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Cover: The winter-blooming Begonia Rieger elatior 'Schwabenland Salmon' brightens our cover. Photographer Don Worth purchased the plant from a florist and said it was the most floriferous begonias he had ever seen as it bloomed from May throughout the summer and into the winter season when he took its picture. Each blossom remained fresh on the plant for an incredibly long time. This plant was growing in a hanging basket in his living room and the steamed-up window in the background gives a clue to the large number of plants that are growing there!

Otto Rieger worked for more that thirty years to perfect this cross of summer blooming-tuberous crossed with B. socotrana. He also produced single red, deep cherry red semidouble, and pale pink semidouble forms. They are marvelously vigorous plants.

Don Worth teaches photography in the Art Department at California State University, San Francisco. He recently returned from a photographing trip to Bangkok and Singapore. His address is 38 Morning Sun Avenue, Mill Valley, CA 94941.

Virus Detection in Cultivated Begonias

John R. Keller

In the last several years there has been an increased awareness of virus infection in indoor cultivated ornamentals, particularly orchids and gesneriads. Begonia plants are usually kept in cultivation for a considerable period, and this makes them prone to infection and virus establishment. With this in mind we have tested various begonia cultivars for virus infection and have found a considerable number of infected plants. We tested for several kinds of plant viruses including cymbidium mosaic virus, odontoglossum ringspot virus, tobacco mosaic virus, potato virus A, potato virus X, cucumber mosaic virus and tobacco ringspot virus.

Choice of virus testing was limited to available antisera from the American Type Culture Collection and a professional orchid virus testing laboratory (in this case, Orchis Labs, Ithaca, New York) and what was felt to be rather common plant viruses in the environment. The predominance of certain viruses may change with various regions of the country depending on prevalent viruses in weed hosts or infected specialty crops. Some plant viruses can be readily insect transmitted, whereas others are transmitted primarily by handling techniques.

The virus test was performed by the agar double diffusion test similar to that for orchids. By this method purified agar gel plates are prepared with wells in which leaf punch sections are placed in distilled water in the outer wells with the virus antiserum placed in the center well. The virus particles and antibodies diffuse towards each other and form a white precipitin band if they are correctly matched.

When testing begonias we found that it is advisable to use three tissue sections per well similar to the procedure for cymbidiums and

John R. Keller was formerly Associate Professor of Biology, Seton Hall University, South Orange, New Jersey, 07079. His present address is 110 Summit Ave, Upper Montclair, NJ 07043. other thin-leaved orchids. Also, begonia leaf sections tend to produce more bacterial contamination on the agar than orchids, and this occasionally presented a problem. However, we found that this contamination could be restricted by adding 100microg/ml concentrations of streptomycin sulfate and penicillin G to the melted agar. We attempted to use 500microg/ml of these antibiotics but a heavy cloudiness developed around the wells which prevented precipitin band observation. Otherwise the method was satisfactory to detect virus presence in begonia leaves and the results to date are presented in Table I and Fig. 1.

The principal virus infections detected in our tests were tobacco mosaic virus, potato virus A, and tobacco ringspot virus. So far the two orchid viruses did not seem to be widespread in the begonias tested but this situation may be different elsewhere where hobbyists or commercial growers have mixed collections.

By using the agar double diffusion method, at least now we have proof of infected cultivars. We tried biological testing on a limited scale against several tobacco test species but with inconclusive results. Some infected plants of the cultivar *B*. 'Flamingo' grow quite robust in spite of the infection, whereas *B*. 'Randy' showed translucent leaf spot symptoms and *B*. oxyphylla grew poorly with stunted growth and a yellowish cast to the leaves.

The cultivars that are symptomless pose a greater threat for virus spread because amateur or commercial growers would be unaware of the infection by the plant appearance. Therefore, begonia growers should adopt procedures to reduce virus spread when handling plants similar to the strategies being recommended for orchid growers. These would include some of the following:

- Either wear different disposable gloves for each plant or wash hands thoroughly with soap and water between handling each plant.
- 2. Use a separate disposable razor blade for

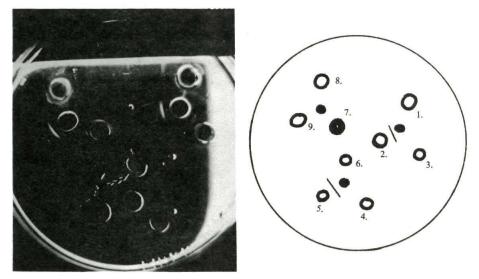


Figure 1. Double diffusion agar plate test for potato virus A. Antiserum in center wells and begonia leaf samples in outer wells as follows:

- 1. 'Robinson's Peach
- 2. 'Randy'
- 3. 'Moon Maid'
- 4. 'May Queen'
- 5. 'Flamingo'

- 6. 'Dragon Flight'
- 7. 'Diclata'
- 8. bowerae
- 9. distilled water
- A clear precipitin band has formed between the antiserum and tissue from wells 2 and 5. For Table I, see page 6.

each plant when taking cuttings or trimming (easiest procedure) or use a thoroughly flame-heated knife which has been dipped in alcohol or flamed with a propane torch.

- 3. Use only clean pots. Wash thoroughly with soap, water, and disinfectant such as household bleach (10% solution). The bleach solution should be kept in the dark. Rinse again in tap water afterward.
- 4. Use only clean, fresh potting mix unless the older mix can be properly sterilized.

By the use of proper handling techniques virus spread can be reduced. In addition, the majority of begonias can be grown from seed. Very few viruses are seed transmitted, particularly in seeds as small as begonias. Thus by the seed method virus free plants can be raised easily and quickly. This is relatively inexpensive compared to orchid propagation and prices, so that known infected plants can be discarded without severe economic loss.

At the moment routine virus testing is not available for begonias but in time some laboratories may be able to expand their testing procedures to include viruses which appear to be widespread in some of the common begonia cultivars.

The author acknowledges the irreplaceable assistance of three Biology research study students who helped conduct the experiments: Elizabeth Dias, Robert Frascella, and Robert Soyka.

	Virus antisera						
	CyMV	ORV	TMV	PVX	PVA	CMV	TRV
Begonia							
'Randy'					1		
'Robinson's Peach'							
'Moon Maid'							
'May Queen'							
'Flamingo'	1				2	1	1
'Dragon Flight'							
'Diclata							
bowerae							
'Turk Murphy'							1
'Flo Belle Moseley'							
'Oliver Twist'					1		
'Thurstoni'			2		2		1
'Texastar'							
oxyphylla			2		2		
'Rouge'					1		
'Noble Ken'							
'Madame Queen'							
'Mohican'					1		
'Interlaken'							
'Compta'					2		1

Table I. Preliminary results of virus infection tests from several begonias.

The virus antisera used in the tests: CyMV = cymbidium mosaic virus; ORV = odontoglossum ringspot virus; TMV = tobacco mosaic virus; PVX = potato virus X; PVA = potatovirus A; CMV = cucumber mosaic virus; TRV = tobacco ringspot virus.

Numerals in graph represent number of tests for that variety which yielded positive results. All others were negative, although a few were questionable.

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- Lawson, R.H. and M. Brannigan. 1986. Virus diseases of orchids. *Handbook on Orchid Pests and Diseases*, pp. 2-49. American Orchid Society, Inc. West Palm Beach, Florida.
- Wister, G.C., FW. Zettler, and T.J. Sheehan. 1983. A diagnostic technique developed for orchid growers

to detect cymbidium mosiac and odontoglossum ringspot viruses. *Amer. Orchid Soc. Bull.* 52:255-261.

Zettler, F.W. and J. Nagel. 1983. Tobacco mosaic virus infection of gesneriads. *Gloxinian* 33:22-25.



THE AMERICAN IVY SOCIETY

is the International Registration Authority for *Hedera*; provides sources for new & unusual ivies; publishes *Ivy Journal* three times a year with reports on research, hardiness testing, life-sized photos of ivies. Memberships: General \$15; Institutional \$25; Commercial \$50. Information: The American Ivy Society, PO. Box 520, West Carrollton, OH 45449-0520.

That Thrilling Peruvian Puzzle!

Carrie Karegeannes

Thelma O'Reilly's "Peruvian Puzzle" in the December issue indeed goes back into history, with many growers and botanists contributing opinions, sometimes later changing them, for more than 120 years.

We in ABS have shared the hunt for clues to whether the beautiful but difficult plants we were growing (often too briefly) belonged to Begonia bracteosa, Begonia roezlii, Begonia lynchiana, or now to Begonia cyathophora – and whether these were four separate species or some were the same as others.

Jan Doorenbos in the August 1976 Begonian summarized much of the tangled hisory that evolved from plant collectors, botancal gardens, and numerous publications from Peru, Mexico(?), Russia, Germany, and Engand, to California and New Jersey. And there s more.

In the 1870s Benedict Roezl, a plant collector who traveled in Peru and Mexico, sent seed from Peru to St. Petersburg (Leningrad) of a begonia with large, pale pink, many-flowered clusters rising above glossy foliage. In 1876 Edouard Regel, director of the St. Petersburg Botanical Garden, published a description (in Latin) in the Russian Acta Horti Petropoitani, vol. 4, p. 334, and also in the German Gartenflora, vol. 25, plate 871 and pp. 194-95, naming the Peruvian plant B. roezlii for its collector.

In 1878, however, the seed grower Ernst Senary of Erfurt, Germany, offered another *R roezlii* for sale, one he said he had received ome years before, also from Roezl but from Mexico. Benary's records of correspondence with the collector have since been lost in East Germany, but his great grandson, still in busiless today in West Germany, sent me the decription from that catalog:

Begonia Roezlii: A very valuable species which I received some years ago from Mr. Roezl from Mexico and which this season only yielded an abundant seed crop. When sowing is done in April very vigorous plants of 50 centimeters height with 25 cm long and 15 cm wide alternate leaves of a fresh dark green and a reddish colour on the backside are obtained until September. Toward the end of October the thick buds appear covered with a dark red perianth [i.e., bracts] resembling a bursting paeonia, which soon afterwards become magnificent large umbels of innumerable bright dark red flowers. This wonderful blossoming continues without interruption until March in the temperate greenhouse.

Ernst Benary's description was quoted in London in an 1879 *Gardeners' Chronicle* (vol. 11, p. 566). In 1883 R. Irwin Lynch of the Cambridge Botanical Gardens published a color plate and description in the *Garden* (vol. 24, plate 402 and pp. 162-63) of plants of Benary's import. Lynch, too, commented on the bright, rich color and the remarkable, large bracts enclosing young flower heads.

At the Royal Botanic Gardens in Kew, England, Director Joseph D. Hooker sought to correct the double use of the name *B. roezlii*. He also published a handsome color plate (*Botanical Magazine*, vol. 110, plate 6758, 1884), saying that Lynch's "Mexican species" introduced by Benary was apparently named in ignorance of Regel's previously published name for a Peru species. Hooker therefore renamed Lynch's *roezlii B. lynchiana*.

Hooker's plate shows the large, glabrous, bright green leaf with red spot at the petiole junction; the large, many-flowered inflorescence with "flat top"; and the young bud cluster wrapped in "an involucriform cup formed of two connate [joined] membranous bracts." *B. lynchiana* had 2-tepaled male flowers like *B. roezlii*'s but its female flowers were sometimes 2-tepaled and some 4-tepaled, while *B. roezlii*'s female flowers had only 2 tepals. *B. lynchiana* had many-branched styles; *B. roezlii*'s were 2-divided.

Carrie Karegeannes enjoys combing through the botanical literature for clues that might be of special value to begonia fans. Her address is 3916 Lake Boulevard, Annandale, VA 22003.

Arguments followed. Regel at first did not believe that B. lynchiana was not his own B. roezlii, but eventually accepted it (Gartenflora, vol. 34, p. 247, 1885). Some have thought that all of Roezl's seed in question must have originated in Peru instead of Mexico, especially since we don't know of any collections in Mexico since then. E. Irmscher, for example, writing in Parey's Blumengartnerei in 1960 (2nd ed., p. 86), described both plants as variations of one species, B. roezlii Regel from Peru. Bernice Schubert of the Arnold Arboretum of Harvard University, on the other hand, accepted the Mexican origin of B. lynchiana as stated and also that it was unrelated to B. roezlii (National Horticultural Magazine, vol. 33, p. 248, 1954) - but she and Irmscher both believed that B. roezlii was a form of B. bracteosa, named by Alphonse de Candolle in 1859.

Meanwhile, back in 1936, a University of California expedition under T. H. Goodspeed had found a begonia in the ruins of Machu Picchu in Peru and distributed seed as no. 1773. ABS growers began using the provisional name *B.* 'Machu Pucchu' for plants from this seed. T. H. Everett carried a photo of *B.* 'Machu Picchu' in the March 1939 Journal of the New York Botanical Garden. The Garden soon identified the species as *B.* roezlii, and Helen Krauss's Begonias for American Homes and Gardens reproduced the photo under that name in 1947. Alice Clark painted *B. roezlii* for the March 1945 Begonian and described her plant in detail.

However, Lyman B. Smith, then at the Gray Herbarium of Harvard, identified no. 1773 from Machu Picchu as *B. bracteosa*, which would fit very nicely with Schubert's and Irmscher's belief that *B. roezlii* and *B. bracteosa* were the same. Not everyone accepted this, either.

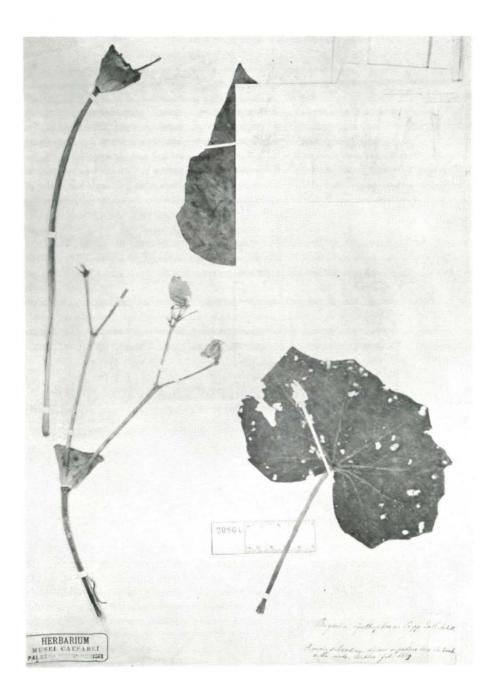
Writing in the December 1943 Begonian and again in June 1944, Helen Krauss held that *B. roezlii* and *B. lynchiana* were two species. By the time she wrote her book she had come to believe they were one very variable species, having seen wide variation in color, habit, and size of plants grown from the seed collected at Machu Picchu; but she did not accept it as equal to *B. bracteosa*. Variations led some – Irmscher, Arthur D. Houghton, and Doorenbos among them – to suspect a hybrid origin for *B. lynchiana* (although Irmscher, Smith, and Schubert all agreed that *B. bracte*osa is a very variable species in its own right).

Finally, during several years' review of all known begonia species for a worldwide key to Begoniaceae, Lyman Smith found a fourth name in this group. He also revised some earlier conclusions. He determined in 1984 that *B. lynchiana* J. D. Hooker (synonym *roezlii* Lynch) actually was the same as *B. cyathophora* from Peru, named by Peoppig and Endlicher in 1835 (Nova Genera ac Species Plantarum, vol. 1, p. 7 and plate 11). Smith now kept *B. roezlii* Regel and *B. bracteosa* A. DC. as two separate species, giving us three in this Peruvian group with large, enveloping bracts.

A visit to the National Herbarium turns up numerous specimens labeled B. bracteosa and B. cyathophora and a photo of the original illustration of B. roezlii. The plants are much alike. Specimen sheets show the enormous bracts and large flower clusters, which vary from white flushed pink, to pink, bright red. and deep crimson. The label on a B. cyathophora sheet notes irregular styles. A Cornel University note on one B. bracteosa sheet reports, "Flowers in Peru brilliant red, but lighter in cultivation in Ithaca, N. Y." A rosetinged B. cyathophora was collected on T. H. Goodspeed's third expedition to the Andes ir Peru, 1942. Capsules carry one very large and two very small wings. Leaves are similar with at least some carrying a red dot at the petiole junction.

How can we tell these apart? Lyman Smitl explained that *B. bracteosa*'s bracts are two separate organs enfolding the young inflores cence, while in *B. cyathophora* the single cup shaped bract (two joined into one) that give the species its name surrounds the inflores cence in a circle on the peduncle.

Even when the bracts have fallen off, a they do early, they leave scars that make it pos sible to tell, he said. You can see whether ther is one scar in an unbroken circle or two semi circular scars almost meeting. Both Hooke and Poeppig & Endlicher described the con



Begonia cyathophora P. &E., type originally in the Vienna Herbarium, Field Museum of Vatural History negative 20861.

Photos of the herbarium specimens supplied by Carrie Karegeannes.



Begonia bracteosa A. DC., type in Hooker's herbarium, Kew negative 11507.

nate bracts, which I have not heard of in any other begonia.

How does *B. roezlii* differ, then, from *B. bracteosa*, since it has two bracts? Lyman Smith pointed out that *B. roezlii*'s leaf blades are almost lobed (sublobate) and the blades' major projections are rounded, while on *B. bracteosa*'s leaves the major blade projections are acute to acuminate and the margins duplicate-dentate. (To trace the begonias through the Key to the Begoniaceae, see box.)

Other seed collections have been offered in the ABS Seed Fund in recent years, and growers will want to reexamine their plants. In June 1975 Doorenbos shared seed from a begonia collected in the Andes in Bolivia in 1974 by two Dutch scientists. He identified it as *B. bracteosa*. It had light pink flowers and glossy green leaves on 3' to 6' shrubs. Lyman B. Smith and Dieter C. Wasshausen's Illustrated Key in Part I of *Begoniaceae* (Smithsonian Press, 1986) lists distinguishing traits for these species on p. 63, item 59; p. 122, items 16 and 19, which fall under 12 on the previous page; and p. 123, items 33 and 40. (To find a species in the key by name, look first in Part II, the alphabetical species list, and find the figure number. The number will guide you to the illustration in the back of the book and also to the place in the key in Part I.)

Also in 1975, the U.S. Department of Agriculture distributed a pink-flowering species as P.I. 390601, collected in Tingo Maria, Peru, by Winters and Higgins of USDA. Plants I received appeared close to B. bracteosa but did not survive long enough to flower. Rudolf Ziesenhenne was able to bring plants he received into bloom, and he identified P.I. 390601 as B. lynchiana. In his greenhouse, the flowers were white with a touch of pink. He was growing another plant as B. bracteosa, which he found to be different. Rudy shared seed with the Seed Fund in July 1976; he did not have the country of origin, however, and the Seed Fund referred to Hooker's originally cited Mexico.

In November 1976 another collector, Marion Brown, gave Jack Golding of New Jersey seed from a *B. bracteosa* growing in the garden of Prof. Cezar Vargas of the University of Cuzco (near the Machu Picchu ruins). It had pink flowers and capsules with one large wing and two almost riblike.

Rene Chavez of the Botanical Gardens in Cuzco, hunting *B. lynchiana* for Jack, made three collections in June 1977 of white- to pink-flowering plants at Colcca, Lares Valley, Peru.



Inflorescence of Begonia U095

Still more recently, the May-June 1983 Begonian offered seed labeled B. bracteosa, "with a slight purple tinge to its rose-colored flowers," saying that it had been grown for years as B. roezlii. See also Karen Bartholomew's article on Machu Picchu in the July-August 1983 Begonian.

And then we come to the dazzling B. U095 reported by Thelma in the December 1986 Begonian, collected by Stephen Morgan and Sherwin Carlquist in Peru in September 1982. Mabel Corwin and Michael Ludwig grow plants that produced huge, many-flowered clusters. The brilliant scarlet flowers and the bud clusters enfolded in large cuplike, redtinged bracts strikingly resembled those on Hooker's Botanical Magazine plate for B. lynchiana, (now determined equal B. cyathophora). It also appeared a very likely parent for B. 'Rosea Gigantea' (reported variously as B. cucullata [syn. semperflorens] × B. roezlii or B. lynchiana). Interestingly, Thelma found the huge bracts to be in pairs that overlapped to enfold the bud clusters completely.

It would be wonderful to have dried specimens of all these we have grown for botanists to examine for us.

Culture Hints for Peru Species

Perhaps R. Irwin Lynch's notes on cultivation of the plant that J. D. Hooker named *B. lynchiana* may give insights for growing *B.* U095 and other species in the "Peruvian Puzzle."

In the Garden of 1883 (vol. 24, pp, 162-63), Lynch warned that at the Cambridge Botanical Gardens this begonia produced only a few stems, which were not inclined to branch, and that this habit "must not be extensively interfered with." Cutting back at the wrong time or pinching the ends was likely to produce too many weak branches and thin flower clusters. The plant's habit, he said, was naturally somewhat leggy-"its chief and only fault"-and that could be treated only by growing the plants in full light with enough room. The finest plants he had seen were grown in a greenhouse facing south with no shading at all (in England).

Lynch said that, because it flowers continuously between October and May, there was little chance to cut back or start afresh. He did cut back his plants after flowering to let them make vigorous stems for the next season. After that, it was "useless to think of cutting back or stopping again." If young shoots had already started growing up, they should not be touched, as they usually bore the greatest bloom. The earliest shoots after the cutting back once should be grown on "without check of any kind."

After about three years, he recommended that plants should be renewed. Cuttings didn't root as easily as those from most other begonias, but seeds grew freely. A greenhouse of intermediate temperature was best, preferably facing south. Soil should be rich and well drained, "as a free supply of water was necessary during its season of growth." He preferred grit to peat for making the soil porous. C. K.

Alice, We Salute You The Legacy of Alice Clark

Convention Banquet Program Presented by Thelma O'Reilly

Review by Lorra Almstedt

"Alice, we salute you!" were the words Thelma O'Reilly used to conclude the 1986 convention banquet program titled "The Legacy of Alice Clark."

Alice Clark left her legacy, a treasure of exquisite portraits of begonias, to her family, friends, and all of us who love and grow begonias in her book *Begonia Portraits*. Published as a limited edition of one thousand copies in 1977, *Begonia Portraits* is dedicated to the memory of Alfred D. Robinson.

This wonderful legacy contains 78 watercolors and pen and ink line drawings of begonias painted by Alice Clark between the years of 1943 and 1949. Also included are the articles Alice wrote to accompany the begonia portraits when they were originally published in the *Begonian*.

During the banquet program Thelma O'Reilly shared slides of 22 of these paintings. It only takes a glimpse at one of Alice's paintings for us to realize that this was a lady who truly loved begonias with an understanding and fondness of nature rarely seen.

In the introduction to her book Alice describes begonias as developing personalities and says that she "finally had to try them." While painting the begonias she says, "...I did not talk to them, but I had a silly feeling they were singing to me!" She goes on to describe the different voices "...some were rich and mellow, some lilting with excitement, and some had sharp staccato accents that dared me to go on. They were the conductors, not I."

Alice's legacy did not end in 1949 when she painted the last portrait of the series. Alice always had a goal. When one was reached she selected another. Thelma believes this is why she lived such a rich and full life.

Lorra Almstedt, past president of the Orange County Branch, writes on horticultural subjects. She lives at 1965 Celeste Lane, Fullerton, CA 92633. On August 22, 1972 the Alfred D. Robin son Branch celebrated its 30th anniversary by dedicating a permanent begonia garden in the Botanical Building at Balboa Park in honor of Alfred D. Robinson. This begonia garden a display for the public, was the fulfillment of a long time goal that Alice shared with her friend Mr. Robinson. At this ceremony the Branch surprised Alice by dedicating a natural rock birdbath in the garden to her. Permanent plaques commemorating the event are placed at the entrance to the Botanica Building.

Alice achieved another goal in September 1973 with the presentation by the Alfred D Robinson Branch of "Begonia Beauty Show.' This show contained the first public display of the fabulous Rieger begonias from Brown's Plants. In part Alice's friendship with Andrew Brown, Sr. was responsible for this display Her portraits were also on display, illustrating the "old" begonias of the portraits with the new Riegers. (Brown's Plants again set up hundreds of Rieger Begonias as displays in the hotel and showroom lobby of the 1986 Convention.) It was during this Begonia Beauty Show that Alice captured the coveted Best of Show award with her *B*. 'Pink Rubra'.

In 1976 Alice received an honor that, in her words, "...left me on a high plateau, breathless. I have not come down since." Rudy Ziesenhenne, Nomenclature Director of the ABS, had named a rare *Begonia* species from Mexico for her: *Begonia alice-clarkiae*.

At the Anaheim Convention in 1977, the ABS presented to Alice a special award of one dozen red roses as an expression of love and appreciation.

Thelma's voice broke with emotion as she shared the story of Alice's very last painting with us. At the age of 84, 27 years after she had completed her begonia portrait series Alice painted B 'Universe', one of Thelma's early cultivars, as a gift to Thelma for her en-



Alice Clark at the 1976 Convention

couragement and assistance in preparing the *Begonia Portraits* manuscript. This portrait is the first found in the book, on the page facing Alice's "Lines of Thanks."

In the *Begonian* December 1974, page 315, Alice sent Season's Greetings to all ABS members with a color plate of *Begonia radicans*, then called *B. limminghei*. She also sent copies of this plate as Christmas greetings to her other friends. Later she shared extra copies with Thelma, who in turn shared them with the 1986 banquet audience in the souvenir programs.

At the close of the program, Thelma showed the slide of the painting Alice chose to appear on the cover of her book, the handsome medley of begonia blossoms she called "Begonia Portraits." Many say this is their favorite of all the paintings. Thelma said, "In addition to *Begonia Portraits*, the legacy of Alice Mary Clark's total devotion to beauty and creativity, her unconquerable spirit, and loyalty to family, friends and favored organizations will live forever. Alice, we salute you."



James Watson's 20-inch planter artfully displayed various types of begonias. Like other division winners, it won a Begonia painting by Pat Maley as a trophy.

1986 SAN DIEGO SHOW WINNERS PUA NANI BEGONIAS

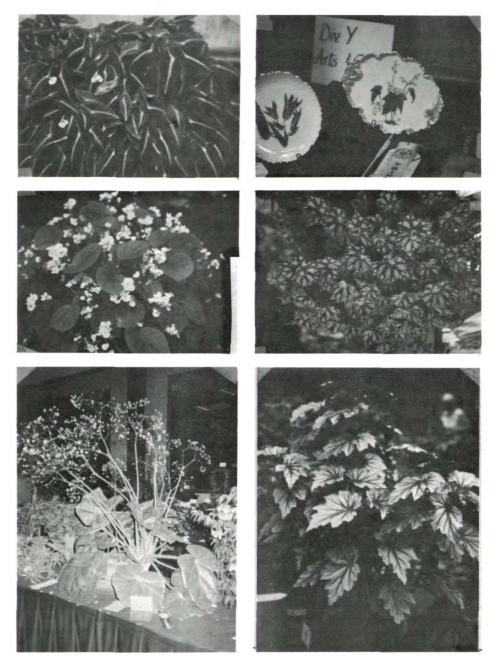
BEST BEGONIA IN SHOW—American Begonia Society Trophy for *B*. U003 entered by Mabel Corwin. SWEEPSTAKES—American Begonia Society Trophy to Mabel Corwin with 15 blue

ribbons.

DIVISION	PLANT	EXHIBITOR	TROPHY
Cane Shrub	<i>B. albo-picta B.</i> 'John Tapia'	Ken Dahlquist Bob Ammerman	Curtis Trophy Pearl Benell Memorial Whittier Branch
Distinctive Foliage Shrub Thick-Stemmed Semperflorens	<i>B.</i> U003 <i>B.</i> 'Richard Robinson' <i>B.</i> 'Opaline'	Mabel Corwin Mabel Corwin Bob Ammerman	Southwest Region Knickerbocker Branch Tampa Bay Branch
Rhizomatous	B. 'Ada Perry'	Edna Francis	Robert Terrell Trophy Rubidoux Branch
Crested/Spiral Rhizomatous	B. 'Leprechaun'	Mabel Corwin	Bessie Buxton Memorial
Rex Tuberous Trailing/Scandent Contained	<i>B,</i> 'Lalomie' <i>B.</i> 'Lulandii' <i>B.</i> 'Ellen Dee'	Mabel Corwin Robert Ammerman Michael Ludwig	Paul Lee Memorial Monterey Bay Branch Berg Trophy
Atmosphere Species Hanging Basket Wall Pocket	B. 'Little Darling' B. chlorosticta B. 'Withlacoochee' B. albo-picta rosea	Tony Newnham Mabel Corwin Ken Dahlquist Ken Dahlquist	Mae Blanton Branch O'Reilly Trophy Walton Trophy Orange County Branch
Old Begonia New Introduction Hobbyist	B. 'Curly Fireflush' B. 'Midnight Magic'	Mabel Corwin Mabel Corwín Thelma O'Reilly, hybridizer	San Miguel Branch ABS Trophy
Introduction (Commercial)	B. luxurians × B. ghertii	Mabel Corwin Patrick Worley, hybridizer	ABS Trophy
Seedling Novice Photograph	<i>B. natalensis</i> <i>B.</i> 'Medora'	Tim Last Lorra Almstedt	Gr. Chicago Branch Jacksonville Branch
(Artistic) San Diego Hybrid	B. 'Frilly Red' B. 'Ada Perry'	Roberto Brin Hazel Jacob	Alamo Branch Bates Trophy
Planter Fern 'Major'	Mixed Garden Davallia fejeensis	Jim Watson Marv & Emma Haworth	Dallas Branch Connecticut Branch
Other Shade Plants	Nematanthus gregarious	Mercy Bissell Memorial Santa Clara	Mabel Anderson
Art	B. 'Looking Glass'	Clara Bada De Montan	Alice M. Clark Memorial

The Begonian

A PEEK AT PUA NANI BEGONIAS



Clockwise from top left: *B. listida*, china paintings, *B.* 'Leprechaun', *B.* 'Looking Glass', *B.* 'Freddie', and *B.* U033.

The exhibitors were Ken Dahlquist, Clara Bada de Montan, Mabel Corwin, Ken Dahlquist, Eleanor Calkins, and Mabel Corwin (same order).



pua nani

BEGONIAS

PUA NANI REGONIAS

ABS AWARDS FOR CULTURE—Certificates awarded to:

ENTRY	POINTS	EXHIBITOR
B. albo-picta	95	Ken Dahlquist
B. 'John Tapia'	95	Robert Ammerman
B. U003	97	Mabel Corwin
B. 'Richard Robinson'	96	Mabel Corwin
B. 'Opaline'	95.5	Robert Ammerman
B. 'Winkie's Chocolate Chip'	95	Mabel Corwin
B. 'Dragon Flight'	95	Jeannette Gilbertson
B. 'Ada Perry'	96	Edna Francis
B. crassicaulis	95	Mabel Corwin
B. 'Connee Boswell'	95	Mabel Corwin
B. 'Leprechaun'	96	Mabel Corwin
B. 'Beryl'	95	Margaret Lee
B. 'Ellen Dee'	95	Michael Ludwig
B. chlorosticta	96	Mabel Corwin
B. rex Putseys	95	Mabel Corwin
B. U192	95	Michael Kartuz
B. 'Honeysuckle'	95	Ken Dahlquist
B. 'Withlacoochee'	96	Ken Dahlquist
B. albo-picta var. rosea	95	Ken Dahlquist
B. 'Lucerna'	95	Robert Ammerman
B. 'Curly Fireflush'	96	Mabel Corwin
B. 'Medora'	95	Lorra Alstedt
B. 'Ada Perry'	95	Hazel Jacob
HYBRID OF DISTINCTION AWARDS		TI
B. 'Midnight Magic'	97	Thelma O'Reilly
B. luxurians × B. ghertii	99	Patrick Worley

SHOW NOTES

There were 237 entries by 38 exhibitors.

Patrick Worley's Best New Introduction, *B. luxurians* × *B. ghertii*, received 99 points. The only other new introduction recorded to receive 99 points was Logee's *B.* 'Midnight Sun'.

B. 'Midnight Magic', winner of the Best New Introduction by a hobbyist grower by Thelma O'Reilly is a hybrid of her own unnamed rex cultivar with *B.* 'Manuel', a rex cultivar hybridized by Barbara Phillip.

Tim Last, whose seedling of *B. natalensis* received the trophy for the Best Seedling, brought his entries from Brooklyn, New York, to enter in the San Diego National Show.

In four divisions, trophies were not awarded. The four trophy-paintings from these divisions were auctioned off at the banquet at the suggestion of the artist and netted ABS an additional \$400.

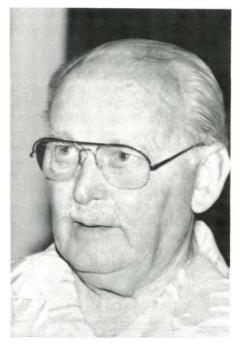
ABS MERIT AWARDS

Herbert P. Dyckman Service Award Presented to Martin Johnson

Martin Johnson was presented with the 1987 Herbert P. Dyckman Award for his many years of work with begonias. He awakened the interest of the ABS in the begonias of the Philippines. By importing new plant material has increased our pleasure and understanding of a whole new group of begonias. Although known to the botanists since the early years of this century, little had been done with them horticulturally. Many of the species he has brought back may never be seen again because of the destruction of natural habitats. It may be years until we appreciate the legacy he has given to us by collecting seeds and plants and distributing them throughout the society.

Martin had been explaining to the people whom he contacted in the Philippines the worth of their natural plant heritage. His efforts were recognized in a feature article in the February 1983 Orchids and Ornamentals, an Asian plant magazine published in Manila.

Johnson has made many hybrids, which he often names after jazz musicians - 'Connee Boswell', 'Little Brother Montgomery', 'Jelly Roll Morton' and 'Turk Murphy' among them. He has been generous in donations for various ABS projects.



Martin Johnson

Eva Kenworthy Gray Award for 1987 Honors Chuck Anderson and Karen Bartholomew

The Awards Committee announced fulfillment of both requirements for the Eva Kenworthy Gray citation by the 1987 awardees, Karen Bartholomew and Chuck Anderson. Their activities included ABS editorship from September 1979 to 1983. Chuck served as national president in 1982-3. Both were very involved in the planning and arrangements for the ABS Golden Anniversary Convention at Santa Cruz in 1982. Their work required tremendous amounts of time, often behind the scene.

They are shown here at the Riverside Convention with Bob Ammerman who was show chairman for Pua Nani Begonias. Thelma O'Reilly accepted the award on their behalf.



Chuck Anderson, Karen Bartholomew and Bob Ammerman

Alfred D. Robinson Medalist for 1986 Begonia 'Withlacooche'—Hybridizer Francis Michelson

Francis Michelson of received the Robinson medal for his hybrid *Begonia* 'Withlacoochee', a cross of *B. thelmae* with unidentified species #U049. The begonia was registered with the Nomenclature Department and was assigned #765 in 1979. Michelson has about twenty other registered hybrids to his credit. He lives in Orange City, Florida.

Awards Chairman Michael Ludwig sent the award to Michelson who was unable to attend the convention.



PHOTO CREDITS

Anderson, Chuck 13 Bates, Phyllis 17 Calkins, Eleanor 13, 15(left lower), 24 Dahlquist, Ken 15(all except left lower) Fergis, Chris 18(bottom) Keller, John 5 O'Reilly, Thelma 9 O'Reilly, Tim 18(top)

BEGONIA QUESTION BOX

Mabel Corwin

QUESTION: I have self pollinated some of my species begonias. The seed pods are ripening. I would like to send some seed to the Seed Fund. How do I go about preparing and mailing it? California

ANSWER: I use two sheets of white paper with a crease across the middle. I place a small strainer with fine mesh on one sheet of paper. I hold the pods over the strainer and break open, letting the contents fall. Shaking the strainer gently allows most of the seeds to fall onto the paper.

I lift the paper, tilt slightly and tap gently. The good seeds will roll off onto the other paper, leaving the chaff which should be discarded. After rolling the seeds from one paper to the other several times the chaff will be eliminated.

If you do not have small seed envelopes you can use folded white paper to enclose the seeds. Be sure to label with variety and date.

I like to seal packets with masking tape. It can be peeled off and resealed easily. It is more difficult to open and close packets sealed with Scotch tape.

It is important to use padded envelopes for mailing. These can be obtained from the post office or stationary store. Seed mailed without any protection is often crushed by the stamping machines at the post office.

Species seed is always appreciated by the Seed Fund Chairman. This is one way all of us can participate in the society.

QUESTION: I have a nice greenhouse and it is kept clean. My plants seem very healthy, then all of a sudden the leaves start to fall one or two at a time until just the top ones are left. Some plants die, but I have one that is still green and trying to put out some new shoots. Could it be too much humidity? It's not too much water. I use potting soil with added perlite.

Do you have a good potting soil mixture? California **ANSWER:** I think your problem with leaf drop in the greenhouse is probably a combination of too much humidity and not enough air circulation. Good air circulation is very important in a greenhouse. A small fan that is kept running all the time will usually take care of that problem. Do you have vents that open for ventilation when the temperature rises?

I suggest the use of a fungicide in the greenhouse. You can use a spray or a dust. I use Ortho Rose and Floral Dust. It comes in a plastic squeeze bottle. I "pouf" this around the greenhouse about once a week and it seems to take care of most problems. Be sure to keep all the fallen leaves cleaned up so they don't rot.

Sudden changes in temperature will cause leaves to drop. Another cause of leaf drop is being alternately too wet and then too dry. Try to keep evenly moist. Cane begonias are heavy feeders and will drop leaves if not fed.

Every grower has to experiment with potting mixes to find one that is satisfactory for his/her conditions. I like a mix with a loose texture. It should drain well, still holding moisture. A commercial mix with added perlite should be fine, but you may find you like one brand better than another. I have even mixed two different products together to get the "feel" that I like.

Begonias respond to a regular feeding program. I use liquid fertilizer with a 20-20-20 formula during the spring and early summer to encourage new growth. About the middle of July I switch to a 15-30-15 formula for bloom.

Mabel Corwin answers questions about begonia growing. Items of general interest are printed to assist others. Write to Mabel Corwin, 1119 Loma Vista Way, Vista CA 92084. Include a stamped, self-addressed envelope for a prompt personal reply.

ROUND ROBIN NOTES

Mary Ellen Taback, Director

Seed growers can improve their record keeping by including these items passed on in a Robin. The suggestion originally appeared in the Australian Begonia Society's newsletter. Record:

- 1. the soil mix used for seed raising
- 2. the propagation method, e.g. heat? extra light?
- 3. germination time
- conditions in which an established plant is cultivated
- 5. potting medium and type of pot, e.g., clay, plastic
- 6. brief description of climatic conditions
- 7. full description of plant at maturity
- 8. final summary of observations

It would be interesting to hear how some other growers keep data.

Some sort of record was set in England by Joan Hill who reports that her *B. versicolor* seed did not start germinating until 60 days after sowing, and 5 months later seed continues to germinate.

The **pollinators** of Robin #64 solve the problem of having pollen available when female flowers open in several ways. Ruth Wills (OK) refrigerates pollen in tiny sample glass pill bottles from her doctor's office. If you use plastic the pollen is sometimes spoiled and there will be no germination.

Joy Porter (MA) air dries the male flowers for 24 hours between lightly folded tissues. Then the flowers are stored in small boxes and refrigerated until needed, at which time she warms them and "massages" the pollen from the stamens with the handle of a watercolor brush. The brush is then used to transfer the pollen to the females when they are fully open.

Arline Peck (RI) recommends *B.* U006 as easy to cross. Goldie and Doug Frost, Ca, are crossing *B.* U03I, *B.* U032, and *B.* U007, among many others. They are now trying to set seed on the tuberous and semituberous species. Some species do not cooperate. For ex ample, Mabel Corwin reports that while the male flowers on *B. handelli* are large and very fragrant, she has never had female flowers on it.

Leave the pods of your crosses to fully ripen, says Arline Peck or germination wil be sparse if at all. If *B*. U007 is the easy one *B*, paulensis is the difficult one to pollinate

A recent **Orchid** Robin carried some good suggestions. Elaine Ayers (OH) writes that Paphiopedalums form tall spikes if kep under the greenhouse benches where they continue to bloom for months. Frances Hoff man (NY) moves both begonias and orchids outdoors for the summer. Her orchids res on wire frames elevated on cement blocks underneath her deck where they receive early morning sun and lots of humidity. The basket types are hung on a pipe above those on the wire frames.

A challenge to many growers is the **care** of tiny plantlets. Roots are underdevel oped, and the merest hint of overwatering results in the disappearance of the plants Rhodora Buss, in the Windowsill Growers Robin, uses a small eyedropper to foliau feed a weak solution of soluble fertilizer to such plantlets without "drowning the roots." Virginia Hamann has a different technique she waters from the bottom to prevent "the soggy mix that kills," using either wicks or trays to set the pots in. Clara Tuoto places the tiny pots on capillary matting cut to fit the bottom of a kitty litter tray.

Dan Paulson of the Midwest Growers found an opposite problem. He found that he sometimes overlooks the small pots among the larger ones, and they face death from drought. Now he has a solution: he intersperses the small pots among his terrariums so that they are easily seen.

The Cactus and Succulent Growers discussed the problem of the tall, heavy cactus (or **plant**) **that tips over.** Put it into a larger, heavier pot, pot and all, advises Sue Haffner. Add weight to the bottom by burying stones, suggests another member.

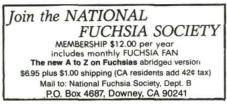
Marvin Kahr has a friend who found an easy way to store his nonhardy cactuses. He digs them up from their beds in the fall, tosses them barerooted into the cellar where they remain until the next spring. This is in Minnesota where cellars have furnaces.

Terrarium growers haunt garage sales for inexpensive but useful plant items. One grower advises: Watch for aquariums that sell for very little because they leak as fish tanks. They may be perfect for plants. Lovely old pots and display containers can occasionally be found, sometimes even containing a neglected plant.

To make a taller terrarium as your plant grows, Rhodora Buss suggests placing several spring-clip clothespins along the edge of a sweaterbox and inverting another over it so that the second rests between the "legs" of the pins. Just a small ventilation slot will separate the two boxes.

Many members report the use of plastic drink containers. The base (easily removed by immersing in warm water until the glue softens) is your "pot" and the bottle part is the terrarium top. Cut it as you need to for closed or ventilated use. These are good for individual plants, and Alton Lee roots the larger leaves of such *Begonias* as *chlorosticta* and *rajah* in 3-liter plastic bottle bases. Russ Richardson reports that a mild Clorox dip is beneficial for the begonia tip about to be inserted into the mix, while Bob Moore prefers to dip into Watch Us Grow liquid fertilizer.

Sheila Matthews stresses the importance of the right mix for terrariums. She mixes one part each of potting soil, perlite, milled sphagnum, plus a little charcoal. A layer of



this mix is covered with a layer of long fiber sphagnum moss. The terrarium is placed close to the lights. Glennis Crouch prepares two mixes for terrariums. For rooting she uses equal parts perlite and vermiculite, and for growing she uses long fiber sphagnum with just enough perlite to keep the moss from packing. The moss is prepared by pouring hot water over it, cooling, then cutting it with scissors, adding the perlite and some fine charcoal. In use this mix is kept barely moist with a solution of 1/4 teaspoon of Rapid-Gro or 15-30-15 food per gallon water. She warns, "If you overfeed, the plant will outgrow its terrarium!" She also keeps it close to the fluorescent lights. An exception, both she and Phyllis Beck find, is B. ficicola which grows better in natural light.

The newest **cane** is flying well, and interesting letters include good photos. Irene Brownlee observes that short nodes produce a compact plant, a desirable feature that can be obtained by growing outdoors. The wind exercises the stems, resulting in strong canes with short nodes. To pinch canes to shape, let three leaves grow on a branch, then pinch the next bud. Let three more grow, then pinch, and so on. She enjoys growing two plants of the same cane, allowing one to grow as it will, while she uses the three-then-pinch procedure on the other. Within a year the difference the pruning makes is obvious.

Several cane growers agree that *B.* 'Sophie Cecile' is a big eater. A typical diet includes rose food in the spring when growth perks up, fish emulsion and extra bone meal to encourage bloom, superphosphate for root growth, and 20-20-20 for leaf growth. Mary McClellan and Irene Brownlee both find lime good for canes. About once a year they use a watering of one teaspoon of lime in a quart of water. This

ANTONELLI BROTHERS 2545 Capitola Road SANTA CRUZ, CALIFORNIA 95060 22-page color catalog \$1.00 reduces the soil acidity, which allows some of the soil nutrients to be released chemically for plant use. Russ Hammer, in another robin, believes that canes use organic fertilizers faster and easier than chemical ones, so occasionally he gives his canes a change from their usual Peters 20-20-20, and feeds fish emulsion, as well as stirring some composted manure into the mix.

The blooms of the canes are indicators of adequate light, reports Russ. A paler color than normal means there is too little light. Another robin writer added that *B*. 'Lucerne' is the first to show mildew damage, so you can be forewarned by this indicator and spray plants accordingly.

Hints from the **tuberous** begonias were plentiful. This hear Helen Clements potted her tubers in 10^{''} and 12^{''} pots instead of the usual 6^{''}. She reports that the resulting overpotted plants were the best she has ever grown. Howard Siebold reminds us that tuber size by itself may not determine what sort of plant results, since different ancestry can account for **tuber size**. He cites the pendulas as a case in point.

When growing tuberous from cuttings, a June cutting will form a 3/4" tuber by early December. Leave these small tubers to overwinter in their pots to avoid moisture loss, advises Howard, and one more growing season will give you a tuber the equal of any commercial one.

Tuberous begonia seed is grown successfully by many members, including New Zealand where the seasons are reversed. For the northern hemisphere, seeds planted in very early spring can be moved as seedlings to pots or beds by June. A large tuber will be produced by early December, perhaps 3'' across, according to one member

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who plants in beds. Howard Siebold believes that the dormancy of tubers should be forced by December so that the tubers have a good rest. Joan Campbell recommends seeds of Clips strain as superior to the Non-Stop varieties. Park Seed Company carries this seed. She enclosed a photo of 2 1/2" high Clips in bloom to prove her point. She also recommends *acaulis* as one of the prettiest tuberous begonias. She starts her seed at the end of December so that the plants are a good size before hot weather tuberous trouble time— hits them.

New members who would like to join robins are welcome. Do write to me for more information.

Mary Ellen Taback, Round Robin Director 151 Shoe Lane Newport News, VA 23606

BEGONIAN MINI-ADS

Miniads are a service to our members. Miniads are \$1 per line per insertion with a minimum of \$4. A line is 36 characters including punctuation and spaces. Payment must accompany order. Make checks payable to ABS and mail to Marion Paris, 4793 Soria Drive, San Diego, CA 92115.

BEGONIAS AND EPISCIAS

Plants and cuttings. Send \$1 for listing. Wilson's Greenhouse, Route 5, Box 328, Ozark, MO 65721. Ship April thru Nov.

FAIRYLAND BEGONIA & LILY HYBRIDS List 50¢. Visitors welcome. Leslie & Winkie Woodriff, Fairyland Begonia & Lily Garden, 1100-B Griffith Road, McKinleyville, CA 95521

BROMELIADS AND ORCHIDS

Species and hybrid orchids and bromeliads. List for stamped legal sized envelope. Paul Lowe, 5741 Dewberry Way, West Palm Beach, FL 33415. (Woodriff also Mar.)

Clayton M. Kelly Seed Fund

Joan Campbell, Seed Fund Director

The Seed Fund now has a good supply of seeds, including the following species. You may also inquire about others you are interested in growing. I have included notes about these new arrivals.

B. dichroa is a low-growing canelike Brazilian species. It is famous for its orange blooms. Summer flowering, it needs warmth and adequate humidity and light.

A rhizomatous species from Borneo, *B. diadema* requires heat and controlled conditions. The spotted leaves are star shaped and the blooms are pink. The male flowers are reportedly fragrant.

B. princeae is a low-growing tuberous African species with small leaves so heavily marked with silver they appear scalloped. It blooms easily, but will go dormant from time to time, producing bulbils in the leaf axils. The pink and white blossoms stand well above the foliage. This one will root from a leaf—what more do you need? Terrarium care suggested.

B. U100, an unidentified species from Panama, is easy to grow and hybridize. The hairy leaves are pale green and blossoms are pink and white. *B.* U100 is considered by some authorities to be *B. urophylla.*

B. friburgensis is a thick-stemmed species from Brazil. Its shiny thick, dark green leaves are red underneath. New leaves are red and noted for resembling a cockscomb before they unfold. Flowers are pink and white. This is an old favorite in many collections.

B. filipes is found in Panama and Central America. This small shrublike begonia is so tiny collectors refer to it as a miniature. It has been found growing in trees, on top of logs, even on rocks, so it probably does not like rich soil. The white blooms are smaller than the green leaves, but produce seed pods twice their size. This plant has an annual growth habit.

I now have seeds of *B. suffructicosa*, one of the African semituberous begonias with typical basal thickness. The leaves are more

deeply cut and serrated than those of *B. dregei. B. suffructicosa* is free blooming, with white flowers. These semituberous begonias often go partially dormant at this time of year.

All the following species from South America are believed to have played a part in the development of our modern semperflorens cultivars. One or two of these planted near your bedding semps create an interesting point of focus for the whole. Do try them outdoors; for me they have proved heat and cold tolerant.

B. cucullata is an annual of medium height with creeping stolons and erect succulent stems, purple tinged at the joints, and bearing clusters of white or pink-tinged flowers.

B. fischeri Schrank is a semperflorens or shrublike species that attains medium height. It has typical semperflorens leaves, red stems and petioles, and very dark pink blossoms. For some good reading about the untangling of the identification of this species, see the January 1981 issue, pp. 4-7.

Another of these related plants is *B. subvillosa* with its small round leaves, and small white flowers. All plant parts, including flowers, are covered with soft, white hairs. Hairy leaves are believed to retard water loss and prevent sunburn. but avoid direct sun if you plant this one outdoors. Overwatering is fatal.

Small, round, hairy leaves and flowers characterize *B*. U008, also a shrublike annual. All plant parts, including blooms, will turn rose colored when grown in good light. Avoid direct sun when planting outdoors, and do not overwater. Grow and compare with *B. subvillosa* above and with *B.* U151 offered as S-O 13 in my last column.

Please let me have your comments on the U-numbered species begonias. If any branch is interested in growing an unidentified species and trying to identify it, the Seed Fund will gladly forward the seeds. Some of you have asked about the convention listing. About one-quarter of those prepackaged seeds are still available, and all are species received in quantities too few for a general listing. I do not want to offer these as "mixed species;" if you are interested, send me a SASE and I'll send the list. These will be sold on a first-come, firstgo basis.

I've been promised fresh bulbils for this listing.

Joan Campbell

SLIDE LIBRARY WELCOMES ADDITIONS TO ITS PROGRAMS

Slide Librarian Dan Haseltine will welcome 35mm slides of begonias. You may send individual slides or several slides or an entire program set. Please identify the plants, owners, locations, etc., as slides with no data are not useful to others.

BRANCH DIRECTORY

All information for the Directory of Branches and Regional Groups MUST be sent to ABS Secretary Jeannette Gilbertson. Only changes reported to her will be reflected in the listings in the *Begonian*.

Clayton M. Kelly Seed Fund

January-February 1987

J-F 1 B. dichroa J-F 2 B. diadema J-F 3 B. princeae J-F 4 B. U100 J-F 5 B. friburgensis J-F 6 B. filipes J-F 7 B. suffructicosa J-F 8 B. cucullata J-F 9 B. fischeri J-F 10 B. subvillosa

J-F 11 B. U008

With every order of one of the last four semperflorens I will include at no charge (1) one packet of mixed sem perflorens seeds and (2) one packet of Frillies semp or of 'Calla' cross semperflorens seeds.

All packets of seed \$1.00 unless noted otherwise Growing from Seed pamphlet is 25¢.

Orders from U.S., Mexico, and Canada need 45¢ ove seed price for postage (60¢ if over 12 packets an ordered). Overseas orders require \$1.20 for postage Send checks or money orders in U.S. funds made pay able to Clayton M. Kelly Seed Fund, and Mail to Joa Campbell, 814 N.E. Honey House, Corvallis, MT 59828

BUXTON CHECK LIST

The ABS Bookstore now has copies c The Buxton Check List available for \$20.00 postpaid. California residents must adu sales tax. Supplements are included.

BEGONIAS, cuttings and plants Send \$1.00 for list. Kay's Greenhouse, 207 W. Southcross San Antonio, TX 78221.



The Palomar branch members had help from adopted members at the convention plan sale. Here Manuel Zamora from San Antonio, TX, and Art Sackenruther from Redwooc City, CA, are arranging the tiny plants. David Graflund of Galesburg, IL, Wanda Macnair Cambridge, MA, and Mary Bucholz, Jacksonville, FL, joined the 'locals' in the effort.

PUA NANI BEGONIAS

OLOR FOR BEGONIAN MAL PROJECT

The ABS Board approved the establishnent of a fund for providing additional color hotographs in the *Begonian* under the uspices of the members at-large commitee. This group of members not affiliated vith local branches has a network to keep n touch and decided upon this project for an activity for their group.

Chairman Thelma O'Reilly announced that he fund was started with \$200 made up of a contribution of \$100 by Martin Johnson and several smaller donations by other MAL nembers. She said that donations from anyone who shared the MAL desire for more colored photos would be welcome. Hereafter, the names of donors will be listed in the *Begonian* from time to time.

WANTED DESPERATELY SOURCE FOR TERRARIUMS

Ruth Wills presented a seminar about growing begonias in terrariums for the Barkey Branch. She is trying to locate a source of large plastic bubbles, as there are new members who would like to purchase these in 12'', 16'', 18'' and 24'' sizes.

Has anyone located a source for new terrariums? This is not the only call I have had about the availability of terrariums. I have traced several former sources but so far have not found a supply. An address and/or phone number would be very helpful. Phyllis Bates, (609) 436-1419

MAL NEWSLETTER READY

Members At Large-Newsletter #8 will be ready for mailing as soon as you send your self-addressed, stamped envelope to Chairman Thelma O'Reilly, 10942 Sunray Place, La Mesa, CA 92041.

MEETING DATE SET

A regular meeting of the ABS Board of Directors will convene at 11:00 a.m. at the Ecke Building, Quail Botanical Gardens, Encinitas, CA, on Sunday, March 15.

NEW OFFICERS NEW BRANCHES

Several officers have retired and been replaced. Please check the new list on the inside cover for the current names and addresses.

Douglas Hahn, the new branch relations director, along with Erich Steiniger, is starting right at home. They are trying to revitalize the Greater Cincinnati Branch. Persons interested in this branch or in another area can contact Doug at 7736 Stonehill Drive, Cincinnati, OH 45230.

ABS welcomes the Pinellas County Branch as its newest. All preliminaries have been completed and the charter issuedegon'. Robert Moore, organizer and now president of the group, invites new members to join them. His address is 7760 57th Street N, Pinellas Park, FL 33565.

SCOTTISH BEGONIA SOCIETY JUBILEE YEAR

Charles Jaros sent a copy of the Jubilee 50th Anniversary issue of the Scottish Begonia Society Newsletter. Hugh McLauchlan, who had been a speaker at the Miami Convention, has kept his ABS friends in mind. The issue includes several articles which have subsequently appeared in the Begonian and also carries several articles about the ABS Convention, including McLauchlin's "American Connection," his report on the Miami event, and Carrie Karegeannes's review his program from the Begonian, "Begonias in Scotland." It's very nice to be able to share these articles in both directions.

ATLANTA EXHIBITION

The fledgling Atlanta Branch is holding a Begonia Exhibition and Plant Sale at the Atlanta Botanical Garden on March 21 and 22. The members aim to increase interest in begonias and to enlarge their active group. For additional information, call the Atlanta Botanical Society at (404)876-5858.

Convention at the Breakers, Long Beach, Calif., Aug 27-30, 1987.

MINUTES OF THE BOARD OF DIRECTORS' MEETING

November 2, 1986

The board meeting of the American Begonia Society was held at the home of Mike and Sharon Ludwig, Lemon Grove, Calif. President Margaret Lee called the meeting to order at 11:00 a.m. First Vice-president Arlene Davis read the Aims and Purposes. Minutes of the annual meeting were approved as sent out.

Treasurer's report showed \$9014.54 in the checking account and \$31,971.97 in the savings accounts.

Board approved the following new appointments: Marion Paris with Toni Baker assisting as Advertising Manager; Ronnie Nevins, Ballot Counting; Douglas Hahn, Branch Relations; Martin Johnson replacing Dael Jones as Conservation; Juana Curtis, Judging. A chairman is still needed for Show Entries.

The September-October issue of the Begonian had July-August at the bottom of the pages. By Thanksgiving, new cover slides will be needed. The editor led a discussion of the Seed Fund. The Post Office has a policy that only 10% of related advertising is allowed in non-profit magazines without a substantial increase in postal rate. The Seed Fund is considered advertising. Board approved a motion to change the format to an article and a separate ad. Thus the Seed Fund will not have to be limited in space. Policy was clarified that any person who donates seed to the Seed Fund gives up control of it. The person who receives and grows the seed has possession, and should keep track of the cross. Board agreed Seed Fund Chairman should keep records of who donates seed [names of parents, where applicable], who buys it, and should have a helper if necessary to keep records. Further discussion of mixed hybrid seed was tabled until the Nomenclature Department can state position.

Members At-large committee is working on two projects: raising seedlings of the species that Tracy McClellan collected in Trinidad and giving free begonia cuttings to new members at-large. Board approved the establishment of a color fund, under the directorship of

1987 CONVENTION

Final confirmation of site for the 1987 show is still pending, but the Long Beach Branch is still hopeful that they will be able to host a full convention and show the last weekend in August. We hope to have more details in the next issue.

SOUTHWEST GET TOGETHER

Fiesta de Las Begonias is the theme of the Southwest Regions Get Together, April 10-12, at the Sheraton Inn, San Antonio, TX. Contact Mellea Schultz, 603 Chauncey, San Antonio, TX 78216 for registration information. Thelma O'Reilly, [chairman.] Any person or branch ma donate.

Membership is up slightly, 1539 paying member Membership Secretary was authorized to send a r minder letter to those who had not renewed fro January through September. A motion was made the paying two years in advance for the rate of \$27 for tw years. Motion tabled until the financial impact could to studied. Mickey Meyer, well known hybridizer from Au tralia, was granted an honorary membership effectiv January 1987 for a two-year period.

Business Manager reported all state and federal ta forms are done and will be filed Nov. 3.

Branch Relations Chair reported she had receive the charter from the defunct Hampton Branch. Dougle Hahn is trying to revive the Cincinnati Branch, and new branch has formed in Florida, the Pinellas Coun Branch. The constitution and bylaws have been in ceived, and the required number of members verifie Board approved the new branch and will send out charter.

Bookstore sales at the convention were \$894.50. A le ter, check for \$1028.70, and carton of materials hav been received from former Bookstore Manager Bobb West. Bookstore was authorized to look into havin more membership pins made.

Back Issues Chairman reported total sales of \$237.0 She is photocopying certain back issues so ABS w have complete sets.

Slide Librarian reported income of \$35.00 in Augus \$20.00 in September.

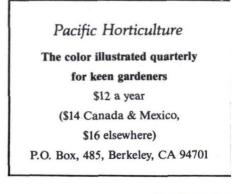
Under new business, Arlene Davis reported that th Long Beach Parent Branch will host the 1987 convertion, if neighboring branches will help. They shoul have a firm answer in the next two weeks. If they are un able to host the convention, they will host the annumeeting and dinner.

Southwest Region will hold their Get-Together Api 10-12 in San Antonio, Texas.

The next meeting will be held January 11, at 11:0 a.m. at the Corona Steak House, Corona, Calif.

The meeting adjourned at 2:00 p.m.

Jeannette Gilbertson, secretai



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 regards 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.

ABS Services

These services are available to all ABS members. For names and addresses of department heads, see inside front cover. Include a self-addressed envelope when you write.

AT-LARGE MEMBERS - Members who do not belong to branches are represented at board meetings by the members-at-large director. MAL committee works on projects by mail.

To find a branch in your area or to start a new one, contact the branch relations director for help.

BOOKSTORE - Books about begonias and back issues of the Begonian.

JUDGING DEPARTMENT - Mail order course for a member who wishes to become an accredited begonia show judge, \$10. Also available: a booklet on point scoring (\$2), the old (unofficial) classification booklet (\$2), information on fuchsia and fern judging, and other requirements to become a judge. Add \$1 for postage and handling on all orders and 6% tax for California residents.

NOMENCLATURE DEPARTMENT - Monitors newly published findings on *Begonia* names. Handles official international registrations of new *Begonia* cultivars and publishes these registrations. Gathers information about and assigns numbers to unidentified species.

QUESTION BOX - Prompt assistance with horticultural questions. Those of general interest will appear in the *Begonian* column.

ROUND ROBINS - Members exchange information about begonias and their culture through packets of letters which circulate among a small group of growers. There are dozens of these packets, called flights, on many specialized subjects. Contact the director for information.

SEED FUND - The Clayton M. Kelly Seed Fund offers seeds of begonia species and cultivars by mail. New acquisitions are discussed in the **Begonian**. Donations of seeds are encouraged.

SLIDE LIBRARY - List of programs available from slide librarian. Donations of individual slides annd programs requested.

SPEAKERS BUREAU - The director maintains a list of speakers on begonias and related subjects.

ABS Bookstore

The Begonia Book. Eva Kenwworthy Gray, 1931. Facsimile copy of the first book about begonias published in the United States. \$4.00.

Begonias:1980. Japanese text by H. Arakawa with 431 excellent color photos. Paperback. \$25

Begonias in Color. Text by Yuji Murotani, color photographs by Hideaki Tatsumi. With English translation. \$12.50

Growing Begonias. Eric Catterall, 1984. Hard cover \$17.00

Les Begonias. Chevalier's classic 1938 study of the *Begonia* as translated by Alva Graham from the French in 1975. Illustrated. Paperback. \$5

Mother Nature's Secrets. Fundamentals of indoor gardening. Illustrations of 341 houseplants in color. Paperback. \$5.

Buxton Check List. Reprints of original and supplements. \$20

Guidelines for Nationnal Conventions and Annual Shows. \$2.50. Order of 5 or more to same address, \$2.00 each.

Pamphlets. Begonias From Seed. 35¢ each, with book order 25¢. Culture of Begonias, 75¢ each, with book order 50¢.

Begonian binders. Keep your issues together. No repunching. Black. \$5.25 each.

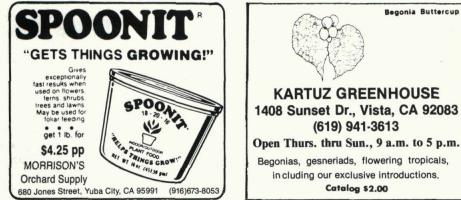
All prices include shipping in the continental U. S. California residents add 6% sales tax. Send check of money order in U.S. currency payable to American Begonia Society.

The Begonian. Individual copies of back issues more than a year old. Price depends upon year. Write for information to Back Issue Sales.

Begonian Back Issue SalesJulie Panttaja 8969 Hope Ave, Riverside, CA 92503

Mailing Notice For Those With New Addresses

Issues sent by Third Class Mail are not rerouted to a new address unless the recipient has arranged for this service with the Post Office. The issues are destroyed, and the ABS pays for the notification of the new address if it is available. If the member misses an issue for failure to notify the Membership Secretary, he may purchase it from the ABS Bookstore.





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