



November/December, 1990

The BEGONIAN



The BEGONIAN

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American Begonia Society

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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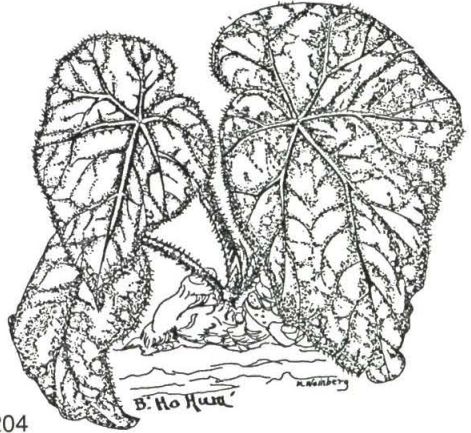
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COVER PHOTOS

Front - Sue Hessel photographed *B. boliviensis*, grown by her mother Bea Hessel. This tuberous species from Bolivia served as an ancestor of our present day tuberous begonias.

Back - *B. U010* was grown and photographed by Millie and Ed Thompson. Long known as "Puerto Rico species", this begonia may have come from New Guinea.



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Officers Installed in Sacramento



Margaret Lee presents President's gavel to Jeannette Gilbertson

Margaret Lee, ABS Parliamentarian and a past President, served as Installing Officer at the Business Meeting September 8 in Sacramento, California. Newly elected officers for 1990-1991 are:

Jeannette Gilbertson, President
Tracy McLellan, 1st Vice-President
John Howell, 2nd Vice President
Millie Thompson, 3rd Vice-President
Ingeborg Foo, Secretary
Eleanor Calkins, Treasurer

Bulletin Board Research

Research Director Houston Knight is looking for members around the country who are interested in begonia research. To find out what's going on, participate in a project, or suggest an area for research, contact Houston at 13455 Hadley St., Whittier, CA 90601.

Barkley Grant

Southwest Region, ABS, offers the Fred A. Barkley Research Grant to students or teachers of botany or horticulture for begonia research. Proposals may be submitted for consideration to: Don Miller, 1005 Mt. Auburn Dallas, TX 75223.

Branches: Get Involved!

The American Begonia Society has brought us together in friendly contact. Our purposes include encouraging the introduction and development of new types of begonias, and gathering and publishing information about begonias.

Toward this end Dr. Tracy McLellan is planning a trip to Africa early next year. She will be collecting seed and plant material, and researching the variation in leaf shapes in *B. dregei* and related semi-tuberous begonias.

Funding such a trip is expensive. I suggest that ABS branches try to donate fifty dollars or more from their treasuries to help defray the expense of Dr. McLellan's trip. Contributions from individual members are also welcome - this is *your* plant society, and we don't want you to be left out.

by Daniel Haseltine

Please send donations to ABS Treasurer Eleanor Calkins, made out to "ABS Research Dept." and marked for "McLellan trip."

Daniel Haseltine is a member of the Greater Chicago Branch, which has sent its check to support Dr. McLellan's research trip. Daniel lives at 6950 W. Nelson, Chicago, IL 60634, and has sent an individual contribution, too.

Notable!

Palomar Branch held a show and very successful sale in August. They have donated the sale proceeds, \$1000, to Dr. Tracy McLellan's research/collecting trip to Africa.



The Little Martian Chronicles

Episode: False Fruit

by K. Mose Fadeem

Since writing about the Little Martian, the plantlet developing suspiciously atop a peduncle of *B. 'Red Planet'* (**Begonian**, Nov.-Dec. '89), I've been shopping about in odd corners seeking to purchase a better understanding of this phenomenon of unusual growth. True enlightenment does not appear to be lurking on the horizon, but at least there is an update.

Francis Michelson of Orange City, FL wrote to relate his experience with a similar plantlet on a very large rhizomatous begonia in the 1960s. He recalls the plant was the same as the one in Selby Gardens labeled *B. popenoei* var. Florida, but believes the label may have been in error. Francis writes: "The flower stalk was about two feet high and at the top of the stalk a rhizome grew and produced another smaller

flower stalk. I knew nobody would believe me, so I took a picture of it." The photo has since disappeared, but I think Francis may now feel well assured we believe him.



Fleshy rudimentary rhizome on Leslie Hatfield's begonia

Leslie Hatfield of the Monterey Branch has in her collection a plant labeled *B. lindleyana*, which she started from the 1973 seed fund. Though the plant did come from Dr. Irmscher's collection, the name was noted at the time to be wrong. On Leslie's plant adventitious leaves are growing atop two separate otherwise bare peduncles, but only on one is there an attempt to produce more than leaves, at least in a distorted sort of way (see photo above). The swelling at the base might best be described as a cellular excrecence rather than a functioning organ. Looks like the whole program didn't quite shape up.

Joan Campbell described a similar "rudimentary rhizome, a small fleshy base of some kind, heavy enough to cause the peduncle to lean over." This on an unidentified begonia with indications of *B. manicata* parentage.* The leaves on the fleshy lump are rather well developed amid an inflorescence of flowers from the mother plant. Joan also turned up the article Epidermal Outgrowths in Begonia by Dr. Harriet B. Creighton (**Begonian**, Jan. & Feb. 1973).

Dr. Creighton's stimulating explorations of adventitious leafy outgrowths were inspired by the outrageous behavior of *B. phyllomaniaca* Martius 1852 (listed elsewhere as *B. 'Phyllomaniaca', incarnata x manicata*). The picturesque term phyllomaniac means "leaf-crazy, i.e., possessed of a mania for producing leaves." I won't attempt to reiterate the wide range of material that was covered in this extensive article but simply extract a comment that seems destined for Martian Chronicles seventeen years later.

First, let me remind that the Little Martian has been thriving on its perch for 11 months. Why is the peduncle lasting so long? They don't normally last 11 months...or longer. Creighton wrote about the infertile *B. phyllomaniaca*: 'I have been disappointed not to find at least one carpellate (female) floral outgrowth coming out of the last formed branches of the inflorescence. Possibly there is not time before the inflorescences abscise and fall off. The early abscission is because no fruits (capsules) develop, because no seeds are forming, because no embryos are started, because no eggs are ever matured. Thus, *there are no hormones moving out of the fruits down the pedicels and then down the peduncle inhibiting the production of abscission layers.*'

Voila! Transposed, this could mean that the Little Martian is producing hor-

B. manicata* along with *incarnata* and *heracleifolia* were noted by Thelma O'Reilly, "Report on Phyllomania-Adventitious Growths" (Begonian**, July '72), as foremost among species that parent hybrids producing phyllomania and other anomalies.

mones that are keeping its vascular support (peduncle) alive by inhibiting abscission. The con is on, and the peduncle has been deluded into thinking that it's growing a fruit. The Little Martian is playing the False Fruit Game!

That is only my extrapolated conjecture, of course. I'm not in a position to demonstrate it, but, as someone once said, "Where there's plant behavior, you'll find hormones." Perhaps it's safe enough to assume further that hormonal imbalances are a necessary condition for abnormal plant behavior. Considering characteristics of known hormones, I am led to suggest that production in fading flowers of ethylene (a gas operating as a hormone in plants) might be involved.

M. Wilkins in Plant Watching, 1988: "Ethylene affects so many aspects of plant growth and development that one begins to wonder if it is not a kind of general poison that upsets the natural operation of plant cells in such a way as to give rise to all kinds of abnormal behaviour patterns. However, current thinking does not believe this is so, but rather it is an important natural regulator of growth and development in plants." Ethylene is actually produced by plants. "All parts of a plant are capable of producing the gas but most productive parts are those where a lot of cell division and growth is occurring, for example, at the apex of the stem and roots...*In flowers the highest rate is when they begin to fade.*"

Thus the suggestion that since our adventitious plantlet developed at the apex of a peduncle, ethylene could have helped to induce this growth. It should also be noted that *B. 'Red Planet'* was propagated and growing in a greenhouse which is tempered by a natural gas water heater, and when present in the air at very low concentrations (as low as 0.16 part per million) ethylene has been shown to cause gross deformity in some stems of pea seedlings..."and can even change the sex of flowers."

In any event, I was just informed that another development in the life of the Little Martian has taken place, one of those mysterious events that are seldom dealt

with in textbook studies of life cycles - a cat knocked our diminutive alien clean off its mother, peduncle and all. It was one of those fatalistic collisions of plant tissue with furry particles which never fails to remind that we live in a crowded world. Environmental relationships may look very neat on paper, but we must not forget that insidious claws of inefficiency lurk in the shadows of windowsill ecology. The hormones in this scenario belong to the cat. Well, I had hopes for a record-breaking high-peduncle act, but I guess sooner or later we all come down to earth.

June Davis of Fort Worth, TX has recently discovered a plantlet growing atop a bloom stalk of B. 'Surfing', and she has no cats indoors, which should help its longevity. She is watching it closely and will report its development.

One more piece that might be of interest: "Some flower parts may develop into plantlets without union of gametes" - this

concerns two carnivorous plants, *Dionaea muscipula* (Venus Fly Trap) and several species of *Drosera* (Sundews), and was noted in Carnivorous Plants of the World, 1986, by J. and P. Pietropaolo. Behavior that crosses family lines seems to take on a new dimension. With a broader base we may come to think about these events less as anomalies of unusual growth and begin to consider them unique but still purposeful biological patterns. Perhaps we are about to witness the beginning of the decline of sexual reproduction...both in nature and cultivated life forms.

K. Mose Fadeem grows, photographs, muses on, writes about, and talks about plants, with special interest in rhizomatous begonias. He would like to hear about other curious outgrowths, and can be contacted at 319 1/2 English Ave., Monterey. CA 93940.



"Proliferous Leaf of Begonia": plate from Belgique Horticole, 1868, cited by Charles Chevalier.

Notes on Epiphyllous Growths

In response to Dr. Bowes' article in the September-October issue on epiphyllous buds on B. 'President', Nomenclature Director Carrie Karegeannes sent a list of other interesting articles which have appeared in the **Begonian** on the same phenomenon:

- "The Unusual Begonia 'Mother'", Dorothy Behrends, Oct. 1953, p. 229 (with drawing)
- "Leaf 'Bulbs' in Begonia", Dr. Fred A. Barkley, June, 1974, p. 148 (with photo)
- Rex "Piggy Back", by Lois Lenski Covey, September 1974, p. 235 (with photo)
- "Proliferous Rexes", C. Karegeannes, June 1975, p. 137 (with photo of 1868 plate; see above)

Tuberous Begonias: The Rolls Royce of Flowers



author with her "Rolls"

My love for tuberous begonias started with some tubers that my mother and brother, Paul, gave me. At that point I didn't know there were named varieties, or ruffled and picotee flowers.

I entered a flower show at the County Fair, entered my blossom in the begonia classes. I had never seen such large blossoms, and they were so beautiful! I asked the man who entered them what he did to get such large blossoms, and he replied that they were all named varieties. He mentioned another grower, who starts begonias from seeds and usually has extras.

I called in March, and picked up some seedlings; I never realized how tiny they were! I transplanted them with difficulty, and they grew.

by Julia Meister

I fell in love with them, and wanted to grow bigger and better plants, so I joined ABS and received a pamphlet "Growing Begonias from Seed" (by Chuck Tagg, 1968). This told me how to transplant the seedlings properly. I tried different gadgets for transplanting, and a lead pencil works best for me. It's used for lifting, separating, and firming the plant in soil without injury.

When my supplier decided to vacation in Florida, I had to start my own seed. After some difficulties with germination - some experts said to start in darkness, others in light - I settled on using 24 hours of light. It worked. Yet, another grower starts his seeds in total darkness and has good results. I have found that if you get 10 begonia growers together, they will each recommend

different methods of growing begonias. I will always try any other method or fertilizer if it helps to grow bigger and better begonias.

Twenty-five years later, I have two steel stands with 4 shelves each and 8 double lights. I start my seed (from Antonelli's) one week before Christmas. Here in New York State you have to start early if you want blooms for the fairs in August and September.

In the past few years I have had a problem with fungus gnats, so now I spray the containers with Diazinon before I plant seed. Everything, including the water, is sterilized. I use Jiffy Mix for starting my seeds, and for potting up later. I use fibercord garden packs, and fill them with mix. When I spray the water settles down the soil in the packs.

After soaking the flats, I leave them overnight so the soil won't be too wet. Then I sow the seed, stand a plastic marker in each corner, and place a plastic bag over the flat, securing it with a tie. Then the flat goes under lights. The lights provide light for the shelves below and bottom heat for the shelves above, and the heat causes moisture to drop on the soil, so I don't have to worry about the soil drying out.

The seeds take about 7 to 9 days to germinate. After most of the seed is up, I open the bag slightly, and continue to open it very gradually until eventually it is removed completely. This is a crucial time; the flats must be checked to make sure that the soil doesn't dry out. I place the flats on styrofoam meat containers, and water from the bottom.

The seedlings are ready for transplanting when they have their first true leaves. All begonias don't grow uniformly, so I watch the seedlings and transplant each one as soon as it can be handled safely. At this stage I spray the packs with Diazinon (to keep off the gnats) before transplanting.

As I separate out the seedlings, I try to group plants of the same size together, planting the larger ones about 1/2" apart and the smaller ones 1/4 to 1/8" apart in flats. Again I water from the bottom, filling the styrofoam containers and letting the soil soak up water. I firm the soil when I plant the seedlings (I find this gives the seedlings a better root system, and the plants are more upright as they grow). I always make sure the cotyledons are set firmly on top of the soil, not covered.

The next transplanting comes when the leaves are the size of a dime. I spray the packs with Diazinon again before transplanting. After this transplanting, I start watering the plants from the top. My smaller flats hold 12 plants, the larger ones 24. At this point the seedlings are still in flats. When they are large enough to go into pots, I use 2", 3", 4", and 6" pots, with Jiffy Mix, firmed down, and water with a bulb-type hand squeeze sprayer. I feed 10-10-10 once a week, alternating with fish emulsion.

All my seedlings are grown in our basement. As outdoor temperatures rise to 50° and higher, the larger ones are moved up to our kitchen (so the smaller ones can get more light), later to our heated porch, and then I start moving some outdoors. If nights are warm, the trays are left out overnight, but they are brought back inside if frost is predicted. The weather here in Rochester is unpredictable - last year we had a heavy snowfall the first week in May.

As I transplant, I keep a marker describing the variety with the plant, and also mark my pots. I stake all my plants, and use old stockings cut into 1 1/2" strips. I don't make loops in tying the plants, but just crisscross the strip.

As the pots are being planted, I keep track of how many I have planted. Last year I had over 650 plants, plus 50 hanging baskets.

Tubers I start in March, and plant through April. I use 2" pots for the smaller tubers, 3" for medium-sized tubers, and 4" to 6" pots for the larger ones. I firm the soil after planting.

When pest or fungus problems come up, I have used Isotox for thrips, and Karathane for mildew.

With so many plants, it's sometimes hard to remember which are my favorites. So as the plants bloom I check the blossoms and attach masking tape to the tops of the stake, writing "beautiful", "keep", or "give away." When it's time to dig the tubers, I dig the "beautiful" ones first, the "keep" ones second, etc. I leave about 4" of stem.

Weather permitting, I'll let the tubers dry in the sun with a clump of soil. If the weather is too cold, they end up on the basement shelves on trays. As the soil dries I will take the old roots and soil off, and set the tubers back in the tray until the stem falls off. Then I use a soft 2" new paint brush to brush each tuber clean and I check for insects. When the tubers are completely dry I dust them with fungicide, and store them in shoe boxes. If there are many of one variety, I put in a layer of tubers, then a layer of folded newspaper, then another layer of tubers (up to three tuber layers per box) and mark the box with the name of the variety. I store the boxes against a cool wall, and take a two month breather. The cycle starts again in December, and I love it!

I have been so enthused growing begonias that at a state fair one year, seeing how people enjoyed looking at the flowers, I asked my competitor if he would be interested in forming a begonia society. Soon we had about 15 members, and a quarterly bulletin.

Since most of the members have problems starting begonias from seed, our group has a plant sale to raise money to order seed. We spend \$100, ordering 4

varieties of seed, and I grow the seed in December and take care of the seedlings until March, when we have our first meeting of the year. The members pay 5 cents each for smaller plants and 10 cents for larger plants.

At the New York State Fair our begonias were judged with other flowers in a "cut flowers" class. After quite a few years of listening to us complain that begonias deserved their own class, the superintendent agreed. Our begonia group donated a trophy in honor of Professor Gilbert Harlow, who has spent years growing, hybridizing, and perfecting tissue culture production of begonias. I had the honor of winning the Harlow Trophy in 1988 and again in 1989.

Begonias are the Rolls Royce of flowers. Unlike other annuals or perennials, they don't have to be pinched, and they don't rest for weeks between blooms. When they start blooming in our area we will have continuous color until the killing frost of September or October. We just enjoy the beauty!

Julia Meister raises her "Rolls Royces" at 222 Mystic Lane, Rochester, NY 14623.



Please note new address for Schultz Co:
14090 Riverport Dr., P.O. Box 173,
Maryland Heights, MO 63043

Begonias Olé!

Note: Roberto Brin's talk at the ABS Convention in San Antonio was accompanied by nearly 100 slides of rainforests, their plants, animals, and problems. A slide tour of Panama's national parks concluded the program.

Conservation of the Rainforest: A Matter of Life or Death

Banquet Speech by Roberto Brin
Part 3

If present trends continue the rich tropical forest of many developing countries will disappear in the next decades. Ironically, these are often the same countries that depend directly on their natural resources; thus they endanger their own future prospects for economic development and stability.

Two-thirds of the rainforests in Central America have already gone. Madagascar and the Ivory Coast, in Africa, will be completely devastated by 2000, only 10 years away. It is predicted that by the end of this century 20% of the present rainforest will be gone and with it endless numbers of animals and plants. A loss of 10% of habitat results in a 50% loss of species. In some areas, most of the birds are so accustomed to the relative darkness of the rainforest that they won't cross a clearing to breed or to find food. Also, rainforests do not regenerate quickly; a devastated area could take up to 120 years to regenerate.

When large areas of rainforest are cut, the regional climate may be so affected as to harm untouched rainforest. As an example, we see that the quantity of rain in occidental Africa has already decreased due to deforestation. In Panama, we have a pathetic case: an area that used to be covered by a splendid tropical rainforest is now the only desert in Panama, the Zarigua desert, and this is due to deforestation.

The causes of rainforest destruction are various, but most arise from a combination of social and economic problems. Worldwide, the most significant have been land reform, cattle ranching, logging, and hydroelectricity. The problem is very complicated. A United Nations report noted that poverty degrades the environment, creating tensions in different ways. The poor, the hungry, destroy their immediate environment in order to survive: they cut the trees, they burn the land to be used for agriculture, their cattle abuse pasture lands. Ecological destruction is too

often the price countries pay for economic development. Enormous foreign debt, impossible to repay, leaves them unable to respond to their internal problems. To complete the vicious cycle, they do not qualify to receive fresh funds from international monetary sources.

There are more hungry people today than ever before in the history of humanity. Because of hunger, people are prey to every kind of illness. A peasant, with a wife and children to feed - who is going to tell him that he can't burn the forest to plant corn and yucca to feed his family? Do you think a politician will tell him so? The politician will not give him a tractor, or teach him to plant or how to use fertilizers. The peasant will work from 5 a.m. to 7 p.m. to get a bunch of corn and yucca, the politician will work from 10 a.m. to 5 p.m., and will take, through corruption, thousands of dollars that are supposed to be used to give a better life to that peasant. Citizens have the same struggle to end corruption that conservationists have to end environmental destruction. I

don't understand why you tax payers don't demand from your government a better control of what our countries do with the so needed foreign aid we receive. That could be very helpful to stop corrupted politicians from taking the food from the poor peoples' mouth. Of course not all politicians are corrupted, but those are the few. Sadly, corruption is all over the world, at all levels. Is this the beginning of the apocalypse? No, not if we stop or modify the actual pattern of destruction.

There is now a strong movement around the world to fight the "greenhouse effect," acid rain, and the destruction of the rainforests. The media is playing an important roll in this campaign and for the first time our developing countries are concerned about their ecological problems.

Most of our countries are now creating forest reserves. Even though the new laws to protect those reserves are not totally enforced (because of political reasons and lack of personnel), something has been done. This is an important step forward. Even the so-called developed countries have understood how important the conservation of the rainforest is for the planet, and some of them have started to interchange debt for the creation and conservation of forest reserves. The first example was in 1987, when a Swiss bank exchanged a debt of

\$650,000 for the promise of the Bolivian government to enlarge a national park and protect it though a special fund of \$250,000. The example was followed by Ecuador, Costa Rica, the Philippines, and just in 1989 by Madagascar. Other countries are also trying to rent their reserves.

As you can see, a new way of doing business between nations has started. Enrique Iglesias, president of the Interamerican Developing Bank, said that the conservation of the environment is a priority for that institution. They have created a special department to take care of projects related to this matter and will finance projects to reduce contamination, to control erosion, and to conserve natural resources.

There are solutions. The control of agriculture together with regeneration of the soil and the application of new methods of timber cultivation that will not destroy the surrounding vegetation are some of them. Also, the investigation of the way the complex ecological systems that exist in the forests work, in order to find new and better measures for their preservation, is another of the possible solutions. The doors are open for anyone who wants to maintain alive the tropical rainforest, for anyone that does not want to be accused by future generations of incapacity to understand and protect this natural wonder.

You can help...

How? In many ways. By following suggestions in the May-June **Begonian**, supporting non-profit organizations like World Wildlife Fund, Rainforest Alliance, Rainforest Action Network. Collecting specimens and seeds of endangered rainforest plants. Supporting collecting trips. Keeping species alive in cultivation as they are becoming extinct in the wild. Donating seed to our seed fund, because it is the major hope for survival of begonia species. Replanting begonias in their homeland, in safe sanctuaries. But as Scott Hoover says, "First we have to get the plants," and Diana Gould adds, "We have to share and grow the seed and distribute the begonias."

I can tell you that the satisfaction you get when you help conserve the species is great, but the greatest pleasure is to share with others what you have obtained. When I go on a collecting trip with my son Juan Carlos, I really enjoy nature. To me, the green of the forest is more relaxing than a visit to a psychiatrist, and nature does not charge you \$100 an hour.

Roberto Brin's address is Apartado 7470, Panamá 5, República de Panamá.

BOOK REVIEW

by Phyllis Bates

Foliage Plants for Decorating Indoors

by Virginie F. and George A. Elbert

Hard cover, 8 1/2" x 11", 374 pages, 394 color photographs

\$49.95 + \$3 shipping in U.S.

Available from booksellers OR

Timber Press, 9999 S. W. Wilshire,
Portland, OR 97225.

Begonia growers usually maintain at least part of their plants indoors for some of the year. Too often this tends to be a makeshift arrangement, but it could be life enhancing for both the grower and the begonia. Many people and many begonias react favorably to the same living conditions, except that people can speak out when they find the air is too dry or the light too dim or the temperature uncomfortable. The aim of the authors of this recent book is to assist the grower in altering the environment - to make the plants thrive while also creating a pleasing setting indoors.

Summer is a great time to consider the indoor growing space and to make alterations. Plants can be accommodated outdoors temporarily while you work at better lighting, good air movement, clever settings, or whatever you decide will please both you and the plants.

The first part of the book is devoted to all the various ways of improving the growing conditions, with an emphasis on lighting, the factor that is the greatest problem in temperate regions. Homes and offices often do not have adequate lighting for a long enough period to keep the plants truly healthy. The chapter on acclimatization will enable anyone who brings plants indoors to compensate for lower light level and adjust gradually. Such basic topics as water, fertilizer, pests, and potting soils are considered. Design of a convenient beautiful display area is stressed, for the indoor garden must be a people pleaser, no matter how small or inexpensive. The second half of the book starts with simple lists of plants with major environmental requirements, such as plants that require temperatures

over 60°, and lists of plants with various characteristics, such as trailing plants. This is helpful in selecting plants to accompany begonias.

The lists are followed by an encyclopedic section that includes a lot of information: genus name, various other names applicable, type of plant, natural and artificial light requirements, temperature tolerances, various other needs, ease or difficulty of cultivation, and some species and cultivars that a grower might be expected to find on the market. Lots of colored photographs help to select appropriate plants for many situations. Begonias get reasonable attention, with four pages of discussion and some nice color plates of representative varieties.

Foliage Plants for Decorating Indoors is a book for the serious indoor gardener, but it is not complicated. It can be helpful to anyone who has to deal with growing plants indoors. It should be available in libraries for those who are caring for only a few plants. Interior decorators will find it a good professional tool. It certainly would be significant to those in the business of growing, selling, decorating, or servicing indoor garden plants. It answers many questions, stimulates ideas, and promotes indoor gardening.

Virginie and George Elbert have written extensively about indoor gardening and houseplants. They are among the founders of the Light Gardening Society and each has served as president.



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Begonia Collections from Thailand

	pressed specimens	species collected	populations sampled	epidermal peels & leaf sections	photos taken
northern	48	9	19	180 each	106
peninsular	22	5	13	124 each	49
total	70	14	32	304 each	155

Summary of 1989-90 Expedition

Part 1: Thailand

by Scott Hoover
Conservation Department

Our expedition represents the first of a series to collect *Begonia* of southeast Asia. The area was selected because a study of the number of described species of *Begonia* and the number of these species introduced into cultivation revealed that fewer species have been introduced to cultivation from southeast Asia than from the Neotropics or Africa.

Considerable planning went into this expedition. It was necessary to locate an area of tropical mainland Asia that is politically safe for botanical work, to raise funds, to find research assistants, to make contacts in the countries selected.

Realization of this trip was made possible by grants from the ABS, donations from several branches and individuals, The Explorers Club, and the Arnold Arboretum of Harvard University, to all of whom I express my sincere gratitude.

Three research assistants agreed to participate with the field work: my nephew, Scott Macon, a junior at the University of Colorado; Victor Girard, President of Clean Waste, an asbestos removal company based in North Adams, Massachusetts; and Don Miller, Director of the Southwest Region, ABS.

In early 1989, contact was made with the Royal Thai Forestry Department in Bangkok, Thailand, following the recommendation of Mr. Nanakorn at the New York Botanical Garden. Because Thailand is basically a non-English speaking country and the Thai language is quite difficult, it was essential to hire a man who was both a translator and a guide. Good fortune presented us with Wee Wat Ueachirakan, a senior officer recommended by the director of the department, Dr. Thawachi Santisuk. By late 1989, Dr. Santisuk had communicated, in advance of our arrival Dec. 30, with the director of the Klong Naka Wildlife Sanctuary, Ranong Province, in peninsular Thailand, to line up 6 local guides

and packers for the remote exploratory work.

Our first work stop in Bangkok was the herbarium at the Royal Thai Forestry Dept. Visiting the Thai herbarium to examine the *Begonia* collection was a revelation. In the literature we had on hand while planning the expedition, only 13 species were described from Thailand; but upon examining the collection in the herbarium, it was evident that there were at least 35 species packed away in the "indeterminate" folders, of which there were several. This was very exciting, and indicated that the genus *Begonia* was much more diverse in Thailand than originally expected. This elation, however, needed tempering, because about 85% to 90% of the country's forests have been destroyed, and replaced by rice, oil palm, or rubber plantations.

The field work began in earnest on Jan. 3, 1990, when a hired truck transported the 4 of us, and all the equipment, to the administrative office at the Klong Naka Wildlife Sanctuary. The trip took a total of 12 hours and provided an excellent opportunity to see southern Thailand. Jan. 4 was spent meeting our 6 local guides, studying a detailed map of the region, and organizing the supplies for later retrieval.

Klong Naka is quite large, estimated at around 1000 square kilometers of pristine lowland tropical rainforest, comprised of low mountains averaging about 500 meters, and bordering the Andaman Sea.

On Jan. 3, Scott, Victor, Wee Wat, our 6 guides, and I headed out on a trail that would eventually lead us to our first base camp, a flat spot on the side of the mountain above a small river, with some fallen trees scattered around. This was also the first day of general collecting. We stayed at this camp for about a week before heading upstream to a more remote area, where we built another base camp and spent another week. The terrain along the river from the

first base camp up to the second camp and beyond can be described as not less than treacherous. There were 12 waterfalls and 5 gorges that had to be traversed in order to carry out the general collecting work and move specimens and supplies.

By the time we reached Camp 2, we had penetrated an area where it is likely no Westerner had been before, and no scientific work had been accomplished. When this remote work was finished we had collected about 900 general botanical specimens, representing roughly 250 species, and an estimated 2700 total collections. A full set of duplicates was deposited with the Royal Thai Forestry Dept., with the bulk of the collection going to the Arnold Arboretum.

Once back in Bangkok, we rented a Toyota 4-wheel drive club-cab pickup truck, with a camper back. This served as our "assault vehicle" for the *Begonia* collecting, which was targeted for mountainous northern Thailand and peninsular Thailand, areas which the herbarium specimens indicated housed many endemic species.

Of specific interest in northern Thailand were the locations where we found *Begonia*. Three prominent mountain peaks exist near Thailand's second largest city, Chaing Mei: Doi Inthanon, the highest mountain in Thailand; Doi Sutep; and Doi Chiang Dao, the northern-most mountain of the three. All *Begonia* collected in the North were concentrated among these three mountains, because:

1. The higher elevations offered by the mountains are a more favorable habitat for *Begonia* than are lower elevation areas.
2. All three mountains are protected by National Park status, or, in the case of Doi Cheng Dao, by a Wildlife Sanctuary; this means that natural forest still exists.
3. Waterfall areas at lower elevations in other National Parks we visited were tropical dry forest vegetation types. We found no *Begonia* -perhaps the areas were too dry for *Begonia* to exist.

Overall, the collecting in the north of Thailand was very good and resulted in the introduction of many new species for cultivation.

The southern part of Thailand was not as rewarding as the north, and stands as the most difficult area I've ever searched for *Begonia*. We drove from Bangkok to the southernmost part of Thailand, where it borders Western Malaysia, and back, but collected only 5 species of *Begonia*. Though habitat became wetter the closer we got to Western Malaysia, it still did not yield very many species. The reasons for this appear to be:

1. Tremendous loss of natural habitat, due to deforestation.
2. In the national parks, the natural habitats around the waterfalls have been disturbed by tourists to such a degree that endemic species of *Begonia* that had once been collected there could not be located, even with 5 people looking.
3. In several national parks that we searched, a huge rainstorm several years earlier had wiped out all vegetation along the stream and river banks, taking *Begonia* with it.
4. Dry seasonal conditions meant all tuberous species were in a state of dormancy.
5. Only low elevations were accessible with relative ease; further ascent to higher elevations would have involved remote exploratory methods such as those employed at Klong Naka.

In summary, the 14 species we did collect represent roughly 40% of the described species from Thailand. It is highly probable that 30% or more of the species in this country are extinct.

Scott Hoover's address is 718 Henderson Rd., Williamstown, MA 01267. In our next issue, we will follow Scott's collecting in Western Malaysia.



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***Begonia soli-mutata*, a new Brazilian species whose leaf color varies with light intensity**

by Lyman B. Smith and Dieter C. Wasshausen

In August 1989, Mr. Jacques Jangoux brought to our attention a dried specimen of a begonia that was occasionally found among the ornamental plants sold in the markets of Belém, Brazil. The plant turned out to be the same as *Begonia* U003 in the classification of unidentified species of the American Begonia Society. The unusual characteristic of this species is that it changes its leaf color with a change in the intensity of the light source. For example, it has been reported by Jacques Jangoux that the leaves will change from a dark green color in the shade to a brownish color in full sunlight. This same change will occur if the light conditions are reversed; the leaf color will change from brownish to dark green if the intensity of the light source is reduced. This change in leaf color is readily apparent after only a 10 minute change in the light intensity.

Description: BEGONIA (section PRITZELIA) SOLI-MUTATA L.B. Smith & D.C. Wasshausen, spec. nov. In clavi Begoniaceae cum *B. subacida* Irmscher posita, sed foliis paulo lobatis inflorescentia densiori, capsulae ala angustiori differt.

Low herb, the stem subrepent or oblique, known only from 6 cm, 3 mm thick, crispifolious-pilose when dry; stipules persistent, ovate, 19 mm long, 13 mm wide, thin, nerved, glabrous without, apiculate at apex; petioles laterally attached to the blade, the upper 4.5-6.5 cm long, the lower 8-8.5 cm long, tawny-tomentose, the trichomes unicellular, expanded at base, 1.2 mm long; blades orbicular, palmately 5-nerved, membranous, dark green, marked with light green areas radiating from the center, pustulate, without a distinct apex, 6-13 cm long and 11-19.5 cm wide, sometimes almost symmetrical, shortly lobed, the lobes

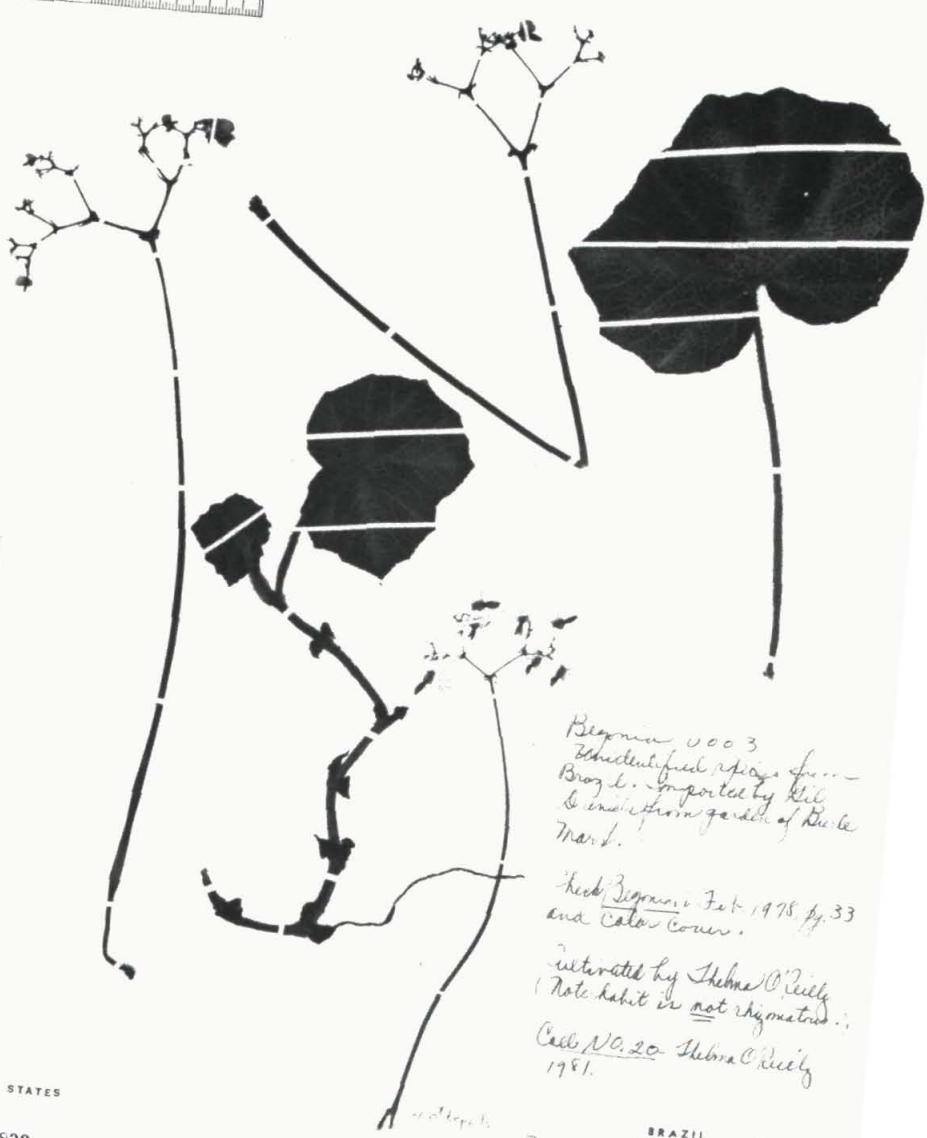
1.5-2 mm long and 3.3-4 mm wide, apically broadly and shortly acute, the basal lobes strongly superposed and deeply cordate, on the upper surface the pustule covered with short erect or spreading trichomes, the lower surface equally densely tawny-pilose, the margins minutely subcrenate and shortly pilose; inflorescences 4-dichotomous, cymes slender, several-flowered, borne on tawny-pubescent peduncles 10-35 cm long, pedicels slender, 1.5-2 cm long, the bracts persistent, minute, the lower ovate-lanceolate, about 5 mm long, the upper lanceolate, about 3 mm long; staminate tepals 4, the outer broadly obovate or elliptic, 8-10 mm long, the inner smaller, narrowly elliptic; stamens free, few, the anthers oblong, obtuse, longer than the filaments; pistillate tepals 5, oblong to ovate, subequal, about 5 mm long; styles 3, deeply bifid, spiral, completely covered by stigmatic papillae; placentae entire; capsule ellipsoid, 4-5 mm long, the wings subovate, one larger than the others, the largest 5.5-6 mm wide, the other two 3-4 mm wide.

Type: Brazil: Cultivated, 1981, Thelma O'Reilly 20 (US). Paratypes. Brazil: Cultivated and sold in the markets of Belém, June 1989, Jacques Jangoux s.n. (U.S.); cultivated, Mosqueiro Island near Belém, October 1989, Jacques Jangoux s.n. (IAN).

Dr. Lyman Smith is botanist emeritus and Dr. Dieter Wasshausen is curator in botany at the Smithsonian Institution, Washington, DC 20560.

Please see next page for plate of holotype.





Begonia
 Thelma O'Reilly 20, 1981

Begonia 0003
 Unidentified species from
 Brazil. Imported by Kille
 & Smith from garden of Kille
 Marsh.
 Herb. *Begonia*, Feb. 1978, pp. 33
 and Color Cover.
 Illustrated by Thelma O'Reilly
 (Note: habit is not rhizomatous).
 Coll. No. 20 Thelma O'Reilly
 1981.

UNITED STATES
 2951839
 NATIONAL HERBARIUM

BRAZIL
Begonia soli-mutata Smith & Wassh.
 Cult. Biele-Moss
 Cult. Thelma O'Reilly 20.

Plate 1. Holotype of *Begonia soli-mutata* Smith & Wassh. (Thelma O'Reilly 20, US).
 218
 The Begonian

The "Instant Suntan" Begonia

Text and Photographs by Jacques Jangoux

Begonia U003 is found occasionally among the ornamental plants sold at the markets in Belém at the mouth of the Amazon, where I live. I have been growing it for some time. Its striking leaves have a pustular surface, dark brownish green, lighter along the veins on the upper side; underneath they are reddish in the space between the veins, and pale green along the veins.

I noticed that the leaves present a different coloration at different times of the day, or depending on the lighting conditions (sun or shade). In the shade, leaves are dark green, light green along the veins. In the sun, they are brownish green and pale, dull green along the veins. I was not sure if it was a true difference in color, or if it was a difference in the light quality that gave the appearance of different colors (I have a rex with green leaves which have a bluish sheen when the light hits it from a certain angle), until I noticed that a leaf partially shaded by another plant presented both colorings, green where shaded and brownish green where exposed.

I decided to experiment with a cardboard mask, hiding one half of the leaf from the light, to see how long it would take for the change in color to take place. In 10 minutes the change in color is already pronounced; in a half hour it is almost complete. This is true of both directions: from shade to sun and from sun to shade. This begonia thus appears to generate its own instant suntan.

It would be interesting to see what happens at the microscopic level, inside the cells. The likely explanation was suggested by the following information, found in Van Nostrand's Scientific Encyclopedia, 5th Edition, 1976, under the entry "plastids":

"..in many cells in higher plants, as for example in the palisade layer of leaves, the chloroplasts may change their position so that they will receive the most favorable amount of light. If the light intensity is low, they will present their flat surface to it; whereas if the light intensity is high, the plastid rotates so that it is placed edgewise to the light."

This can be complemented by the following definitions from Webster:

"chloroplast: a plastid containing chlorophyll being the seat of photosynthesis and starch formation, in higher plants having commonly the form of a minute flattened granule."

"plastid: any of various small bodies of specialized protoplasm lying in the cytoplasm of cells (as those of plants and some protozoans), serving in many cases as organs or centers of special metabolic activities..."

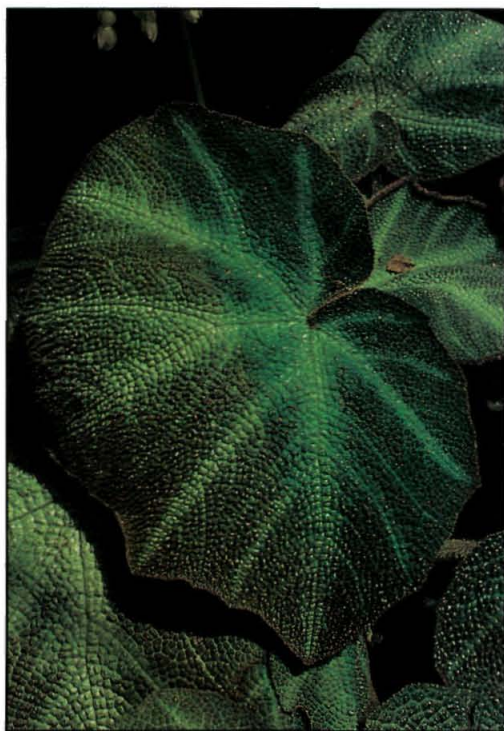
It is thus likely that our begonia presents a reorientation of the chloroplasts in the cell cytoplasm. Thus if this hypothesis is correct, in low light the chloroplasts would face the light, presenting the maximum amount of chlorophyll, giving the leaf its green coloration, and obscuring the red pigments of the lower cell layer of the leaf; whereas in the sun the chloroplasts would rotate, presenting a reduced amount of chlorophyll and exposing the red pigments, producing thus the brownish coloration of the leaves.

One may speculate from the behavior of this begonia in response to varying light intensity that in its natural habitat it is probably exposed to alternating deep shade and strong sunlight as, perhaps, on cliffs exposed to the sun part of the day, at the bottom of canyons, or among rocks providing shade when the sun is not right overhead.



B. U003:

Left half of leaf was shaded by cardboard mask for about 45 minutes, the plant being exposed to the sun (top photo). The mask was then switched to right half of leaf for about 30-40 minutes, after which the lower photograph was taken.



For Mr. Jangoux' color photograph of the entire plant, see back cover, **Begonian** September-October 1990.

Jacques Jangoux is a freelance photographer specializing in the rainforests. His address is Rua dos Timbiras 1375 Apto. 1001, Batista Campos, 66.000 Belém, Pará, Brazil.



photo by Kit Jeans Mounger

Meet B. 'Lubbergei'

by Mary Ellen Taback

This is a pitch for a begonia that is seldom seen or mentioned in the literature. Yet it is a beauty, easy to grow, and easy to reproduce. A cane, its flowers although large are not produced in the overwhelming masses of the more popular canes. This is a modest beauty; it does not shout, "See me!"

B. 'Lubbergei' is a cross of *B. lubbersii* x *B. dregei*. Its leaves show an interesting blend of the two species. They have a heavier texture than *dregei*, hence are not so subject to mildew. The margins are cut by concave scallops. The upper surfaces are a rather unusual olive-green, with darker veins and a red dot at the sinus. The undersides are red. My largest leaves are about 4" long; most are smaller. The plant is low-growing,

and almost independently shapes itself into a neat small upright bush. The blooms are large and fairly numerous, and are two shades of delicate pink, becoming white if bleached by sun or age.

Not usually finicky about its environment, B. 'Lubbergei' will sunburn in hot summer sun. It enjoys being outdoors in good weather under shade of trees, where direct sunlight touches it but does not scorch it. Winters, a sunny spot near a window or in the greenhouse keeps it blooming for a long time. It will lose lower leaves, like all the begonias, if allowed to dry out too severely, but will recover them when care is resumed.

Someday I would like to find it in a show, so that more growers would come to know and enjoy this lovely Japanese hybrid (by Uemura, 1977).

Reprinted from the Members-at-Large Newsletter #15, Jan, 1990.

Mary Ellen Taback is a past Round Robin Director and active member of the Members at Large Committee. She lives at 151 Shoe Lane, Newport News, VA 23606.



MEMBERS-AT-LARGE NEWSLETTER READY

New MAL Director Kit Jeans Mounger has her very first newsletter ready to go. To receive a copy, Members-at-Large may send a stamped, self-addressed legal-size envelope to Kit at Rt. 1, Box 319, New Johnsonville, TN 37134.

JUDGES' CORNER

Maxine Zinman, Judging Chair

There has been some confusion on the points necessary for place winners. Required are:

- 75 or above for 3rd
- 80 or above for 2nd
- 90 or above for 1st

The points listed are only the *minimum* required scores; a class might have all three winners scoring in the 90's (for example, 91, 94, and 96).

There have been several requests to start a Judging Robin. If you'd be interested, contact Round Robin Director Margaret Coats, 11203 Cedar Elm, San Antonio, TX 78230.

Question: "In a show, is it legal to enter a pot containing more than one plant of the same variety?"

Answer: Check the show rules and see if this question has been addressed. Some areas regularly allow this, and others don't. My feeling is that the plant is judged as it appears - if you can spot 5 separate plants in one pot, you may count off; but if you can't tell how many plants there are and the show rules don't address the question, don't count off.

Congratulations!

to the following new judges:

- Sylvia Ben
- Tamsin Boardman
- April Foster
- Frances Hunter
- Elaine Mills
- Edythe Ropiek
- Johanna Zinn



"There is not, necessarily, always more where that came from"
Anonymous, quoted in the Palomar Planter

Begonias and a Florida Freeze

by H. Alton Lee

The image of Florida as a tropical, horticultural paradise is quickly dispelled for the gardener who decides to take up rake and hoe here. Our state seems to have some of the wildest, most unpredictable weather in the country.

Saturday, December 23, 1989 was a day not to be forgotten throughout Florida. In our community just southwest of St. Petersburg, we had the unprecedented "distinction" of cold rain, sleet, and snow flurries all within a period of about six hours.

Then came the freeze. Christmas dawned with 25 degrees; the temperature had been below freezing since midnight. Sun finally arrived, but we also had a wind worthy of Maine in deep winter. Florida temperatures were in the mid-teens in Orlando, 20 degrees in Tampa Bay; even fabled Miami was down to 30 in the city and below that in outlying areas.

Within days the temperature was more or less back to normal for late December, a 50-70 degree range. But the damage was done. Florida looked much like Vietnam must have looked after Agent Orange. As this is being written, in late July, recovery is barely starting; some plants won't come back.

But there have been some pleasant surprises. In an area facing north but sheltered by a greenhouse wall on the west and south, begonias were clustered in pots on the ground and hanging in baskets. Heavy blankets were hung and thrown over this area, and removed several days after the worst of the cold had passed.

Apparently devastated were *Begonia* *egregia*, 'Philfera', *paulensis*, 'Midnight Sun', 'Venetian Red', 'Merry Christmas', and 'Mumtaz'. All except B. 'Midnight Sun' came back. B. 'Merry Christmas' was the slowest; not until June did it get serious about resurrecting.

In the same area, some of the plants looked much worse but recovered, and show virtually no sign of problems six months later: *Begonia pinetorum* (known also as *dayi* hort.), *multinervia*, *venosa*. 'Thurstonii', *masoniana*, and *imperialis*. B. 'Guy Savard' packed it in later, perhaps as much from the heat here as the cold.

The cold penetrated the greenhouse, too. *Begonia rajah*, *exotica*, and *goegoensis* are three that recovered well. B. 'Templini', a favorite, barely clinging to life before the cold, folded its tents and is deeply mourned.

It has been said before, but deserves repeating: **be super-patient with cold-damaged plants**. They have a time table of their own, and it is sometimes amazing what will resurrect to live another day.

One thing is certain: the need to prepare for cold. We've had so many freezes in our area of late that some of the work is becoming second nature - though no less back-breaking.

Here are a few tips which may help your begonias survive:

1. Know where the rare treasures are in your collection.
2. Have blankets and a source of heat ready, as well as hauling and storage game-plans.
3. Keep some plastic, staples, nails and small timber on hand for building quick shelters over difficult-to-move plants.
4. Long outdoor electrical cords and "trouble lights" that can be used in garden areas are helpful (this assumes you continue to have electricity, a big problem for many electrical customers in our area last winter).
5. Keep your plants as vigorous and well grown as possible as you go into winter.

Here's to warmer weather...always!

Writer/plant lover H. Alton Lee lives at 5813 19th Ave. South, Gulfport, FL 33707

WANTED, ALIVE: BEGONIA SPECIES!

by Kingsley Langenberg

A committee of the Conservation Department is compiling a list of species begonias being grown by members and by botanical gardens and commercial growers in the United States. In 1990 we listed 265 of the recognized 1,543 species of begonias and related genera. However, our sample of ABS members was woefully small. Only 20 members responded.

How about making a list of your collection right now, in November, while there is little else you can do for your collection? We would like to update the species list annually - say, on Election Day, the first Tuesday in November. That doesn't mean that we won't accept your list made on Christmas Day. It's just that we thought you might have a little more time to make a list on Election Day. Please do it - help conserve begonias.

Please send your lists to Kit Jeans Mounger, Rt. 1, Box 319, New Johnsonville, TN 37134 or to Kingsley Langenberg, 2141 N. Bonnie Brook Lane, Waukegan, IL 60087. Thank you.

As an added inducement, Kit has printed postcards with begonia drawings. She'll send you four cards, free, when you send your species list.

Old Begonias Questionnaire

ABS members have been invited to participate in a survey for an upcoming book about North America's old ornamental plants. Here's what author Jo Ann Gardner needs to know:

1. Do you have a favorite old begonia you just can't do without? ('Old' here means any species or cultivar introduced in America before 1960).
2. What characteristics make this particular plant your favorite over hundreds and thousands of others in the same genus? Fragrance, form, long flowering season, all-season interest, or something else?
3. Does your choice have any drawbacks? How do you deal with them?
4. Is your choice commercially available? Where?
- 5 What growing zones and area of the country do you live in?

Please send answers to:

Jo Ann Gardner
RR 1
Orangedale, Nova Scotia BOE 2KO
Canada.



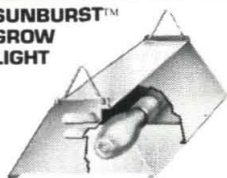
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In the News...

The Journal of the Arnold Arboretum featured an article by **Scott Hoover** on abaxial leaf epidermis in *B. parviflora*.

Dr. Tracy McLellan published an illustrated article on *B. dregei* leaf shapes in the American Journal of Botany 77(3):323-337.

The Los Angeles Times published an article entitled "Bountiful Begonias are Full of Surprises" by **Lorra Almstedt**. Lorra will have an article in American Horticulture in February.

If your branch is holding a show, Lorra will write an article on begonias for your local newspaper - give her about 6 weeks advance notice. Her address is 1965 Celeste Lane, Fullerton, CA 92633.

Poster Available

A painting of Costa Rica's Monteverde cloud forest by artist Stig Dalstrom is available in poster form from Marie Selby Botanical Gardens, 811 South Palm Ave., Sarasota, FL 34236. The full color poster is 18 3/4" by 30", and sells for \$12. Proceeds from sales will go to finance Selby's May 1991 symposium, "Biology and Conservation of Epiphytes."

SHOW NEWS AROUND THE COUNTRY

Jo Pangrazio took Best of Show for her B. 'Irene Nuss' at the *Westchester Branch 9th Annual Show* July 21-22. The same entry won a Cultural Award, as did **Pat McElderberry's** B. 'Lois Burke'. The Novice Division was especially exciting, with a large number of entries and a trophy donated by Irene Nuss which was won by **Brad Thompson's** B. 'Concord'; Brad also took another Novice class with a rhizomatous begonia. Other Novice class winners were **Ossie Williams** and **John Goldenberg**.

"Begonia Book of Days"



A "Begonia Book of Days", which may be used as a weekly organizer or a birthday/anniversary/special events book, will be available before Christmas (nice gift idea!) at a pre-publication price of \$12 (postage paid; \$16 after December 1). The 112 page book will contain 53 new line drawings suitable for framing and a color cover by Kit Jeans Mounger; notes on begonias; and horticultural quotes from famous authors, selected by Tim Last. This will be a limited edition printing, and we will need to know how many are interested before we print. To reserve your copy, write Kit Jeans Mounger, Rt. 1, Box 319, New Johnsonville, TN 37134. Profits from sales will go to Southwest Region, ABS.

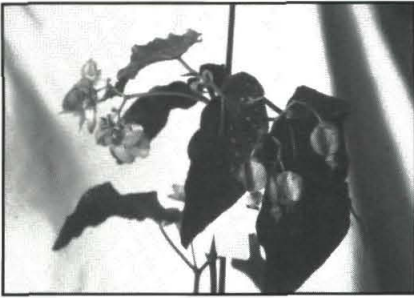
NEW CULTIVARS

Official Registrations 935-939

Carrie Karegeannes, Nomenclature Director

Applications to register *Begonia* cultivars may be obtained from Carrie Karegeannes, 3916 Lake Boulevard, Annandale, VA 22003. Each form must be typed or printed in ink and accompanied by a \$2 check or money order payable to the American Begonia Society. Photos, drawings, and dried specimens of new cultivars are requested. ABS is the International Registration Authority for *Begonia* names.

In citations of cultivar parentage below, the female (seed) parent is listed first.



Begonia 'Losport'

No. 935 - *Begonia* ('Lenore Olivier' sport) 'Losport'

Cane-like cultivar with orange flowers against white-spotted apple-green leaves on 19" stems. Leaf blades 2" wide x 5" long are obliquely long-ovate and slightly cordate with entire margins, glabrous surface, and 7 palmate veins. Petioles are 1 1/4" long, green, and glabrous; stipules are 1/2" long x 3/8" wide, green, and glabrous. The 4-tepaled, orange male and female flowers contrast with white ovaries on the females. Clusters are borne on 2" peduncles the year around. The habit of growth is similar to that of *B.* 'Lenore Olivier', but the smaller, narrower leaves are light green with spots rather than the parent cultivar's dark leaves. *B.* 'Lenore Olivier' flowers are salmon rather than orange. (More mature 'Losport' leaves may lose spots.)

Isolated and vegetatively propagated in 1987 by Zeph H. Ballmer (8538 Hickory Lane, Riverside, CA 92504); first bloomed in 1987; inspected by Gordon Ballmer of Riverside. Registered Aug. 8, 1990.



Begonia 'Phil's Phantasy'

No. 936 - *Begonia* ('Lenore Olivier' x 'Florence Rita') 'Phil's Phantasy'

Cane-like cultivar with large orange-red flowers and large, silver-spotted dusky-green leaves on 19"-tall plants. Obliquely broad-ovate, palmately 6-veined leaf blades with shallowly rounded overlapping basal lobes reach a 3 1/2" width and 9" length. Margins are entire; petioles green, 1 1/4" long; stipules green, 3/4" wide x 1" long. Male flowers measure 1 1/2" across, females 1 1/4", with 4 orange-red tepals on each and red-and-white ovaries on females. The many-flowered clusters hang from 3" peduncles almost year around. The larger leaves distinguish this cultivar from other similar low-growing canes.

Developed in 1986 by Philip B. Mudgett (9005 W. 5th Avenue, Lakewood, CO 80226); first bloomed and distributed in 1987; tested by Joan Campbell of Corvallis, Montana. Won Best New Introduction, Hobby Grower, at 1989 ABS National Show and Convention (photo, *Begonian* 57:211, Nov.-Dec. 1989). Registered Aug. 8, 1990.



Begonia 'Silver Comet'
No. 937 - *Begonia* (*wollnyix carrieae* hybrid)
'Silver Comet'

Thick-stemmed cultivar with large, cleft to parted, medium-green leaves that are bullate, hirsute, and finely splashed with silver. Leaf blades are 8 1/2" wide and 12 1/2" long and palmately parted into 5 to 6 long-acuminate (tapering) lobes with coarsely serrate and also serrulate, ciliate margins. Basal lobes overlap. The 5 to 6 palmate main veins are flushed red above and below, indented above, prominent and white-hairy on the red-flushed underside. Petioles are 9 1/2" long, pale green, terete, densely covered with long white hairs. Stipules are 3/4" x 13/16", pale green, glabrous, transparent, triangular, keeled, and persistent, quickly drying to a light brown. Leaves are markedly different in shape and texture from those of *B. wollnyi*, and the other parent has no silver.

The 2-tepaled flowers are white, the females carrying green ovaries with 3 pinkish-green wings, one wing half the size of the other two. Male tepals measure 3/4" wide x 9/16" long, females 7/8" wide x 3/4". The many-flowered, loose clusters are borne on 13" sparsely white-hairy peduncles in spring and early summer.

Developed in 1985 by Jan Goodwin (63 Second Avenue, Sefton Park, South Australia 5083); first bloomed in 1987; first distributed in 1990; inspected by M. C. R. Sharrad of Ridgehaven, South Australia. Registered Aug. 8, 1990.



Begonia 'Sharrad Star'
No. 938 - *Begonia* (unknown x unknown)
'Sharrad Star'

Cane-like, Superba-class, 2'-tall chance seedling carries lightly silver-spotted dark-green leaves, purple underneath, and medium-pink flowers. The obliquely ovate-acuminate, lightly lobed leaf blades, with truncate bases, measure 5" wide x 7 1/2" long. Margins are serrate with tiny points at nerve ends, the surface smooth and glossy, crossed by 7 pinnate main veins. Petioles are 2" long, reddish brown, bare; stipules are 7/16" wide x 1 3/8" long, pale green, persistent, quickly drying to light brown.

Pendant clusters of pink flowers are borne on 2" peduncles in late summer and autumn. Male flowers are 4-tepaled, the outer two 5/8" x 3/4", the inner two 1/4" x 9/16". Females are 5 tepaled with pink, 3-winged ovaries; 4 tepals are 9/16" x 13/16" and the 5th 6/16" x 13/16".

The originator reports the nearest cultivar in appearance is *B. 'Sophie Cecile'*, which has silver-splashed leaves rather than the scattered, fine spots of *B. 'Sharrad Star'*. 'Sophie Cecile' leaves have overlapping basal lobes, not truncate. 'Sophie Cecile' and its sisters *B. 'Nora Hanson'* and *B. 'Esther Albertine'* have more deeply and sharply cut (cleft) leaves, as well.

Developed in 1984 by Jan Goodwin (address above); first bloomed in 1986; first distributed in 1988; tested by M. C. R. Sharrad. Registered Aug. 8, 1990.

COMING EVENTS

1991



Begonia 'Southern Aurora'

No. 939 - *Begonia* (chance seedling)
'Southern Aurora'

Cane-like chance seedling reaches 18" height. Heavily silver-splashed and spotted glossy dark-green leaves with wine-red reverse set off deep-pink flowers. Obliquely ovate-acuminate leaf blades 4" wide x 6 1/4" long are slightly cordate at the base. Silver-bordered margins are fluted between the 7 palmate, slightly indented main veins, which end in small points on the margin; veins are prominent on the underside. Petioles, 2" to 2 1/4" long, are reddish-brown, bare. Stipules, 1/2" x 1 1/4", light green and glabrous, quickly drying to light brown, persist at each node.

The deep-pink few-flowered clusters are borne on 3" reddish-brown peduncles midsummer to late autumn. Male blossoms have 4 tepals; the outer 2 are 5/8" wide x 1/2" long, the narrow inner ones 1/8" x 3/8". Females have 5 tepals, 2 measuring 9/16" wide x 3/4" long, 2 measuring 7/16" x 5/8", and the 5th 1/4" x 1/2".

Grown from ABS Seed Fund seed of 1985 by Jan Goodwin (address above); first bloomed in 1987; first distributed in 1989; inspected by M. C. R. Sharrad and tested by Australian Begonia Society members. Registered Aug. 8, 1990.

March 29-April 1: 2nd Australian Begonia Society Convention, Freeway Hotel in Perth, Western Australia. For further information, write Dr. John Mills, 20 Rivett Way, Brentwood WA 6153, Australia.

May 3-5: Southwest Region Get-Together, "Begonias, Oklahoma Style." Holiday Inn on NW 39th St., Oklahoma City. Packets will be mailed in February. Note: dates given in September-October issue were incorrect.

May 5-8: Symposium, "Biology and Conservator of Epiphytes". Contact Elizabeth Strange, Marie Selby Botanical Gardens, 811 South Palm Ave., Sarasota FL 34236; or call (813) 366-5731.

September 12-15 : American Begonia Society National Convention, Old Colony Inn, Alexandria, Virginia. Theme will be the "U" numbers. Convention Chair is Barbara Nunes, 6025 Greeley Blvd., Springfield, VA 22152.

Deadline for next issue is November 15.

Quick!

Check your mailing label! Look in the upper left hand corner: if you see 11/90 or 12/90, your ABS membership is about to expire. Please *renew right away* - we don't want to lose you!

Directory Update

INTERNATIONAL

BELGIUM

Societe Belge du Begonia

Piron Gilles, President

Chemin de Lancre, 4

B-4970 Coo, Belgium



AUSTRALIA

addition:

Gladstone Begonia Club

Mr. W. Scarborough

160 Oxley Ave.

Gladstone 4680

Queensland

changes:

Australia Begonia Society

Mrs. Pat Williams, Pres.

4 Florence St.

Woodville 5011

Adelaide, South Australia

Begonia Society of New South Wales

20 Blue Gum Crescent

Blaxland 2774

New South Wales

Begonia Society of Western Australia

Mrs. E.M. Silvester, Pres.

34 Waterton Way

Rockingham 6168

Western Australia

Queensland Begonia Society

Peter Henderson, Secretary

79 Chuter St.

Staford North 4053

Brisbane, Queensland

ABS BRANCHES:

Sue Hessel is new President of **Knickerbocker Branch**. Her address is 14 Sutton Place South, New York, NY 10022.

New President of **Jacksonville Branch** is **Robert Brownlee**, 7041 Ridge Trail Rd., Keystone Height, FL 32656.

New President of **Sacramento Branch** is **Bob Hamm**, 10065 River Mist Way, Rancho Cordova, CA 95670.

Potomac Branch meets the 4th Sunday of each month, at 2 p.m., in the conservatory at Green Spring Farm Park, 4601 Green Spring Rd., Alexandria, Virginia.

Russell H. Richardson is new president of **Atlanta Branch**. His address is 1854 Chancery Lane, Chamblee, GA 30341.

Meetings of **Fort Lauderdale Branch** are held the first Tuesday of each month at 3245 College Avenue, Davie, FL.

Do you have a question about growing begonias, indoors or out? Write ABS' horticultural expert Mae Blanton, 118 Wildoak, Lake Dallas, TX 75065 and let her solve your problem!

Gift hunting? Consider an ABS membership for your plant-loving friends. They'll enjoy it all year (and you'll avoid crowded malls and holiday traffic jams).

CLAYTON M. KELLY SEED FUND NOTES

November-December 1990

Diana H. Gould, Seed Fund Director

Germination times for this issue's selections range from 10 to 51 days, so PLEASE BE PATIENT.

Unless otherwise noted, these selections have not been offered during the last three years.

The Seed Fund would like to thank Jackie Davis, John Farina, Jake Hafer, Bob Hamm, Jean-Claude Hausson, Zelda Isacs, Joyce Martin, Mickey Meyer, and our anonymous donors and the international exchanges for making this offering possible.

The 1990 Convention Listing will be sent free with all seed orders, or you may request it by sending a stamped, self-addressed envelope to the Seed Fund Director.

Mix-ups

We all have mis-named plants, and the Seed Fund tries to clarify nomenclature problems. The good news is that all *B. pearcei* seed offered during the last year and a half is *B. pearcei*. However, seed offered last year as *B. philippinensis/cumingii*s, in fact, *B. U007*. The Seed Fund does not have any *B. philippinensis/cumingii*.

Also, the last seed offered as *B. malabarica* was *B. beddomei*, and is still available under that name. The real *B. malabarica* is also available.

Now that the seedlings of *B. elastomatooides* are maturing, they appear to bear a very strong resemblance to *B. tayabensis*. They are, however, two different plants. Perhaps in time we will discover that one is a variety of the other.

Notes on Seeds Offered

Tuberous

B. balmisiana var. *balmisiana*, from Mexico, came in with no description. *B. suffruticosa* is not the standard form we are all accustomed to; this one is a very fine, lacy type and has never been offered in the Seed Fund.

Shrub-like

This issue's only shrub selection is *B. hispida* var. *cucullifera*, and it comes to us from Brazil. It has very wide, hairy green leaves and moderate white flowers in the fall.

Trailing-scandent

Our trailing scandent selections include *B. jussiaeicarpa*, from Tropical West Africa, with long, narrow medium-green leaves, red stems, and yellowish-white flowers with red margins - it is stunning! We also offer *B. subscutata* from Tropical Africa, which unfortunately came in with no description.

Thick-stemmed

The exciting thick-stemmed offering is called *B. species Reunion #1*, and it has medium-green round leaves, 5-10 cm. tall, with a height over 150 cm, green stems and petioles, and is somewhat fast-growing. We are also able to offer *B. #17CHJ* from Peru, which is hairy-leaved, large-leaved, and has moderate white flowers in December.

Rhizomatous

B. falciloba comes from Peru, and is joined at or below the soil with erect stems bearing white flowers. *B. floccifera* comes from India and has medium-green leaves and white flowers in spring. *B. hemsleyana* comes from China, is also joined at or below the soil, has erect stems and medium-green palmate leaves and fragrant, light-pink sparse flowers from December to January. *B. nigritarum* from the Philippines has very distinctive foliage with profuse white flowers that are pink-tinted; it requires terrarium care. We also offer *B. paulensis* from Brazil, with its large, medium-green leaves with their unusual surface (see cover photo, the **Begonian** Sept.-Oct. 1985) and creamy white flowers with wine hairs. Seed sent in as "*B. rubrovenia*" may or may not be

one of the *hatacoa* species; it came without description. Also with no description we offer a *B. heracliefolia* variety and *B. hispidivillosa* f. *nigramarga*, both from Mexico. Our most interesting selection, from my point of view, is one that I call Zelda's problem. I have given it this affectionate name because I have been unable to get it identified. It is gorgeous! The giant, oval, medium-green leaves are slightly puckered with some green hairs and are attached to green petioles. These mature leaves measure 10-12 inches in diameter. Flowers are white, small, in clusters, and very profuse. If you can identify this plant, please advise me.

Unknown classification

B. rostrata, B. species Mexico #2, B. species Panama #1, B. species S.H. #259, B. species coded S.F. #5, and B. species coded S.F. #8. Unfortunately, none of these came in with any descriptions and the test plants are far too small to venture a guess. B. species Peru #2 was collected from a

floating mat of vegetation on Rio Pacaya, small river near Bretana, a town west of Iquitos, Peru, in the department of Loreto. Specimens were scattered throughout the mat along with grasses and polygonum species, in full sun. They were 2-3 ft. tall with white flowers and 2", medium-green, bare leaves. The bases of the stems were reddish, succulent, and knobby, reminiscent of jewelweed (*impatiens capensis*). We also offer B. mixed species and B. mixed tuberous species.

Our hybrid lovers are truly in luck this issue with mixed seed from Mickey Meyer, mixed uprights from Antonelli's, assorted ruffled picotee from Antonelli's, mixed cane cultivars, mixed frillies, mixed semps, mixed rex cultorum, mixed rhizomatous, mixed tuberhybrid, and mixed shrub cultivars.

Thank you all for your most generous support.

Please see next page for Seed Fund Listing



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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, P.O. Box 520, West Carrollton, OH 45449-0520.

CLAYTON M. KELLY SEED FUND LISTING

The Seed Fund is a service to ABS members only. It is a privilege of your membership.

All packets of species seed are \$1 each, and all packets of hybrid seed are 50 cents each; a pamphlet on growing from seed is 25c.

All orders must be accompanied by check or money order payable in U.S. funds, and made payable to Clayton M. Kelly Seed Fund.

Costs of mailing in the United States, Canada, and Mexico are: 1-12 packets of seeds, 67c; 13-24 packets, 82c; 25-36 packets, \$1.27; 37-48 packets, \$1.57.

Foreign mailing costs are: 1-12 packets of seeds, \$1.30; 13-24 packets, \$2.10; 25-36 packets, \$3.10; 37-48 packets, \$4.10.

Two sets of planter dishes with free instructions in one mailer costs 89c. If ordered with seed and sent in one mailer: 2 sets of planter dishes and 1-12 packets of seed, \$1.02; two sets of planter dishes and 13-24 packets, \$1.19; 2 sets of planter dishes and 25-36 packets, \$1.54; 2 sets of planter dishes and 37-48 packets, \$1.87.

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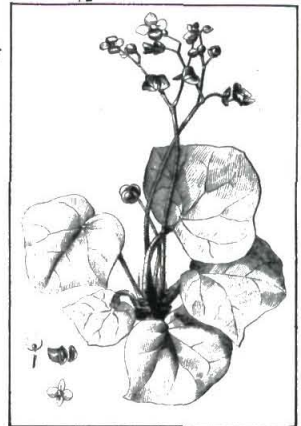
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USA

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B. floccifera
B. hemsleyana
B. heracleifolia var.
B. hispida var. *cucullifera*
B. hispidivillosa f. *nigramarga*
B. jussiaecarpa
B. nigritarum
B. paulensis
B. rostrata
B. rubro-venia (*hatacoa*?)
B. subscutata
B. suffruticosa
B. sp. Mexico #2
B. sp. Panama #1
B. sp. Reunion #1
B. species Peru #2
B. sp. #17 CHJ
B. sp. SH #529
B. sp. "Zelda's Problem"
B. sp. SF #5
B. sp. SF #8
mixed species
mixed tuberous species

hybrid seed 50c packet

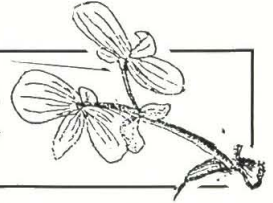
mixed seed Mickey Meyer
mixed uprights, Antonelli
assorted ruffled Picotees
mixed cane
mixed Frillies
mixed semps.
mixed rex cultorum
mixed rhizomatous
mixed tuberhybrida
mixed shrub



B. nigritarum

ROUND ROBIN NOTES

Margaret Coats, Round Robin Director



Water rationing, drouth, wind storms, hail stones, heat waves, overabundance of rain...we begonia growers are a stubborn lot; we just keep on trying in spite of what Mother Nature sends our area!

Remember the old saying "Where there's a will, there's a way?" Even though Kim Roe (UT) lives in a townhouse, she has found a way to grow her beloved begonias. She utilizes a very small patio, and of course grows in the house under lights. Under lights she uses humidity trays filled with gravel, and mists daily. When you think of what some people have to do to grow their plants, you know it must be true love.

Janet Welsh (PA) received a "BEGONIA" license plate from her son for her birthday. Janet says this is good advertising, and suggests that others in her rhizomatous Robin get one in their state. In addition, she is painting begonias on her mailbox. She winds up her letter with the question, "Do I love begonias?" Yes, Janet, we believe you do!

Glennis Crouch (TX) explained how her begonias survived the winter outdoors: they were well protected, up against the house on the south side, in a backyard surrounded by a six-foot redwood fence. They were heavily mulched with oak leaves from the trees. Glennis does not remove the leaves until new growth is showing, and then removes them only gradually. Some of those that survived last winter (her temperatures went down as low as 12° below one night) were Begonias 'Sophie Cecile', 'Nora Hanson', 'Pink Shasta', 'Kristy', and one she calls 'Patio Door'.

Want a good tip from one who has won so many awards I'm sure she doesn't know where to put all her ribbons and trophies?

Mabel Corwin (CA) says constant grooming of your plants is a must. Every morning when she goes down to talk to her plants she is constantly removing old or damaged leaves. So don't wait until you select a plant to show before you begin to groom.

Besides growing many terrarium plants, Esther Nagelberg (FL) uses terrariums as a "hospital" - especially for rhizomatous begonias that are not doing well. Esther says terrarium care helps them recover, but warns that the plant should be hardened off before removing it from its enclosed atmosphere. In response to one of the terrarium growers who was having trouble with algae, Mae Blanton (TX) offers her solution: "To prevent it entirely, I put a thin layer (1/4" - 1/2") of small, fine vermiculite on top of the soil mix and sow seeds on top of this. If your supply of vermiculite isn't fine enough, sift some to use. Even if seeds take six months to one year to germinate, you won't be bothered with algae. And, water from the bottom, especially when you start feeding. Algae needs nitrogen and strong light to grow. I never plant in a mix that has plant food in it. If you have to make your own mix, sift some peat moss, add fine vermiculite and perlite, and plant with the vermiculite layer on top."

Charlotte Kuhnle (OR) relays news from Kit Mounger (TN) that a disease caused by thrips (Western flower thrip) is going around. Tomato Spotted Wilt Virus starts out with a brown spot at the leaf sinus and travels rapidly down the stem. It is apparently lethal. Glennis Crouch (TX) explains a problem she had last fall. Her canes were beautiful when she moved them into her greenhouse for the winter, but soon the leaves started turning brown in the center and dropping off. She thought *this was not too uncommon with a move*, but the problem didn't stop and soon there

were only bare stems with clusters of new leaves at the top. Soon the new leaves, too, met with the same fate. Finally she took a magnifying glass to the greenhouse and saw dozens of red spiders scampering around. Glennis sprayed the whole greenhouse, which really did the trick on those old red spiders! She warned everyone to be sure and protect themselves very well when spraying.

Members of one of the species Robins are in agreement that plants should be spread around to as many people as possible. Pat Sage (CA) says extreme temperatures could conceivably destroy a rare species if it is being grown by only a few in just one area of the country. (A good way of distributing plants would be through the different branches contacting one another and working out some kind of cutting exchange.)

Brad Thompson (CA) has found his self-watering pots to be working too well. Those plants he grew in them got too large, and after a couple of months he ran out of space under his lights. He was forced to repot in regular pots outdoors. He plans to use the self-watering pots again next winter and start the process all over. Brad also comments that in reading back issues (from the 60's) of the **Begonian** he finds himself reading about species and hybrids he has never heard of, and he wonders if they no longer exist.

Thought you would enjoy a funny story told by our editor, Tamsin Boardman (TX): she had been looking for a particular begonia and had asked several people if they had it. One day the phone rang and Tamsin's daughter answered and took down the message: "Dorothy Patrick has hydrocotylifolia." Bruce, Tamsin's husband, got home first and met her with a long face.

"Poor Dorothy!" he said. "She must really be sick - that sounds awful!"

Risa Young (FL) tells of several members of her branch experimenting with adding perlite and cut-up sphagnum moss to their regular potting mix on the premise that the perlite lightens the mix and allows oxygen to the roots, while the sphagnum retains moisture so the soil doesn't dry out as fast in the heat. She has been using perlite and sphagnum with good results so far.

Mabel Corwin (CA) soaks wilted cuttings in tepid water for about half an hour, then encloses them in plastic baggies overnight. She says she likes to soak even fresh cuttings. Mabel puts her cuttings down in either plain sponge rock or perlite, or a mixture of sponge rock and vermiculite. Using a clear plastic box, she puts in about 2" of the mixture, then inserts cuttings.

And then there's the story told by Eleanor Calkins (CA - she says it's supposed to be true): a garden talk show host had a lady caller asking about her plant. After listening to her description of how the plant looked, etc., he gave her some advice. About a month later, the same lady called. "You remember giving me advice about my plant?" "Yes," he replied. "Well," she said, "I did what you said and the plant jumped up, squared its shoulders, grabbed its heart, fell on the floor and died." Let's hope none of us is guilty of giving this kind of advice.

They're not all work, they're not all play: Round Robins make learning about begonias fun. You can join in by writing to:

Margaret Coats
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BEGONIAS: THE COMPLETE REFERENCE GUIDE by Mildred L. and Edward J. Thompson. 884 pages, 850 illustrations (165 in color). Culture, classification, and history. \$20.00 to ABS members. To order autographed copies write: THE THOMPSONS, P.O. Drawer PP, Southampton, NY 11968. **BEGONIAS: 1984 UPDATE** \$6.75. Prices include shipping. Foreign orders \$5 additional for shipping via Surface Mail.

SOUTHWEST REGION, ABS: Annual Get-Together, show, sale; monthly newsletter. Membership \$7, family \$10. Send to Marie Harrell, Rt. 3, Box 689, Elgin, TX 78621.

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Assorted, unrooted **Begonia Cuttings.** Cane stems, 50-\$30, 100-\$50. Rhizomatous leaves, 50-\$20, 100 - \$20. Mixed types 50-\$25, 100-\$40. Postpaid Parcel Post. Paul Lowe, 5741 Dewberry Way, West Palm Beach, FL 33415.

WANTED for sale or trade: Any Woodriff tuberous Begonia hybrids. Especially 'Wild Rose' or 'Orange Sweetie' or any derivative of fragrant Begonias. Contact: Jerry Hunter, P.O. Box 1689, Rancho Santa Fe, CA 92067, (800) 759-3717.

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BOOK LIST

Begonias won't behave? Horticultural Correspondent Mae Blanton (118 Wildoak, Lake Dallas, TX75065) will answer questions on growing begonias.

Want to form an ABS branch? Douglas Hahn, 7736 Stonehill Dr., Cincinnati OH 45230 will send you a list of members in your area, and help you get organized.

Isolated from other begonia lovers? Join the Members-at-Large Committee (send a stamped, self-addressed legal-sized envelope to Kit Jeans Mounger, Rt. 1, Box 319, New Johnsonville, TN 37134 for the MAL newsletter).

Want to make begonia friends all over the world? Join a Round Robin. Contact Margaret Coats, 11203 Cedar Elm, San Antonio, TX 78230.

Giving a program? Writing a paper? Research Librarian Lorra Almstedt may be able to locate the facts you need. Her address is 1965 Celeste Lane, Fullerton, CA 92633.

Can't find books on begonias? ABS Bookstore has them! See next column.

Are you the branch program chair? Slide Librarian Dan Haseltine, 6950 W. Nelson St., Chicago, IL 60634 can recommend a program or two; the only cost is postage. Speakers Bureau Chair Muriel Perz, 2943 N. "H" St., San Bernadino, CA 92405 can help you locate a speaker.

Branch libraries are entitled to a complimentary copy of each **Begonian**; write John Ingles, Jr., 157 Monument, Rio Dell, CA 95562-1617 to be added to the mailing list. Requirement: the Branch Librarian must be an ABS member.

Overprints of the **Begonian** to be given away at shows are available to branches for cost of postage. Contact Tamsin Boardman, Box 249, Roanoke, TX 76262.

THE BEGONIA BOOK

A facsimile edition of Eva Kenworthy Gray's classic begonia book of 1931, reprinted in 1986. The first book about begonias published in the United States. Contains growing, propagation, and fertilization information as she knew it. Describes many old time begonias. 50 pages, some pictures. Softback. \$4.50

BEGONIAS

Bill Wall, A Wisley Handbook, R.H.S., 1988. An excellent guide to growing foliage begonias. See Phyllis Bates' review in September-October 1989 **Begonian**. 64 pages, 44 color photos. Softback \$7.50

BEGONIAS

Uemura, a Green and Flower Book. 131 pages, 171 pictures. Written in Japanese; however, pictures have English titles. Published by Shaeffer by Seikatsu-sha. \$13.00

CATALOG OF REGISTERED CULTIVARS

Published by ABS, lists the first 100 registered cultivars of the genus begonia. Listed is each cultivar's background, its parents, originator, references in the **Begonian**, tested data, and complete description. 47 pages with index. Softback. \$4.50

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GROWING BEGONIAS

Eric Caterall, 1984. From a complete survey of species distribution through complete cultural information for both tuberous and non-tuberous types, this is a beautiful and invaluable guide for the beginner and expert alike. 132 pages, 16 color photos, 154 b/w photos, 22 line drawings. Softback. \$19.00

GUIDELINES FOR NATIONAL CONVENTIONS AND ANNUAL SHOWS.

Thelma O'Reilly. Approved by Board of Directors July 15, 1982. A must for branches, also for chairpersons of National Convention. \$3.00 Order of 5 or more \$2.50 each

LES BEGONIAS

Charles Chevalier, 1938. Written in French and translated into English by Alva Graham in 1975. This book has pictures (some in color), a botanical study of begonias, general ideas on culture, and information on different types of begonias. 165 pages, softback. \$6.00

POTTING MIXES

Kevin Handreck et al, published by CSIRO Division of Soils, Australia, 1985. Covers basics and provides technical information for the serious grower: watering, fertilizers, salinity, pH, mixing your own soil. 48 pages, softback. \$8.00

REVISED BUXTON CHECKLIST

A listing of all the cultivars included in the original check list in 1937 and its three supplements (1958, 1962, 1967), plus those found in other sources. Current as of May 1990. Species and "U" numbers are not included. Softback, 481 pages. \$35.00

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FORT WORTH, TEXAS 76110

NOTE: BEGONIAS, by Brian Langdon, has gone out of print. We are trying to locate copies, and will list the book again if our search is successful.

Moving?

Please remember to notify the Membership Chairman of your change of address. The Post Office does not forward bulk rate mail: ABS is billed for notification of the new address (if one is available), but the issue is destroyed. You miss your **Begonian**; ABS must pay for the issue, the postage, and the notification that you have moved; and no one is happy. If you forget to let the Membership Chair know you've moved, you'll have to purchase your missed magazines from the Bookstore - that gets expensive!

MINUTES OF THE BOARD OF DIRECTORS' MEETING

July 22, 1990

On July 22, 1990, the Board of Directors' Meeting was held at the home of Mabel & Ralph Corwin. 1119 Loma Vista, Vista, CA. Twelve members were present. Parliamentarian Margaret Lee waived the requirement of a quorum. President Jeannette Gilbertson called the meeting to order at 11:40 a.m. Eleanor Calkins read the Aims and Purposes. Minutes were read by Ingeborg Foo.

Treasurer Eleanor Calkins reported balances as of June 30, 1990, of \$7,206.08 in checking and \$39,809.66 in savings for a total of \$47,015.74.

Correspondence: Helen Spiers wrote that thousands of plants of B. 'Scarletta' were planted in Houston after it was named the official flower of the Economic Summit.

Ballots have been counted. It was suggested that in the future no ballots be sent unless there were more than one candidate for office; the Board voted to let the members consider such a change in the By-laws.

Bookstore: Anita Ruthenberg reported a beginning balance of \$6.98, income from national of \$400, sales of \$1132.15 (convention sales of \$1,055.90, mail order sales of \$75), expenses of \$744.43, with a balance on hand of \$794.70. She expects to repay the \$400 from national by the end of the year.

Branch Relations: Palos Verdes has been accepted as a new branch. South Bay has sent in Constitution & By-laws, which were approved by Parliamentarian Margaret Lee.

Membership: As of June 30, 1990, 84 Life Members, 132 Institutions, 1,399 dues paying members.

Conservation: Board voted that the Species List to determine which species are being grown and where will be placed under the Conservation Committee. Branches and individuals are asked to send lists of their species to Kit Mounger.

Judging: Joy Blair requested that a judging course be held in Southern California.

Members at Large: Thelma O'Reilly reported that the 7th MAL meeting was held in San Antonio. Thelma read a farewell note, and was thanked for the many years of tireless work for the Members at Large. Kit Mounger was appointed as new Members at Large Director.

Color Fund: The Color Fund was started by the Members at Large. Many others have made donations, and the fund has been re-named the ABS Color Fund. To make contributions, send

your check to Treasurer Eleanor Calkins and mark it "ABS Color Fund."

New Project: The board voted to give John Ingles the authority to send a questionnaire to new members.

Nomenclature: Carrie Karegeannes reported that 7 registration applications were mailed, and eleven letters on nomenclature written. Thelma O'Reilly and Jack Golding have written articles for the **Begonian**.

Publications: Kit Mounger and K. Mose Fadeem have joined the staff of the **Begonian**. Two pamphlets have been printed and are available through the Bookstore. Five publications are in the making.

Public Relations: The board approved a new "14 Reasons why you should belong to ABS", to be done by Russ Richardson. Funds for the project have been donated by two branches.

Round Robin: Margaret Coats processed 10 Robins in May and 16 in June. A new Director is needed.

Slide Library: Daniel Haseltine reported the need for new programs, and suggested that branches and individuals contribute funds. The Board appointed Charles Jaros as Co-Chariman of the *Slide Library in charge of developing new programs*. Monies from renting of programs will go to financing new programs.

Old Business

Insurance: The board appointed Michael Gilbertson to look into affordable insurance.

Africa trip: An urgent plea went out for donations for Tracy McLellan's Africa trip. She needs almost \$4,000 more.

Attention, National Representatives and Committee Chairmen! Many items on the agenda require approval. If you are not in agreement, please let President Gilbertson know; otherwise, it is assumed you agree and the motions stand as approved.

Meeting adjourned at 3:05 p.m.

Respectfully submitted,
Ingeborg A. Foo,
Secretary

Note: Minutes are condensed because of space limitations; any member may order a copy of the complete Minutes from the Secretary.

ELECTED OFFICERS

President Jeannette Gilbertson
410 JoAnn Circle, Vista, CA 92084

Past President Arlene Davis
157 Monument, Rio Dell, CA 95562-1617

Second Vice-President Joan Coulat
4111 DePaul Court, Sacramento, CA 95821

Third Vice-President John Howell
129 Trillium, San Antonio, TX 78213

Secretary Ingeborg Foo
1050 Melrose Way, Vista, CA 92083

APPOINTED CHAIRMEN & DIRECTORS

Awards Committee Rudolf Ziesenhenne
1130 N. Milpas St., Santa Barbara, CA 93103

Audit Committee Marion Paris
4793 Soria Drive, San Diego, CA 92115

Ballot Counting Ronnie Nevins
1913 Aspen Circle, Fullerton, CA 92635

Begonian, Back Issues Bob Bailey
5190 Mission Blvd., Sp. 90, Riverside, CA 92509

Book Store Anita Ruthenberg
1016 W. Arlington Ave., Fort Worth, TX 76110

Branch Relations Douglas Hahn
7736 Stonehill Dr., Cincinnati, OH 45230

Business Manager John Ingles, Jr.
157 Monument, Rio Del, CA 95562-1617

Clayton M. Kelly Seed Fund Diana Gould
9940 Falcon Meadows Dr., Elk Grove, CA 95624

Conservation Committee

Co-chairman Scott Hoover
718 Henderson Rd., Williamstown, MA 01267

Co-chairman Martin Johnson
959 Glennan Dr., Redwood City, CA 94061

Convention Advisors Carol & Peter Notaras
2567 Green St., San Francisco, CA 94123

Convention Chairman Melba Schultz
603 Chauncey, San Antonio, TX 78216

Historian Norma Pfrunder
3484 Jefferson St., Riverside, CA 92504

Judging Maxine Zinman
Rt. 1, Box 73, Boyce, VA 22620

Members At Large Thelma O'Reilly
10942 Sunray Place, La Mesa, CA 92041

Nomenclature Carrie Karegeannes
3916 Lake Blvd., Annandale, VA 22003

Parliamentarian Margaret Lee
1852 31st St., San Diego, CA 92102

Public Relations/Special Advertising
. Russ Richardson
1854 Chancery Lane, Chamblee, GA 30341

Research Houston Knight
13455 Hadley St., Whittier, CA 90601

Round Robin Margaret Coats
11203 Cedar Elm, San Antonio, TX 78230

Show Entries Tim Last
437 Prospect Ave., #15, Brooklyn, NY 11215

Slide Librarian Daniel Haseltine
6950 W. Nelson St., Chicago, IL 60634

Speakers Bureau Muriel Perz
2943 N. "H" St., San Bernardino, CA 92405

BEGONIAN STAFF

Editor: Tamsin Boardman, Box 249, Roanoke, TX 76262 (817) 481-4305, 481-2169

Editorial Associates: Phyllis Bates, Bruce C. Boardman, Mary Weinberg

Nomenclature Editor: Jack Golding

Technical Editor: K. Mose Fadeem

For subscription, dues, circulation inquiries contact John Ingles, Jr., 157 Monument, Rio Dell, CA 95562-1617



American Begonia Society
157 Monument
Rio Dell, CA 95562-1617

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