias 'Lady Frances Jean,' 'Lady Bee Olson,' 'Lady Beth Bath,' 'Lady Peggy Leatherman,' and 'Sir Albert Leatherman.'

Vernia Routh, in Louisburg, Missouri, this year has given her rexes more light, and they have grown so fast she can't keep up with them. Daisy Austin of Julian, California, advises that rexes like humidity to rise from below, to reach undersides of leaves. In the summer greenhouse, keep humidity high by spraying the ground once or twice, setting pans of water among the plants, or setting pots on moist gravel. If the glass is shaded, plants themselves may be misted.

Cuttings: Daisy agrees that growers have found rex leaf-stem cuttings make stronger plantlets than do wedge cuttings. If you want more plantlets, use fingernail or razor to just barely cut outer layer of stem. Mary Powers of Mahaffey, Pennsylvania, cut a leaf

of B. rex 'Sunburst' into four pieces, put them into vermiculite and sand, and potted up seven plantlets—then rerooted for ten more.

Fragrance: Ruth Wille has found B. 'Florence Carrell' ('Limminghei' x *incarnata*) to be fragrant, quite noticeable in the middle of the day.

Shelter: Amelia Matheson of Miami uses a two-car pie-frame garage, the sides and top covered with chicken wire and vines covering the wire, as a lathhouse. The vines keep it ten degrees cooler than ordinary laths. Pat Burdick finds metalized Mylar, a plastic, tacked on roof and sides inside the greenhouse in summer, works well, even allows her to keep seedlings in the greenhouse all summer.

Sterility: Dorothy Behrends of Encinitas, California, has never had success using B. 'Lucerna' or B. 'Corbeille de feu' as parents. Thelma O'Reilly heard that B. rex 'Fire Flush' is sterile, but a friend has finally set big, round seed pods on her plant, hopes they are fertile. Dorothy adds that she does know this rex is not always fertile. Grant McGregor's B. 'Lady Mac' (a cheimantha type Christmas Begonia) has not produced any seed pods for him, but he was trying once more in May.

To join a round robin, write:

Mrs. Carrie E. Karegeannes
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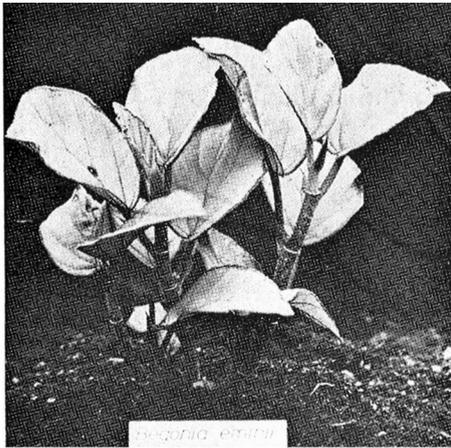
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CLAYTON M. KELLY SEED FUND FLIGHT

No. 1 — *B. eminii* —

A very unusual *Begonia* in many respects; looks more like a *philodendron* than a *Begonia*. Also, the seeds look like *philodendron* seeds; you can actually separate and count them. Leaves are oval, with a dark band around the edge, and rather ornamental. Flowers are small and borne in the leaf axils. The plant was collected by Dr. de Witt near Nimba, Liberia. Seeds were furnished by a botanist in Holland. Price \$1.00 per pkt.



No. 2 — *B. quadrialata* —

Dwarf plant from West Africa. Peltate leaves almost glabrous, yellow flowers. Price \$1.00 per pkt.

No. 3 — *B. herbacea*, Vellozo —

Brazil. Epiphytic plant found growing from face of boulder in dense shade near Ubatuba 20 km northeast of Caraguatatuba. One peculiarity of this *Begonia* is the epiphytic habit. Without any contact with earth, it can go on living on dead tree trunks and can be grown admirably on giant tree fern fibers. Another interesting feature of this plant is the symmetrical and lance form of leaves. It is evident that we have an uncommon species of *Begonia*, very interesting and of easy

culture. If it has a support of fern wood or a pot containing segments of the same material, maintained constantly damp, the results of this care will be the growth of many ramifications of the rhizome. Leaves can be green or silver-spotted. Price \$1.00 per pkt.

No. 4 — *B. convolvulacea* —

Brazil. Grows bushy up to six feet. Stems fleshy with knotty swellings, forming root over the entire length, bare, green. Leaves large, broader than long, about two and a half by three and a half inches when fully grown, broad, heart-shaped, dull-pointed, irregular small 5 to 7 partite lobes, dark green on top, shining, bare. Flowers white, overhanging axillary very ramified, multi-flowered panicles. Male flowers have many petals; female flowers have five.

This is a fast-growing, robust species, which is suitable for walls or trellises in greenhouses but requires cool conditions. Can be grown outside where climate permits. Price \$1.00 per pkt.

No. 5 — *B. 'Kallaking'* —

This is a robust, *Calla* type introduced recently by Chester Nave, San Leandro, Calif. Leaves and flowers are much larger than some of the other *Calla* types. Easily grown, not temperamental. Price 50 cents per pkt.

No. 6 — *B. valdensium* —

Brazil. Beautiful foliage shaped like the grape but variable as to leaf color, sometimes with beautiful silvery veins, red petioles. Flowers showy, white. A novelty. Price 50 cents per pkt.

No. 7 — *B. acetosa* —

Brazil. Neat, round, hairy leaves top short stilt stems from rhizome below. Above the effect of fuzz is subdued green; underneath, ruby-red. White flowers in spring. Price 50 cents per pkt.

In June we offered several of the best varieties of semperflorens *Begonia*

nias and the response was so great we ran out of seed before all of the requests were filled. We are sorry for this and hope to make it up with the following.

B. 'Linda' —

New and one of the best from Europe. Rich rose. Very free flowering, large flowered and compact. Resists disease and adverse weather conditions. Price 50 cents per pkt.

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Bright scarlet red. Best for vivid color and uniform dwarf compact habit. All plants bloom freely, at once and early. Price 50 cents per pkt.

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Dwarf, bronze foliage, six to eight inches in beds out of doors. Clear rose color. Price 50 cents per pkt.

B. 'Derby' —

A bi-color glistening white with each petal edge tinged salmon-pink. Early free flowering, compact and uniform. Price 50 cents per pkt.

If you wish all five varieties, you may purchase them for \$2.00 otherwise priced as listed.

Semperflorens Begonias are the most versatile and easiest grown of all Begonias and are the friendliest plants in the world. They are eager to bloom almost all year, in a riot of gay colors in greenhouse or garden.

Fern —

New from a collector in Costa Rica and is a large, tongue type, fronds heavy textured and corrugated. In all probability a polypodium that develops into a large basket fern and is considered quite choice. Requires much water; would make a good house plant in cold areas, outdoors in mild climates but should be protected from hot sun. Price 50 cents per pkt.

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

Convolvulacea is derived from the Latin, *convolvere*, meaning to twine around.

SMOKY VALLEY SHOW

By RUTH BEINEKE

Can prize winning Begonias be grown in Kansas? "Yes," said the many visitors at our Smoky Valley Begonia Show held May 24 in Salina. "Yes," said our judge, Mr. Gilbert Cunningham, owner of Designs by Cunningham. He has been our judge for several years, has noticed an improvement in our plants, and complimented us on our growing interest and skill.

Many were the "Oh's" and "Ah's" as visitors viewed the beautiful picture the tables of colorful Begonias and blooming violets made, and many were the chuckles as they stopped at the theme table. Here was a miniature baseball team, each player having a colored balloon for a head. A nearby sign read, "Growing Beautiful Begonias Takes Team Work" and the second sign read, "Hey, Team! Let's Work Together!"

There were tables of other shade loving plants and vines and two lovely terrariums which showed a great deal of know-how and T.L.C.

Some books from our growing library were displayed on another table with copies of *The Begonian*. A sign read "Begonia club members keep well informed."

There were several educational exhibits showing how Begonias are grown from seed and how violets are propagated from leaves. The Prize Winning Exhibit showed the growing stages of an African violet from a seed to a lovely blooming plant. Mrs. Frank Shults won a blue ribbon for this entry.

The Romeiser Trophy for Best Rex Begonia was won by Mr. Frank Shults for his 'Marian Louise.' Mrs. M. L. Rose, general show chairman, took the Rhizomatous Plaque with a star type Begonia, and Mrs. Chester Beineke took home the plaque for Best Violet in the Show.

The Smoky Valley Begonia Society has the distinction of being the only

(Continued on Page 177)

SANTA BARBARA EXHIBIT

Members of the Santa Barbara Branch of the American Begonia Society will present an exhibit of tuberous, fibrous, rhizomatous, and rex Begonias on Saturday, September 9, 1967 from 9 a.m. to 5 p.m., and Sunday, September 10 from 1 p.m. to 5 p.m. in the afternoon, in the Flower Hall of the Santa Barbara Museum of Natural History, 2559 Puesta del Sol, Santa Barbara, Calif. There is no charge for admission.

Prominent among the exhibitors will be Mrs. Barbara Philip whose collection of rex Begonias has been featured in many Santa Barbara County shows, and Rudolf Ziesenne, nomenclature chairman of the American Begonia Society, whose introductions of Begonias from their natural habitat in Mexico and South America and by hybridization, have enriched Begonia collections throughout the world.

BRILMAYER'S BACK!

The book *All About Begonias* by Bernice Brilmayer is available again starting this month. Begonia fanciers have long depended on this book as one of their authorities. Anyone who has been to the public library for books about Begonias knows how few there are. *All About Begonias* was copyrighted in 1960 and is the most up-to-date material available. It was taken out of print when Mrs. Brilmayer passed away in 1962 and has been very difficult to find.

All About Begonias is now available from our national library at a cost of \$5.95 plus postage (Calif. residents 5% tax). Order your copy now from our librarian,

Mrs. Lucile Wright
4508 West 133rd Street
Hawthorne, Calif. 90250

CHROMOSOME NUMBERS IN SEMPERFLORENS VARIETIES

Chromosome numbers of the sixty-two cultivated varieties of semperflorens Begonias on the facing page were listed by A. E. Zeilinga in the Netherlands journal of plant breeding, *Euphytica*, in 1962.* The cultivars were provided by various seedhouses in Europe.

Mr. Zeilinga listed the varieties he used in two classifications, *B. semperflorens* and *B. semperflorens gracilis*, including crosses between the two types under *gracilis* because it dominates in the hybrids. (The *gracilis* type is reported to have resulted from a backcross of a *semperflorens* x *schmidtiana* hybrid to *semperflorens*, and has no relationship with the species *B. gracilis*, a different Begonia.)

A series of crosses showed that triploids (plants with three times the basic chromosome number) resulted from crosses of tetraploid (four times the basic number) by diploid (two times the basic number). These triploids are sterile (probably causing their exceptional flowering).

Begonia chromosomes are very small and difficult to distinguish, Mr. Zeilinga pointed out. Therefore, different counts have sometimes been reported and some numbers may not be exact. Some of the variety names given him for the cultivars may be synonyms.

*A. E. Zeilinga, "Cytological Investigation of Hybrid Varieties of Begonia Semperflorens", *Euphytica* 11 (Institute of Horticultural Plant Breeding, Wageningen, Netherlands, 1962), pp. 126-136.

The dagger (†) indicates an approximate count.

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Cultivar's Name	Group	Diploid Number	Triploid Number	Tetraploid Number
Adeline	gracilis			68
Ball's Deep Rose	gracilis			66
Ball's Red	semperflorens	34		
Ball's White	semperflorens	33		
Bella	gracilis		50	
Benary's Rosenrot	gracilis			†
Blutenmeer	Fl semp. X Schmidtiana	33		
Bois de Vaux Rose	gracilis			66
Bois de Vaux White	gracilis			†
Carmen	gracilis			66
Christmas Cheer	semperflorens	34		
†Dornroschen (Sleeping Beauty)	gracilis		†	
Dwarf Carmen				†
Enchantress (Zauberin)	semperflorens	33?		
Erinnerung an Walter Seeger	gracilis		†	
Fl hybride 1/56	gracilis		†	
Fireball	gracilis			†
Firesea	semperflorens	33?		
Flamingo	gracilis			†
Grusz von Toggenburg	gracilis			†
Indian Maid	gracilis			66
Indian Maid Dwarf	gracilis			66
Karin	gracilis			66
Kongress Rosa	gracilis		50	
Kongress Rot	gracilis		50	
Kongress Weiss	gracilis		52?	
King of the Reds	semperflorens	34		
Lucifer	gracilis			†
Luminosa	gracilis			68
Luminosa compacta	gracilis			66
Matador	gracilis		50	
Organdy	gracilis		51,51	66
Prima Donna	gracilis			66
Radio	semperflorens	34		
Rosabella	semperflorens	34		
Rosa Perle	gracilis		†	
Rosa Rheingauperle	gracilis		†	
Rosa Tausendschon	gracilis		50	
Rosa Teicher	gracilis			†
Rosa Wunder	gracilis			66
Rosea	semperflorens	32		
Rose Perfection	gracilis			†
Red Perfection	gracilis		†	
Rote Perle	gracilis		50	
Rote Tausendschon	gracilis		50	
Rotes Wunder	gracilis		50	
Scandinavian Pink	gracilis			†
Scandinavian Red	gracilis			†
Scandinavian White	gracilis			†
Schnee	gracilis		†?	
Schwabenstolz	semperflorens	34		
Snowbank	semperflorens	34		
Snowflake	semperflorens	32-34		
Stuttgart 1939	gracilis		†?	
Teicher's Rot	gracilis			†
Vernon	semperflorens	34		
Weisse Perle	gracilis			66
Weisse Rheingauperle	gracilis		†	
Weisse Tausendschon	gracilis		51	
White	semperflorens	34		
Wintermarchen	gracilis			66
Zwaan's Dwarf red	semperflorens		†	

TENDER LOVING CARE

By HERB WARRICK

T.L.C. represents a term that many people use, but what does it mean? Does it mean the same thing to all plant growers? Does it mean the same thing the year around? Is it the same in every climate? Is it the same for all plants? Are green thumbs or ten dirty fingers the principal factors in T.L.C.?

Some folks feel that T.L.C. means watching their plants daily. Well, commercial growers watch their plants daily but should we say that they give T.L.C.?

Some folks say that they can't leave their plants for more than a few hours at a time while others sort of abandon them while away on lengthy trips.

After talking to many people it appears that there are several factors in "Tender Loving Care". Apparently one of the very important factors is the attitude of people toward their plants. Anyone can provide the "Care" part of T.L.C. if they have a sincere desire for it. The proper type of "Care" just requires knowledge, experience and effort. Commercial and professional folks and the amateurs alike can give identical "Care" and any of them can be a success or a failure according to their plant knowledge, experience and effort.

The words "Tender Loving" refer only to our feelings that go with our "Care". This "Tender Loving" attitude is usually reserved for conversational purposes by the amateur growers but it does not always assure success in the growth of plants. Without knowledge of plant physiology, without experience with plants and without effort, no one will have success in growing plants, regardless of how much we "Love" them or treat them "Tenderly".

The experienced commercial, professional and advanced amateur growers can usually 'run circles' around the devoted or dedicated beginner and yet they may not be credited with providing "Tender Loving Care".

A desire or an attitude toward researching or applying research efforts

is really the most important factor in successful plant growing. The "Tender Loving" part of plant "Care" merely refers to the pleasure that we get individually or collectively from the applied research on our plants. Plant research need not be complicated nor have a monetary motive. A monetary motive is usually reserved for the commercial and professional growers. The average home grower or the dedicated amateur usually is motivated only by the pleasure of seeing plants grow. It is among these latter folks that the term "Tender Loving Care" is usually applied, whether or not they have success with their plants.

To be successful, all classes of growers of plants must apply certain basic cultural principals. The following list provides a few of these principals.

1. Consider every plant as a small chemical factory that is always reacting to its environment. This factory is capable of increasing in size, changing color and providing many by-products.

2. Always study plant physiology and observe the reactions of the plant to such things that we provide for it as food, water, heat, light, humidity, etc.

3. Work around the plants frequently. We never know what a plant is doing unless we observe it almost continuously.

4. If we use a plant for decorative purposes, we must provide extra attention to assure its continued high quality growth.

5. Always watch for parasites, disease, weeds and mechanical or chemical damage from any source.

6. Provide a proper and adequate supply of plant food. Remember, a plant is a chemical factory and must have supplies on which to grow and to help present an attractive appearance.

7. We must provide adequate water and humidity to prevent wilting and drying of leaves, stems and roots.

8. Here are some of the signals and signs that all growers must watch for.

- a. Watch leaves and branches for wilting.
- b. Watch color of all parts of a plant. Vivid colors usually mean good growth.
- c. Watch for balanced growth. Proper and adequate light gives good color, low and strong looking plants. Spindly growth usually indicates insufficient light intensity.
- d. Watch for broken and distorted stems. Ungainly or thin spindly growth needs pruning.
- e. Watch the quantity and quality of flowers. During the flowering season a lack of flowers usually indicates lack of food, light or proper temperature.
- f. Watch for firm turgor in all parts of the plant. Firmness of the leaves usually means that the vascular system of a plant is functioning at full efficiency.

9. Here are some plant physiology items and associated features that we should study in order that we will better understand how our plants grow.

- a. Photosynthesis—(How plants use light).
- b. Transpiration—(How air and other gases and liquids are used).
- c. Translocation of liquids in plants.
- d. How meristematic tissues function and grow.
- e. How cuttings grow new roots and stem buds.
- f. Structure of flowers.
- g. Nomenclature of all plant parts.
- h. General anatomy of all plant parts.
- i. Plant diseases and remedies.
- j. Plant pests, their damage and their control.
- k. Light intensity and its control for plants.
- l. Hybridization, seed production and production of new plant cultivars.

To summarize: all plant culture for novice, amateur, commercial and professional growers, it is probably safe to depend on the old adage that says "our Creator helps those who help themselves."

The more we study, watch, test and spend time with our plants, the better they perform for us. Plants will grow well for everybody and anybody anywhere in the world at anytime if we

provide for their needs. We all are supervisors of those wonderful little chemical factories and a very real technical knowledge and interest and willingness to work will make anyone appear to have a so-called 'green thumb' and to be a real provider of "Tender Loving Care."

BEGONIAS ON LONG ISLAND

(Continued from Page 163)

ing brought indoors. The potted plants which were in the ground are all treated with V.C.13 to control nematodes. Of course, many plants have grown large and are pot-bound. These are divided and repotted in fresh soil. By Christmas the plants are well established and as usual crowd the benches. The excess in the fall and throughout the year I am glad to give away so that others may share with me the happiness and enjoyment I get out of them.

NORTHEAST BEGONIAS

(Continued from Page 167)

each time I fertilize which is usually every three weeks, but only when Begonias are in *active growth*. I cannot emphasize strongly enough that here in the Northeast it is not advisable to feed Begonias during the late fall and early winter if not in active growth. Young plants from cuttings are usually growing quite well at this season and may be fed as required.

PUBLICATION NOTICE

The deadline for all material for publication is the first of the month prior to the publication date. All articles, notices and photographs should be sent to the Editor as much prior to the deadline date as is possible.

Advertising copy and inquires should be sent to the Advertising Manager.

CORRECTION

In the July issue of *The Begonian*, page 125, John Scott was from Niddrie (not Middrie), Victoria, Australia. Mr. Scott has since moved to 44, Queen Street, Ormond, Victoria, Australia.

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- 2 — **Good Philodendron** starts, some rooted, some aerial roots.
- 2 — **Foliage Plants** (plants from previous lists).
- 2 — **Bromeliad seedlings** (unusual hybrids from new crosses) 3 or 4 years old.

(We will label the crosses when we know them.)

ANY TWO OF THE ABOVE COUNT AS ONE PLANT

- 1 — **Tillandsia species** (different than any listed before), but our choice. Mounted on tree fern.
- 1 — **Orange Jessamine** (*Murraya Paniculata*), sometimes called chalcas exotica. Lovely foliage plant. The shiny leaflets last very well in flower arrangements. Small white flowers, fragrant life orange blossom, followed by red berries.
- 1 — **Cissus Discolor** — Lovely climber or good in a hanging basket. Leaves rich green with silver lustre, with rich red beneath. Sometimes called a climbing Begonia but it is not. Grow in shade.
- 1 — **Monstera deliciosa** (Mexico) Leaves deeply cut and perforated. Grown as a house plant in the north. (We always have these on hand in all sizes as tip cuttings. 4" pot size \$1.00). Easy to grow.
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- 1 — **Species orchid of up to \$2.00 value**. Mounted on tree fern, some named, some not, for \$1.00.
- 1 — **Pollyscias balfouriana 'Pennockii'** — (aralia) This is an attractive cultivar from Puerto Rico. Has leather oval leaves, variegated with creamy-white, with dark green on leaf edge. Easily grown as a houseplant.

If interested in other unusual and rare plants, from the tropics and sub-tropics, send 10c in stamps or coin, for our regular lists.

MANY SPECIALS AND BARGAINS

PLEASE NAME TWO (2) SUBSTITUTES

ARE YOU A BEGONIA JUDGE?

A list of judges accredited by the A.B.S. is badly needed. Requests have been made for lists of judges available in many areas.

An individual need not have taken an A.B.S. Judges Course or even be a member of the A.B.S. to qualify for a judges card. These cards are issued according to the number of years and number of shows judged. As a person gains experience he advances and may eventually obtain a Senior Judges Card.

Any person holding a valid Judges Card may retain that card, and is still an accredited judge. However, up-to-date information is needed for the Judges List, available to any show

committee member. Pertinent information includes how far a judge will travel, whether expenses are expected to be paid for travel beyond a certain distance, etc. Many shows include other types of plants, and it is important that the records indicate a judge's capabilities to judge these.

For those who wish to be included in the list of available judges, the application form may be obtained by sending a stamped, self-addressed envelope to:

Mrs. Sylvia Leatherman
A.B.S. Chairman of Judges
2637 North Lee Avenue
South El Monte, Calif. 91733

DID YOU KNOW?

Did you know that the word Begonia should always be capitalized? Check with "Trusty" Webster. The Begonia was named for Michel Begon (1638-1710), a French Botanist. Therefore, the name of the plant, Begonia, and the name of the family, Begoniaceae, are always capitalized. If Fuchsia lovers will also check "Trusty" Webster, they will find the same is true for Fuchsia.

OLD BEGONIANS

The first *Begonians* published by the American Begonia Society, being reprinted in mimeograph form, are now available for 1934. Other years will be distributed as soon as each year is completed. Send your order now to the Librarian—\$6.00 for the years 1934-35-36-37.

SMOKY VALLEY SHOW

(Continued from Page 171)

branch in the state of Kansas. Our climate is certainly not ideal for the culture of shade loving plants, but our beautiful shows, this year and in past years, prove what can be done when we all work as a team and have many happy hours doing it.

Volume 34 • September, 1967

BEGONIANS for 1934-35-36-37

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MINUTES OF THE JULY A. B. S. BOARD MEETING

The regular meeting of the Board of Directors of the American Begonia Society was called to order by President Wright at 8:00 p.m. on Monday, July 24 at South Gate Auditorium.

Past President Perz led the Pledge of Allegiance and President Elect Tagg read the Aims and Purposes. Thirteen officers and ten branches were present. The minutes of the June meeting were read and approved with one correction. Correspondence was read. A check for \$5.00 to the Convention Fund was received from the Dallas County, Texas Branch.

President Wright read the Standing Rules for the Convention concerning the agenda. Malcolm Rich, Parliamentarian, explained the rules. President Wright asked that board members make their reports concise. If necessary, a special board meeting will be called in August.

The Treasurer reported a balance on hand of \$1,184.09. Due to the late printing, *The Begonian* for July has not yet been paid for. He also reported a donation of \$25.00 from the Bessie Raymond Buxton Branch for the Dr. Creighton research fund. W. Barnett made a motion to rescind the June motion that the A.B.S. donate \$15.50 to complete the goal of \$500.00, as this goal has now been oversubscribed by \$9.50. Motion seconded by C. Tagg, carried.

The report of the Round Robin Director was read.

The Membership Secretary reported 148 new and renewal memberships during the month, with a total of 2,390.

The Public Relations Director reported several nice letters, and passed around pictures. Her co-chairman, Iris Delameter, was present.

Ruth Pease read the report of the Judges Course Committee.

The Librarian reported that the reprints of *The Begonian* for 1935 are now available.

The Show Chairman reported on the meeting held by the show committee during the month. Preparations are proceeding well, except that Malcolm Rich reported a shortage of judges. Mr. Rich made a motion that all judges who held cards prior to this year receive ratings as

Senior Judges. Seconded by Bert Slatter. Motion did not carry (three yes, twelve no).

Alice Martin reported that plans for the judges luncheon and the banquet are all made. She asked for donations for the show snack bar.

Bert Slatter thanked the North Long Beach and Westchester Branches for the use of their plant hanging racks for the show.

Ann Rose reported on an exchange advertisement with the Hemerocallis Society. She is to have a cut made of the A.B.S. emblem for that ad.

C. Tagg reported on the bids for printing *The Begonian*. The best offer was made by the Kruckeberg Press, 340 S. San Pedro, Los Angeles. Ralph Corwin moved that this offer be accepted and that C. Tagg so inform the present printer, the others who submitted bids, and Mr. Kruckeberg. Motion carried.

Ann Rose reported that an additional six months of the mimeographed copies of *The Begonian* have been discovered, and moved that we include these with the four years now being prepared. Motion carried.

Everett Wright asked for approval to allow the Neal A. Maclean Co. to sell MagAmp at the show. The price of a five pound bag is \$2.75, of which the ABS would receive \$1.00. Motion to approve this made by P. Benell, seconded by A. Martin, carried.

E. Wright appointed Mae Tagg as editor of *The Begonian*. Motion made by Ralph Corwin to approve this appointment, carried.

Everett appointed Mr. Cocke, Mr. Neff, and Mr. Sparks to count the ballots; and Mr. Pease, Mr. Hough, and Mr. Cocke as auditing committee.

Branch reports were heard. Ralph Corwin, Photographer, took pictures of the elected officers. He then took pictures of Mr. Wright with his surprise birthday cake. After adjournment, the board members helped Mr. Wright celebrate his birthday with the cake and coffee, served by Mrs. Wright.

Lucille Williams,
Secretary

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CALENDAR

September 7—Westchester Branch:

Birthday potluck supper at 6:30 p.m. Rudolf Ziesenhenne will be the guest speaker.

September 8—San Gabriel Valley

Branch: Jimmy Girdilian will discuss bulbs and show slides. The meeting will be at 8 p.m. at the Arboretum.

September 9—Santa Barbara Branch:

Plant exhibit September 9, 9 a.m. to 5 p.m. and September 10, 1 p.m. to 5 p.m., in the Flower Hall of the Museum of Natural History, 2559 Puesta del Sol, Santa Barbara. No admission.

September 13—Inglewood Branch:

Guest speaker will be Mrs. Ethel Arbuckle from Temple City who will speak on Cane Begonias. Our own members Marie and Richard Tudor will share some highlights of their recent trip.

September 19—Knickerbocker Branch:

Plant competition and demonstration.

September 22—Redondo Area Branch:

Mr. Ruby Budd will speak on Hybridization of Begonias. Ernest and Vail Ave., Redondo Beach at 7:30 p.m.

September 24—North Long Beach

Branch: Annual Chicken Dinner. Donation \$1.00. Hourly prize drawings. Home of Mrs. Alberta Logue, 6053 Lime Ave., 1 p.m. to 4 p.m.

OCTOBER 1—DEADLINE for all material for the November issue of *The Begonian*.

★ ★ ★
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