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The BEGONIAN

The BEGONIAN

Publication of the American Begonia Society

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Founded January 1932 by Herbert P. Dyckman

Aims and purposes

- 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.
- TO bring into friendly contact all who love and grow begonias.

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See inside back cover

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THE COVER: Clusters of mandarin-orange flowers adorn *B.* 'Tom Ment', a cane-type begonia which rated fifth in ABS voting for the classiest canes. Tovah Martin of Logee's Greenhouses in Danielson, Conn., took the photograph. See *Classy Canes* tally on page 62 and other articles on cane-type begonias throughout this issue.

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NOTES/ *From the editors*

Cane-type begonias are almost as American as mom and apple pie.

Nearly every rural grandmother and many an urban or suburban one had—indeed *has*—an “angel wing begonia.”

So we asked a number of authorities to gather together what they could find out about the history, breeding, and growing of canes.

The result is this, the “Classy Canes” issue.

We think you'll find helpful the pair of discussions on cane-type begonia growing by Tovah Martin and Marguerite DeCola.

Tovah represents an Eastern viewpoint, of course, because the cultural methods she describes are those used successfully at Logee's Greenhouses in Connecticut.

Marguerite, on the other hand, uses her methods in the West—San Jose,

California, to be exact—with milder winters and dry summers.

The differences are vast. We suggest you read both articles and adapt the approaches to meet your own requirements. As Marguerite notes, don't change your own practices at all if they produce good plants.



Poetry usually is not our bag, but we couldn't resist inquiring of the Buxton Branch when we heard that member-written verses about begonias would be recited at the branch Christmas party.

About 40 members gathered in front of the blazing fire with champagne punch at the home of Don and Kaia Ann Frye, we're told, to hear and vote on 14 entries.

First place went to Addie Palmer

Please turn to page 69

How breeding brings us cane-type beauties

Patrick J. Worley

Cane-type begonias are graceful beauties that are easy to grow and reward the begonia fancier with beautiful, often spectacular flowers and handsome foliage. The flowers emerge in a riot of color from white and palest pink through shrimp, salmon, red, and carmine. There may be as many as 30 to 40 flowers per cluster, male, female, or both simultaneously.

The beauty and subtle sheen of the foliage rewards the grower when the plant is not in bloom. The shape may be that of an angel's wing or ruffled like a petticoat. The leaf can be long and narrow or rounded, peltate or shaped nearly like a star. Colors range from pale green to forest green, bronze, and metallic pinks and purples, spotted, streaked, and splashed with silver, white, or pink, or plain and waxy.

There seems to be a cane for nearly

Patrick Worley is a hybridizer at Kartuz Greenhouses, 1408 Sunset Dr., Vista, CA 92083. He also studies begonia history assiduously.

every location, from the terrarium bowl to beside a house in sizes shorter than one foot to "the sky's the limit."

Cane-type begonias have upward-growing stems with an almost bamboo-like appearance due to swelling of the nodes. The nodes are spaced fairly evenly along the stems, which tend to be smooth and thickened. The underside of the leaf can be the same shade as the upper or veined in bronze or red. It can also be pink or red or mahogany. The texture of the leaf is often leathery and sturdy, but it can be thin and papery and delicate-looking.

It is against this circus of leaf shape and color that the flowers must stand out. The male flowers are borne first and usually have four tepals. The females follow, usually after the male flowers have fallen. In a few hybrids, the male flowers never open but drop like small hearts to make way for the females.

The female flowers have five tepals in most plants and tend to stay on the plant for an extended time, often remaining for a week or longer. Some

B. albo-picta*, a drooping cane, is a parent of *B. 'Argenteo guttata'

Photo/Tovah Martin



varieties are seasonal, and others are nearly everblooming. Many hybrids have a sweet scent, especially plants with *B. dichroa* in their background.

A few of the canes rarely or never bloom but more than make up for it with spectacular foliage shapes or colors.

The first cane begonias were discovered in the late 1700s in Brazil, where nearly all of the cane-like species originated. Europeans did a fair amount of hybridizing, but most of the best work was done in the United States, many of the early hybrids being produced in California by Alfred D. Robinson and Eva Kenworthy Gray.

It is truly amazing the diversity that has been shown in modern hybrids from the relatively small group of species that formed the base of the hybridizing work. Basically, only six or seven species were used, with only three or four being added in the 20th Century.

Main species that formed the cane cultorum are these:

□ *Begonia aconitifolia*—This beautiful species was discovered in Brazil by Riedel and introduced into Europe by Linden in 1892. The name means "leaves resembling the aconite (monks-hood)." The plant grows erect and tall to five feet or more. It is little-branched with new stems often emerging from the base of the plant, which is swollen and almost tuber-like.

The leaves of *B. aconitifolia* are palmately lobed with each lobe irregularly toothed. They have a dark, silky green color splashed with silver and sunken veins. Handsome, *B. aconitifolia* was a parent with *B. 'Lucerna'* of the Superba strain of hybrids created by Eva Gray. Few are in wide cultivation today, but many descendants are among the most popular of hybrids.

Margaret Lee of San Diego used

plants from the Superba strain to obtain one of my favorites, *B. 'Lana'*, and from 'Lana' *B. 'Nokomis'* and 'Osota'. Irene Nuss of Los Angeles has used the Superba strain to good effect, crossing it with another of the Superba group, *B. sceptrum*, to produce *B. 'Kentwood'*, 'Pink Jade', 'Rhapsody', and the new *B. 'Silver Mist'*, grown by Mabel Corwin of Vista, Calif., and introduced at the 1980 ABS convention in Long Beach, Calif.

In further generations, Michael Kartuz of Vista used the Nuss hybrid *B. 'Hannah Serr'* to produce the lavishly silver-splashed *B. 'Orpha C. Fox'*.

□ *B. albo-picta*—This species was introduced from Brazil into England by William Bull in 1883. Another form, *B. albo-picta rosea*, followed in 1902. Both are low-growing, branching plants with a drooping habit. Lance-shaped leaves are glossy green and spotted heavily with silver. Greenish-white flowers are numerous near the ends of the drooping branches.

B. albo-picta has not been used often in modern hybridizing. Its most famous descendant probably is *B. 'Argenteo guttata'*, the trout-leaf begonia, a cross of *B. albo-picta* and *B. olbia* performed by Lemoine in France in 1888. *B. 'Medora'* is thought by some to be another *B. albo-picta* hybrid.

□ *B. coccinea* — This species was discovered in Brazil in 1774 and introduced and described in 1843. Erect with weaker branches than others, *B. coccinea* has contributed its bright red flower color to many descendants. For me, however, the flowers are seldom seen, although the species is purported to be a heavy bloomer and this capacity is a feature of its many hybrids.

There seems to be confusion in the literature about names and perhaps plants. Maybe a different form was in



Photo/Alfred D. Robinson Collection

***B. aconitifolia*, erect with lobed leaves,
made possible the Superba strain**

cultivation and was used in the many early hybrids. The species *B. coccinea* I grow is drooping and unbranching. Nevertheless, *B. coccinea* figures in the background of one of the most popular and famous of all canes, *B. 'Lucerna'*, known to many by its now-obsolete name, 'Corallina de Lucerna'.

B. coccinea can be traced through many generations. Belva Kusler of Wisconsin used *B. 'Elaine'*, a child of *B. 'Lucerna'*, as the starting point for a series of crosses that provided the parents for a whole new generation of modern hybrids, her own and nearly every other hybridizer's.

B. 'Elaine' was produced by William Grant in California in 1928. By crossing *B. dichroa* with *B. 'Elaine'*, Mrs. Kusler produced *B. 'Lenore Olivier'* and *B. 'Laura Engelbert'*. So many hybrids trace their origins to these two plants that it would be impossible to list all, but some of the most widely

grown are *B. 'Barbara Ann'*, 'Clara Elizabeth', 'Dorothy Barton', 'Esther Albertine', 'Fifi Florrie', 'Frances Lyons', 'Gertrude Nelson', 'Gigi Fleetham', 'Hannah Serr', 'Irene Nuss', 'Jeanne Fleetham', 'Kent Brandon', 'Lil O'Neill', 'Margaret Stevens', 'Martha Floro', 'Matild', 'Miyo Berger', 'Nancy Gail', 'Nora Hanson', 'Pat Burdick', 'Orpha C. Fox', 'Peggy Stevens', 'Rosalie Wahl', 'Sophie Cecile', 'Swirly Top', 'Wayne Newton', 'Corinthian', 'Delphine Fosmo', 'Grace Lucas', 'Apollo', and 'Cardinal'.

One gets the feeling that few of our modern hybrids would exist without these two beautiful creations.

□ *B. dichroa*—This sweetly scented species was introduced from Brazil in 1906 by Haage and Schmidt. The plant is low growing and rather spreading in habit with stems that become woody quickly. The leaves are glossy green and sometimes faintly spotted silver. Flowers are large and clear orange on short stems.

It is a slow-growing plant that requires warmth and humidity. Even a slight chill can cause leaf drop and bring on dormancy. Greenhouse conditions are more to its liking.

B. dichroa is the parent of all orange- and salmon-colored canes. Some of its early offspring are in cultivation today. *B. 'Di-Anna'* and *B. 'Di-Erna'* are two. Some of *B. dichroa's* modern offspring include *B. 'Anna Christine'*, 'Flamingo', 'Florence Rita', 'Orange Rubra', 'Rubaiyat', 'Rubric', 'Tom Ment', and compact, everblooming *B. 'Wayne Newton'*. Because *B. dichroa* was a parent of *B. 'Lenore Olivier'* and *B. 'Laura Engelbert'*, all of their offspring listed above are *B. dichroa* hybrids in addition.

□ *B. lubbersii*—This lovely species with large, pale, strongly sweet-scented

flowers was brought into cultivation accidentally. It was found growing on a branch of a wild, collected shrub from Brazil in 1880. The plant is low to medium in size and branches well from the base. Leaves have an unusual shape, the petiole joining the leaf in the center (peltate). The leaf comes to a point on either end and the edges ruffle slightly. The upper surface has a fine satin texture and the underside is deep carmine. Coloring is best if the plant is grown in part shade.

Some plants now grown with *B. lubbersii* in their backgrounds are *B. 'Apollo'*, *'Ayer Bergen'*, *'Barbara Ann'*, *'Corinthian'*, *'Florence Rita'*, *'Phantom'*, and *'Tom's Fantasy'*. *B. lubbersii* is an attractive species in or out of bloom and deserves to be in every cane collection.

***B. coccinea* as depicted when introduced in 1843 in Curtis Botanical Magazine**

Illustration/Courtesy Dr. Lyman B. Smith



□ *B. maculata*—Discovered in Brazil in 1819 by Riedel and introduced to the botanic garden in St. Petersburg in 1891, this was the first spotted-leaf begonia introduced in Europe. Its habit is tall and erect with strong stems and rather drooping branches. Flowers vary from greenish white to pale pink.

B. maculata 'Wightii' appeared in cultivation in 1938. Leaves have more silver spotting and flowers are more abundant and remain on the plant longer.

The species probably was used in Europe but is not in use currently for hybridizing.

□ *B. plantanifolia* — This species was introduced from Brazil in 1834 to the botanic garden of Berlin. Grouped with Superba types, the plant is little-branching and swells at the base of the stems. In strong light, the leaves tend to be bronzy green with a light pattern of silver in a wide band down the center of the leaf. In more subdued light, the color is purple-bronze with a bold silver pattern.

This plant is difficult to grow well because it tends to lose its lower leaves. It tends to be a sparse bloomer, but the flowers are large and white. So far, it has been little used in hybridizing, *B. 'Phantom'* being one of the few hybrids currently in cultivation.

□ *B. sceptrum* — Introduced from Brazil in 1887, *B. sceptrum* is another in the Superba group. The plant forms swellings at the base from which stems arise upright and little-branching. Leaves have a lovely corded satin texture with red veins that are sunken. The leaf is deeply cut and the surface is flecked lightly with silver.

B. sceptrum has been used by hybridizers only recently. Belva Kusler

used the species to obtain *B.* 'Esther Albertine', 'Nora Hanson', and the widely grown 'Sophie Cecile'. Irene Nuss used *B. sceptrum* as a parent to create *B.* 'Kentwood' and 'Kent Brandon'. Other descendants of *B. sceptrum* are *B.* 'Irene Nuss', 'Hannah Serr', 'Pink Jade', 'Cardinal', 'Orpha C. Fox', and 'Marguerite DeCola'.

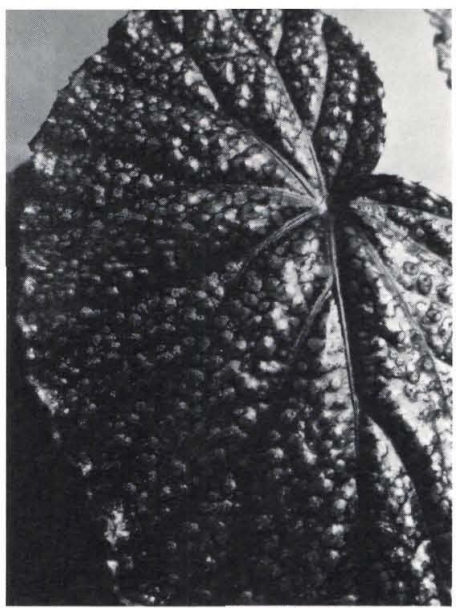
The species often loses its lower leaves, so is difficult to grow into a good-looking plant.

□ *B. undulata*—Discovered in Brazil and introduced to Vienna in 1927, this tall-growing species with smooth bamboo-like stems can make an excellent basket plant. Some branches are quite spreading, while others head straight for the sky. If one removes the upright branches, the spreading habit is encouraged.

Leaves are light green and shiny with undulating edges. Flowers are numerous in large clusters, white, and sweet-scented. It seems to be nearly everblooming. The plant is easily grown, but seems to have been neglected by hybridizers. Only *B.* 'Flamingo', a cross of *B. dichroa* and *B. undulata*, is grown currently.

□ *B. teuscheri*—Introduced into Belgium from Malaya in 1877, this species is tall growing and branches readily from the base. Foliage is handsome, olive green with red and silver markings. Leaf size varies on the same stem, giving an odd look to a mature plant. This species is a shy bloomer and seems to have been little used in hybridizing. I find only one reference to its use—Helen Krauss lists *B. teuscheri* as a parent of *B.* 'Lucerna'—but I question that this is true.

The Mallet group of canes has the most beautiful leaves of all, in my opinion. The metallic pink and rose



Photo/Kingsley Langenberg

Dark leaf color of the Mallet group is typified by *B.* 'Arthur Mallet'

shades that cover the leaves make them outstanding in any collection. The hybrids are believed to have been derived from crosses of *B. subpeltata* and the *B. rex* cultivar 'El Dorado'. But there is some confusion about the identity of *B. subpeltata*: some authors list *B. incarnata* var. *purpurea* as a parent with 'El Dorado', while others list *B. subpeltata* as an alternate name for *B. incarnata*.

The initial cross done by Lionett in France about 1885 resulted in three cultivars: *B.* 'Arthur Mallet', 'Naomi Mallet', and 'Octavia Mallet'. Of these, only *B.* 'Arthur Mallet' is still in cultivation.

Another hybrid, this one using *B.* 'Arthur Mallet' as a parent, is in cultivation—*B.* 'Margaritacea', obtained by Veitch in 1895 in a cross with *B. coccinea*. *B.* 'Florie de Jouy', done by Lionnet in 1890, has silver Mallet leaves, but is less showy than the above-mentioned hybrids.

Many of the early hybrids have been lost to cultivation. Perhaps some are

still being grown in Europe. In any case, little work was done with the Mallet group until the early 1950s, when Constance Bower released three lovely hybrids, *B.* 'Arabelle', 'Faustine', and 'Melisse'. These resulted from crosses of *B.* 'Margaritacea' with *B.* 'Lulu Bower'. Two are still in cultivation, but *B.* 'Faustine' seems to have been lost. (If you know where I can obtain cuttings or plants, please write.)

In 1962, Belva Kusler released two Mallet-type hybrids. *B.* 'Miyo Berger' resulted from a cross of *B.* 'Tingley Mallet' and 'Lenore Olivier', while *B.* 'Grace Lucas' came from a cross of *B.* 'Tingley Mallet' and 'Laura Engelbert'.

B. 'Margaritacea', 'Tingley Mallet', and 'Glorie de Jouy' bloom profusely, but none of the newer hybrids have ever bloomed to my knowledge. The Mallets also have a feature not duplicated by any other cane-type begonia: In the same leaf axil, you will find a vegetative bud *and* a flower stem.

A few other types of begonias have been crossed with canes to give them more variety. Belva Kusler used *B. goegoensis* in a series of crosses that produced *B.* 'Freda Stevens', 'Margaret Stevens', 'Peggy Stevens', and 'Rosalie Wahl'. By using *B. hydrocotylifolia*, she obtained *B.* 'Posy Wahl', 'Lil O'Neill', 'Question Mark', Clara Elizabeth', 'Gertrude Nelson', and 'Marjorie Sibley'.

Many lovely and compact hybrids have resulted from crossing *B. dregei* with members of the cane group. Belva Kusler produced *B.* 'Frances Lyons', 'Nancy Gail', 'Delphine Fosmo', and 'Dorothy Barton.' Mae Blanton gave us the lovely *B.* 'Flo'Belle Moseley'.

Canes also have been crossed with *B. procumbens*, *B. solananthera*, *B. so-*

cotrana, *B. prismatocarpa*, Tuberhybrida begonias, and various rhizomatous begonias from Central and South America.

The cane-type begonias have retained their popularity because of their tremendous adaptability to a wide variety of conditions in the home, outdoors, or in the greenhouse. They range in size from a foot to tall, dark, and handsome. Leaf size can be small and petite or large enough for a hat.

Many possibilities are left to be explored in cane hybridizing: better branching habits, good basket varieties, extension of the color range into picotees and yellows, double flowers, and sturdier foliage. The future holds a great deal for the cane-type begonia and the present never ceases to delight.

Photo/Karen Bartholomew



Leaf shape is intriguing feature of *B. lubbersii*. Its flowers are fragrant

Dr. DeCola's prescription for cane success

A. Marguerite DeCola, M.D.

Cane-type begonias have come a long way since grandmother's day, when they were referred to as "angel wings," given no special care, and little interest was shown in bloom quantity or quality.

I like to grow cane begonias and I demand good blooming performance.

A well-grown cane begonia has balanced leaf and stem growth and many blooms. In full bloom it is breathtaking. To achieve success, you must supply them with these basic needs:

- A well-drained planting medium.
- Proper sun, light, and air circulation.
- A good fertilization program.

I grow cane begonias in Santa Clara County, California, where I find weather conditions very good for growing fine canes. I will outline here the methods I use and share some observations. The methods I present are those I use, but if you are happy with the performance of your canes with the method you follow, continue your method—don't use mine.

Planting mix—Any mix must provide good drainage. I use a heavier mix for growing canes than for other types of begonias. I find the heavier mix necessary because of the vigorous growth habit of canes. Lighter, friable mix would be unable to hold up the weight of a plant that has heavy top growth. With the heavier mix, fewer stakes are needed.

Planting mixes can be divided in

Marguerite DeCola of 1520 University Ave., San Jose, CA 95126, is a physician whose cane-type begonias are envied locally. A member of the Santa Clara Valley Branch, she has never before spilled her secrets.

two types, soilless and those containing garden soil.

Mixes containing soil—Good topsoil in the mixture is beneficial to growth and bloom. This is due to the presence of trace elements in the soil. When good soil is available, I mix it with other ingredients in these proportions:

- $\frac{1}{3}$ Topsoil (friable, sandy, and well-drained)
- $\frac{1}{3}$ Planting mix or forest humus
- $\frac{1}{3}$ Manure (aged, well-rotted, and weed-free)

Soilless mix—This is the one generally used because of the scarcity of good topsoil:

- $\frac{1}{3}$ Planter mix
- $\frac{1}{3}$ Forest humus or Silver Spade
- $\frac{1}{3}$ Manure (well-aged and well-rotted)

In selecting a planter mix, be certain it isn't raw sawdust. You could also be misled by the name "forest humus," envisioning this material as having been hauled in from the forest like leaf mold. It is mostly sawdust, but better quality forest humus is partially decomposed. It is added to the mix primarily to get a coarser texture that improves drainage. (I don't use leaf mold.)

A high-quality planter mix distributed by a reliable source, even though slightly higher in cost, will pay off in better plant performance. I am partial to two brands (these may not be available in your area):

Blue Tag planter mix. This is distributed from Salinas, Calif., to most California nurseries and garden supply stores.

Supersoil Cymbidium Mix. Supersoil products are distributed by Rod McClellan Co. of South San Francisco, Calif., and are available in fine

texture as Supersoil, or in coarser form as Supersoil Cymbidium Mix. I use the latter for better drainage.

Manure should be well-aged and weed-free. Beware of manure at bargain prices! These may contain excess salt, which is toxic to plants. Aged manure has been piled a full season in the open before it is sold. In aged manure the rain has leached out the excess salt. I do not use peat moss in my cane mix because of its tendency to dry out. Since my cane begonias are grown in the sun, peat moss dries quickly.

Whether I use the mixture with soil or the soilless mix, I add a mixture of perlite and vermiculite for more drainage and moisture retention. I prepare a mixture of one-third vermiculite and two-thirds perlite. To each five gallons of planting mix I work in a 6-inch potful of this mixture. The mixture is then almost ready for potting.

To all potted plants, especially for those grown for bloom, I also add some organic fertilizer in the bottom third of the pot. I combine a mixture of equal parts of the following ingredients:

Cottonseed meal. (This is preferred when water is alkaline and hard.

In areas where water is softer and not so alkaline, hoof and horn meal can be substituted.)

Blood meal. (This is my preference, but fish meal can be substituted.)

Bone meal. (I prefer cooked rather than raw.)

Superphosphate.

Garden charcoal.

These ingredients are mixed thoroughly and a measured amount added to each plant depending on size of container: 1 teaspoon to 4-inch pot; 2 teaspoons to 6-inch pot; ½ cup to 12-inch tub. The amount is stirred into the bottom third of the planter mix at



Photos/Chuck Anderson

Part of the DeCola cane collection grows in full sun with translucent fiberglass overhead and on one side as windbreak

potting time. Regular mix is used to fill the rest of the pot. I do not use lime because my area has very hard water with high alkalinity. In areas where water is not highly alkaline, lime is beneficial when added to the mixture.

I usually pot my canes in the spring, when weather is beginning to stabilize and plants are showing signs of active growth. After repotting, I place them

in a protected area for about one week so they can recover. When weather begins to warm up, I place them where there is good air circulation and as much sun as they will tolerate. Since the sun is not too hot at this time, the begonias normally can enjoy full sun all day.

Sun, light, and air circulation—These are other basic needs for growing good cane begonias. In my experience, cane begonias do not perform well in a greenhouse, unless they receive plenty of sunlight. I also find they do not grow well in cold, damp, foggy areas; they like warmth and air circulation. They can be grown in full sun in the morning and late afternoon, or all day in dappled sun. Midday sun should be avoided on very hot days; this may cause crisping of leaf edges.

Canes also cannot tolerate prolonged periods of extremely hot temperature. A plant given good amounts of sun, light, and air circulation on all sides will exhibit full growth, short internodes, and excellent blooms. A plant that is tall and leggy with long internodes and few flowers is receiving poor sun and light exposure. It also will drop its leaves, leaving a naked stem with only a cluster of leaves; these characteristics also can occur if the plant is overwatered or has poor drainage.

Fertilization—Begonias generally are not heavy feeders, but cane begonias are the exception. I consider canes to be very heavy feeders: When a good, regular feeding program is followed, the quality and quantity of blooms will be in direct proportion. From the time active growth begins, my canes receive weekly applications of a complete fertilizer full strength.

In a plant where bloom is demanded, the fertilizer must contain adequate



Dr. DeCola took a spring cutting and by October had this 2½-foot *B.* 'Orrell'

amounts of phosphorus. I generally use either Spoonit (16-24-14) or Romeo (15-30-15). I prefer Spoonit, since it contains iron chelates for good leaf color.

There is a new trend to use a fertilizer with equal proportions of ingredients (14-14-14 or 20-20-20). I have not given this an adequate trial to pass judgment. Commercial growers seem to like it, so you might try it on a few canes.

About the last week of October or early November, I apply a small amount of three-month Osmocote to each plant. The amount depends on the size of container: $\frac{1}{2}$ teaspoon to 4-inch pot; 1 teaspoon to 6-inch pot; 1 tablespoon to 10- to 12-inch pot.

It is debatable whether to use any slow-release fertilizer during winter. Some growers allow the plant to have a dormant period. I have done it both ways, and favor the rest period. But I do apply Osmocote to small plants, because I believe they grow more quickly and are better at maturity.

Containers—Contrary to the belief that begonias should not be over-potted, in my experience canes grow better in large containers. Obviously if a plant is a small, freshly rooted cutting, it should not be planted in a very large container. When a plant has outgrown a 2-inch pot, I transfer it to a 4-inch size, then to one-gallon, and then to a 3- to 4-gallon container or 10- to 12-inch tub.

If the cutting is large with a very large rootball, it may go into a size that will not cramp the roots. This is especially true with the Superba types that have large leaves and large rootballs; I frequently plant the rooted cutting from the propagation medium to a 4-inch pot. These large-growing, tall varieties, such as *B.* 'Sophie Cecile' and *B.* 'Irene Nuss', go into large containers, like 10- to 12-inch tubs, very soon.

In my experience, if these tall, large-growing cane types are kept at all rootbound in small containers, they become stunted—and will never make good, strong specimens.

Plastic or clay or wooden pots? There is no disputing that plastic pots require less watering, since evaporation occurs through clay. I am not happy with cane performance when

they are planted in clay pots. A fully grown plant always gets put in a plastic pot or a redwood tub. I prefer redwood when available.

The size of the plant and the container should be harmonious. A low-growing type should not be planted in a deep container. Begonias like shallow pots, because their roots are near the surface. Deep plastic containers can be made shallower by cutting off a portion of the top. This can be done best with a bandsaw, but with some skill can be done with a hand saw.

Pruning—In relatively frost-free Southern California some good growers advocate pruning all cane begonias in late October or early November. They advise cutting all the canes back to 10 inches. The tip cuttings are propagated, and good-sized new plants are available in spring.

In my area, where frost is prevalent in winter, early pruning may result in total plant loss. When plants are left outdoors during frost, the tips of leaves and stems are frost-burned. Sometimes as much as 12 inches may be burned. In the spring when the weather is stabilized and frost danger is over, I generally prune any damaged tips to the first healthy node below the damaged part.

Pinching is a type of pruning. When the growing tip is pinched off, this forces dormant nodes to develop below the cut. A young plant becomes full instead of spindly. Pruning and pinching go hand-in-hand when you are developing a well-grown specimen.

Diseases—Cane begonias properly grown can be practically disease-free. Mildew is the biggest problem. This is especially prevalent when canes are grown in a damp climate or in a greenhouse with high humidity. By growing

my canes in plenty of sun and good air circulation, I have very little mildew.

I have observed that the maroon-leaf varieties are more prone to mildew. Also, certain varieties are more susceptible; I have found *B. 'Lucerna'* very prone. Since mildew is a fungus spread by wind currents, I try to place *B. 'Lucerna'* at the end of the row, heading into the wind. I call my *B. 'Lucerna'* my "mildew sentinel," and keep a daily watch on it for mildew. The minute I see any, I spray it and all my other cane begonias with a fungicide. I rarely find mildew on my cane begonias without finding it first on *B. 'Lucerna'*.

The fungicide I use is Doo Spray (karathane). It was initially dispensed in powder form, but is now generally available in liquid, which I find more convenient. I follow the manufacturer's directions exactly. Doo Spray was recommended to me by Pat Antonelli. It is the chemical his family uses at Antonelli Bros. Begonia Gardens in Santa Cruz, Calif. I have found it to be more effective than Benlate (benomyl), especially for outdoor garden use, and is far more economical. I also use it in the greenhouse if I find mildew on a plant.

Generally, unless one has a heavy mildew attack, one application will take care of the problem. Weekly application is recommended if more than one application is necessary. It is important that all leaves that have fallen off the plant be removed and burned to control the contamination. I spray the plants without moving them to keep the spores from spreading.

As temperatures fall, and winter rains appear, the plants should be watched more closely for mildew.

Winterizing—I encourage my canes

to go through a period of dormancy, especially those that have been blooming heavily. Cane begonias may lose many of their leaves during winter. This is a normal reaction, from which they recover in spring when the new growth cycle begins. They should be protected from frost and cold. If they have overhead shelter, plastic can be hung in front of the plants, with sufficient clearance so little plastic touches the plants. I take down my cane baskets, place them on the ground, and provide overhead shelter. I place the containers with plants as close to one another as I can, which gives them better overall shelter.

I try to place as many of my favorite varieties against the walls of the house during winter. There is sufficient radiation of heat through the walls of the heated house to warm the air around the plants. I try to place them in areas where they do not receive the full impact of cold wind. Tall trees give good winter protection.

Small plants are best placed in the greenhouse for protection. They can even be placed indoors under lights during winter, but should be taken outdoors as soon as weather permits. Cane begonias do not grow well in the house; they are not indoor plants. When cane begonias are taken from one environment to another, such as from outdoors to indoors, they may defoliate. They usually recover in spring after being placed outdoors.

Cane begonias in the ground—These will do well through winter in mild winter areas. They should be planted where they get eastern exposure or protection from hot midday sun. The basic rules should be applied; they should be planted in soil that has been prepared to provide good drainage, and the same fertilization program



Here's *B. 'Marguerite DeCola'*, hybridized by Belva Kusler and named for the author

used on container plants should be followed.

Propagation—Tip cuttings may be taken in October at the onset of dormancy or in early spring. October cuttings may be slow-growing and, unless given protection, may have a disappointing survival rate.

At whatever time, I propagate all my cane begonias in water. This method is used in Japan and, until I was encouraged to follow it by a Japanese grower, I was less successful in propagation. It is a simpler and more convenient method, and I firmly believe the cuttings root faster.

The containers can be glass bottles, jars, glasses, or plastic cups (not styrofoam). I place several cuttings of the same variety with the name tag in one container. Cuttings seem to root faster in opaque plastic than in clear glass.

Cuttings should be neither too young or too old. A young cutting may be subject to rot; one too old will take too long to root, and when it does may result in a weak plant. Generally,

a cutting from the previous year's growth is best. I like at least three nodes on each cutting. One node remains in water. The water is changed about every three days.

A suitable cutting will begin showing roots in about three to four weeks. When the roots are about an inch long, I plant the cutting in a mixture of one-third perlite, one-third vermiculite, and one-third regular potting mix. A solution of vitamin B-1 is applied for two successive waterings. The cuttings are not covered. Weekly applications of half-strength Spoonit are started about the third week.

I like to plant each water-rooted cutting in a separate container. Size varies with the variety. Larger-growing types have larger rootballs and require larger pots, but generally a 3-inch container is adequate. When they have outgrown this size and are moved to larger containers, fertilization is started weekly at full strength.

From this stage on, they are provided with all the basic needs.

Begonia profile: B. 'Pickobeth' from Texas

Thelma O'Reilly

My favorite "Classy Cane" is *Begonia* 'Pickobeth', an elegant cultivar created by Mae Blanton of Texas. Why is it my favorite? Because it is the first cane-type begonia to flourish under my wing. There are few cane-type begonias in my collection because I find them difficult to grow in my area and they lack the diversity in leaf color and form which intrigues me more than masses of bloom.

In spring of 1979 a cane-type begonia I had never seen before was sent to me for identification by Tovah Martin of Logee's Greenhouses in Danielson, Conn. It was love at first sight and this charming unnamed begonia became the recipient of my most ardent attentions. Its response in the glasshouse was immediate and within a few weeks the plant developed into a full, compact specimen.

I searched for this begonia in every garden I visited without success until I found it labeled *B.* 'Pickobeth' in the collection of Elda Reginbol. About the same time I received word from Tovah that Corliss Engle of Brookline, Mass. had also identified it as *B.* 'Pickobeth'.

New bronze-green leaves develop into rich, jade green with silver (or sometimes cream) spots, a bright red dot at the sinus, and fine red edging. They measure 3½ by 8 inches, are slightly lobed, rippled, and glabrous. Green stems with prominent swellings at the nodes become brown and corky with age. Short petioles and closely set internodes give the leaves



Photo/Thelma O'Reilly

***B.* 'Pickobeth' with its shocking pink blooms and spotted leaves**

a layered appearance which is distinct.

I was curious to see the flowers but not impatient because the attractive foliage and compact growth habit were so rewarding. When large, profuse clusters of shocking pink blooms appeared in late summer they were the icing on the cake.

The seven- to eight-tepaled female flowers have an unusual arrangement. If you look directly into a flower you see 5-6 broadly-ovate tepals with the tips of 2-3 narrow tepals peeking at you from underneath. The deep yellow stigma is huge. Ovary is white with four or five large shocking pink wings.

Begonia 'Pickobeth' is now 2½ feet high. Caution must be used when handling this plant because its stems are

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Thelma O'Reilly, ABS co-director of nomenclature, writes these begonia profiles regularly. She lives at 10942 Sunray Place, La Mesa, CA 92041.

In Ventura, B. "Hazel's Front Porch"

When Hazel Snodgrass moved into her home on Walnut Drive in Ventura, Calif., in 1945, a huge cane-type begonia graced the front porch. But nobody knew its name.

Eight feet tall and four feet wide, this pink-flowered monster bloomed year-round, garnering much attention from visitors, neighbors, and passers-by.

Hazel, a member of the Theodosia Burr Shepherd Branch, was asked for cuttings continuously, and she was generous with them.

The cutting-grown plants emigrated far and wide. When people would ask about the plant, the owners knew only that it came from "Hazel's front

porch." And so it came to be known, especially in Southern California.

For years, people grew and talked about *Begonia* "Hazel's Front Porch." One day, Hazel's friends Dorothy Behrends and Ora Wilson came to visit and were "amazed at the size of the begonia," Hazel recalls.

"What do you call that?" one asked. "I don't know," Hazel had to reply. So Dorothy and Ora took cuttings and set to work trying to identify the cultivar.

They found that "Hazel's Front Porch" is *B.* 'Rose', an early hybrid of San Diego begonia pioneer Alfred D. Robinson, which apparently found its way to Ventura, grew robustly, and lost its identity.

Hazel reports that her *B.* 'Rose' isn't as vigorous these days, perhaps because the house was fumigated for termites in recent years.

"I have never been able to get it to grow like it used to," she said. "I keep trying, though, hoping it will get large again."

The big begonia grows at Hazel's front porch (left). Properly identified *B.* 'Rose', it is exhibited at a show (below).



Photo/Louise Bower





Classiest canes: our tally of your favorites

One vote *can* make the difference—especially in a “Classy Canes” contest with only two dozen voters.

Results of *The Begonian's* poll on top canes prove that Superba-type canes are considered superb by ABS members.

The top three—the first two of which are Superba types—in order were *B.* ‘Sophie Cecile’, *B.* ‘Irene Nuss’, and *B.* ‘Wayne Newton’. They were followed by *B.* ‘Orange Rubra’ in fourth place and *B.* ‘Tom Ment’—pictured on the cover—in fifth.

Tied for a close sixth behind *B.* ‘Tom Ment’ were *B.* ‘Pink Jade’ and *B.* ‘Esther Albertine’.

The grand lady of modern cane begonias, *B.* ‘Sophie Cecile’, won the coveted Alfred D. Robinson Medal as an outstanding cultivar in 1966.

A cross of *B.* ‘Lenore Olivier’ and *B. sceptrum*, the winner was hybridized by Belva Nelson Kusler, now of Frederic, Wis., in 1961.

B. ‘Sophie Cecile’ has pink flowers and green leaves with silver splotches.

B. ‘Irene Nuss’, second-place winner, was hybridized by its namesake in Los Angeles in 1971. The plant has large clusters of coral-pink flowers and satiny green foliage.

It was sold widely through Hines Wholesale Nurseries of Santa Ana, Calif., with labels spelling it incorrectly as ‘Irene Ness’.

Michael Kartuz of Vista, Calif., created the No. 3 cultivar, *B.* ‘Wayne

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***B.* ‘Sophie Cecile’, the No. 1 cane-type begonia among those in our Classy Canes contest. Freelance artist Pat Maley of El Cajon, Calif., is also ABS judging co-chairman.**

Illustration/Copyright © 1981 by Pat Maley

1. *B.* ‘Sophie Cecile’—49 pts. (14 votes)
2. *B.* ‘Irene Nuss’—37 pts. (9 votes)
3. *B.* ‘Wayne Newton’—25 pts. (6 votes)
4. *B.* ‘Orange Rubra’—19 pts. (4 votes)
5. *B.* ‘Tom Ment’—14 pts. (5 votes)
6. *B.* ‘Esther Albertine’—13 pts (4 votes)
B. ‘Pink Jade’—13 pts. (3 votes)

Tovah's challenge: growing canes in the east

Tovah Martin

I enjoy a challenge. That is probably why I chose begonias as my specialty. Little time was spent mastering the rex hybrids, the semperflorens were not difficult, the rhizomatous proved more perplexing—but the cane-type begonias are as intricate as a chess game.

Every carefully planned move in timing, each strategic snip and stake will later determine the ultimate outcome—the difference between a stately, compact, and bushy specimen or a denuded, gangly weed.

Canes thrive on attention. The grower is struggling to restrain this begonia's natural tendency to grow luxuriant, wild and rampant. In Brazil, where almost all canes claim their origins, species reach heights as much as eight feet. It is only by constantly checking their growth that the cane is tame enough to grow indoors.

Utilizing their knowledge of parentage as well as their eyes for beauty, hybridists have aided us in creating hybrids suitable for the home. For example, *B. dichroa*, noted for its brilliant orange blossoms, was bred to the robust giant *B. coccinea* to give us *B. 'Di-Erna'*. Among *dichroa's* desirable traits are its compact growth habit and its tightly held flower stalks. However, many growers find *dichroa* finicky.

Nature allows these characteristics to combine with the large flower umbels and vigorous growth of *coccinea* to make *'Di-Erna'* suitable for house plant culture. The canes of *'Di-Erna'* are erect, but of medium height, and

the flowers are coral red, a blend of the pigments of both parents.

Some basic cultural rules hold true for almost all canes. The most important factor in culture is pruning. The beauty of the plant is not enhanced by allowing it to reach greater and greater heights.

To develop a mature plant that is dense with foliage and blossoms, lateral growth and the production of new canes must be encouraged. When the plant is young and consists of a single stalk, this is done by removing the terminal bud.

More severe pruning is necessary as the canes become more numerous. The extent depends upon the particular plant, but in general each cane should be topped when the basal leaves reach maturity. A word of caution: over-pruning can result in smaller umbels when the plant comes into flower.

All cultural practices are interdependent. There will be no lush growth to prune without a good fertilization program.

Your goal is to produce new canes and yet have short leaf nodes. This new growth is controlled by the nitrogen in your food.

In winter, when there is little sunlight, feeding a balanced fertilizer once a month is sufficient. Over-fertilization at this time will produce only thick, bambo-like canes with long leaf nodes when the weather warms.

Toward spring, increase your fertilization frequency to once a week. However, rotate your food to include a fertilizer high in nitrogen every fourth week. This will initiate new canes.

Common sense must rule over your schedule. If there is a sign of thick,

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Illustration/Copyright © 1977 by Alice M. Clark

***B. 'Di-Erna'*, a cane-type seedling of *B. dichroa*, was hybridized by Alfred D. and Annie C. Robinson of San Diego in 1939, two years after they created another *dichroa* cultivar, *B. 'Di-Anna'*. This depiction of 'Di-Erna' was painted by Alice Clark of San Diego in 1945 with the mistaken identification of 'Di-Anna', and reproduced in color in Alice's book, *Begonia Portraits*. This impression was made from the 36-year-old original printer's engraving.**



Photo/Tovah Martin

B. 'Orange Rubra', widely grown cane-type cultivar with bright orange flowers

fleshy growth, reduce the fertilizer concentration.

Fertilization will result in a growth of your plant's root system. Early spring is the season to begin the continual repotting which these plants require. In the warmer months, it will be necessary to pot your plant up whenever the roots fill the pot.

It is not uncommon to find an angel wing thriving in a homemade mixture the consistency of garden soil. They do better in a heavier soil than that used for other begonias. Soilless mixes often produce a thin, artificial, yellowish leaf, rather than the lush, thick leaf for which canes are renowned. A recommended soil mix is as follows:

- 3 parts peat moss
- 1 part perlite

- 1 part leaf mold
- 1 part rotted cow manure
- 1 part sand

For every 35 gallons use:

- 3½ cups lime
- 2 cups bonemeal
- ½ cup blood meal
- ½ cup horn meal
- 1 cup green sand
- ¼ cup K-mag.
- 3 cups gypsum

Specimen plants are grown only in optimum conditions. These conditions can be provided in any well-ventilated, sunny window. Turn the plant regularly for even exposure to the sun's rays and provide ample space between neighbors to produce symmetrical growth.

In winter, a cane-type begonia

should be afforded as much light as possible. As the sunlight brightens, your plant must be protected against over-exposure to the sun, which causes the leaves to curl and bleach.

Watering is also a major factor in begonia culture. All begonias prefer to be watered only when dry. This may occur every day or less often depending upon the weather and your heat source.

Grooming your canes will aid in the development of new growth and guard against fungus. If botrytis becomes a problem, benomyl is an excellent spray. Canes are not as susceptible to powdery mildew as some other begonias, but, if it does occur, use karathane.

Root knot nematodes are a major enemy. This microscopic organism causes the roots to swell just slightly at first, then more visibly as the infestation becomes more severe. Although a plant can live for years with nematodes, it is more prone to other diseases. Eventually the leaves will yellow and become limp, and the plant finally rots completely. Cleanliness is your best weapon against this foe. Sterilize pots in chlorine bleach before repotting, and ostracize a stricken plant.

Most growers cultivate canes as uprights, but they can be effectively grown in baskets. We prefer sphagnum moss baskets, although clay is second best and plastic will suffice in a pinch.

Depending upon the size of the container, we pot three to five cuttings directly into the basket. Choose cuttings which show basal growth and/or have many shoots. If a sphagnum moss basket is used, line the wire frame thickly with an inch of long-fibered (uncut) moss; then fill with soil. As the basket begins to mature, pinch the

tips to encourage trailing.

No doubt that when your friends see your specimens, they will ask for cuttings. Take the cutting about three nodes from the tip, making sure that the leaf nodes have "eyes" (new growth initiating from the node, not flower shoots).

These cuttings can be rooted in sand which we find relatively sterile, inexpensive, easily obtainable, and well-drained. The sand should be kept evenly moist. Never allow it to dry out thoroughly or become soggy. Your cuttings should be ready to pot in two to four weeks, depending upon the time of year.

As I mentioned earlier, I enjoy a challenge. The following is a list of my favorite canes, although some are of easier culture than others:

B. lubbersii—Noted for its heavily fragrant flowers, *lubbersii* blooms in fall and winter with large pinkish-white blossoms. The winged leaves are unique, sporting large white spots against dark bronze. *Lubbersii* must be pruned savagely to an inch of the base in order to grow out again into a full, stocky specimen. Leave it very thirsty in winter.

B. 'Tom Ment' — 'Tom Ment' is noted for its compact growth and perennial bloom. The abundant mandarin-orange flowers complement the wide, silver spotted foliage. 'Tom Ment' can be easily trained into a hanging basket.

B. 'Sophie Cecile'—Sophie's feathery spotted leaves embody the shape for which the group was named. She has the tendency however, to "take off"; prune her ruthlessly. She rarely blossoms; flowers occur only when grown in full sun, which tends to wash out the foliage colors.

B. 'Flo'Belle Mosely'—a very neat,

compact plant, Flo'Belle sports gorgeous, dark, notched leaves and bright pink blossoms. An excellent subject for the beginner.

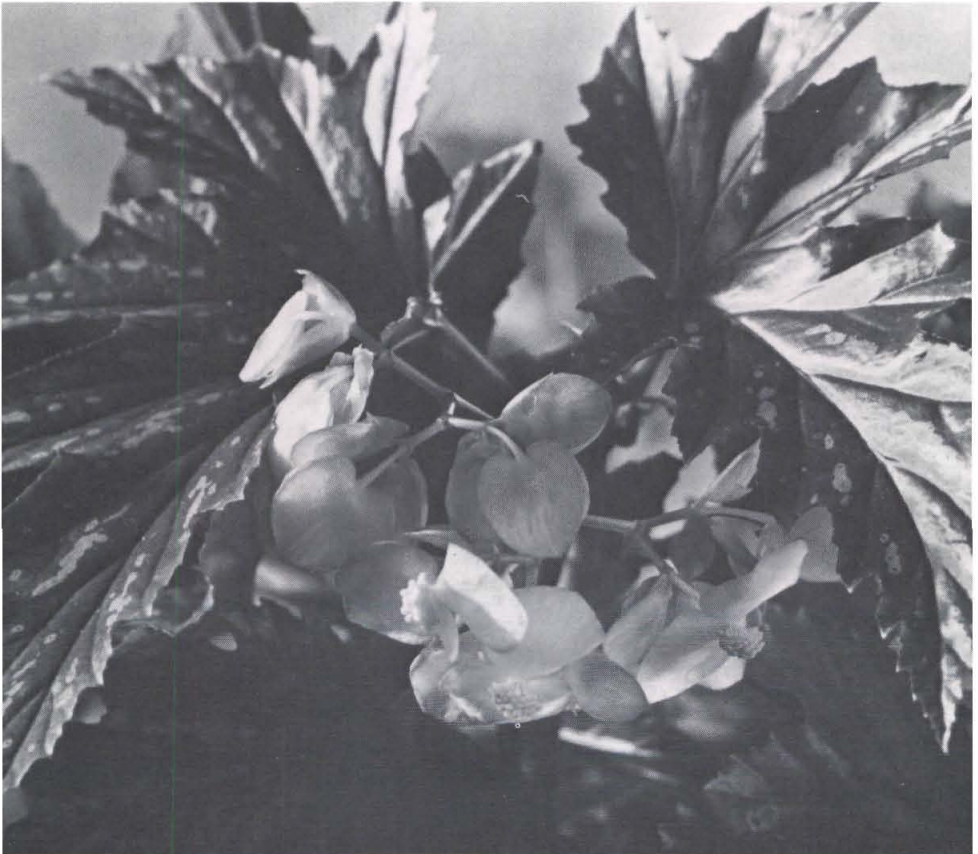
B. 'Pickobeth'—A favorite with the impatient, 'Pickobeth' rapidly attains maturity. Its silver-splashed, olive-green leaves are backed with rose pink which matches the bright pink blossoms.

B. 'Pinafore'—It forms a stunning basket having long, dark leaves with ruffled edges. The salmon flowers appear in large umbels all year. Although 'Pinafore' branches naturally, pinching it back will produce a very thick specimen.

B. 'Fifi Florrie'—Although a difficult begonia to grow, Fifi makes a fine basket with her delicate light green leaves heavily marked with silver. Very light pink, almost paper-like blossoms cascade from the foliage. 'Fifi Florrie' is susceptible to botrytis—keep an eye on her.

I have chosen only a few cane-type begonias to describe. There are countless new hybrids as well as many older ones which should not be overlooked. Such oldtimers as *B.* 'Rosie Murphy-ski' and 'Helen W. King' are easy to grow yet very rewarding; or, if you also enjoy a challenge, try keeping *B.* 'Interlaken' from scraping the ceiling.

Photo/Kingsley Langenberg



B. 'Sophie Cecile' has perfect Superba-type leaves, pink blooms

B. 'Flo'Belle Moseley': deep mahogany leaves

Robert B. Hamm

Two cane-type begonias I fell in love with because of their bright colors and easy culture are *B.* 'Pickobeth' and *B.* 'Flo'Belle Moseley'.

Both cultivars are Texas hybrids, the "mother" having been Mae Blanton of Lake Dallas. *B.* 'Pickobeth' is described on page 60, so I will tell you about 'Flo'Belle Moseley'.

This is a gorgeous cane with deeply colored, wavy leaves of translucent mahogany. Its pink flowers are a bonus

Bob Hamm is director of ABS' Southwest Regional Association, chairman of the annual Southwest Begonia Growers Get-together, and a begonia dealer at 2951 Elliott, Wichita Falls, TX 76308.

More editors' notes

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for *Ode to a Begonia*:

Oh, begonia on the table,
Can't you see that I'm not able
To give you everything you need
With lighting, water, proper feed?

I play soft music, a little verse
But you don't care—you just look
worse.

What else can I do to make you
tingle—
Change my name to Corliss Engle?

Corliss, the much-envied grower who is ABS research director, was mentioned in another entry, too. We'll get to that.

Second place went to Estelle Mason for *Kitchen Begonia*:

Clay-potted begonia
On the crowded kitchen sill,
Fill the home with springtime;
The winter lingers still.

Ruby-leaved begonia
Sprouting cookie dough,

with such splendid foliage.

It is a good grower in basket or pot, developing a spreading character that is emphasized with judicious trimming and pinching to encourage development of side shoots.

The plant does well in good light, but sometimes is subject to sunburn because the leaves are darker and thinner than on most canes. It also thrives indoors under lights when small.

B. 'Flo'Belle Moseley' is slightly susceptible to mildew in humid weather, but this generally is not serious.

Like *B.* 'Pickobeth', *B.* 'Flo'Belle Moseley'—named for ABS member Flo'Belle Moseley, a Dallas begonia grower—is an exceptional plant.

Frame the frigid winter
And laugh at the melting snow.

Alan Drew was a very close third, though only two places were to be awarded. His runner-up entry was untitled:

A begonia is a handsome plant.
I've tried to grow 'em, but I can't.
No matter how I have tried,
The damn things always upped and
died.
Though you may think it plain as
brass,
Now I'm only growing grass.
Smoke, anyone?

Rosemary Norton, who conceived the idea of a poetry contest, had her own reaction to the entries. She calls it *Two Cents Worth*:

If it should chance
That our verses don't dance
And make other begonians tingle,
We can tell ourselves that
They're still good; and a fact
That it's 'cause *they* don't know
Corliss Engle!

—C.A. & K.B.



Photos/Hikoichi Arakawa

A Japan Begonia Society member views *B.* 'Ginny' and 'Esther Albertine' in a collection

Canes in Japan: a begonia success story

Hikoichi Arakawa

With few exceptions, the heritage of begonias in Japan is not very old. About the only long-time begonias are *B.* 'Argenteo guttata', *B.* 'President Carnot', and *B. angularis*, all in cul-

Hikoichi Arakawa grows begonias in Japan, belongs to the Japan Begonia Society, owns a cafe called The Begonia, and attends annual ABS conventions. He lives at 2-1-13 Koshienguchi, Nishinomiyashi, Osaka, Japan.

tivation for about 60 years, and *B. grandis* ssp. *evansiana*, brought to Japan from its native China many years ago.

For many Japanese, "begonia" is synonymous with "semperflorens." Only in the last two to three years have appeared Cheimantha, Hiemalis, and new Tuberhybrida begonias. With their introduction, the demand for Semperflorens Cultorum plants did

not diminish, so better Japanese hybrids are now being developed by commercial growers.

Because *Semperflorens* *Cultorum* plants need adequate sun for best bloom, they are unsuitable for indoor culture. Commercial growers in Japan, seeking begonias for indoor growing, turned to cane types. They hoped to develop varieties as foliage plants. In time, interest in blooms increased, so the search today is for a sturdy, long-lasting cane variety grown indoors for foliage and flowers with minimal sunlight or under artificial light.

Japan's size—like an elongated California—and variations in climate play major roles in limiting begonias to be grown. Most Japanese families have too little land for large gardens, so they build greenhouses or grow plants in the house. A greenhouse is a necessity in northern Japan, with its freezing winters, but not so in southern Japan, with almost tropical conditions.

Cane-type begonias grow better in the South.

In Japan, cane types usually are grown in containers. They rarely are planted in the ground because of the North's cold winters and because of nematodes, a serious problem throughout Japan.

Large garden stores and horticultural magazines in Japan recommend these as good cane-type begonias to grow: *B.* 'Medora', 'Di-Erna', 'Perfectiflora', 'Bob-O-Link', 'Pinafore', 'Anna Christine', 'Flamingo', 'Lenore Olivier', 'Mrs. Hashimoto', and 'Hawaiian Sunset'.

Plastic pots are in general use throughout the country, and most growers are switching from clay for reasons of availability, economy, lightness, and durability. Wooden containers are rarely available; if found, they

usually are homemade.

The planting mix used by the commercial grower differs from those of hobbyists. The commercial mix is a medium-heavy mixture of steam-sterilized farm soil and leaf mold, with cottonseed meal added for fertilization. Generally, commercially grown plants are better than home-grown ones.

The hobbyist most often uses a mixture of sand, peat moss, perlite, vermiculite, and natural product from northern Japan called Kanuma soil. Kanuma is lightweight, porous, slightly acid, and inexpensive. It can be used straight for a rooting medium.

Other potting mixes have recently become available similar to those in the U.S. In any case, the grower is always careful to use a sterilized mix. Mixes don't dry out as quickly as in the U.S., probably because we have high humidity during the long summer rainy season.

To grow a well-shaped cane specimen, we give special attention to pinching and pruning, especially with a new, young plant. Older plants can be improved when growth begins in spring.

When a cane-type begonia sends up a strong, vigorous shoot from the base of the plant, a neophyte grower will think this will become a fine, strong plant. This is not the case, for, if the shoot is not pinched, shaped, and groomed, it will become tall, leggy, and unattractive with long internodes.

To develop a full, shapely plant, the experienced grower pinches off the growing tip when the shoot reaches one-third the height of the mature plant. When pruning either a new, tall shoot or an older plant, the cut is made just above a node. This forces bud growth at the node just below the

cut or the pinch.

In pruning for shape, one should watch the position of the node above which one intends to cut. Usually, the cut is best above a node that aims toward the outside of the plant, so growth goes in that direction. But if one needs to fill the center of a sparse plant, then the cut is above an inward-facing node.

Fertilizers in general use by Japan Begonia Society members are Mag-Amp and Hyponex. Some growers use organic fertilizers such as cottonseed meal, bone meal or fish meal. But these are risky because they can cause summer root rot. Liquid organic fertilizers have unpleasant odors, an important consideration when houses and greenhouses are close together.

Cane-type begonias have few disease or insect problems in Japan. Mealybugs sometimes are found on the underside of leaves and on flower stems and buds. They can be controlled with insecticides recommended by a reputable nurseryman and used according to directions.

Nematodes, mentioned earlier, are the most serious problem faced by Japan's begonia growers. No begonia will escape infestation if planted in the ground or in a container left to rest on soil.

A healthy plant exposed to nematodes may continue to look good through autumn, then will die during winter. In botanical garden greenhouses, tall canes are planted in special beds filled with sterilized soil mix. But eventually nematodes spread to the plant from soil carried into the greenhouses on visitors' shoes.

Because of this, greenhouses routinely replace soil mix and plants every two to three years. The only control of nematodes is by soil and container

sterilization plus rigorous prevention of contamination. Infested plants must be burned or disposed of immediately.

In Japan, cane-type begonias are propagated by water-rooted cuttings because they root fast that way. The cuttings should be neither too soft nor too hard—if too soft, it may rot; if too hard, it may be a long time rooting and produce a weak plant.

Cuttings are taken with two or three



nodes and immersed in water in a glass or jar so that the lowest node is always underwater. The container with cutting and name label is placed in a warm, well-lighted location but out of direct sun. A windowsill is good. If the immersed end of the cutting begins to rot, it is cut away and immersed again in fresh water. Roots generally appear in about 7-10 days. When new roots are about one-half

inch long, the cutting is planted in a small pot of clean, porous mix without fertilizer.

When roots have nearly filled the pot, the plant is repotted to a larger size using a mix that contains some fertilizer. This propagation method requires no special prop box, allows one to follow rooting progress, and permits early detection of stem rot during rooting.



Photo/Chuck Anderson



In Japan, begonia enthusiasts pay to be admitted to begonia greenhouses in botanic gardens like that at far left. Even apartment balconies such as the one at left can house begonia collections. Large cluster of pure white flowers marks *B.* 'Mrs. Hashimoto' (above), a best-selling cane cultivar in Japan.

Mary Harbaugh

There are a few openings in several of the flights now going around. These include *Miniature Begonias*, *General Culture*, *Begonias in Arid Climates*, *Ferns*, *International*, *Eastern General*, *Organic Begonia Growing*, *Research*, *Mounted Begonias*, *Semperflorens*, and *Rex Begonias*. In addition, when there are enough requests flights will be started for those interested in *Photography*, *Orchids*, *All-Australian*, *Tuberous Begonias* and *Midwest Begonia Growers*. If you are interested, please drop me a line. Suggestions for other flight topics are always welcome.

Novice growers have sometimes been hesitant about joining the robins for fear that they are not "expert" enough. This is just the place to learn and you are always welcome. Experienced growers are pleased to be able to share the knowledge they have acquired through the robins.

A special invitation is extended to you if you are not a member of a branch. Speaking from personal experience, I can tell you that being in the robin program gives you a sense of "belonging" to the ABS. These sentiments are echoed frequently by robin members.

□

Robins have been offering some suggestions concerning the society and its activities.

Arline Peck, Rhode Island, suggests sending Seed Fund seed in a small box to avoid having it crushed in the mails. Ben Yarbrough, Georgia, received

Information about joining a robin—a packet of letters circulated among begonia lovers—is available from Mary Harbaugh, round robin director. Write to her at W2899 Homewood Ave., Shawano, WI 54166.

some seed from Europe in which the seed pack was enclosed in a foam material to protect it.

Lynda Goldsmith, Vermont, enjoyed her trip to the ABS Convention but was disappointed that the seminars had been scheduled at the same time as the judging.

Peetie Swafford, Arkansas, would like to see the society come out with gummed stamps depicting begonias. "I'd be happy and proud to put them on my correspondence."

The Begonian has been receiving its share of compliments. Pat Burdick, Minnesota, says "the editors of *The Begonian* did a great job on the special July edition." Mary Jo Brashear, Washington, is very impressed with *The Begonian* and comments that it is "by far the best society publication I have ever seen . . . on a consistent basis."

□

For hybridizers, here are some thoughts to ponder from Dan Haseltine, Illinois:

"It is easy to produce a hybrid, but harder to produce a good or superior hybrid. Over a period of time Belva Kusler produced about 40 good hybrids and threw out hundreds that did not come up to her rigid standards. Gordon Lepisto also produced over 30 hybrids in his walk-in terrarium growing conditions.

"Time is a good eliminator of hybrids as only the best will stay around and be used for other crosses or continue to be listed in catalogs. Leslie Woodriff produces many hybrids. The good ones will stay around and some have been grown now for 40 years and are being grown today.

“Man can improve on nature or make plants that are hybrids more suitable to his growing area by hybridizing—not just for the sake of creating a new plant but for improving a type of plant. I think this is what should be aimed for.”

In the same vein, Patrick Worley, California, says that he discards about 98 percent of his crosses before they reach maturity because of some major defect.

Kit Jeans, Tennessee, relates a “happy accident” she had with some of her seedlings. She was transplanting a batch of very tiny seedlings into their first real mix. She was interrupted by other things and put the lid on the box and stuck it back on the light shelf.

“Since the pan had been there so long (three months) I had assumed that everything that was going to germinate already had.” When she looked in that box to check it for dryness about a week later, “the plot where the *B. partita* x *pearcei* seedlings had been removed was now covered with more seedlings! After I had finished moving that cross, I’d probed with my pick

back and across the mix so I was certain I had them all. I can only assume that the disturbing of the mix motivated a few more to come to the party.”

She is now tempted to disturb the mix in seed pans that have not had seed germinate in a long time just to see what happens.

The pick Kit is referring to is a dentist’s pick. The point is tiny enough to lift the seedling gently by its leaf after the mix has been loosened around the root. And the point also makes a good probe.



A delightful feature of Robin No. 11—Learning, is its ever-changing “I Can’t Grow Without” list. Some recent items:

Marvin Kahn, Iowa: Tin cans! Larger sizes make good pots for large plants. Also old silverware, especially forks. Keep them distributed around the greenhouse for handy use.

Dottie Lillestrand, Minnesota: A plastic measuring spoon set that is just for plants.

More classy canes

Continued from page 63

Newton’, in 1970. It is a low-growing plant with salmon-orange pendant flowers and dark foliage. Growers often plant it in a basket.

Another Robinson Medal winner (1954), *B.* ‘Orange Rubra’, was fourth. Hybridized in 1947 by Leslie Woodriff of McKinleyville, Calif., it has bright orange flowers.

Fifth place by a hair went to *B.* ‘Tom Ment’, created by Tom Mentelos of Florida in 1973. Leaves are silver-spotted and its flowers are coral tinged white. (We selected this month’s cover long before the tally.)

Though the contest had only five places, we list two tied for No. 6 because they were right on the heels of ‘Tom Ment’. They were *B.* ‘Pink Jade’, created by Irene Nuss in 1972, and *B.* ‘Esther Albertine’, a Belva Kusler hybrid from 1973.

Some 54 plants were entered by the 24 voters.

The editors, never having grown satisfactory canes, did not cast ballots.

The survey had no scientific merit. In fact, the results might be different if we could find Vice President Joan Coulat’s ballot, which probably will turn up during the co-editors’ spring cleaning. —K.B.

SEED FUND/ *Species with interesting leaves, plus others*

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- MR 2 — *B. paleata*: Shrub-like with distinctive foliage. The rough-textured leaves, much like *B. acida*, are a darker green and petioles are red with white hairs. White flowers in late spring are carried just above foliage. Compact.per pkt 1.00
- MR 3 — *B. egregia*: A thick-stemmed species from Brazil, 3-4 feet, with rough-textured, hairy, bright green, 3 x 10-inch leaves. Many small white, fragrant flowers in late winter.per pkt 1.00
- MR 4 — *B. lindleyana*: Thick-stemmed, little or not branched. Large rounded green leaves with silvery hairs and red sinus. Fairly large white flowers in spring.per pkt 1.00
- MR 5 — *B. nelumbiiifolia*: Rhizomatous species from Mexico to Colombia, with large, peltate green leaves; named for its likeness to a waterlily pad. Pale pink flowers in spring. This seed from West Indies...per pkt 1.00
- MR 6 — Open-pollinated seeds from *B.* 'Lenore Olivier', a Kusler hybrid cane. Seedlings should be labeled: *B.* hybrid cane mix.per pkt .50
- MR 7 — *B.* hybrid mix: Fresh seed from two Australian hybridizers. Majority of seedlings will be rhizomatous.per pkt .50
-

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***B. nelumbiiifolia* has large, lily-pad-like leaves**

Textured leaves of *B. paleata* come atop red petioles

Photos/Karen Bartholomew



The annual Southwest Begonia Growers Get-together will be a joint meeting with the Peperomia Society on May 14-17 in Oklahoma City, Okla.

Peperomia growers will conduct their own programs, but will participate in a joint show, plant sale, and tours.

Begonia activities will include two days of seminars by such authorities as Massachusetts begonia explorer Scott Hoover and Tennessee grower-hybridizer Kit Jeans.

The plant sale will run Friday through Sunday. Get-together headquarters is the Holiday Inn West.

For registration information, write to Bob Hamm, chairman, 2951 Elliott, Wichita Falls, TX 76308.

New branch relations director

Lynda Goldsmith of Fairfax, Vt., was appointed branch relations director Jan. 19, succeeding Evelyn Cronin of Cotuit, Maine, who resigned.

Lynda's first official act was to request that each branch place her on its newsletter mailing list so she will be familiar with branch activities when new ABS members inquire about branches.

Appointees are directors

The recently appointed chairmen of constitution and bylaws, finance, and audit committees sit on the ABS board of directors, parliamentarian Clair Christensen has ruled.

Clair based his decision on a bylaws provision that "appointed officers shall serve as voting members of the board of directors," saying this applied even though the positions in question are not specified in the constitution or bylaws as ones to be filled by presidential appointment.

If you are moving . . .

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Notify:

Elisabeth Sayers, membership secretary
369 Ridge Vista Ave.
San Jose, CA 95127

The clarification was requested by President Gil Estrada, who last October named Joan Coulat to head the constitution and bylaws committee and Chuck Richardson to lead finance and audit committees.

The Begonian in December reported that the positions did not carry board membership.

In memoriam:

Floyd Buell

Word has been received of the death last May of Floyd Buell, a 25-year member of the Redondo Area Branch.

Floyd was a past president and past vice president of the branch and a tireless worker at branch shows. His widow, Margaret, of San Diego, continues her ABS membership.

Tee Davis

Tee Davis, a hybridizer specializing in large, red, spiral-leaved *B. rex* cultivars, has died.

A member of the Long Beach Parent Chapter, Tee was the creator of *B. 'Red River'* and countless other seedlings in ABS members' collections.

She was an active promoter of branch activities and was always generous with gift plants.

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More *B. 'Pickobeth'*

Continued from page 60

extremely succulent. While turning it on the glasshouse bench, I snapped off a large portion of a main stem. This rooted easily and is thriving under outdoor growing conditions that are fully exposed to morning sun.

Mae shared the following information about *B. 'Pickobeth'*:

"I grew some *B. dregei* from a Seed Fund offering in February 1960. They gave me a wide variation of plants, no two exactly alike, with leaves from the solid type to the most feathery cut.

"One of the more colorful of the maple-leaved types was used as a seed parent, crossed with pollen from *B. 'Laura Englebert'*. This seed was planted and germination was excellent.

"I chose the most outstanding seed-

ling and later named it *B. 'Pickobeth'* in honor of my Aunt Elizabeth whom I had called "Pickobeth" when I was a baby. That name was passed on to her other nieces and nephews and became a permanent nickname during her lifetime."

Another of those *B. dregei* hybrids was crossed with *B. 'Laura Englebert'* at the same time and produced the stunning *B. 'Flo' Belle Moseley'*.

Although hybridized eleven years ago, *B. 'Pickobeth'* is just recently appearing in begonia catalogs. As more collectors are introduced to this beautiful cane-type begonia, I hope it will become a universal favorite.

Board to meet March 16

ABS directors will meet Monday, March 16, at 7:30 p.m. at Fullerton Savings and Loan Assn., Anaheim, Calif. Any ABS member may attend.

THE BOARD / *Condensed minutes—January 19, 1981*

President Gil Estrada announced the deaths of Kathy Brown, Tee Davis, Louise Schwerdtfeger, and the mother of Thelma O'Reilly.

Gil announced the resignation of Jan Clark as round robin reporter. The board accepted with regret. Round robin director Mary Harbaugh will assume the reporter's duties. Gil informed the board that Evelyn Cronin asked some time ago to be replaced as branch relations director. Lynda Goldsmith of Vermont has agreed to serve.

Minutes of the October meeting were read, corrected, and approved.

Treasurer John Ingles reported balance on hand Dec. 1, 1980, of \$4,251.24, receipts \$2,270.94, disbursements \$4,991.67, and balance on hand Dec. 31, 1980, \$1,530.51. Savings account balances: life membership \$6,837.88, life membership auxiliary \$706.85, special account \$394.25, convention fund \$1,318.74, research fund \$825.29, catalog fund \$6,321.80. Report filed for audit.

Gil reported the 1980 show and convention recorded revenues of \$12,948.39, expenses of \$8,604.50, leaving net income for ABS of \$4,343.89.

The report of membership secretary Elisabeth Sayers showed 2,534 members.

The board voted to encourage branches and members in the San Fernando Valley area of California to participate in the begonia portion of a plant societies' show at Sherman Oaks Mall May 23-25.

Gil appointed and the board ratified Elisabeth Sayers for another term as membership secretary; Doug Frost and Helene Jaros as awards committee members; a nominating committee of Claire Husted, chairman, Eleanor Calkins, and Pearl Benell; and Lynda Goldsmith as branch relations director.

The board approved Ventura, Calif., as the site of the 1981 convention and show. A delegation from the Theodosia Burr Shepherd Branch was introduced, including Barbara Schneider, who will be convention

chairman, Lory Hansen, and Hattie Lee Keller. The convention will be at the Holiday Inn Aug. 14-16. Santa Barbara Branch will handle plant sales and Glendale Branch has offered to assist. Rooms will be \$46 single, \$54 double. Menus were discussed and Barbara announced there will be garden tours.

Gil reported receipt of a request from the Denton Branch to change its name to Mae Blanton Branch. The board voted to approve. The board also voted to remove the disbanded Saline County Branch from the roster.

Pearl Benell, chairman of the ballot counting committee, reported results of the board's mail vote on the site for the golden anniversary convention in 1982: Santa Cruz, Calif., 26 votes; Oklahoma City, Okla., 14 votes. Of the 40 ballots cast, 17 were from outside California.

Phyllis and Edgar Bates, who are compiling the catalog of registered cultivars, asked for authorization to limit the first volume to 300 cultivars. Approved.

Gil reported for the record that the current ABS secretary has not been given certain society records by the immediate past secretary. He said the past secretary was keeping this material until she received her \$20 allowance for each of the last two months of her term. Gil said the \$40 was sent to her and the check has cleared the bank. Gil met with the past secretary's former employer on Oct. 31, 1980, and was given the ABS corporate seal and records covering two years. These records apparently had been stored at the past secretary's office. Records for the past secretary's one-year term and certain others remain to be recovered. Gil said he wanted this statement in the board minutes for the information of future officers and so tax authorities who might request records will know that some might not be available.

—Arlene Davis, secretary

ABS SERVICES

These services are available to all ABS members. For names and addresses of department heads and other officers, see inside front cover.

AT-LARGE MEMBERS—Services for members who don't belong to branches are handled by the members-at-large director. Contact him for details. If you are interested in finding a branch or starting one in your area, contact the branch relations director for help.

THE BEGONIAN—The monthly journal of the society publishes how-to articles, scientific information, and ABS news. Articles on a member's personal experiences with begonias are welcomed, as are black-and-white photos of begonias and color slides suitable for use on the cover. Contact the editors.

BEGONIAN BACK ISSUES—Individual copies of The Begonian more than a year old are available from the back issue sales chairman (75 cents). A full year is \$6.50 for any year in the 1940s. \$5 for any year from 1950 through 1979. Back issues less than a year old are ordered from the membership secretary for \$1 each.

BOOKSTORE—Books on begonias and related subjects can be purchased mail-order from the bookstore librarian. Contact him for a list of books available. Include a stamped, self-addressed envelope. The bookstore also sells reproductions of antique begonia prints.

JUDGING DEPARTMENT—The judging department offers a course by mail with which you can learn to become an accredited begonia show judge. Also available are a booklet on point scoring, information on fuchsia and fern judging, and other requirements to become a judge.

BEGONIAN MINI-ADS

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LIBRARY—Books about begonias and gardening may be borrowed by mail from the lending library. Contact the librarian for a list of books and the procedure. Include a stamped self-addressed No. 10 envelope.

NOMENCLATURE—The nomenclature department monitors newly published findings on begonia names as well as handling official international registration of new begonia cultivars. Registrations are published in *The Begonian*.

RESEARCH—The research department conducts a Grow and Study project in which members experiment with various begonias and compile their findings. The department also has other activities, including the review of requests for ABS backing of outside projects. For details, contact the director.

ROUND ROBINS—Members exchange information about begonias and their culture through a packet of letters which circulates among a small group of growers. There are dozens of these packets—called flights—on many specialized subjects. To join one or more, contact the round robin director.

SEED FUND—The Clayton M. Kelly Seed Fund offers seeds of begonia species and cultivars by mail. New offerings are listed in *The Begonian*. Donations of seed are encouraged. Please contact the Seed Fund Director.

SLIDE LIBRARY—A series of slide shows on begonias and begonia growing can be borrowed by mail for showing at meetings and seminars. New shows are under preparation. Contact the slide librarian for fee information.

SPEAKERS BUREAU—The speakers bureau maintains a directory of speakers on begonias and related subjects. Contact the director.

Mini-ads are \$1 per line per insertion with a minimum of \$4. A line is about 36 characters. Payment must accompany order. Send to Pam Sundell, advertising manager, 2324 Connie Dr., Sacramento, CA 95815.

Begonias. Blue ribbon winners. Odd, Rare, Unusual. Price list available. Tropical Greenery, formerly Begonia Paradise Gardens, 22140 S.W. 152 Ave., Goulds, FL 33170. (305) 248-5529.

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