



The

Begonian

November/December 2009

The Begonian

Publication of the
American Begonia Society

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 that will be mailed to all members of the society.
- To bring into friendly contact all who love and grow begonias.

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Above: B. 'Caribbean Sails'
photo by Jem Wiseman, Haysville, KS



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Front cover: *B. 'Fred Martin'*, a tuberous begonia grown by Paul Carlisle and shown at Gazebo Flower Show. Photo by Julie Vanderwilt

Back cover: Double Ruffled Pink from Antonellis, grown by Paul Carlisle. Photo by Paul Hunt

PROCEEDINGS OF THE COMBINED BOARD MEETING AND ANNUAL BUSINESS MEETING

Austin, Texas August 28, 2009

President Mary Sakamoto opened the meeting and asked Linda Tamblyn to read the Aims and Purposes of the Society. There were 47 member votes present for the board meeting. Charles Henthorne was appointed timekeeper.

The proceedings of the May 2, 2009, board meeting in West Palm Beach, Florida, were approved as published in the Begonian and thus upgraded to minutes.

Treasurer Carol Notaras presented the financial statements for April 1 to July 31, 2009, and the fiscal year August 1, 2008 to July 31, 2009. For the four months April through July the general fund beginning balance was \$4,824.74 and the ending balance was \$5,482.04. During this period income was \$14,648.37 and disbursement was \$20,991.07. The seed fund had a beginning balance of \$478.37, income of \$1000.00, and disbursement of \$1,169.88 and an ending balance of \$308.49. Savings accounts had a beginning balance of \$67,442.51 and ending balance of \$69,884.56. Combined checking and savings totals were \$79,745.62 beginning and \$75,675.09 ending. For the fiscal year the general fund had a beginning balance of \$5,315.80 and ending balance of \$5,482.04 with income of \$56,413.55 and disbursement of \$56,247.11. The seed fund

figures were the same as above making the checking account totals \$5,794.17 beginning and \$5,790.53 ending. The combined savings accounts balance was \$68,133.16 beginning and \$69,884.56 ending. The combined checking and savings accounts totals were \$73,827.33 beginning and \$75,675.09 ending. The report was accepted.

President Sakamoto announced the board is still seeking a convention site for 2010. All branches are requested to consider hosting the convention. Proposals should be submitted soon.

The Executive Board recommended that email voting be set up in addition to paper ballot. A motion to amend the constitution for this purpose passed. The amendment will be prepared, approved and published in time for a vote at the next annual business meeting.

Membership Chair Paul Rothstein submitted a report for May through August 2009. ABS has 864 domestic members, 91 foreign members and 51 business, garden, university or society members for a total of 1,006 members. Monthly figures show we are adding more than we are losing. Membership income since April 30 was \$3,194.90 not including that received through Paypal.



Incoming President, Cheryl Lenert, presented Mary Sakamoto, past president, with an Appreciation award for her service to the ABS. Photo by Kenny Wilkerson

Holiday Greetings Chair Wanda Macnair reported \$2,348 received thus far with more coming in. After the meeting the total increased to \$3,200.

Grant Committee Chair Johanna Zinn sent an annual report confirming donations to Rekha Morris and Hieu Nguyen for their next collecting trips and encouraging branches and individuals to send donations to the ABS treasurer to support the trips since ABS has limited conservation funds.

Nomenclature Chair Gene Salisbury reported that the procedure for registering new cultivars is being simplified. The ABS will be glad to assist

anyone who needs help filling out the form.

Past President Janet Brown reported that the website is very successful with hits logged in around the world. She also reported that the next Begonian DVD is nearly ready for sale. A third item was an invitation for the ABS to help celebrate the Scottish Begonia Society's 75th Anniversary in 2011 with a trip to Scotland around the first week in August. This would include the Ayr Flower Show. An itinerary will be investigated. Trip costs will be handled directly with a travel agent. The ABS treasury will not be involved.

Research Director Howard Berg discussed a plan for disposition of Jack Golding's files. Jack's wishes were that the files be preserved and held at a host institution but not open to the public. Portions would be scanned and made available to interested parties. Details will be discussed with the Executive Board including costs of scanning and moving the files.

Kingsley Langenberg has agreed to assume the duties of Nomenclature Editor to replace Jack Golding in that position.

Charles Henthorne, who was appointed to act as point of contact with Fort Worth Botanic Garden, reported that the Begonia collection is in good condition. He also reported that Freda Holley's files are being sent to the FWBG and a signed agreement on its maintenance has been obtained.

Branch Relations Director Mary Bucholtz sent a written report indicating that ABS has 37 branches and one regional branch. Letters of welcome were sent to new branches: Mid America Begonia Society, Rhode Island Branch and Austin Area Begonia Society. An article welcoming the new branches was published in the September-October issue of the Begonian. No progress was made on establishing branches in Oregon or Michigan. A duplicate charter was prepared and sent to the Westchester Branch at their request.

Unidentified Begonias Project Directors Mary Bucholtz and Charles Jaros reported assigning 5 numbers since last report on April 23, 2009. The



Elizabeth Cassimatis presented Freda Holley with the SWR Marguerite Vernon Unsung Hero award for her many contributions to the ABS. Photo by Kenny Wilkerson

last assigned number is U581. Thelma O'Reilly is still working on numbers prior to U541.

Save Our Species Chair Rekha Morris apologized for being able to do only one issue of the SOS Newsletter for 2009. It was completed before this meeting and sent to Julie Vanderwilt to be put on the ABS website. There are three new adoptees in the SOS program. Three additional inquiries were received, 2 from Singapore and 1 from Germany.

Rekha Morris also reported that she has found someone to work with her on identification of the Indian species she has been collecting. His name is Dr. Ching-I Pang of Acadimia Sinica in Taiwan. Jack Golding referred Dr. Pang to her and they worked together for 4 days this summer. Rekha will be giving a talk on the Indian species in Taiwan in September or October of this year before returning to India for more collecting.

A motion that ABS donate \$1,500 over one year, in two \$750 increments, the first before December 31, 2009, to the SWR/ABS Fort Worth Botanic Garden Fund passed.

A motion to donate \$1,200 from the general fund to Rekha Morris for her next collecting trip passed. This is in addition to the amount previously voted from the conservation fund.

Branch reports were given for the Southwest Region, Buxton, Atlanta, Westchester, Alamo, Astro, Austin Areas, and Mae Blanton Branches. A written report was received from San Francisco Branch.

Respectfully Submitted,
Richard Macnair, Secretary

President's Message

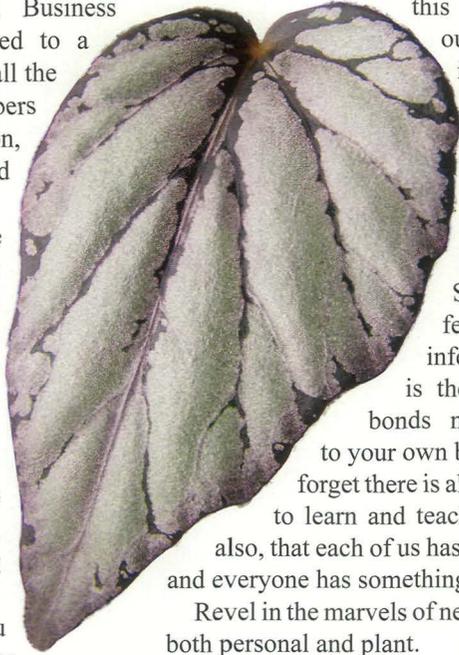
Those of us who attended the Southwest Region Get-Together/ Annual Business Meeting in Austin were treated to a wonderful few days filled with all the things we Begonia Society members love: entertainment, education, good fellowship, good food and lots of begonias.

As you know, Austin is one of our newest branches. For them to volunteer to host so ambitious a function was above and beyond what might be expected of a new group. Every member met this challenge with so much enthusiasm that all who attended became caught up in the excitement of this new branch. You could feel it in everything they did.

Remember the excitement you had in the beginning with every new discovery?

I would like to see how we can rekindle this feeling in ourselves and in each other. Think back to the joy of meeting new people and new begonias. Share this feeling—it is infectious. This is the feeling that bonds new members to your own branch. Never forget there is always so much to learn and teach. Remember, also, that each of us has much to learn and everyone has something to teach.

Revel in the marvels of new beginnings, both personal and plant.
Get EXCITED!!



*Above: Unknown Begonia
photo by Jem Wiseman*

*I love begonias—pass it on!
Cheryl*

Letter to the Editor

Even though I have only been a member of the ABS for a few years, I have come to really appreciate Begonias. As a long time plant enthusiast I realized that being located in zone 6 meant that any plant that can't survive the cold has to come in for winter. Those of us who are compelled to winter their begonias indoors are much more restricted as to what size can be accommodated on shelves under grow lights. Space limitations force us to be practical - hah! like me with 200 plants in my bedroom.

My appeal is to the hybridizers - to promote and popularize begonias across the country we need more smaller leaved and smaller sized begonias. This will appeal to potential growers - of which they are 10's

of thousands - because the plants, being smaller, will be easier to grow completely indoors.

Fortunately our hybridizers combine selected features that we admire or, in some cases, want to enhance or combine to create an even more beautiful flower, leaf, or color. This is where our talented hybridizers show their curiosity and creativity by providing us so many wonderful begonias to enjoy.

I am sure that we together can and will continue to promote begonias to as many interested people as possible. I see this step, this appeal, as a vehicle to carry the ABS further into the lives and homes of people across the country.

*Stephen Ripper, Quakertown, PA
Delaware Valley Branch*

ABS MEMBERSHIP – WHERE ARE WE?

by Paul Rothstein, Membership Chairman

Before I became the Membership Chairman the only thing I knew about the membership was that there were a lot of members in CA, FL, & TX. I had no idea how many other states had members or that we had members in countries outside the United States.

I decided to look at our membership a little closer and discovered some interesting facts:

We currently have members in 49 states. Do you know which two states have no members?

CA has 32% of our total membership followed by FL with 16% and TX at 15%.

I think we all knew that those 3 states have the most members but do you know the next 3 largest? How about which cities have the most members? Houston tops the list with 44 members followed by Los Angeles with 23, Sacramento with 20, San Francisco with 17, and Tampa with 16 members.

We have 92 members in 22 countries other than the U.S. Australia leads the list with 21 members followed by Canada with 11, and Japan and the United Kingdom with 10 each. Of course we are well represented

in a number of countries in Europe and Asia but did you know we have members in South Africa, Ukraine, and the Czech Republic?

Another fact I was not aware of is how many memberships we have that are not just individuals. We have 27 memberships here and around the world in the names of various societies and nurseries; 26 memberships with Universities and Libraries; and 26 memberships with Botanical Gardens.

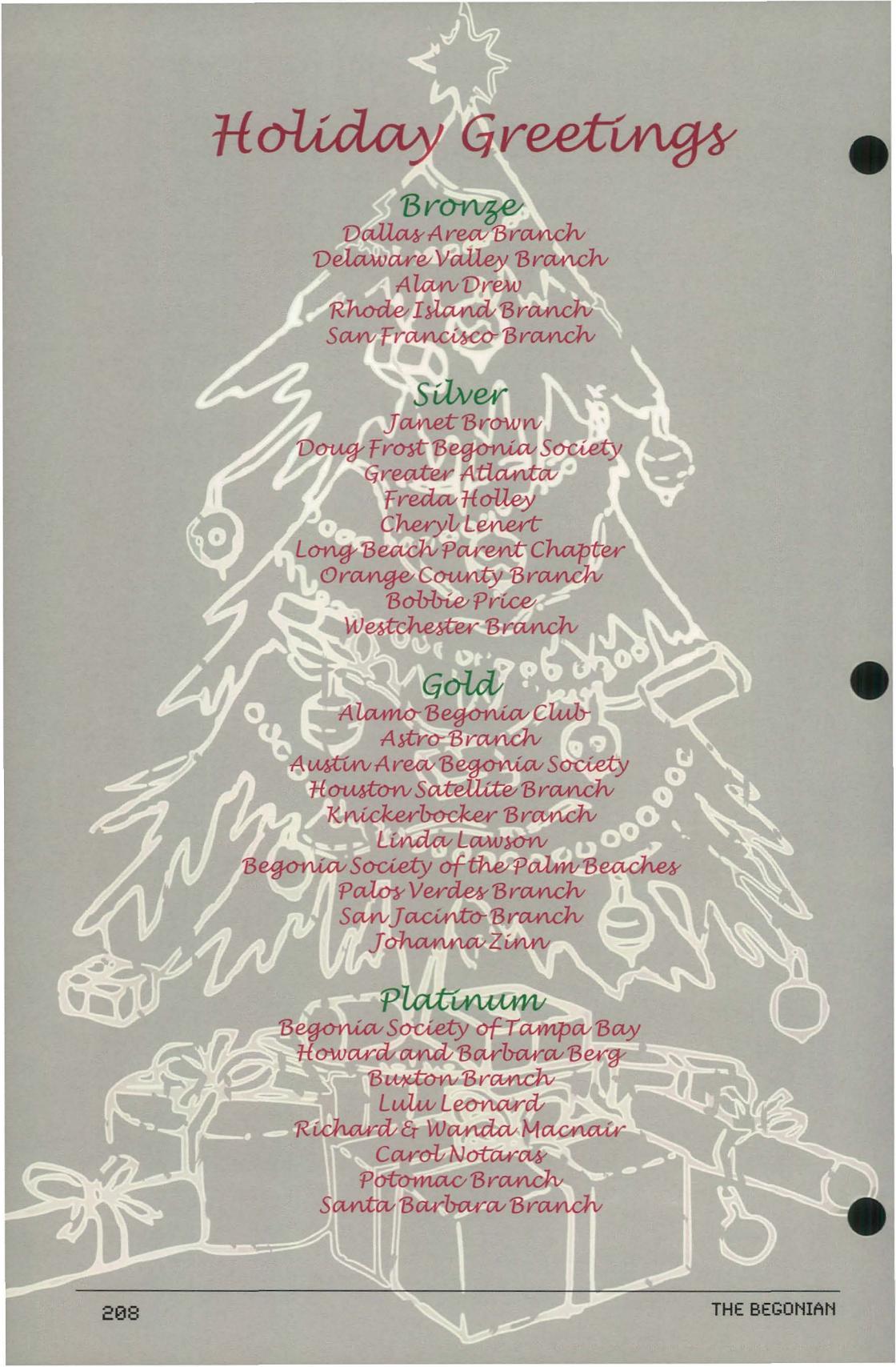
Although we are the American Begonia Society we really are an international organization.

I hope you find these facts as interesting as I did. Oh, by the way, the 2 states where we do not have any members are North Dakota and Wyoming and the 3 states with the most members following the top 3 are MA with 48, PA with 43, and MO with 17. Did you guess them correctly?

One last fact for everyone; your membership expiration date appears on the mailing label of *The Begonian*. Please check this and renew before the expiration date so you do not miss any issues.



This lovely begonia with its striking orange flower was given to me as a cutting years ago. Its identity is not known to me nor have I seen anything like it. All of my begonias thrive outside here in South Carolina from April through November in tree-dappled shade and bear our heat and humidity well if kept slightly damp. I prune in late October and move indoors to a bright northern light for the winter. Grown and photo by Reece Williams



Holiday Greetings

Bronze

Dallas Area Branch
Delaware Valley Branch
Alan Drew
Rhode Island Branch
San Francisco Branch

Silver

Janet Brown
Doug Frost Begonia Society
Greater Atlanta
Freda Holley
Cheryl Lenert
Long Beach Parent Chapter
Orange County Branch
Bobbie Price
Westchester Branch

Gold

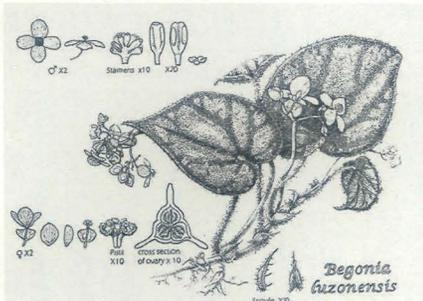
Alamo Begonia Club
Astro Branch
Austin Area Begonia Society
Houston Satellite Branch
Knickerbocker Branch
Linda Lawson
Begonia Society of the Palm Beaches
Palos Verdes Branch
San Jacinto Branch
Johanna Zinn

Platinum

Begonia Society of Tampa Bay
Howard and Barbara Berg
Buxton Branch
Lulu Leonard
Richard & Wanda Macnair
Carol Notaras
Potomac Branch
Santa Barbara Branch

Illustrating Begonias

by Gail Kahn, Wellesley College Friends of Horticulture



"Such a vast world of beauty and asymmetrical leaves!" is Esther Klahne's impression of the begonias she has drawn. An artist in Wellesley College Friends of Horticulture's certificate program in botanical art and illustration, Esther was one of nine adult students who participated in a course on scientific botanical illustration with art instructor and begonia enthusiast Jeanne Kunze. Under Jeanne's guidance, students used traditional pen and ink techniques to create black and white illustrations of begonias, whose wide range of plant habit, varied leaf shapes, flowers and textures lend themselves well to this medium.

Jeanne explains, "In order to correctly draw, the student (or 'Begoniac') must first observe and understand a plant's particular morphology. I believe that drawing is the best way to study, increase appreciation and enjoyment of begonias." Working from live begonia specimens, the class used dissecting microscopes to accomplish an informative, precise and aesthetically pleasing begonia illustration. Final illustrations included the habit of the plant, with enlarged details of flower and plant parts.

If Jeanne's students' comments are any indication,

their art experience did indeed add to their knowledge and regard for these plants. "I am attracted to wide diversity of begonias. The large-flowered plants are eye catching and the plants with small flowers are delicate like orchids," explains Sharon Jeffery. "The leaves are a delight to draw." Sandy Adams was also drawn to the variety of begonia leaves, describing them as "well suited to pen and ink drawings and a pleasure to study." Anita Turner describes her encounters with the genus: "I first looked seriously at begonias in Mexico. The leaf structure is dynamic, diverse, and colored richly. The flower is delicate and strong all at once. How lucky I was to find a class in rendering this beauty!"

Artwork from the class was on exhibit at this year's Buxton Branch Begonia Show at Tower Hill Botanic Garden, W. Boylston, MA. For more information on the plant-based art courses offered by Wellesley College Friends of Horticulture, visit www.wellesley.edu/WCFH. Hi Mike



Discussing the pen and ink drawings are (from left to right) Dick Macnair, Charles Jaros and peeking around is Mary Fuqua of the New England Tropical Conservatory. Buxton Branch was generous with the individual artist awards and a Special Educational Award for the group of artworks. Top: B. luzonensis. Photo and illustration by Jeanne Kunze

B. iridescens Dunn and *B. scintillans* Dunn

In the fall of 2006 I documented two begonia species which until then were known from the single collection made by I. H. Burkill in 1911-1912 in what is today East Siang, Arunachal Pradesh, India. Both these species are described in Burkill's account of the flora of this region, "Botany of the Abor Expedition" [Records of the Botanical Survey of India, vol. X – No. 1, p. 289].

B. iridescens Dunn [Platycentrum] is as Burkill described it endemic to this section of Arunachal Pradesh. It is generally to be encountered in shady but not overly moist habitats, and as Burkill noted has "two large blue-green iridescent leaves, which lie against rocks or more rarely against the soil. ... Often but not always, there are big silver blotches between the veins." After two fruitless days of searching when I was resigned to not locating *B. iridescens* on the trip in 2006, I noticed these plants with huge, nearly 6'-7' long, lanceolate blades some forty feet or so up the cliffs. Dramatic as these leaves were, their inflorescence was even more astonishing. Two 10" – 12" large, white tepals rose above a cluster

of chocolate colored fruit, and nearly 20" or more long, white filaments much like dropping whiskers dangled downwards. From afar they looked like a group of elderly aliens watching in silence. Later I was able to identify these as *Tacca integrifolia* commonly known as the Bat Flower.



Blue-green foliage of B. scintillans Dunn

Article & photos by Rekha Morris, Pendleton, SC



Red flushed leaf of B. iridescens

Trying to get a better look at these curious entities of the floral world, I zoomed in on them with my camera, and slowly moved downwards following their sturdy stems to make sure that they were indeed part of the same plants with the gigantic leaves. Beneath the arching layers of these leaves, I caught glimpses of silver splashed, orbicular leaves. With mounting excitement I began looking for these lower down the cliff side, and finally found the allusive *B. iridescens*.

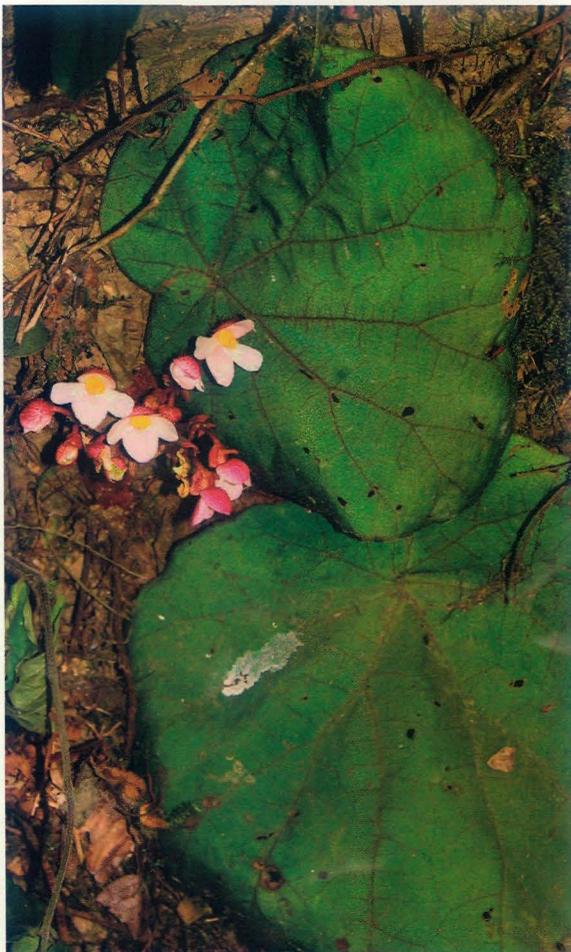
In January 2009 I found several small colonies of *B. iridescens* but not in the environs of Renging where Burkill notes that they “were plentiful.” I found three small colonies of *B. iridescens* between 10 and 20 km. north of Renging at approximately 500 m – 600 m. In two of these colonies, *B. iridescens* with variegated foliage grew among plants with all dark green foliage. However, in the third colony all the plants of *B. iridescens* were a pale creamy-green either with red veins or with the entire leaf flushed carmine. The flowers are white with such prominent and dense red hair on the outside that they look red. The stipules and dark reddish-mahogany capsules are likewise covered with red hair.

Although the rhizomes of *B. iridescens* are small and slender and easily damaged in the rigorous cleaning they are subjected to pass USDA inspection, if one or two survive, new plants are readily propagated from rooting leaves. *B. iridescens* does not require the humidity created in terrarium conditions, however, it needs protection from overly bright light. In the wild the leaves of *B. iridescens* look painfully riddled with holes and insect damage, but in cultivation their spectacular foliage makes them irresistible.

B. scintillans Dunn [Diploclinium 1?], also known from the single collection made by Burkill in 1911-1912, is a much smaller, creeping species with such dark foliage that it is barely visible in the overwhelming verdure of the hills of East Siang. In late September 2006 I found a couple of plants as one of them was in bloom, and the coral flowers were just visible under large fern fronds. The roots were so fragile that they

did not survive.

Determined to bring back larger, more robust plants, I searched for them for several days without any success in Jan. 2009. On the fourth evening as we were heading out of the hills, we circled around a jutting cliff side, and in the headlights I caught sight of dark, gun-metal colored leaves about 10' up. On the off chance that these might well be the foliage of *B. scintillans*, I got down and scrambled up a wet and slippery hill side. Without lights it was difficult to distinguish the dark leaves lying flat against the near black ground, and I found myself pulling up large fistfuls of oozy soil in my attempts to find the rooted, dark



All green foliage of *B. iridescens*



Red reverse foliage and capsule of *B. scintillans*

stems which sprawled about in a tangle of other creepers and plants.

Burkill describes this species as having “leaves dark green above with or without silver spots, crimson-red beneath.” While the majority of the leaves were dark green above with no silver variegation, a few had a faint gleam, and it is these I concentrated on up-rooting. In washing off the bulk of the mushy soil, I was delighted to find that I had inadvertently pulled up a few capsules which had drooped downwards and been sucked into the slime. Once cleaned and dried, it was clear that the capsules had remained closed and retained the tiny seeds.

Unlike *B. iridescens*, this species appears not to thrive outside a terrarium. On the variegated plants the hundreds of tiny, closely packed silver dots on the leaf surface create the impression of a continuous, unbroken silver sheen occasionally with the mid section defined in dark green

splashes. The dark, crimson-purple under side of the foliage is a striking contrast against this gleaming, metallic surface. The lovely coral flowers, according to Burkill, begin appearing in February, and I was in East Siang in 2009 at least 2 weeks too early to see them bloom in the wild.

This single colony of *B. scintillans* was nowhere near the various find spots mentioned by Burkill, all of which were between 4800’ and 6300’. Although I briefly explored one of the areas mentioned by Burkill, the hills around Rotung, I did not find any *B. scintillans* there.

This small colony of *B. scintillans* was at about 500 m twelve or so km south of Rotung. In the nearly hundred years since these two species were first recorded by Burkill, E. Siang has been subjected to changes which have no doubt led to the demise of some begonia habitats. Until the Indian supreme court banned logging in Arunachal in 1995, vast tracts of old growth forests with relatively easy access to the Assam border were being indiscriminately destroyed.

March 29th 2009



Variegated *B. iridescens* damaged by insect activity in the wild!

The Evolution of Begonia Section *Gireoudia* - Research in Edinburgh

By Alex Twyford^{1,2} and Catherine Kidner^{1,2}

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Contact: a.twyford@rbge.org.uk

Begonias have long inspired research interest at the Royal Botanic Gardens Edinburgh (RBGE). The abundance of different species (1500 and counting), their dramatic diversity and interesting geographic distribution makes this hardly surprising. We have a large collection of species from around the globe, representing the remarkable diversity seen in this genus. This collection contains exciting new undescribed species from recent expeditions, as well as the more familiar cultivated species and some horticultural hybrids.

The research focus of the Kidner lab is *Begonia* section *Gireoudia*, a diverse group of 66 species from Central America (Figure 1). They are best represented from Mexico, but the range of the section extends through Central America into Panama and Costa Rica. Some of these species are cultivated and hybridised for use as houseplants in the UK (or outdoor plants for warmer locations), and includes the large leaved *B. nelumbiifolia*, and *B.*

heracleifolia, the 'dusty'-leaved *B. peltata* and the small and very tender *B. conchifolia*. Despite the horticultural importance of this group, our knowledge of the distribution of these species in the wild is limited, and the possibility of undiscovered species is tantalizing. Botanists visiting the tropics regularly find new *Begonia* species, reminding us how our knowledge of the group is far from complete.

The research we are doing at RBGE uses genetics and molecular work to study the evolution of the group. Much of our work relies on crosses between the different species in *Gireoudia*, to produce F1, and subsequent generation hybrids (Figure 2). The ease of hybridising will be no surprise to members of the ABS, and wild hybrids have been reported in the Begonian (Morris, 2007) and other publications (Peng and Chen 1991; Peng and Sue 1991; Teo and Kiew 1999; Peng and Chiang 2000). Our crossing experiments show that almost all species of section *Gireoudia* can interbreed under greenhouse conditions, and the offspring are often fertile. We currently have over 100 F1 plants, as well as a number of

continued on next page



From left to right: **Figure 1** - Leaf diversity in *Begonia* section *Gireoudia*. Leaf variation includes: leaf shape (compound, lobiness, degree of dissection), leaf size, leaf colour (due to anthocyanin rich tissue), peltateness, amount of and degree of succulence. **Figure 2** - *Begonia sericoneura*, with tagged crosses **Figure 3** - Ectopic leaflets in an F1 *Begonia* (*B. urophylla* x *B. nelumbiifolia*).

Top left: ectopic leaflets grow from the petiole attachment point, Top right: ectopic leaflets also occur along the mature petiole, Bottom left and bottom right: scanning electron micrographs reveal developmental detail of the ectopic leaflets

backcrosses to the parents.

I am analysing these hybrids to determine the genetics controlling hybrid vigour, the phenomena of F1 hybrids being more vigorous than either of their parents. This will no doubt be of great interest to Begonia breeders, who produce thousands of crosses in the hope of finding the rare vigorous individual. Often we find that the F1 hybrids in the greenhouse are small plants that really struggle – and will only be seen on the windowsill of a biologist! In a population produced by backcrossing the F1 to one of its parents some vigorous plants are produced and some plant struggle or die. I am trying to discover what combination of genes results in successful hybrids. Having genetic markers for vigour in hybrids may allow breeders to depend less on trial and error.

Modern molecular techniques are also critical for aiding our understanding of evolution. Many botanists work on building a 'family tree' of species, which tell us which species are more closely related than others. This is a powerful method of studying how a group has evolved, such as are all the Begonias with rhizomes related, or has this character evolved multiple times. Much of the genetic sequencing work the lab is doing on the Gireoudias is completed at the University of Edinburgh, who have ushered in a new era of molecular technology with the Genepool sequencing facility. We hope that using these facilities we will be able to sequence the entire genome of Begonia chloroplasts, the photosynthetic powerhouse of the cell, which can be used to unravel the evolutionary history and the degree of relatedness between Begonia species.

If you have had the opportunity to see these plants in the wild you may have noticed what appear to be hybrids between species growing in the wild. We are planning to study the significance of hybridisation in the wild, and have been fortunate to receive material, information and advice from Rekha Morris. We are planning our

own field trip to Mexico for the spring of 2010, and hope to find some new species, some new accessions of known species and determine whether hybridisation is blurring the boundaries between species in some localities.

Despite our impressive collection and expertise, our work has not been without setbacks. We have found seed storage to be problematic, with germination success notably falling in the space of a few years, forcing us to repeat many crosses to keep a stock of good seed. Successfully finding sterile growth conditions to nurture Begonia seedlings has been a challenge too. But observing the full collection in flower in spring is a site to behold, and addressing some of the critical questions in evolutionary biology makes Begonia a rewarding group to work on.

The Kidner lab in Edinburgh is: Dr Catherine Kidner, Dr Keith Gardner, Saima Umbreen, Nikki Burton-Harrison, Mobina Shaikat Ali and Alex Twyford. The work on chloroplast sequencing and the phylogeny is by Nikki Burton-Harrison. Thanks to Frieda Christie for help with the scanning electron microscope.

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My Basement Refuge

Article and photo by Johanna Zinn, Fairfax, VA



A world of terrariums in Johanna Zinn's subterranean getaway

During the winter, I long for the bright days of summer and miss digging in the garden. Fortunately, I have a substitute for both in our basement. If I need a bit of quiet and bright light, I head downstairs and relax with my terrariums. In the basement there is no TV or stereo, just the sound of the furnace fan and the occasional squeak of the chinchillas' exercise wheel. For light, I have the glow from the full-spectrum fluorescent lights over the terrariums. These particular lights were guaranteed by the company to make cows give more milk—only the best for my begonias—so I expect that the light will energize me and make me more efficient in my efforts to water, prune, groom, and propagate.

In one small, unfinished corner area, measuring approximately eight feet, including the front of the stands and the

open space between the stands, and five feet from front to back, I have quite a bit of the rainforest in our basement. How much is quite a bit?

In that eight foot by five-foot space, I have two, seventy-two inch tall, sixty inch long, and twenty-four inch wide plant stands equipped with light fixtures tucked into a corner of our unfinished basement. The stands have a total of seven shelves of varying heights. On those shelves, I have 41 terrariums

of varying sizes, some quite small, and 10 propagation boxes containing more than 200 cuttings or small plants. Between the light stands, I have a small, unlighted plant stand for plants that like less light. The top two shelves of that stand currently hold six terrariums, and one prop box. The bottom two shelves, which don't receive much light, store unused containers. On small individual plant stands, I have six large terrariums between the two light stands. When my collection is larger than the space available to grow the plants, I sometimes put one terrarium on top of the other, and hang cuttings from one or more clothes lines strung between the shelves.

The many plants that I grow in my basement corner provide me with a great deal of pleasure. Perhaps you have an unused closet, a space between windows, or a corner of the basement that can become your refuge.



Begonia House. Greenhouse designed in the style of Modern-Balinese architecture. Officially Declared On July 15, 2009 at Bali Botanical Garden - The Complete Collection Of Indonesian Begonias In The World

Begonia House and B. 'Tuti Siregar'

by Hartutiningsih – M. Siregar 1, 2 & Sutomo 1, 3, photos by Musfaid Siregar

Begonia 'Tuti Siregar' is a new cultivar from Bali Botanical Garden, which had been registered with the American Begonia Society 2008 with registration number 1001. This begonia resulted from crossbreeding between *Begonia listada*, (stripped and narrowed leaves) and *Begonia acetosa* (green-broad leaves with dark red base). Surprisingly, when it is still in vegetative phase, the leaves of this hybrid are rolled like a cup and exhibit its very dark red base.

The appearance of this new cultivar has attracted many people. National and international scientists, and even non-scientific visitors, were amazed by this plant's beauty at the Begonia House during the 50th anniversary event at the Bali Botanical Garden. The plant grows vigorously and in clumps in the middle of its new home in the Modern-Balinese architecture greenhouse. *Be-*

gonia 'Tuti Siregar' brings the collection of begonias in the Bali Botanic Garden to 294. These begonias are all arranged inside the newly established Begonia House. The greenhouse occupies an area of 692.35 m² (nearly 7500 square ft.) finished in 2008. The Begonia House was meant to be a Conservatory Exhibition for visitors. Here, the begonia collections were comprised of native and exotic begonias and formally arranged with natural concepts. From the total 294 begonia species that the garden has, 81 species are native to Indonesia and were collected during explorations throughout Indonesian rain forests. The rest of the collection was gained from seed exchanges and seed donations.

The Begonia collection has become one of Bali Botanical Garden's main collections, and has been regarded as one of the most complete collections in terms of na-

tive species. According to the data from the Herbarium Bogoriense, there are more than 200 species of Begonias that need to be conserved. So far, Bali Botanical Garden has conserved 81 species. Bali Botanical Garden is located in Bedugul, a tourism area in upland of Bali, with an altitude of 1250 m asl. Thus the cool climate in this garden is representative for the vigorous growth of Begonias.

We have cooperation with the American Begonia Society started in 2006 by Begonia Seed exchange and the New England Tropical Conservatory. Beside native and exotic begonias, the garden also has four types specimen of Begonias. These specimens were found during flora explorations in various places such as Kelimutu National Park, East Nusa Tenggara and South Sulawesi. Taxonomical analyses revealed the new species of Begonia are namely: *Begonia didyma*, *Begonia guttapila*, *Begonia hooveriana*, and *Begonia kelimutuensis*.

In the future, we plan to collect and conserve more

begonias from lowland habitat in Bogor Botanical Garden. Conducting conservation efforts is not only due to our awareness to avoid global warning but also part of our responsibility as botanists and researchers in Indonesia.

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² Now, Centre for Plant Conservation – Bogor Botanical Garden – LIPI Jl. Ir. H. Juanda 13, Bogor, Indonesia. 16003

³ College student of Plant Biology the University of Western Australia 35 Stirling Highway Perth WA E-mail: hartutiningsih@yahoo.co.id



Above: Inside the new Begonia House. Notice the *Begonia luxurians Scheidweileri*, to the right, grown with seed donated by the ABS seed fund for which we are most grateful.

Left: The colorful and exotic Begonia 'Tuti Siregar' registered with the ABS in 2008 with the registration number 1001. Blooming, on left, is *Begonia bowereae*.

Terrarium Begonias: Types and Cultivation

- Part 1

Article and photos by Charles Henthorne, Plano, TX

In the past few years there has been an enormous amount of interest in terrarium begonias and their culture. So many people have asked for reliable information on such subjects as: "What type of begonias will live in a terrarium?" We have also had many inquire as to what type of containers can be used, what humidity is required.

How much water do terrarium begonias need? What about humidity? Doesn't too much humidity cause rotting? What kind of fertilizer is used on terrarium plants, and how much, and how often? Does it really matter what



Begonia bogneri, one of the Madagascan species, requires high light and a humid terrarium to keep it looking its best.

kind of potting medium is used? What about perlite, and what is it? Vermiculite? Do we need to use charcoal, and if so why? What is that slimy, sweet smelling stuff that sometimes appears? Is it harmful? How can we get rid of it? What is the stuff that accumulates on the side of the container? How do we get rid of it? Do we need to keep the terrarium covered, and why or why not? What about diseases or pests? What kind of spray can we use? The list goes on. It is impossible to answer all these questions with one article. Therefore, I am starting a series on terrarium begonias. I'll write about all these questions and more in the coming issues. This current article, part 1, will cover the very basics of Terrarium begonias, types, and culture. Future articles will go more in depth about these and the many other questions we have had through our years of growing terrarium begonias.

The most important thing about growing



The strikingly colored, B. U012, another terrarium lover, thrives under warm temperatures, high humidity and low light.

a terrarium is, of course, the container. The only limit on the container type is ones' own imagination. There are plastic containers, fish aquariums and bowls, and old glass containers that have held other things. There are homemade terrariums made from Plexiglas, glass, or plastic. The list goes on. The most important thing is to make sure that the container is clean, clear, and will be somewhat airtight, thereby holding in humidity. Also it is really necessary to have a container that has a wide enough opening to gain access for initially planting, and then continual grooming of the plants. Terrarium begonias for the most part, require high humidity. Eighty to one hundred percent is an ideal level for successful cultivation of terrarium begonias. One of those that we have found to require close to 100% humidity is *B. bogneri*. Another is *B. U012*. *B. crispula* is another one, however it is important not to allow water, condensation, or moisture of any type to set for any length of time on the leaves. Those that require the high end on the humidity scale are those that are normally found in natural environments that have high humidity. It is important to remember not to place a plant in a container that is too small or too large for the plant size. Plants can and must be replanted as they grow and mature. They do not do well if initially over or under planted.

After the correct container is found, it is necessary to make sure that it is clean of all debris, and contamination. That does not mean to wash it with acid, bleach,

or strong ammonia, or detergent. It does mean to wash with a mild soap or water. Do not use any containers that have previously contained acid or strong chemicals. This might seem unnecessary to say or hear, but a warning is always good. Remember also, not to handle the glass containers from the rim or apply too much pressure when holding, around the tops or edges of the glass. They will break! They will crack! We have destroyed many of our favorite containers by being careless.

These are just rudimentary things that are necessary for those who are just getting into the wonderful world of terrarium begonias. In the next issue I will discuss our initial planting methods. What materials we use and why. I'll also continue adding a few more begonias each issue that can be successfully grown in the terrarium. The third part will include much information about the cultural needs of terrarium begonias. I hope that when the series ends, that many of the questions, both basic and more advanced, will be answered for growers who have the interest to try this most fascinating part of begonia growing.



Begonia crispula, with its interestingly textured leaves, appreciates medium light, high humidity and warm temperatures.



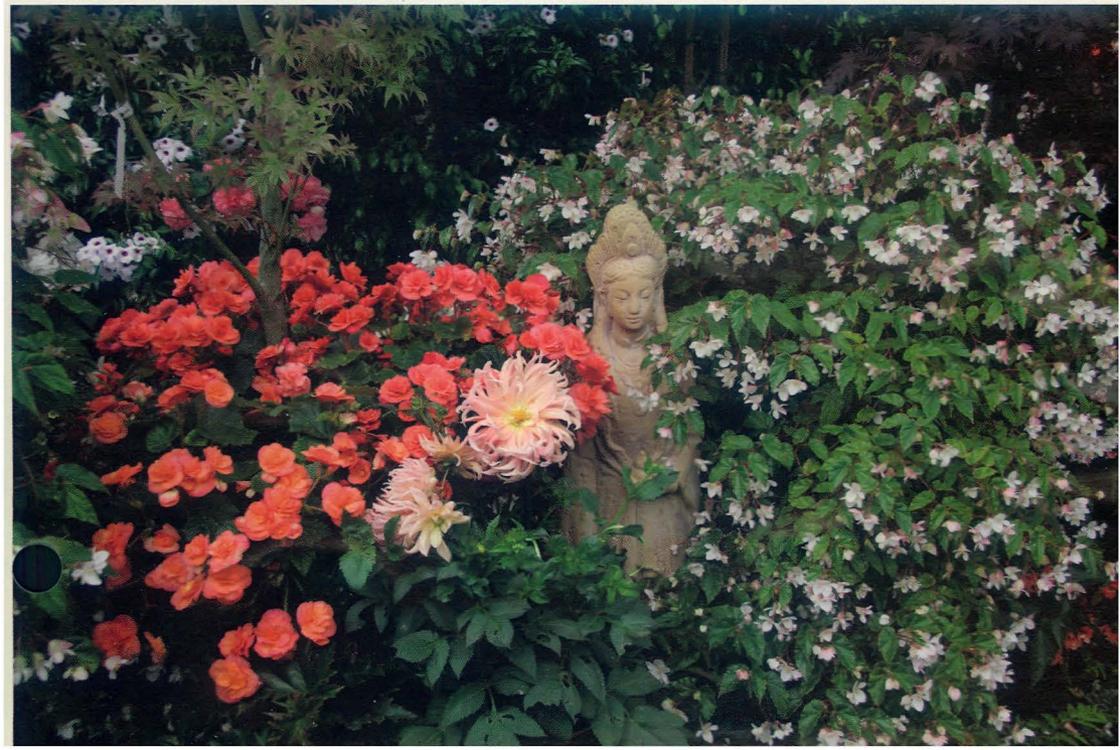


Gazebo Flower and Begonia Show

Beautiful blooms were abundant at the recent Gazebo Flower and Begonia Show held in Montecito, CA in conjunction with the Rudolf Ziesenhenné branch of the ABS (see more information on page 228).

From top left, clockwise: The tall, red begonia in the center of the photo is a Carlisle hybrid, the red begonia on the right is B. 'Allan Langdon'. Top right: B. 'Fire Dance' Bottom right: A statue of Quan Yin, Goddess of Compassion, surrounded by an orange B. 'Solenia and the delicate white B. acuminata. Bottom middle: B. 'Rudy Tutti' a hybrid from Mike Flaherty. Bottom left: B. 'Antonelli #12'.

Photos by Gary Hunt



Why Do Rhizomatous Begonias Bloom In The Spring?

by Chuck Ades, San Marcos, CA



Orange red buds open to reveal bright yellow flowers with a red throat in this dainty Begonia 'Gold Coast'. This rhizomatous does best with high light, in a humid terrarium.

Photo and culture notes by Charles Henthorne

When I was growing up I was struck by the plant bug at an early age, about 6 years old. My first experience with plants was with geraniums in Covina, a town in the suburbs of Los Angeles. A person had asked me a simple question. Did I know that if one broke a stem off of a geranium plant and stuck it in the ground that it would grow? Of course I was intrigued. He had gotten my attention. He then dug up a small plot of ground and told me to break off some geranium stems and stick them into the ground in this little plot of earth that he had prepared. I did, and promptly forgot about the incident. Sometime later, he asked me if I had looked at my geraniums. I hadn't.

I quickly ran to the area and was amazed to see they were not only alive, but were twice as big as when I planted them. From that time on I was "hooked" on plants. As I grew up I began to ask why did plants know what to do. Why do cuttings root? Why do leaves drop in the fall from deciduous trees? Why did plants bloom? Why? Why? Why?

When I went to college, many years later and many, many years ago, I began to learn the answers to many of these questions. I also learned that the answer to each question was not true for all plants. Some plants blooming are determined by the amount of carbohydrates the plant had accumulated, others by temperature or a series of temperatures, sometime by day

length. Sometimes it was caused by not one happening, but rather, by a series of happenings. Cherry trees cannot be grown where I live in Southern California, because there has to be a series of happenings for the cherry tree to leaf out in the spring and bloom. First the tree has to experience short days. That is, the day is shorter than the night, which happens after September 21 every year. This caused the cherry tree to drop its leaves, to initiate leaf and flower buds and to enter dormancy. However, another thing has to happen before these buds and flowers can open in the spring. An auxin, or plant hormone, that the tree produced in the new growth bud prevents it from opening up and growing. It has to be neutralized. This comes about by the number of hours the bud experiences temperatures below 40 or 45 degrees. Here in Southern California, we never experience the required number of hours to neutralize the auxin. Hence cherry trees won't leaf out in the spring in our area.

As a commercial grower of indoor houseplants, I often have to draw upon this knowledge that I learned in college to solve problems that I may be presented with now. Many of the "whys" of major crops such as chrysanthemums or Easter lilies have already been worked out. But we grow many types of begonias. With the exception of tuberous begonias, wax begonias and Reiger begonias, very little information has been worked out on the "whys" of growing them. At our greenhouse, I had observed for two consecutive years that leaf cuttings from rhizomatous and Rex begonias planted

in October, November and December, did poorly. Most of them died. Of those that did root, some came up with a flower bud instead of leaves. This is a very important planting time for us. It is the time to plant for our spring sales. That's when the demand is highest. Each spring the begonia club members would say such things, as "You don't have many rhizomatous begonias now. You should grow more for the spring sales." It was obviously a problem that had to be solved.

I had suspected that it had something to do with day length since the rhizomatous begonias seemed to bloom in the spring, but not later in the summer or fall. We already had a system to break up the night with artificial lights. On the original work on the day-length flowering on chrysanthemums in the 1950's, it was found that if the night was interrupted by 4 hours of continuous artificial light that the chrysanthemums would not bloom. They continued to grow as if the days were longer than the nights, like summertime. Fortunately, it was also

continued on next page



Begonia coriacea x rajah, sports lovely red flowers in the spring. Terrarium culture and high light are needed to keep this rhizomatous begonia looking healthy. Photo and culture notes by Charles Henthorne



Notice the raised projections, called bullae, on the leaf surface of B. staudii. This texturing allows the plant to maximize the amount of light it receives in its spot on the forest floor. High light in a nicely humid terrarium meet the cultural requirements for this plant.

Photo and culture notes by Charles Henthorne

determined that the light didn't have to be strong enough to make the process of photosynthesis happen. Just strong enough to prevent the plant auxin that causes them to flower from being produced. Therefore, I set up three different tests. The first was to assure that we would have rhizomatous begonias in the spring; we stuck the spring planting in August and the beginning of September. Secondly, we gave the rhizomatous begonia stock plant artificial lights at night when the short days started in September. Thirdly, we periodically planted leaves from the lighted stock plants, but we planted them under artificial or night interrupted lighting, long day treatment.

In the case of planting these begonias earlier, it succeeded. But our costs were higher since we were watering and feeding and heating them for a longer period of time. This all costs money. The stock

plants that were given supplemental lighting also failed to set flower buds, but instead continued to produce foliage. Most rhizomatous and Rex begonias don't grow leaves in the winter; they only grow and produce flowers in the late winter and early spring. At this point you should know that there are actually two processes that happen during short days, flower initiation and secondly flower development. The reason this is important to know is that some of you that may be growing rhizomatous and Rex begonias in greenhouses that are run cool in the winter or growing them outside in climates that allow it. If that is the case, the flower buds will be initiating on time, but the plants won't bloom until the weather warms up in the spring. Therefore, if this is your case, your experience has been that they bloom in late spring and early summer. In our case the greenhouses are

heated and the flower buds continue to develop in the winter. Therefore, for us, they bloom in late winter and early spring. The third part of our test was to take leaves from the artificially lighted stock plants and plant them under artificial lights. This part of the test was also successful. The rhizomatous and Rex begonias are what is called “short-day plants”, that is they bloom when the days are shorter than the nights, their blooming is affected by short days. Now our dilemma is which process is most economical, plant the cuttings early in order to assure that we have these plants available in the spring or light the stock plants and the rooting cuttings. The first costs more fuel, water and fertilizer, the second costs more electricity. So far we have decided to

continue the test another year and to figure out our costs later.

Now you may be thinking that this is all interesting, but how can you use it. Now you know that you shouldn't try to propagate rhizomatous and Rex begonias during short days unless you are able to interrupt their night with lights in the short day periods of the year. You also know that you can keep these begonias growing but not blooming during the winter and spring by applying “long day lighting” to the plants. I've had some begonia fanciers tell me they are so glad when their rhizomatous begonias quit blooming because they make such a mess with their falling spent flowers. At any rate, now you have the knowledge. Probably that is the most important factor.

Addendum to Article: B. 'Kiowa Skies'

Photo and article by Charles Henthorne, Plano, TX

After my article last issue on a new seedling, which I have called *B. 'Kiowa Skies'*, Michael Kartuz notified me that this was very similar to his hybrid *B. 'Fireworks'*, and after I looked at his photos I agree that if it was not the actual *B. 'Fireworks'*, it was a very similar hybrid. Looking on the internet for more information on *B. 'Fireworks'*, I saw many different variations of it, and all were labeled *B. 'Fireworks'*. It appears, if all photos are indeed *B. 'Fireworks'*, that there is wide variation in it.



B. 'Kiowa Skies' is so similar to photos of Michael's hybrid that I am no longer calling it B. 'Kiowa Skies', and would ask everyone that has it labeled as such to change the name to B. 'Fireworks'. Check out another photo of B. Fireworks on page 227.

However, my *B. 'Kiowa Skies'* is so similar to Michael's photos of his hybrid that I am no longer calling it *B. 'Kiowa Skies'*, and would ask everyone that has it labeled as such to change the name to *B. 'Fireworks'*. This was a seedling that I grew from seed, and neither Michael nor I have an explanation as to the similarity of the two.

Begonia Blog

Article & photos by Julie Vanderwilt, Santa Barbara, California



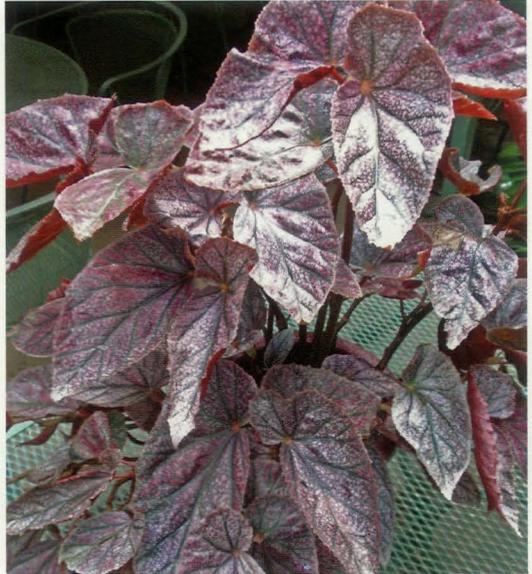
The 2009 Southwest Region Get-Together is over, and it was wonderful. The new Austin Begonia Branch really knows how to throw a party! And I want to thank those responsible for the great hospitality room; Joan Estes, Julie Krosley, Nelda Moore and Valerie Morris. The hotel provided no free breakfast, so these lovely ladies made sure we had breakfast treats each morning. One of my favorites was the spicy Sausage Kolaché, a Czech specialty popular in Texas. I wish it were popular in Santa Barbara!

On Wednesday evening, co-chairman, Valerie Morris, picked up Mike Flaherty and me at the airport so she could shuttle us to the Congress Avenue Bridge to see America's largest urban bat colony. More than 1.5 million Mexican Free-tailed bats emerge each night at dusk. The colony summers in Austin and winters in Mexico. We were too late to see the first flush, but there were still plenty of bats emerging from the bridge.

On Thursday our first tour was to Joe Montgomery's charming tropical garden. This lovely *B. 'Maurice Amey'* was growing amid coleus, strobilanthes, bromeliads and many more tropical delights.

Next we visited Laura Joseph's beautiful antebellum home, which is listed with the Texas Historical Society. She has dedicated an adjoining lot to purple martin "condos" where the birds feast on flying insects. Purple Martins are the only birds totally dependent on humans for housing. Laura's garden was an amazing tropical delight with ferns, cissus, begonias, rhipsalis, ruellias, stapelias and a beautiful Rangoon Creeper (*Quisqualis indica*) we all admired.

Laura served a delightful lunch and



Top: *B. 'Maurice Amey'*
Bottom: *Begonia bowerae*



gave us her sure-fire recipe for baking asparagus in a brown paper bag.

Friday was the ABS board meeting and the SWR board meeting. Then there was the big plant sale with over 1,000 begonias. It was also the opening of the non-judged Begonia show. There were so many beautiful begonias. I took my pictures before the growers' names were divulged so I can't give everyone credit. Tom Keepin's, *B. 'Martin's Mystery'* won Best in Show, and Charles McGough displayed a beautiful hybrid he created in one of his handcrafted pots.



On Saturday, we attended the 2009 Festival of Ferns and then had a tour of Austin where we saw the infamous "Clock Tower, a 307-foot structure at the center of the University of Texas.

The award banquet on Saturday evening was memorable. Mike Flaherty installed the new officers singing a tribute to Gene Salisbury. Tom Keepin presented the Astro Branch Ambassador Award to Valerie Morris, much to her surprise!

Well, I could go on and on about the delights of the SWR Get-Together, but I'm out of my allotted space. Happy holidays to all you begonia lovers, and I'll see you in the next issue!



Top left: *B. 'Fireworks'* **Top right:** Charles McGough's cross between a rhizomatous and a cane **Center:** Tom Keepin's *B. Martin's Mystery* **Bottom:** Tom Keepin and Valerie Morris (photo by Kenny Wilkerson)

New Shrub Begonias

Article & photos by Brad Thompson, Vista, CA

This is the first of a series of articles on shrub begonias. To help get readers interested in shrubs, which are not often written about in recent years, I'm sharing some new hybrids I've done. Hopefully, this will help readers know that new shrubs are still being worked on.

The first new hybrid is *B.* 'Chiquita Rosa' (see photo pg. 203). The reason for creating this hybrid was a feature of *B. foliosa*. Everyone loves the miniature leaves and tiny flowers but the plant itself grows quite large. I decided we needed a *B. foliosa* that stayed small so I crossed *B. schmidtiana*, which never grows more than a few inches tall with *B. foliosa*. The resulting plant *B.* 'Chiquita Rosa' was the perfect marriage. It never grows more than a few inches tall



Begonia 'Vista Way'

but has the miniature leaves and flowers of *B. foliosa*. It makes a beautiful basket or small potted plant.

The next new hybrid is *B.* 'Vista

Way'. Everyone loves *B. egregia* but it can be hard to grow a full shapely plant. I crossed it with *B. echinosepala* and the result was the textured leaves of *B. egregia* on a full growing more compact plant. The leaves also retain a faint red edge like *B. egregia*. All the seedlings were fairly identical but the eventual *B.* 'Vista Way' was the only seedling that proved to be ever-blooming. *B. egregia* is a seasonal bloomer so this trait is obviously from *B. echinosepala*. The flowers are pure white held above the bright green foliage and are



B. 'Bill Byron'

very showy in contrast.

The last new hybrid, that will be available soon, is *B.* 'Bill Byron'. I crossed *B. egregia* with *B. paulensis*, this time hoping for more texture and peltate leaves. What I got was exactly what I was hoping for which doesn't always happen. *B.* 'Bill Byron' has the long leaves and reddish lined edges of *B. egregia* with the peltate leaf and heavy texture of *B. paulensis*. While I didn't get an ever-blooming plant since both parents are seasonal, it does bloom with upright white flowers in spring. The plant itself is low and spreading like *B. paulensis* for the most part. The leaves can get quite large on a mature plant to nearly 12 inches long. Even out of bloom, it's a plant people notice. Some people may question that it's a shrub, but being a mongrel between groups, and the fact that *B. paulensis* is considered by many to be a shrub, it has shrub qualities. Anyway, it's a shrub.

I hope this has sparked some interest in shrub begonias again. Future articles will try to cover everything you ever wanted to know about shrubs. The next article will be on hairy shrubs.

Clayton M. Kelly Seed Fund Listing

The Margaret Lee Branch, San Diego County, CA

The seed fund is a service to members only. It is a privilege of your membership.

The Seed Fund would like to thank: Rekha Morris for her contribution to the Seed Fund. Seed featured this issue is from Rekha: (rare seeds and newly collected: \$2.00)

These were collected for the most part in Arunachal Pradesh & also in Meghalaya.

- B. aborensis* * RM-AR-756
- B. acetosella** RM-AR-805
- B. acetosella* var. *hirtifolia**
RM-AR-828
- B. annulata** RM-AR-843
- B. burkillii* * RM-AR-786
- B. cathcartii* = BU 545
RM-AR-842 (Tentative identification)
- B. griffithiana* RM-AR-806
- B. iridescens** RM-AR-782
- B. longifolia** RM-AR-804
- B. palmata* RM-AR-790
- B. palmata** = BU 567
RM-M-677 (Unusual form)
- B. perakensis**
RM-AR-826 (Tentative identification)
- B. picta**
RM-AR-868 (Tentative identification)
- B. rex* P.* RM-AR-850
- B. sikkimensis* var. *kamengensis* =
BU 522 RM-AR-865
- B. xanthina* RM-AR-860

Stars indicate that this is the first time Rekha is able to distribute the seeds of these 11 species.

Accession numbers: RM = Rekha Morris, AR = Arunachal, M = Meghalaya.

Packets of seeds of species and U numbers are \$1.50. All packets of cultivars (including open pollinated) seeds are 50¢ per packet. Very rare seeds and newly collected seeds will be \$2.00 or more per packet. California residents please add 7.75 % sales tax. All orders must be

accompanied by check or money order, payable in US funds ONLY, to The Clayton M. Kelly Seed Fund.

Please send your order with payment to:
AMERICAN BEGONIA SOCIETY
CLAYTON M. KELLY SEED FUND
Dean Turney
467 Fulvia Street,
Encinitas, CA 92024
e-address: dean@deansmail.us

Costs of mailing:

US only: 1-12 packets \$1; 13-24, \$1.35; 25-36, \$1.71; 37-48 (2 cans), \$2.30; 49-60, \$2.66.

Canada only: 1-12 packets, \$1.10; 13-24, \$1.46; 25-36, \$1.82; 37-48 (2 cans) \$2.35; 49-60, \$2.71.

Mexico only: 1-12 packets, \$1.15; 13-24, \$1.51; 25-36, \$1.87; 37-48 (2 cans), \$2.50; 49-60, \$2.81.

All other international mail: 1-12 packets, \$1.85; 13-24, \$2.68; 25-36, \$3.68; 37-48, \$4.68; 49-60, \$5.68.



DISCLAIMER:

The seeds distributed by the seed fund are identified as received from the donors. The species names (in italics) reported here are correct based on the latest information from **BEGONIACEAE**, Ed. 2; Golding, and Wasshausen. Hybrid names are made consistent with the "ABS Check List of Begonia Hybrids" edited by Howard Berg dated 9/13/2005.

Unknown begonia 'photo by Jem Wiseman



A trio of tuberous beauties. On left, Fairy Light; middle, Princess; right, Salmon Seedling.

Gazebo Flower and Begonia Show - Origin

by Mike Flaherty, Montecito, CA, photos by Gary Hunt

In the year 2000 I was trying to think of a way to promote my favorite plants - begonias. I mentioned to one of the nursery deliverymen that I wanted to have a begonia show and he told me about Paul Carlisle and his tuberous begonias. At the time I thought, "Oh sure he probably has some scrawny non-stops or mediocre tuberhybrida, but what the heck I need more plants for the show." So I asked Paul to participate, and to my surprise, he brought lovely big tuberous begonias to display. Paul's few plants were the stars of the first show. The show was in a small tent 12' x 24' and featured my begonias, Julie Vanderwilt's and a few plants from other Santa Barbara branch members.

I could see by the reaction to the tuberous begonias that Paul's plants should be the focus of the show. The next year Paul brought many

more plants and we also honored the great hybridizer Brad Thompson with a wonderful display of his hybrids. The following year we honored Rudy Ziesenhenne and the show had grown to include a begonia garden and the entire courtyard. We now have people from all over California attending our show and have been featured in magazines, newspapers and television.

The show has accomplished just what I wanted. We have increased the membership in our branch and we are the #1 seller of begonias in our area.



Visitors were greeted by a panorama of colorful begonias.

Bewitched, Bothered and Begonia'd

Article & photos by Marci Oehler, Jacksonville, Florida

"Hats off" to all the amazing folks who organized the recent Begonia Society Convention in West Palm Beach. This was my second convention and I continue to be so impressed with all the people who orchestrate these events. The hours of preparation and planning is mind boggling, as well as all their time and dedication during the show.

My first convention, in 2007, was *Begonias in Paradise, California Style*. As a relative newcomer to the Society, and not belonging to a branch, I was hesitant to attend the convention. As I read and reread the enticing descriptions of tours and accommodations - plus the promise of extreme plant shopping - I decided that I really must go. But, I knew no one and had never been to LA so I sent the invitation to my sister, Patti. At the time she was only interested in orchids but liked begonias and she's always up for a road trip.

Upon arrival everyone was friendly and we were accepted into the fold right away. There's nothing like a big group of plant people. Just as promised the tours were fascinating and the shopping was excellent.

We bought plastic containers to ship our plants back to Florida. I labeled the boxes "clothes" and the airline attendants' didn't even open them. Patti, now hooked on begonias, joined the ABS.

The West Palm Convention, *Bewitched, Bothered and Begonia'd*, was only a few hours drive south of me, practically in my own backyard. All the people we met in LA were there and, it was as if no time had passed. The tour to Unbelievable Acres was just that - unbelievable! At the end of the day the bus driver opened the compartments usually packed with luggage but, in our case, it was plants - lots of plants. In the frenzy I accidentally left a special plant on the bus. Cheryl Lenert was kind enough to rescue it for me. Thanks Cheryl. Also thanks to everyone who allowed us to tour their lovely gardens and greenhouses. What an excellent convention!

I would like to encourage anyone who has not attended an ABS convention to do so, you will meet the nicest people, see amazing sites and buy the cream of the crop at the plant sale. That's hard to beat.



Oh-la-la! The sales tables were impossible to resist at the recent West Palm Beach Florida convention.

Symptoms Affecting Plants

By Jack Street, Queensland Begonia Society, Australia

Despite care being taken to select fertilizers containing suitable N.P.K. for our plants, it is possible for a deficiency of certain elements to occur due to soil or climatic conditions.

The following is a summary of deficiencies and treatments.

Magnesium (Mg). Deficiency can be due to a low magnesium content in the soil or a high level of available calcium which restricts the uptake of magnesium by the roots. Symptoms appear first on the older leaves in the latter part of the growth season. Leaves become yellow at the tip and margins or between the veins.

Treatment – If the soil is acidic, dolomite should be applied in small quantities. If acidity is not involved, magnesium sulfate (Epsom salts) may be applied in small dosages.

Iron (Fe). Deficiency is usually due to alkaline soil conditions or insufficiency in acidity in the case of plants requiring very acid soil. Young leaves are affected first. Symptoms vary from a very pale color through interveinal yellowing with green along the fine veins, ending in total yellowing.

Treatment – Acidify the soil by applying small amounts of powdered sulfur. A small quantity of iron chelate can be given to

alkaline soils as an alternative.

Zinc (Zn). Some soils have a low zinc content which has an effect on plants' terminal growth. Symptoms are shortening of the internodes resulting in a rosetted appearance of the shoots. Leaves are undersized and become mottled yellow between the veins.

Treatment – Applying a foliar spray containing zinc to flush off new growth in the spring is most effective. A standard spray is 10g of zinc sulfate in 10 liters of water. The addition of 20g of urea increases

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the uptake of zinc.

Manganese (Mn). Low available manganese content in alkaline soil can be easily confused with either zinc or iron deficiency. Symptoms are light green patches between darker green areas along main veins. This may appear about a month after a flush of growth then fade as leaves mature and take up sufficient manganese.

Treatment – A foliage spray containing 10 grams of manganese sulfate in 10 liters of water applied to a flush of spring foliage will overcome the problem. The addition of 20g of urea will increase the uptake.

Copper (Cu). Low content in the soil may be the cause of the deficiency or too strong soil alkalinity. Symptoms vary according to species of the plant. First signs are growth of watershoots with large coarse, dark green leaves. These droop then grow into “S” shapes. Less vigorous shoots develop gum blisters at each leaf nodes. Soft drooping foliage is also recognized as a copper deficiency.

Treatment – Deficiency may be controlled by spraying with fungicide, copper oxochloride, at the rate of 40g in 10 liters of water. It is quickly absorbed when applied to a flush of new growth.

Boron (B). As well as a low content, overliming the soil can cause a deficiency as well as alkaline soil conditions. Symptoms are terminal growth rosetting and an abnormal development of lateral buds. Leaves will be thickened with corky

cracks.

Treatment – For large areas a foliage spray containing 225g of Borax to 45 liters of water will give an even dispersal. In small gardens a teaspoon of Borax in 5 liters of water will suffice. Mixed fertilizers also contain boron in regulated quantities. Borax can be purchased in chain stores. Note: It is recommended that application only be made once a year.

Molybdenum (Mo). Deficiency is due to low content of the soil and is the worst where soils are acidic. Symptoms are pale, cupped leaves, reduced in size and scorched at the tip and edges.

Treatment – Ammonium Molybdate may be applied as a foliage spray at the rate of 10 g per 10 liters of water. Liming the soil prior to planting to raise the pH is beneficial. The average gardener is catered for with specific products at all commercial outlets, but remember - don't be heavy handed when applying these mixtures or they could cause toxicity.

References:

Department of Primary Industries (Horticultural Branch)

Gardening Down Under by Kevin Handreck

**January/February closing date
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**Please send your articles,
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To the Begonia Society Members

Over the years the partnership between the Begonia Society and Ades & Gish Nurseries has been a wonderful relationship. We appreciate all the expertise, advice, and cuttings we have received from the different Society chapters.

To show our gratitude to the Begonia Society, over the years we have held chapter meetings at our nursery, where members have been able to purchase plants for their personal collections.

I realize that for some of the chapters it is just too far to travel to our nursery. This brings up my next point. **Ades & Gish Nurseries is proud to offer our begonias to all chapters in the U.S.** We have just created an order form for you to purchase plants directly from us. You can use this to order for your Begonia Society Chapter.

If you are interested in purchasing some begonias please visit us at **www.agnurseries.com**. Then click on the "Begonia Society Member Order Form" on the left navigation bar. If you have any trouble with this please feel free to give me a call or e-mail.

To schedule a meeting or field trip at our nursery, please contact me so we can discuss the details. My phone number is 760-410-0400 ext. 145; my e-mail is darrella@agnurseries.com

Again I thank everyone in the Begonia Society and look forward to a continued partnership.

Sincerely, Darrell Ades

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Coming up in The Begonian

Next year is already shaping up to be an exciting one for The Begonian. Finishing touches are being put on an article about new Vietnam species from Hieu Nguyen. Another article on a couple of new species from Mexico and a beautiful article on *B. longifolia* are ready to go from Rekha Morris. Two new series – Brad Thompson on various aspects of Begonias and Charles Henthorne on terrariums and Begonias – both begin in this issue and will continue into next year. There are also a few surprises in store. I think 2010 will be a great year for The Begonian!

Please be part of the fun – send your growing tips, questions, letters to the editor, event announcements, great photos, clever ideas or whatever you think would be a good addition to our journal. Keep an eye on our excellent ABS website (www.begonias.org) for more information about submitting materials to the Begonian. A writer and photographer's style sheet will be available there soon to make it easy for you to know how to submit articles and images. A new rate sheet for advertising will also be accessible on the website. And, by the way, remember to patronize our advertisers and let them know you saw them in The Begonian.

Thanks to all the contributors who make our journal something we look forward to finding in the mailbox. Keep up the excellent work.

Linda Tambllyn, editor

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Begonia 'Enchantment Aureola' is one of the many terrarium plants that will be highlighted in a new series on Begonias for terrariums.

This beauty, above, requires low light, cool temperatures and high humidity to retain its wonderful coloration.

Culture notes and photo by Charles Henthorne

Closing Dates for the 2010 Begonians

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May / June – March 28, 2010
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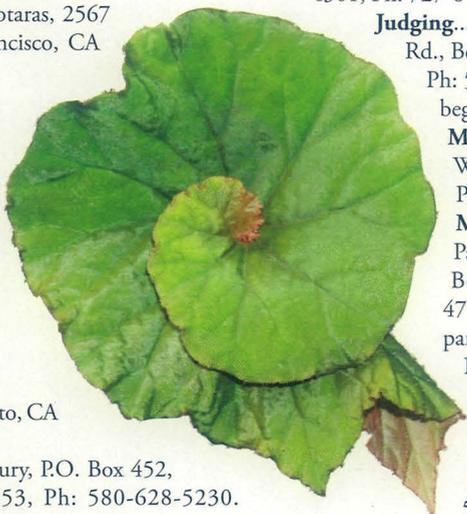
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