

*The*

# Begonian

September/October 2006

# 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 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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## Cover

**Front:** **Jim Hunter** sends us this photo of *B. aptera* collected in S. E. Sulawesi. Read all about the collection trip on which this was taken on page 168.

**Back:** Here are the unusual seed pods of *B. ampla* provided by **Mary Bucholtz**. Read about her adventures growing four African beauties on page 166.

# In This Issue

This is an exciting issue in which four new species from China are announced and many descriptions of unidentified begonias are provided. **Mary Bucholtz** writes about African begonias and **Charles Henthorne** about *B. ludicra*. Plus, **Scott Hoover** describes more of his travels collecting species and **Rekha Morris** shares new information on Indian species she has collected. These are truly exciting begonia times!

## Articles

Begonia Clinic	165	Editor's Notes	188
A Quartet of African Beauties	166	Conservation Comments	190
Collecting on Mt. Slamet and Sumbawa, Indonesia	168	Membership Update	193
Corrections, Directory of Begonia Societies	170	Coming Events	198
Unidentified Begonia Listing	171	Officer's Page	199
Four New Species	172		
Two Eastern Himalayan Species	174		
Behind the Dust	178		
Begonias and Scotland	180		
<i>B. ludicra</i>	184		
<i>Begonia U439</i> and <i>U440</i>	195		

## Regular Features

President's Message	164
Seed Fund	182

## Quick

Check your mailing label.  
If it reads

**200611 or 200612,**  
your membership is about  
to expire.

Please renew!

We don't want to lose you.

This is the last time you will see this notice since all dues in the future will be due in December for the following year!

## PRESIDENT'S MESSAGE

I hope to see many of you in St. Louis, September 14-16 for the Southwest Region Get-Together and American Begonia Society Annual Meeting. Director *Gene Salisbury* and Get-Together Chairman *Cheryl Lenert* have worked very hard to make this historic event happen. We look forward to meeting new begonia friends in the Midwest and visiting the renowned Missouri Botanic Garden.

Save the Date! The invitation from the Scottish Begonia Society for a Ceilidh (gathering) at the Ayr Flower Show in August 2007 appears in this issue. President *Samuel Kennedy* is following up on the late *Hugh McLauchlan's* dream of forging a bond between the ABS and the SBS. I will be meeting with Samuel, his wife Betty who is Treasurer of the SBS, *Ewen Donaldson* from the Glasgow Botanic Garden and members of the Scottish Begonia Society in August this year to help with the plans for the event. My next message to you will tell about those meetings and the plans for next year. Please consider making the trip to Scotland to experience Scottish hospitality, meet new fellow begonia lovers, take in the breathtaking Ayr Flower Show, and tour Scotland, a most beautiful and friendly land.

This year the SBS has asked ABS to put up a display booth at the Ayr show. Plans are being made and I will report on the outcome in St. Louis and my next message. A memorial for our beloved *Hugh McLauchlan* is planned for this year as well.

One of the subjects to be discussed at the Annual Meeting in September concerns ABS membership. It is most important that we maintain the rules for branch membership set forth in our Constitution. "Article IX-Branch Societies Section 2. Each branch society shall

have a Constitution and Bylaws, both of which shall be approved by the Board of Directors of the American Begonia Society. It will require that one member of each household maintain membership in the American Begonia Society....." I will ask the National Directors to report on whether their branches have members who are not ABS members and if so, what can be done about it. Branch Relations Chairman, *Mary Bucholtz* and Membership Chairman *Donna Marsheck* will be working on this as well. We would hope that this problem can be addressed and corrected in a friendly manner. We have been working on this for some time in Southern California with some success but much remains to be done.

The 2007 ABS Convention will be in Los Angeles in September. The Ayres Hotel that Convention Chairman *Margaret Fisher* has chosen is fabulous. Although it is still too early to book reservations you can check it out on their web site: [www.ayresmanhattanbeach.com](http://www.ayresmanhattanbeach.com). The hotel is close to LAX with a world class restaurant, free parking and a great location with lots of restaurants within walking distance. The room rate is quite reasonable and includes breakfast. You will love it and the Plant Sale, the Show, the Tours and the Seminars.

We wish our dear Past President *Morris Mueller* a swift and complete recovery from his recent serious illness. ABS and the Joan Coulat Sacramento Branch need you, Morris.

I just had a post card from *Charles Jaros* and *Maxine Zinman* in Thailand. They were having a grand time and collecting lots of begonias. What will they bring back for us? Can't wait to hear all about it. See you in St. Louis.

Janet Brown,  
in friendly contact.



# Begonia Information Travels Too!

## *Begonia Clinic*

*It has been noted before how quickly new begonias travel from state to state and country to country. Movement is true of information about begonias as well. In the Winter 2006 Queensland Begonia Society Inc. Journal Joan Taylor suggested a repeat of a worthy article from the June 1994 issue of that journal entitled "Begonia Clinic." At the end it was noted that the material was originally taken from the U.S.'s Bernice Brillmayer's 1960 All About Begonias. I agree with Joan and repeat the article once more here with my thanks to her and the Queensland Journal editor, June McBride.*

Sometimes (and some varieties of) begonias will react sharply to unfavorable conditions; in other situations (and with other begonias) there may be only an overall malaise or unhealthy appearance. The most prevalent reactions will be presented in this and the next issue of the journal (it's a mini-series!).

- 1. Temperatures Too High.** *Symptoms:* Leaves feel and look dry, lifeless, not supple and alive. Plant wilts frequently, needs watering more than once a day. Few or no flowers at visual flowering time of year.
- 2. Temperatures Too Low.** *Symptoms:* Plant "stands still" – lives, but does not grow or bloom. Leaves have a sickly colour, feel limp. Soil takes too long to dry out. Plant may appear to be in good health one day, flop over and die the next.
- 3. Temperature Too Changeable.** *Symptoms:* Unopened buds and leaves drop. Plant may suddenly collapse. *Cause:* Chill drafts in warm air, or extreme jumps from cold to warm – plant

suffers "shock". Occasionally results when plant is moved from warm, humid greenhouse to cool, dry home.

- 4. Light Too Weak.** *Symptoms:* Stems limp, soft, and longer than normal with exaggerated spaces between nodes. Leaves lack fresh healthy colour, look pale, wan; unhealthy sheen. Plant stretches toward the light, blooms little or not at all. *Treatment:* Cut back and start over; provide more light. *Note:* Plants, even with strong light, will tend to lean in the direction of the one light source. To preserve symmetry, rotate pots a quarter-turn every day or so.
- 5. Insufficient Sunlight.** *Symptoms:* Plant bloomed well last winter, but hasn't a flower this year. *Cause:* Check last winter's weather reports. Were there fewer sunless days with dark, overcast skies? This year, how many days of bright sunlight? *Treatment:* Try a few bonus hours of artificial light beginning at dusk every day.
- 6. Sunlight Too Strong.** *Symptoms:* Thin, brown spots on leaves – sunscald. Plant looks shriveled, stunted, leaves are reddish, even scorched. *Treatment:* To prevent sunscald, avoid water on leaves when plant is in sun. Otherwise, more plants out of strong sunlight, or provide some shade.
- 7. Air Sale, too Humid.** *Symptoms:* Filmy mould forms around base of stems, particularly on cuttings rooting in closed propagation box. Leaves rot, starting at centre and working out to edge. Stems become squashy and rot off. Soil is sour, seldom dries out. *Treatment:* Increase circulation of fresh air. Space plants well apart. Partially remove top from propagation

*Continued on page 173.*

## A Quartet of African Beauties

*B. ampla*, *B. cavallyensis*, *B. ebolowensis*, *B. oxyanthera*

by Mary Bucholtz,  
Jacksonville, Florida

The area that is the native habitat of these four begonia species is found in tropical Africa. The location is the east coast of Africa, above the equator with high temperatures, high humidity and considerable rainfall.

They are epiphytes, that is: living on other plants, but not taking any nourishment from the host. In addition they have a climbing habit, some growing in the dryer conditions found in the tree tops of the forests making them an excellent choice for hanging baskets.

Their cultivation can be carefree to a bit more challenging. However, these four seem to do quite well in an outdoor setting for most of the year. In the winter months they will need to be in a heated greenhouse or similar warm location. They require bright filtered sunlight. In the winter, they can enjoy full sunlight, provided the winter sun is not extremely intense in the space you have chosen. You might also consider some additional humidity, such as wetting down the floor of your greenhouse and misting. If you have chosen an indoor location, frequent misting is a must. Your basket hanging over the kitchen sink is a perfect spot for extra humidity. To induce branching along the stems, pinch out the terminal bud on some of the stems and shorten others. These begonias do well when grown pot bound and they like to be fed on a regular schedule.

*B. ampla* was described by J.D. Hooker in 1871 and is placed in the section *Squamibegonia*. It was found on Sao Tome', one of the islands in the Gulf of Guinea. It has large glossy glabrous leaves with flowers two inches from tepal

to tepal. Flowering is moderate to profuse in late spring to early summer. Flowers are white with rose-colored markings. In addition to its large flowers, most exciting about *B. ampla* is its fruit. It is a pale orange, berry-like and thick walled.

*B. cavallyensis* was described by A. Chevalier in 1912 and is from the Ivory Coast and Guinea to Ghana. It is placed in the section *Tetraphila*. The leaves are drought tolerant and leathery. The leaf color is stunning, red veins on the green leaves which are bordered on the edge with a maroon band. Flowering is moderate, with inflorescence being white, most tinted red. The fruits of *B. cavallyensis* are fleshy, which, when ripe, split open.

*B. ebolowensis* was described by Engler in 1921 and is found from Cameroon to the Congo. It is placed in the section *Tetraphila*. The leaves are elliptic, of medium size and bare. *B. ebolowensis* produces profuse pink-red flowers. The female tepals fold back from the stigmas and styles, making the flower almost bird-like. The orange fruit is tubular or banana shaped, measuring two inches long. It is said, the seeds can germinate in five days.

*B. oxyanthera* (syn. *B. jussi-aeicarpa*) was described by Warburg in 1895 and is placed in the section *Tetraphila*. This begonia exhibits long, narrow, medium green leaves with red stems. The yellowish, white inflorescences have red margins, especially the male flowers. The male blossom appears above the female blossom. The yellowish fruit is elongated as a banana or sausage. *B. oxyanthera* has been found, in nature, to grow on the trunks





*Left, B. ampla whose seed appear on the back cover. Above is B. ebolowensis and below is the elegant B. cavallyensis. All photos by Mary Bucholtz.*



of the trees where it is dryer, rather than closer to the ground where conditions are more moist. This species seems to prefer cooler conditions than the other three.

*Mary Bucholtz is a frequent contributor of wonderful articles and photos to the Begonian as well as serving as Branch Relations Chair for ABS. Her full address will be found on page 199.*

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## Begonia Collecting on Mt. Slamet and Sumbawa, Indonesia

2004-2005

by

Harry Wiriadinata & Deden Girmansyah, Bogor Herbarium  
Scott Hoover & James M. Hunter, New England Tropical  
Conservatory

Continuing our exploration for *Begonia* on Indonesian mountains, as reported by Hoover et al (2004), we here describe botanical work on an additional 5 mts. Mt. Slamet (3,416 m., 7 30' S Lat./109 14' E Long.), Central Java was targeted for exploration because it is the second highest mt. in Java and the highest reported annual rainfall on the island (7,069 mm.) is reported from Baturdeen on the South slope (Berlage 1949). Prior experience indicates *Begonia* to be very diversified in wet tropical forest. The rationale for exploring Sumbawa, Nusa Tenggara was based on the likely probability that no botanist or any other scientist has explored the high mts. in the western part of the island.

Such a circumstance offered opportunity to find new species. Recognition that the island is dry suggested some surprises would be in store.

The first expedition was undertaken in March/April 2004 at the end of the rainy season while the second took place in July 2005. The rainy season conditions on Sumbawa in 2004 were such that it was not practical to ascend the higher mts., thus the return trip was undertaken in 2005 in order to access the tops of the mts.

Of interest on Mt. Slamet was the collecting of *B. atricha* (Miq.) A.DC. a beautiful species not previously in cultivation, but now introduced. A fine, small specimen was shown at the 2004 ABS convention in Dallas grown by **Mary Fuqua** of NETC. Of additional interest is that *B. atricha* was not included in *Flora of Java* by Backer and van den Brink (1963). *B. atricha* was observed as a small colony of several individuals, though seedlings are beginning to grow on a trail embankment below the main colony, indicating the population is spreading. In general, none of the *Begonias* on Mt. Slamet occurred as large, dominant colonies, like in West Java. A curious, high elevation *Begonia* likely a *B. multangula* variety was collected from 6250 ft. Its leaf morphology was distinct from the lower elevation plants, which appeared more closely aligned with plants from West Java. This *Begonia* was observed at one of the highest elevations I've seen the genus in Indonesia. Other *Begonia* collected on Mt. Slamet includes: *B. hirtella*, *B. muricata*, *B. longfolia*, *B. aceolata*, and *B. isoptera* taking the record for the most species of *Begonia* along an elevational gradient so far in the country.





Above, the striking fruit of the cover plant, *B. aptera*. Below, these beautiful leaves and seed pods are on *B. atrica* in East. Java. Photos by **Jim Hunter**.



Sumbawa did indeed offer surprises. During 2004, the trip by jeep into the staging area village of Tepal resulted in finding two species growing along a wet embankment at 950 m. One species was tuberous, the other a rhizomatous, both likely new to science. The tuberous species was not recollected in 2005 because the embankment on which it was growing had become a landslide; this location being the only place the species was observed. Seed from this tuberous species was grown at NETC and exhibited at the 2004 ABS convention also. Most of the island of Sumbawa is dry, but this particular area where we collected the begonias, and for about 10 kms. more along the road, was a wet area. Besides the Begonias, tree ferns, Gesneriads, aroids and a number of other interesting plants grew, indicating we were passing through a patch of wet tropical forest. With sights on the tops of the high mts., it still was not possible to botanically explore this wet area in 2005. Due to the possibility of finding such a wet forest on dry Sumbawa necessitates a return visit to explore the limits of this curious patch of forest and determine floristic content. Four unknown species of *Begonia* were collected in 2005, each several times. In several instances, large colonies of *Begonia* were collected on the very top of the mts., a circumstance not encountered on any of the higher mts. explored throughout Indonesia (Hoover et al 2004). It is noted that Mt. Linting had 3 species of *Begonia* clustered at the top of the mt. while the other mts. had only one or two species each. Here in Sumbawa, moisture-laden clouds must create a favorable habitat for *Begonia*. It will remain for Girmansyah, undertaking his Ms. Thesis in Indonesia on Begonia of Bali, Lombok and Nusa Tenggara, to make a determination of whether any of these Begonia are new to science.

The upcoming expedition in March

2006 to S. E. Sulawesi will undoubtedly offer opportunity to discover Begonias since the areas we will be visiting have received little, if any, previous botanical exploration.

## Literature Cited

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- Berlage, H.P.** 1949. Rainfall in Indonesia: Mean Rainfall Figures for 4339 Rainfall Stations in Indonesia, Calculated from Observations Made During the Period 1879-1941. Drukenj de Unie, Batavia.
- Hoover, W.S. Hoover, H. Wiradinata, C. Karegeannes and J.M. Hunter.** 2004. Notes on the Geography of SE Asian Begonia and Species Diversity in Montane Forests, *Telopea* 10 (3) 749-764.

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## Corrections: Directory of Begonia Societies

Please correct the email address for the Knickerbocker Branch National Rep, **Nikki Taussig**: it is [nytaussnikki@netscape.net](mailto:nytaussnikki@netscape.net).

For the National Rep of the Begonia Societies of the Palm Beaches, **Virginia Jens**, the correct address is 4398 Evelyn Place, Lake Worth, FL 33463, Ph: 561-964-8871; the e-mail is: [virginiajens@hotmail.com](mailto:virginiajens@hotmail.com)



# Unidentified Begonia Species List

Thelma O'Reilly, Project Director

**B. U314** - Bolivia. Plant material collected and deposited with Marie Selby Botanical Gardens, Sarasota, FL. Thick Stem. Large leaf blades are lobed and dark green with few silver splashes. Margin is serrated. The flowers are identical to flowers of *Begonia wollnyi* and *B. U176*.

**B. U315** - Madagascar. Shrub-like begonia found growing on plant imported by **Dr. Darian** of Vista, CA. Specimen given to **Mabel Corwin** who grew it into a lovely green leaved semp-like shrub with swollen nodes and clusters of attractive, small white flowers.

**B. U316** - China, Yunan. Collected west of Yang Bi by **Bob Cherry**, Australia.

**B. U317** - China, Yunan. Collected by Bob Cherry. Tuberous. Difficult because new shoots go dormant quickly and fail to regrow.

**B. U318** - Phillipines. Seed sent to Jan Goodwin, Australia, from Prof. **J.D. Doorenbos**.

**B. U319** - South Australia. Seed collected by Thelma O'Reilly from an interesting *B. cucullata* type begonia in the beautiful enclosed garden of **Ted and Joyce Williams** in Adelaide, 1993. Masses of huge white flowers adorned the 6 ft. tall plant. A 2004 planting of the original collected seed proved 100% viable. Seedling grown outdoors bloomed with large, bright pink flowers. Seedlings grown indoors under light bloomed huge, pristine white flowers.

Note: Fresh seed is available in the Seed Fund.

**B. U320** - Ecuador. Collected in vicinity of Villacabamba by Marie Selby Botanical Gardens, Sarasota, FL in 1989. Terrestrial and lithophyte on soft conglomerate cliff with *Tillandsia tectorum* and *T. secunda*. Elevation about 1600 ft. in dry thorn scrub on steep slopes. Note: This tuber was given to O'Reilly in 1994. Growing it side by side with *B. U237*, collected in Ecuador by **Scott Hoover** in 1988, proves they are the same species. Identical rare traits appear on both species when flowering. The strong rose-like fragrance and the variable number of male and female tepals, from four to ten, on each plant. I am preparing an article on my many observations and discussions about a few other tubers species that have an unusual number of tepals.

**B. U321** - Mexico. Seed. No Germination

**B. U322** - Malaysia Saban. Collected by **Kevin Hendreck**, Australia. Rhizomatous. Leaf blades 5 x 3 1/2" light green, ovate/acuminate. Margins and petioles hairy. Flowers bright pink, occasionally white.

*You may contact Thelma O'Reilly at 10942 Sunray Place, La Mesa, CA 91941, Ph: 619-670-0830. She will appreciate receiving any information about your experiences in growing any of the Unknowns. And the editor would appreciate articles about those experiences for the Begonian.*

Jack Golding has announced four new begonia species additions from China. First below, shows his listing, followed by the abstract from the journal, **Botanical Studies**.

## Four New Species from Guangxi added to Begoniaceae Species List on June 13, 2006

### Begonia

**debaoensis** C.-I Peng, Yan Liu & S.M. Ku, Bot. Stud. 47:207-11, pl. 1 & 2, 2006. [*Coelocentrum*]. China: Guangxi. N

**pseudodaxinensis** S.M. Ku, Yan Liu & C.-I Peng, Bot. Stud. 47:211-14, pl. 5 & 6, 2006. [*Coelocentrum*]. China: Guangxi. N

**pseudoleprosa** C.-I Peng, Yan Liu & S.M. Ku, Bot. Stud. 47:214-18, pl. 7 & 8, 2006. [*Coelocentrum*]. China: Guangxi. N

**semiparietalis** Yan Liu, S.M. Ku & C.-I Peng, Bot. Stud. 47:218-21, pl. 9 & 10, 2006. [*Coelocentrum*]. China: Guangxi. N

## Jack Golding

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### Botanical Studies (2006) 47: 207-222.

Four new species of *Begonia* sect. *Coelocentrum* (Begoniaceae) from limestone areas in Guangxi, China

Shin-Ming KU<sup>1,2</sup>, Yan LIU<sup>3</sup>, and Ching-I PENG<sup>1,\*</sup>

<sup>1</sup>Herbarium (HAST), Research Center for Biodiversity, Academia Sinica, Nangang, Taipei 115, Taiwan

<sup>2</sup>Department of Life Sciences, National Cheng-Kung University, Tainan 701, Taiwan

<sup>3</sup>Guangxi Institute of Botany, Guangxi Zhuangzu Autonomous Region and the Chinese Academy of Sciences, Guilin 541006, P.R. China

**ABSTRACT.** Four new species of *Begonia* (sect. *Coelocentrum*), namely *B. debaoensis*, *B. pseudodaxinensis*, *B. pseudoleprosa* and *B. semiparietalis*, from the limestone areas in Guangxi Zhuangzu Autonomous Region, southern China are described and illustrated. A somatic chromosome number of  $2n = 30$  is determined for three of them. *Begonia debaoensis* resembles *B. bonii* Gagnep., differing in having smaller leaves; a slender rhizome with long internodes; bicolored outer tepals that are pink



toward the margins and whitish in the middle; and bearing abnormal, feminized stamens on staminate flowers. It is perhaps of hybrid origin. *Begonia pseudodaxinensis* is similar to *B. daxinensis* T.C. Ku, differing in the leaves being entirely green and without white maculation; the stipule apex obtuse or emarginate; and the rhizome stout and nearly glabrous. *Begonia pseudoleprosa* bears a superficial resemblance to *B. leprosa* Hance (sect. *Leprosae*), differing in the fruits being winged, trigonous obovoid-ellipsoid and with parietal placentation. It also resembles *B. bonii* Gagnep., differing in the leaves being subcoriaceous, nearly flat and very sparsely setulose or subglabrous on the adaxial surface; and petioles and the main veins on the lower leaf surface being appressed hairy. *Begonia semiparietalis* is also somewhat similar to *B. bonii* Gagnep., differing in the leaves having white maculation along main veins and the upper surface sparsely setose-pilose; ovaries and fruits long glandular-pilose; placentation parietal on upper half of the ovary and axile on the lower half.

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Continued from page 165.

box; keep propagating medium on the dry side.

**8. Air Too Dry, Humidity too Low.**

*Symptoms:* Leaves continually drop ; new leaves form. Leaf edges are crisp, dried. Flower buds don't develop, or fall before opening. *Treatment:* Provide more humidity.

**9. Too Much Water, Too Often.**

*Symptoms:* Soil is constantly muddy; roots and rhizomes rot. Healthy plants (especially hairy-leaved varieties) suddenly wilt, wither, dry at top. Lower leaves (particularly angel-wings) drop off as if cut from stem, leaving small tassel of new leaves at tip. Leaves have blister, dropsy-type swellings (oedema). *Treatment:* Make sure pot has adequate drainage. Hold back water, even to the point of wilting. Never water on dark, damp days. When plant looks ill, start new cuttings in a hurry. One small but firm and living section of rhizome or root can often be trimmed clean and started again in a propagations box.

**10. Too Little Water, Too Seldom.**

*Symptoms:* Leaves and stems wilt. Well-formed flower buds drop off. Leaves (particularly summer-blooming tuberous begonias) wither and dry, without turning yellow first. *Cause:* Is

soil too sandy? Is pot so full that water has no room to wait until it can seep down and soak the root ball? Are you watering thoroughly, so that excess runs out the bottom – or merely wetting the top inch or so? Do you water on a set schedule, or when plants actually need it. *Treatment:* Most begonias wilted from dryness will perk up amazingly fast when soil and pot are soaked in pan or bowl of water up to the rim.

**11. Soil Too Heavy.**

*Symptoms:* Plant "doesn't do well", barely survives. New tip growth withers, dries. Plant gradually dies. In hot, dry weather (and especially in summer-flowering tuberous begonias) the lower leaves yellow and fall off. *Treatment:* Turn soil out of pot, examine roots. Clean off any that look dark and dead. Repot in fresh soil. Prune back severely. If this is one of the more delicate begonias, try it in a wire hanging basket lined with moss, and a lighter soil mix containing more humus. Or try sphagnum moss.

**12. Soil Too Light.**

*Symptoms:* Plant requires too-frequent watering, has tendency to wilt several times a day, particularly in hot weather. *Treatment:* Mix soil that will hold more moisture, increase proportion of humus and cut-

*Continued on page 196.*

## Two eastern Himalayan species from India:

### *B. griffithiana* and *B. nepalensis* by Rekha Morris & Patrick McMillan\*

Among the twenty or so species which were documented in Arunachal Pradesh, India in 2005 by Rekha Morris [details in the *Begonian*, May/June, 2006, pp.89-95], two seemingly similar species have, with the help of **Dr. Mark Tebbitt**, been identified as *B. griffithiana* [syn. *B. episcopalis*] and *B. nepalensis* [both in section *Monopteron*]. Since we have been able to observe mature plants of these species in the wild and growing here in South Carolina, it is well worth examining both with reference to published descriptions which appear to have been based largely on herbarium specimens. Moreover, Dr. Mark Tebbitt in his recent monograph, *Begonias: Cultivation, Identification and Natural History* [2005, p. 144], has pointed out that these species are infrequently encountered in cultivation, writing that *B. nepalensis* is "more widely grown, but neither is common in cultivation." Since it appears that neither of these two species is currently in cultivation in the USA except for the plants brought back by Rekha Morris, it is appropriate to introduce them into cultivation in this country with as much accurate information as we have been able to derive from our observation of live plants.

In his monograph, Dr. Tebbitt has described these two species briefly in conjunction with *B. hatacoa* [pp.143-144]. Both have lanceolate green foliage and single winged seed capsules with two locules. Although Dr. Tebbitt describes both these as having "glossy green leaf blades" [p. 64], *B. griffithiana* from several sites in western Arunachal does not have glossy green leaves. It does, however, conform to two characteristics mentioned by Dr.

Tebbitt, as it has branched stems and male flowers with 4 tepals. *B. nepalensis* has unbranched stems as described by Dr. Tebbitt, but its male flowers have 4 tepals and not 2 as indicated by Dr. Tebbitt. One explanation for this divergence may be that as in a number of other species *B. nepalensis* loses two tepals quite early, so only two are preserved in herbarium specimens. Evidently female flowers were not available for observation to Dr. Tebbitt as these are not mentioned. On our plants the female flowers have 5 tepals, as is clearly visible in the accompanying photographs.

Surprisingly the most extensive coverage of these two species and other Indian begonias is the 19<sup>th</sup> century account by **C. B. Clarke** in *The Flora of British India*, vol. II [1879], pp.635-656, by **Sir J. D. Hooker** assisted by various botanists. It is with close reference to information in this monographic study that we discuss various key aspects of *B. griffithiana* and *B. nepalensis*.

*B. griffithiana* [A. de Candolle]

*B. griffithiana* is also known as *B. episcopalis* [C.B. Clarke], and Clarke's description is based on specimens collected by Griffith in Bhotan [now correctly spelled as Bhutan], by Clarke himself in Shillong [formerly in Assam but now in Meghalaya], and by Hooker and Thomson from the Khasia mountains [formerly in Assam but now in Meghalaya]. The specimens from Arunachal display characteristics which are generally in consonance with Clarke's description except in the number of tepals on male flowers. Clarke mentions two tepals on these, whereas we have consistently observed four tepals on



our plants. The seed capsule of *B. griffithiana* [syn. *B. episcopalis*] as shown in a line drawing in another publication by C. B. Clarke, "On Indian Begonias," *Journal of the Linnean Society*, [London, vol. 18, 1880, pp.114-122, fig. 34] conforms to those collected by Rekha Morris in Arunachal. Our plants have foliage which is pubescent on both surfaces as in Griffith's examples from Bhutan cited by Clarke, who also goes on to mention that examples from Shillong were very nearly glabrous while those collected by Hooker and Thomson from Khasia were intermediate.

Although *B. griffithiana* has not been in cultivation in recent years, photographic documentation indicates that **Mildred Thompson** had at least one plant of this species in her now dispersed and largely lost collection, although it was identified by her as *B. nepalensis* var. *nepalensis*. This latter species may, as indicated by Dr. Tebbitt, be more widely cultivated, however, descriptions of this species are either incomplete or somewhat confused, thus meriting a detailed description based on the plants from Arunachal in cultivation with us.

*B. nepalensis* [A. de Candolle]

*B. nepalensis* is a perennial, tuberous species producing multiple stems from each tuber that reach 15-30 cm or more in height. Following fruit set the individual stems senesce, but new stems are continuously produced from the tuber, and the species appears to flower year round in cultivation. Frequently stems will produce aerial tubers which develop through swelling at the nodes, not as bulbils in the leaf axils as in *B. evansiana*. Leaves are alternate and widely spaced [1-5 cm internodes], and stipules are persistent, 5-13 cm long, broadly lanceolate, puberulous, and minutely lacerate on the margins. Petioles range from greatly elongate low on the

stem [to at least 14 cm] to less than 1 cm long on the upper portions of the stem. Leaves are 7-15 cm long and 2.0 - 5.5 cm wide, lanceolate and oblique-cordate at the base with the lobes only slightly or not at all overlapping with minutely serrate-crenulate margins. The upper surface is typically a rich, dark green and moderately puberulous. Undersurfaces are paler, and in some specimens the venation is an attractive and contrasting red. Inflorescences consist of few flowered [2-4 flowers] cymes produced from the upper leaf axils. Inflorescence bracts are lanceolate, quickly deciduous and minute ranging to 2.5 mm. The male flower consists of two broadly orbicular to broadly obovate outer tepals [8-14 mm long & 12-13 mm wide] which are white to very pale pink, and 2 narrowly oblanceolate to oblong inner tepals, similar in coloration to the outer tepals. Thirty or more bright yellow stamens are produced from a short central column. The female flowers have 4 -5 obovate to oblanceolate tepals with the outermost being the largest and widest, and similar in coloration to the male flowers. Two or occasionally 3 stigmas are produced, and these are broadly flabellate with bicornute extensions along the distant margins. Pedicels continue to extend during flowering and fruiting to reach maximum length of 25 mm. The ovary is two locular with bilamellate placentation. The compressed capsules are falcate, 15-22 mm long and up to 7 mm wide with one well-developed, ascending upper wing of 10-15 mm. The flowers in this species are extremely fragrant, with a strong rose-like scent that is most intense in female flowers. This fragrance is most intense during the morning but continues to be present through the early afternoon.

In the wild, *B. griffithiana* has flowers which are either all white or those which are a pale pinkish-white. Likewise





Left, *B. griffithiana* growing in Pendleton, S.C. Above are the male flowers, notice pubescent Foliage which is one distinguishing feature of this species - *B. nepalensis*, below, is not hairy. Photos by *Rekha Morris*.





the inflorescence of *B. nepalensis* in its native habitat differs from those of our cultivated plants in being more dramatically vivid, as the buds are a deep pink while the open blossoms are a satiny white flushed pink.

In C. B. Clarke's coverage of the begonias of India there is no species listed as *B. nepalensis*. However, the authors of the Smithsonian tome, *Begoniaceae*, determined that in describing *B. gigantea*, Clarke was in part describing the species now listed as *B. nepalensis* in both editions of *Begoniaceae* with an illustration of an herbarium specimen in the 2<sup>nd</sup> edition, Fig. S218. There are other problems with Clarke's description of *B. gigantea*, chief among these being that he has used the same specimen, Wall. Cat. 3677, on which partly he has based his description of *B. gigantea* [= *B. nepalensis*] and *B. silhetensis* [now *B. silletensis* following the spelling used by A. de Candolle, 1864]. Clarke's conclusion that this i.e., *B. gigantea*, is the largest Indian species describes not *B. nepalensis*, which is not a large species by any criteria, but *B. silletensis* whose foliage can measure up to nearly 3' in length.

However, the seed capsule of *B. gigantea* as described by Clarke is not that of *B. silletensis* but of *B. nepalensis*. This is further confirmed in his later publication already cited, "On Indian Begonias." Here the seed capsule for *B. gigantea* in fig. 33 generally conforms with the seed capsules we have recorded for *B. nepalensis*. It appears that Clarke's *B. gigantea* is a muddled pastiche, and the authors of *Begoniaceae* were correct in their designation of this appellation as 'nomen nudem.'

In describing *B. nepalensis* as a tuberous species, we have opened up a fresh area of controversy regarding this species, which has hitherto been regarded as rhizomatous. Clarke describes *B. gigantea*

[= *B. nepalensis*] as having rootstock which is "thick, woody, not tuberous". Dr. Tebbitt and Millie Thompson have both described *B. nepalensis* as rhizomatous in personal communication with Rekha Morris. We present two points in support of our position, which is at variance with the assessments of two such highly regarded authorities on begonias. The first of these is a point made by Millie Thompson that the hard, woody portion of the rootstock we are referring to as tuberous is considered a rhizome by begonians, as demonstrated by a photograph showing similar rootstock on a plant of *B. roxburghii* once in the Thompson collection. While rhizomes and tubers are similar in that they both serve as storage units anchored to the soil by fibrous roots, as they grow rhizomes elongate either horizontally or in some case vertically, as in *B. carolineifolia*. Tubers, whether spherical or narrow and tubular, get larger, bulkier and more substantial but do not have a predominantly lateral, lengthwise growth. This is the type of growth we have noticed on the rootstock of *B. nepalensis*.

Secondly and more significantly, we refer to *B. nepalensis* as tuberous because it forms aerial tubers at the nodes from which new plants emerge, as is clearly visible on one of the accompanying photos. No rhizomatous species we know of forms aerial rhizomes at stem nodes whereas there are a number of tuberous species such as *B. falciloba* and *B. evansiana* already cited, which form bulbils at the axils. *B. griffithiana* also forms aerial tubers at the nodes, and is here considered a tuberous species." Clarke in his description of this species as *B. episcopalis* is enigmatically silent with regard to its rootstock.

As stated earlier, our discussion of these two species is based on plants documented in Arunachal Pradesh by Rekha Morris. *B. griffithiana* was documented at

several sites in the hills of Lower Subansiri district of Arunachal where it grew in large colonies both on bare, rocky cliffs and among lush undergrowth characteristic of rainforests between 1000' and 3000'. *B. nepalensis* was documented at approximately similar elevations in three locations along steep cliffs in W. Kameng district. Although *B. griffithiana* was also seen albeit in small, sporadic colonies [not in proximity with *B. nepalensis*] in W. Kameng, *B. nepalensis* was not documented in Lower Subansiri district.

Since *B. griffithiana* [syn. *B. episcopalis*] has been recorded for Bhutan and the Khasia mountains of Meghalaya in northeast India, and *B. nepalensis* for Nepal and Sikkim [India], we submit Arunachal Pradesh, where both these species were recorded by Rekha Morris in April and December of 2005, as a new

and hitherto undocumented find spot for both these little known species.

Patrick McMillan is curator of the herbarium at Clemson University, and as of July 1<sup>st</sup> 2006 director of The Campbell Museum of Natural History, which includes the herbarium. I received invaluable support during my trips to India in 2005 to document begonias as the acknowledgement accompanying my article in the *Begonian*, May /June, 2006, recounts. Here I once again wish to thank all those mentioned previously for enabling me to document begonias in India 2005, and to add a special thank you to someone who has generously and warmly supported my trips to both Mexico and India in search of begonias, Tom Keepin.

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## Behind the Dust

by Michael Ludwig

Another message from **Ed Bates**, "... attached are a couple of orders that arrived today." I'll be seeing him at the Mabel Corwin Branch meeting on Sunday, 4 days from now, when I can pass them off to him for mailing. We see each other on the 2<sup>nd</sup> and 4<sup>th</sup> weekends where we pass off orders, seeds, or money for the Clayton M. Kelly Seed Fund of the American Begonia Society. At either the Corwin or Margaret Lee Branch meetings we transfer items to keep the seed funds activities moving, between these times there is a flurry of email activity to keep each other informed of the latest developments. Following a major problem with my mail delivery, Ed receives and sends the mail for the fund.

It's time to get out the seeds and pack them for sending. Pull the vials corresponding to the seeds that were ordered, 15 different ones, but I'm in luck because

4 of them are seeds that **Thelma O'Reilly** donated, she packages her donations into seed packs already. Make labels for each of the packs put it on the envelope and now add the seeds. A few are available in limited quantity so there are fewer seeds in the packs to get them out to as many people as possible. Fold the flap, twice to make sure the seeds don't escape, and add a seal. There, one down and 11 more to go. Collect the envelopes by order place in a padded mailer, address and seal. Ready for Ed! He ends up sending 4 other orders before the meeting and all are packed and ready on meeting day.

A message from Ed Bates arrives on the computer, "...I received two packages in the mail today... from **Jackie Davis** and **Bea Huckriede**..." What exciting words, two of the most loyal and regular contributors to the Clayton M. Kelly Seed Fund



have sent in more seeds. Would there be *Begonia dipetala*, *edmundoi*, *peltata*, *boliviensis* or some other species or hybrids in the packages. These donations make my pulse race and are the heart and blood of the fund. Each donation receives its own lot number and individual vial so the seeds can be tracked if necessary to issue information about it. There are also numerous other donors making contributions, including **Yoshiko Azuma, Howard & Barbara Berg, Janet Brown, Iris Bird, Shirley Brown, Margaret Fisher, Johanna Kitson, Morris Mueller, Midori Nobusawa, Gene & Ann Salisbury, and Bernadette Senechal**, but I'm always hoping and looking for more. The seed fund also receives donations from **Rehka Morris** and **Scott Hoover**. Ann Salisbury sends seeds, from ABS funded trips, to donors and to the seed fund.

Since taking over the Seed Fund in 1997, the members of the Margaret Lee Branch have been the most dedicated donors of this American Begonia Society project. Selling their species to keep a supply of fresh seeds coming, they've also built species rich collections to make as large a selection as possible available to members around the world. **Ed Bates, Eleanor Calkins, Ingeborg Foo, Michael Ludwig, Thelma O'Reilly, Dean Turney** are long time members keeping this activity vibrant. Recent additions to the membership include, **Denise Knobloch, Janet Brown, Ruth and Walter Pease and Jim Jaeger**. Discussions at our meetings often turn to sex and match making. How can we create the right conditions to get these boy and girl flowers together at the right time and have them bear seed?

It's September and it's that time of year, only 2 months before the Master List needs to be sent to Freda for publication in the January/February issue of the *Begonian*. So I break out the flats, soil and the

seeds to prepare for the testing of the fund. Before they are listed in the fund all seeds are tested but in the fall before the Master List goes in all seeds are re-tested. This works great for most seeds but there are some seeds that only germinate at a certain time of the year. An example of this is *B. veitchii*, which Thelma O'Reilly reports was put down numerous times but only when she sowed it in April did she have germination, so seeds that don't germinate get several other chances before they are disposed of. My cell flats are prepared with moist soil and now the arduous tasks of sowing each cell with a different lot of seed. They are covered with paper to minimize false sowings, and each cell the size of a postage stamp is planted with a touch of seed, 9 cells to a row, and 18 rows to a flat. One after another the vials are teased for a touch of seed, until they all have been sown, cell after cell, and flat after flat, there! They're finished. As they are moved to the light-cart shelves I count, 1, 2, 3, almost 4 full flats, over 625 cells to watch over the next several weeks. The cell flat sits inside another flat that has just enough water in it to bring water to the bottom of the cells. This keeps them from drying out. Within 4 days there are white dots, root tips exploding from the seeds, on the cells that have *Semperfloren* types sown in them, in another couple of days the green leaves will be in place. During the next couple of weeks the rest will go through the same process, but a bit slower than the semps. A chart of the flat with information as to what is planted in each cell is updated daily as signs of life appear. This is then used to update the database with the inventory of the seed fund. Call up the ones that germinate and the list is ready for Ed, once I make sure each species is only listed once. Ed does the listing and descriptions for each issue

*Continued on page 186.*

# Begonias and Scotland - A Short History.

By Samuel Kennedy,  
President of the Scottish Begonia Society.

Fact, begonias are one of the largest groups of plants in the world, in his latest book author **Mark Tebbit** estimates nearly 1500 species, very few of these are known or grown by the amateur gardener. This is especially true in the United Kingdom where sourcing plant material was impossible. Yes, there were one or two nurseries selling Rex begonias with the obligatory instructions, water sparingly, light position but not direct sunlight, etcetera, which was good if all you wanted to grow was Rex begonias. Specialist societies exist filling this void, bringing awareness of the variety of species and their many complex forms of growth, leaf form, texture and shape to the general public (and indeed, one's own membership) backing this up with good cultural and technical information, which in many respects is most gratifying.

The shop window to the general public is through exhibition, bringing to them, awareness of the many forms the Begonia family take. Like the plants we grow, every member from beginner through experienced grower must receive the correct amount of food, light and water in the form better suited to our species, information, enlightenment and encouragement, just when they need it. From this you have the making of a Begonian.

At the discovery of tuberous Begonias and introduction into Britain by Englishmen **Richard Pierce** and **Walter Davis** (et al.) from the South American Andes in 1865, all bearing insignificant small single red, pink or yellow flowers. From these original five species the hybridisers have developed the large double flowers which we grow to perfection here

in Scotland. No other flowering plant that I am aware of in cultivation has ever been improved in such a rapid and spectacular manner.

From the earliest recorded date of 1906 Scotland has had its share of hybridisers, Aberlour (North of Scotland), Kirkconnel and Minishant both Ayrshire, Coalburn Lanarkshire, Inchinnan Renfrewshire all have played a part in advancing the development of shape, form, colour and lastly size of the *Begonia* Tuberhybrida, large double flowered variety.

The only Begonia nursery in Scotland during the later half of the twentieth century were Messrs **Tom White** and Son, growers and hybridisers, Tom's son Ron, did much to promote Begonias and the Scottish Begonia Society, by exhibiting at flower shows throughout Scotland and England. Each year he and many helpers transplanted thousands of Begonias out into a field allowing them to grow, flower and late in the season be assessed for future growing.

**George McCormick**, (deceased) a miner living at Kirkconnel in Ayrshire, had a flare for growing, exhibiting and hybridising, each year one can only imagine the quantity of seedlings that would have been grown and assessed, the few hopefuls taken aside for growing the following year, the rest, committed to the compost heap. This single amateur grower introduced, named and registered forty four seedlings. On visiting Scotland, **Mose Fadeem** (ABS) spent time with George. On witnessing the selection process he thereafter called George "the ruthless Scot".



Retiring from his everyday job as a printer Mr. Bill Dodds and his wife Rose, moved to Minishant in Ayrshire to manage Cassillis Garden Nursery, an extension of Bill's hobby, (growing begonias) and their strong interest in horticulture. During this time Bill has registered fifteen seedlings (to date) At the opening of Ayr Flower Show in year 2001, Bill registered a gold cream seedling 'Kirsty Hume' in honour of the Ayrshire model who opened the flower show that same year, who just happened to be wearing a dress the same shade.

School teacher, **John Hamilton**, lives at Coalburn, Lanarkshire. He is a committed grower, exhibitor and hybridiser. John has registered to date fourteen seedlings, each year he produces some spectacular blooms for the show bench.

There are many other Scottish amateur growers who have registered at least one seedling in their lifetime. At Ayr Flower Show 2005 an entry of one Tuberhybrida seedling named 'Wilma Bridges', grown and exhibited by **Mr. Alan Bridges** the Vice President of our society, the plant was assessed by the floral committee and adjudicated as worthy of the Scottish Begonia Society 'William Muir' Gold Medal Award, which was the first time this particular award had been issued for many years. Having mentioned Aberlour in the first sentence you may be forgiven for thinking that I have forgotten to write anything about it, but you would be wrong, for I have left this the most contentious to the last. Contentious, as some growers believe that it is impossible to create the perfectly formed double begonia with scent. *John Gillam White* (in itself this would be an article on its own) commenced hybridising at the beginning of the twentieth century. Thankfully he had an article published in 'The Garden' magazine in December 1916, entitled "Experiments in Raising Double Sweet Scented Begonias", where he writes about the trial and tribulations of hybridis-

ing, but importantly he describes a pink double flower with a sweet scent.

Time moves forward again to year 2006, Winterlaw Begonias, Carnwath, Lanarkshire owned and managed by *Willie Muir*, (Hon. Member S.B.S.) once again gives Scotland a begonia nursery, supplying tubers to the public.

The company most associated with the development of the Begonia Tuberhybrida development in England since 1900 is of course Blackmore and Langdon who have registered several hundred named varieties.

The long day length and cool days of our Scottish summer allows the blooms of the large doubles to develop slowly, maximising size of bloom with depth of colour, which will be in evidence on the show benches of Ayr Flower Show. The stage is once again set, the exhibition tables are laid out and awaiting the exhibits. Will you be there to share in the spectacle?

The Scottish Begonia Society wishes to invite the American Begonia Society to a Ceilidh to be held at Ayr Flower Show on Friday 3<sup>rd</sup>, Saturday 4<sup>th</sup>, and Sunday 5<sup>th</sup>, August 2007.

As president of the Scottish Begonia Society, allow me to extend on behalf of the members of the society our desire to invite you, Madam President, office bearers, members and friends to Scotland for the above dates where the venue will begin at Glasgow and end at Ayr Flower Show.

The original interpretation of Ceilidh (pronounced Kaylay) is gathering. Hence in August we intend to have a big Begonia gathering. We shall be sending information which will be published here, with an itinerary for the plants people.

*Looking forward to meeting all of you,*

**Samuel Kennedy**

# 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 is a project of the Margaret Lee Branch.

At our monthly meetings members help to clean and package seeds for the seed bank. All seeds are tested for germination by various members before they are added to the list and made available in the *Begonian*.

Each year, in the Jan/Feb issue, a complete inventory of available seeds is prepared and printed in the *Begonian*. In each issue new additions to the inventory are listed along with deletions of "sold out" items. Seeds can be ordered by name from the inventory list at any time in the year.

There is insufficient room for descriptions of the entire list each issue. All new additions to the seed fund and selections from the inventory list are described in each issue of the magazine.

Send orders, comments, suggestions, or complaints to:

Edgar A. Bates  
13232 Ocean Vista Road  
San Diego, CA 92130  
e-address: [hortbeg@san.rr.com](mailto:hortbeg@san.rr.com)

Most packets of species seeds 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**

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**DISCLAIMER:** The seeds distributed by the seed fund are identified as received from the donors. The seed fund cannot guarantee that the identification is correct. 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.

## Corrections:

Seed received as *B. roezlii* has turned out



not to be that species.

There was an error in the seed list in the July/Aug. Issue. *Begonia* U442 from Brazil, is **not** syn J-11, U043 is syn J-11

**Additions:** The seed fund thanks **Thelma O'Reilly, Bea Huckriede, and Mike Ludwig** for seeds offered here. Add these names to the seed inventory published earlier this year.

*B. carrieae* Ziesenhenné [Mexico] (Sect. *Gireoudia*). Branching rhizomes; large, lime green, rugose, lobed leaves; white blossoms in late winter to early spring.

*B. manicata* Brongniart [Mexico] (Sect. *Gireoudia*); succulent rhizomes sometimes erect; distinctive collar of coarse red hairs at top of petiole; ovate green leaves with toothed ciliate margins; pink flowers on long stems.

*B. solananthera* A. de Candolle [Brazil] (Sect. *Solanthera*) trailing scandent; green leaves; fragrant white flowers with red centers.

*B. wollyni* Herzog [Bolivia] (Sect. *Knesebeckia*) erect stem with swollen caudex at base; palmately lobed, peltate (?) leaves elegantly spotted with white; greenish white flowers with pink petals; blooms in winter.

*B. U #319* This unidentified begonia is a *B. cucullata* type, tall with large attractive white flowers.

#### Large flowered semperflorens

#### Descriptions from Seed Inventory

*B. heracleifolia* Schlecht. & Cham. (Sect. *Gireoudia*) Rhizomatous; leaves 1 foot across, hairy, 5-9 deep narrow lobes, toothed, bronzy green tinged with black near margin; petioles 10-18 in. long, stout, tinged with red, prominent ruff below the blade; flowers rosy pink, fragrant; peduncles 2-4 feet long.

*B. hirtella* Link [West Indies and S.

America] (Sect. *Doratometra*) herbaceous annual to 2 feet, shiny green stems and petioles with entangled white hairs; green leaves, upper leaf surface finely pubescent, oblique heart shaped with scalloped margins; white flowers on peduncles from the leaf axils; all parts somewhat hairy.

*B. pustulata* Liebmann [Mexico] (Sect. *Weilbachia*) Rhizomatous, stemless; leaves 3-6 in. long, obliquely broad-ovate, acuminate, cordate basally, blistered, toothed, ciliate, Nile-green with silvery-white markings, on long reddish-hairy petioles; fls. Pink, in few flowered clusters.

*B. robusta* Blume [Indonesia] (Sect. *Sphenanthera*) Rhizomatous, stems 2 ft., succulent, red-hairy; leaves obliquely suborbicular to ovate, acuminate, cordate basally, wavy-margined, green; flowers white, red-bearded on exterior, male flowers with 2 large ovate and 2 very small tepals, female with 5 equal tepals. Spring.

*B. roezlii* Regel [Peru] (Sect. *Cyathocnemis*) stems erect, little-branched; leaves obliquely ovate, cordate basally, shallowly angulately lobed, ciliate-toothed, glabrous, bright green above with red spot at juncture of veins; Many, pale pink flowers in axillary cymes, male flowers 3/4 in. across, with 2 nearly orbicular tepals, female with 2 tepals, stigmas spiral, ovary with 3 unequal wings. Winter.

*B. wallichiana* Lehman [Mexico] (Sect. *Doratometra*). An annual begonia similar in most respects to *B. hirtella* and others of the same section.

U # 083 A tall, corky, thick-stemmed begonia with small, bright green splotches randomly scattered over the jointed stem. Introduced into cultivation in Florida by Francis Michelson. The plain green leaves are 5 inches x 6 inches and probably will grow larger. The leaves have red veins with a red "eye" at the junction of the blade and stem. The leaves are glabrous,

*Continued on page 186.*

# *B. ludicra*

## By Charles Henthorne

While Leora and I love and enjoy every one of our terrarium begonias, there are, of course, ones that are our favorites. Near the top of my favorite list is *B. ludicra*. *B. ludicra* is in the Section *Weilbachia*. Other begonias in this Section are *B. lynceorum*, *B. imperialis*, *B. pustulata*, and *B. violifolia*. We also have all of these represented in our collection. *B. ludicra*'s distributional range is listed as Central Mexico. Oaxaca, Puebla, and Vera Cruz are the locations where this species has been found. It is also noted to be in Guatemala, and Panama.

In an article for the *Begonian*, Jan/ Feb. 2004, pp. 6-13, **Rehka Morris** describes finding two forms of *B. ludicra* on rocks in a waterfall in Oaxaca. It is a perennial herb with elongate creeping rhizomes. The leaves are highly variable in shape and size, and are most commonly sub-palmately lobed, ovate, with asymmetrical, cordate bases, often with overlapping lobes, entire to sparsely serrate or dentate on the margins, leaf tips are acuminate. The leaf surface is glabrous to sparsely pubescent on nerves above and below. Leaves are deep green above, and paler below, with stomata single, not occurring in clusters. Staminate flowers with 2 white suborbicular sepals and white narrowly obovate petals. Pistillate flowers with 2 sepals, white similar to the staminate sepals, with 2-locular ovary.

Its habitat is in middle and higher elevation (900-1300 m) semi-evergreen forest, deciduous forest and pine woodlands. It is most abundantly found in seepage and moist soil adjacent to water such as stream banks, waterfalls or exposed cliffs with seepage. This species often forms dense

tangles under optimal conditions

Dr. Morris has documented *B. ludicra* both in Veracruz and Oaxaca, Mexico, and those growing around a small waterfall cited above had foliage which was green on both sides. However, one short strand at the lower edge of the same waterfall had foliage which was a rich maroon-purple on the reverse. This form is quite pubescent and has a rough texture. The photograph in the article shows the coloration, which is different on both the front and back sides of the leaves. There are at least three other forms of *B. ludicra* with leaf color variations, and the one we have is a form with glabrous, maroon leaves, which are smaller than some of the other varieties, and was found by Rehka Morris growing on a moist, moss covered cliff side in Oaxaca in Dec. 2004. Growing in deep shade in the wild this form had glossy, green leaves tinged maroon, while the underside was a bright reddish-maroon. Grown in bright but filtered light in Rehka Morris's greenhouse and one of Clemson University's greenhouses the foliage is a deep, rich glossy maroon. In both these greenhouses it grows and thrives outside a terrarium, and Rehka Morris has it in hanging baskets in regular potting soil to which extra perlite has been added for better drainage. However, the soil is kept evenly moist all the time.

When I first obtained this plant I attempted to grow it outside of the terrarium environment, however here in Northern Texas, we found it to be almost impossible to provide the moisture and humidity that it needs to thrive. Therefore we placed it in a large terrarium to see if we could maintain better growing conditions.





*Above, the Henthorne plant of *B. ludicra* in a terrarium in Dallas. Photo by **Charles Henthorne**.  
Below is one collection of *B. ludicra* growing in Oaxaca, Mexico. Photo by **Rekha Morris**.*



In controlling the humidity and moisture, we gave the plant a chance to show its charm and beauty.

We found that, even though it grows in seepage and moist soil in the wild, and even near to waterfalls and stream banks, in the terrarium, we must let the medium dry out to a barely damp stage before we add water. In doing this we have been able to obtain blooming size plants which indeed have bloomed profusely for us. The maroon-purple coloration of the total leaf surface, has added a splash of color to what had been an all green collection with just splotches of whites, and a very little red on the edges of some of our other plants.

This plant has not been as full as some of our other plants, but the color has made up for the lack of fullness that the other begonias in our collection have exhibited. I have taken many leaf cuttings from our *B. ludicra* and we seem to have much more success with total leaf propagation, than with leaf wedges. *B. ludicra* has turned out to be rather slow growing, and as I said, is slow to fill out. Our potting medium of choice is the same as we use for all of our terrarium grown plants. That is long strand sphagnum moss and perlite laid down on a bed of plant grade charcoal. It is important not to use aquarium charcoal for the terrarium. The sphagnum mixture is barely moistened before placing the plant in it. We then cover the terrarium and leave it fully covered at all times. We do watch for excessive moisture and if necessary, we crack the cover to allow the container to dry out a little.

We give it good medium indirect light and it seems to thrive. We do not have it under our lights in our light stand but have it standing alone on a stand away from the lights, so the only light it gets is indirect light from the plant stands and indirect sunlight from the patio doors. We tried it under bright grow lights and it did

not do as well as we felt it should. Only after we moved it away from the strong lights did it start to thrive. I feel that, with its growing conditions in the wild, it requires some special care to give it subdued light in cultivation. Also giving some consideration to the water requirements seems to encourage the plant to grow to its full potential. At least in this area of the country, that would seem appropriate.

There are many many begonia species and hybrids that would make excellent terrarium plants. For us, it has been an easy plant to grow, and easy to propagate. We know that *B. ludicra*, with a little extra care, will give color and large size blooms to a collection, and that it is certainly worthy of consideration for anyone starting or adding to their collection.

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*Continued from page 183.*

entire-subentire, and widen at the edge exactly opposite the junction. New growth is covered with fine fuzz that disappears with age.

**B. U388** (see *Begonian*: July/Aug. 2003, pg.128-9) collected in Vietnam by Mary Sizemore. Huge leaves 8 to 10 in. With very long white hairs.

**B. U412** collected by Scott Hoover in West Java, at 4000 ft., at base of a waterfall, similar to *B. multangula*.

---

*Continued from page 179.*

of the *Begonian*.

The fourth Saturday is here and today is the meeting for the Margaret Lee Branch. Six orders have been prepared for the meeting, one of them for a branch. The seed fund provides seeds to branches for seed programs if they so request. It's our choice but it's FREE to the branch. Today at the meeting there will be several items



that the members are going to help do for the seed fund. There are several species that we are getting low on so I find a few volunteers to grow on some of the remaining seed to maturity and sell them so that we'll have a new source for the seed. There are new donations that have been tested and we must decide if they are coming true, a couple are looking a little funny and so they may be misidentified. I've got a batch of seed to package and label for *Donna Marsheck*, the seed fund supplies the membership chairman with seeds to send to new members as a welcome gift. We still have a program too, we are studying members of the section *Pritzelia* and each member has a SOS, Species of Study, which we cover with the hosting members being the one to look at that month.

This month the meeting is at my home in the KOLZ Research Center. This 24'x16' space is set up for our meetings with tables and chairs for all. It is home to collected and copied materials, a herbarium, years of dedicated research and love

of begonias and other shade loving plants. It opened January 2006; it contains the life work of **Carrie Karegeannes**, when she was moving out of her research I became heir to this invaluable resource. It also contains my collection of material from 30 years of plant loving. Other mentors have made donations, **Margaret Lee**, **Thelma O'Reilly** and **Rudolph Zieshenne**, hence *Karegeannes*; *O'Reilly*; *Ludwig*, *Lee*; *Zieshenne* Research Center. It's a great resource for the Margaret Lee Branch as we study the wonderful world of *Begoniaceae* and bring it to the world.

*Few of us realize the complexity of preparing and presenting seed through the seed fund. This article was prepared at the suggestion of our President as an aid to appreciating the efforts of this branch. Ed.*

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## Editor's Notes

As I have tried to pass out begonias and stimulate interest in my new living area, I often answer questions and frequently pass on my extra editor's copies of the *Begonian*. In the process I am reminded of how very little of relevance there is to brand new begonia growers who are struggling with the such basics as "sun or shade." I would very much appreciate if someone would volunteer to do a beginner's column. It might be a simple question and answer type column. This would be something we could all point to as we might hand out copies to new growers. Won't you volunteer?

Since many of the contributions I get are now coming by email, my work is much easier than when I had to enter everything by typing it up. However, it would help me even more if writers could adhere to some of the basic style tenets used in the *Begonian*. Some of these were long standing when I became editor and others have evolved. If for any reason, you cannot meet these, don't worry, I can adjust; it just simplifies my work. Here's a list:

1. Type: Please use "Times New Roman"
2. Style: The body of most articles is done in 10 pt. type. In Word, it is "Body Text, First Indent". Don't worry about the type size on titles, etc. as that is adjusted to fit space and appearance.
3. All begonia species names are italicized, as *B. thiemei*; all cultivar names are written with single quotation marks, as B. 'Lucerne' or *Begonia* 'Lucerna' - note the *B.* or *Begonia* in the title is italicized, but the name is not. If a begonia section is mentioned it is also italicized. I always check for these, but sometimes miss them so we will be more accurate if we are both checking.

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4. When the *Begonian* title is used, the "the" is not capitalized or italicized. Of course the title *Begonian* is italicized. This is because when I started editing, there was a note in the files that said this was how it was done and that's how I have always done it!
5. The first time a person's name is used in your article, it appears in Bold type. That is because it helps to pick out those names for the index - nothing more.
6. Reference books mentioned should be italicized, articles should be in double quotation marks.

Many thanks for noting these suggestions and again don't worry if you cannot implement them in your article; it is just an assist to the editor, not a requirement. Just send those articles in! ~FH



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# Conservation

## Comments

by **Bill Claybaugh**,  
Conservation Chairman, ABS

### Hybridization Considerations

I usually write about species and their identification and care, but this article is about their use in hybridization. This seems appropriate because one of the joys of owning species is in identifying their dominant characters and using this in creating new varieties. With over 400 begonia species and over 4000 cultivars presently known to be in cultivation, we are certainly blessed with a huge warehouse of starting material. No one individual owns all of these, but a typical collection does contain enough varieties to open up numerous possibilities.

For me, the first consideration in starting any hybridization program is finding plants that are **genetically compatible** with each other. The recognized method for this is for the plants to have the same chromosome number (CN). Hybrids produced from parents of the same CN will in general be vigorous plants and will produce fertile seeds. If the CN are not alike, the resulting hybrid may be weak, may not bloom, and probably will not be useful for future hybridizations. Fortunately, from the work of **J. Doorenbos** in the early 70's we know the CN for approximately 270 species, most of which are available today. This is the place to start any program. If on the other hand, if one is in the greenhouse without their CN guide or the complete history of a given cultivar, the next best technique is to select parents from the same part of the world i.e., both Asian, both African or

both American. This is a crude but efficient way of having two plants with a reasonable chance of producing viable offspring. If more information is available, you can of course select two parents from the same country or begonia section.

Perhaps the second most important character to consider is the **overall growth habit** of the two parents. As a rule, "like begets like", i.e., canes give canes, rhizomatous give rhizomatous, trailers give trailers etc. Most of my hybrid work follows this path, but some very interesting hybrids have resulted from mixing the habit types. The third major consideration in selecting hybrid parents is the **unique aspects** of each individual plant. By this I mean such things as: (1) rhizome growth habit – prostrate or upright; conventional or with upright stems; (2) thick-stem – sprawling or upright; branching or non-branching; (3) cane or shrub-like – height, branching; (4) etc.

A fourth consideration is **leaf shape, color, or margins**. I am particularly fond of the peltate leafed plants such as *B. tayabensis* and *B. kingiana*, but also have a strong affinity to the compound leafed varieties such as *B. thiemei* or *B. 'Kit Jeans Mounger'*. Other leaf shapes that have dominated hybridization consideration in the past have been the depth of the leaf lobes and the shape and degree of curl in the basal lobes. When we add in considerations of crested or frilly margins, then we have a full complement of possibilities. With leaf shapes, again, "like tends-to-give like".

Finally, we must consider the plant **adaptability** of high importance. By this I mean certain plants require or can tolerate unique growing conditions. For example a plant that requires high humidity will probably produce seedlings that require high humidity. Others may have a high tolerance for bright light (U062 and *B.*




*nelumbiifolia*) and again this property is often passed on to the offspring. There are other considerations, but these two rank high on my list.

The above considerations are easily seen in three of my recent hybridization programs, two successes and one failure. The first and without doubt the easiest was the selfing of B. 'Di-Erna'. This cultivar is an F1 hybrid, a cross of two species, *B. dichroa* x *B. coccinea*, both from Brazil, of different Sections, but both having a chromosome number of 56. This program resulted in 36 seedlings (F2 hybrids) that lived through the first year. As anticipated, the plants all appeared similar to the parent, being large sprawling canes. Seven of the plants had solid green leaves and the 29 others had either white spotted green leaves or a mix of the two. In the second year, however, there was a pleasant surprise when the seedlings bloomed. Of the 36 plants, one had bright red flowers, three had pure white flowers and 32 had strong pink flowers. Going back to the parents, we note that the flowers of *B. coccinea* are red, *B. dichroa* are orange, and 'Di-Erna' are pink. The new F2 hybrids reflected this heredity, and even included a white color, undoubtedly a combination of recessive characteristics. Finally, one plant of each color was kept and named B. 'Crosby Red', 'Crosby White', and 'Crosby Pink'. These have been vegetatively reproduced

and are currently being circulated in the Houston area.

The second program was interesting, but ultimately a failure because it violated my first rule of genetic compatibility. In the summer of 2000 I crossed B. 'Di-Erna' (CN of 56), the Brazilian cultivar described above with *B. masoniana*, a Chinese species (CN of 30). This cross produced fertile seeds, but the seedlings were few in number and very weak. Only three survived for six months and only one lived beyond the first year. This strange hybrid had a cane-like habit, small green pustulated leaves with white spots, small white hairs on the leaves and petioles, a height of only six inches, and required terrarium care. These characteristics were desirable, but after about three years the plant passed on, just being too weak to survive. No cuttings were successfully rooted.

The third program, the most rewarding of the three, was a cross of two cultivars, B. 'Gideon' X B. 'Boomer'. The pod parent is a cultivar of **Freda Holley** and is a hybrid of a Brazilian thick-stem species *B. valida* (CN of 38). This plant is a very attractive thick-stem of moderate height, and at selected times of the year, has the same yellow/pink leaf variegation as *B. valida*. The pollen parent was derived from two other Brazilian species, *B. solimutata*(CN ?) X *B. reniformis* (CN 70). This cross of a rhizomatous and a thick-stem plant is a sprawling thick-stem that



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*Above, 3 cultivars of Bill Claybaugh's hybrid.: B. 'High Roller' (largest), B. 'High Regards' (Medium), and B. 'High Hopes' (smallest). Right is a close-up of the small B. 'High Hopes.'* Photos by **Bill Claybaugh**.





likes to run sideways, branches easily, has large green pustulated leaves, and blooms freely. To my pleasure, the progeny of my cross had all of the desirable characteristics of the two parents, plus a surprising variation in height! As the small seedlings developed, it was obvious that I had something of interest, so I watched carefully and separated them into three groups based on size. Within the first six months, the large group grew to over one foot in height while the small group stayed less than an inch. Over the next six months, I culled the three groups to one plant each. The largest plant, now named B. 'High Roller', reached five feet in height in one year, branched freely both from the base and along each stem, and had a peculiar fold in most of the large (9-10 inch) leaves. The intermediate plant, B. 'High Regards', is now slightly under three feet in height after two years, has large (6-12 inch) green uniformly shaped pustulated leaves and branches reluctantly from the base and stems. The third plant, B. 'High Hopes', is only ten inches in height after two years, branches profusely, and has moderately (3-5 inch) sized pustulated leaves that occasionally show the yellow/pink variegation of *B. valida*. Overall, this program was everything I had hoped for.

There are numerous lessons to be learned from the above exercises but the two that strike me are: (1) hybridization is easy and any ABS members should be able to develop a successful program based on their own plant collection, and (2) one should save all seedlings for at least one year to see what develops. Some very interesting variations in size, shape, flower color etc. may have occurred, and it's best to see them all. In particular, save the little ones; they are easy to throw out as being weak, when in actuality they are just small.

*Let the editor add her thoughts to Bill's. Everyone who loves begonias should indeed try hybridizing if for no*

*other reason than that if you do it somewhat systematically you learn a lot as indicated by the considerations that Bill mentions above. I believe both Bill and I are pleased when we get a good cultivar, but I suspect we value the learning more.*

*Bill's complete address will be found on page 199.*

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## **Membership Update by Donna Marsheck, Membership Chair**

We have 46 new ABS members since the last issue: Those not affiliated with a branch: NY-2, GA-2, CT-1, MI-1, MS-1, LA-1, TX-4, CA-3, HI-1, and through PayPal: The Netherlands-1, Spain-1, Israel-2, Belgium-1, CT-1, CA-1, CO-1, FL-1, AR-1, NJ-1, PA-1, AL-1, and AZ-1.

Branch new members: Tampa-4, Astro-4, Palm Beaches-4, Doug Frost-1, and Whittier-3. We have 1010 addresses on our USA mailing list and 87 addresses on the outside of USA mailing list.

Until next issue,

*DM*

P.S. As of July 4, we can add 2 new members from Indonesia.

P.S. In June, we added 1 Life Member:

**Jose Almandoz, San Sebastian, Spain**

*Welcome, Jose and all new members from everywhere! And let's help Donna by remembering all our memberships will be due in December. I know she will appreciate it if you get them to her early so she doesn't face all of them at once. I just sent mine in for three years which also will make her job easier in coming years - why not do the same or be like Jose and make it a life membership! Editor.]*



*At left is B. U439 indicating its upright growth. Below left is recent growth on B. U440 cutting and below is a closeup of the leaf showing its lobed growth and the red spot which never fades.*





# *Begonia U439 and U440*

by Freda Holley

Thelma O'Reilly has a further listing of Unknowns on page 171 and because I had this space leftover, I thought it might be a good time to provide a bit more information about these two plants from Brazil.

Some years ago now, **Jacques Jangoux** of Brazil sent seed of two plants he had encountered on a vacation to **Tamsin Boardman** and me. My seed were marked: "Brazil, State: Ceara, Guaramiranga Mountains SW of Fortaleza = Serra de Baturite." Via email, he also sent a photo of the plant that became **B. U439**, but unfortunately this seems to be lost somewhere in my CDs (Do you lose things in those black holes?). I do recall, however, that the plant was quite large with many blooms. I remember thinking it looked like a shrub.

The seed germinated quickly and well in Oklahoma. I passed on a number of the seedlings to individuals and in various plant sales. I grew on several for myself. Neither were very happy about the low heat and humidity of summers there. With cooler temperatures in the winter in the plant room, *B. U440* was happier and grew well. *B. U439* did not like the cooler temperatures and though it did put out buds on one plant, the light was just too low and they fell without fully opening. I could tell, however, that they would be white.

When they came to Louisiana, both were quite happy through the hot humid summers and grew well. Many of you may recall, however, that our greenhouse was not finished until January and the plants had to survive in a plastic wrapped shed. With the temperatures going to the low 20s several nights, *B. U439* quickly died and one *B. U440* died and another

went dormant.

I had a few seed left and planted more *B. U439*. These have grown much more rapidly than they did in Oklahoma and the plant you will see to the left is a larger one of those seedlings. Although less than a year old, it is about 18 inches tall. Seedlings need to be moved up frequently and will let you know they need it with yellow leaves and stunted growth.

I am now unsure of the classification. I'm inclined to think thick-stemmed because of the strong upright trunks. They do have upright branches and the manner of growth and the leaves remind me of both *B. ulmifolia*, *B. holtonis*, and even *B. dipetala*. Yet, it is different in appearance from all of these. I do not think it will ever get over about two to three feet in height - none of mine have to date. It tends to be upright rather than spreading.

Stems have internodes that tend to about 1 inch, but sometimes reach 2 inches. They are erect and glabrous with nodes that only become prominent with age. Stems are at first light green and succulent becoming more woody with age.

Leaves are also glabrous and ovate with pinnate veins. They are up to 4" x 2 1/2" at their widest points. They are asymmetric decurrent, but just slightly so. Margins are crenate. Stipules are about 1/4 inch and very light green; they fall soon.

I am very hopeful of getting bloom in the greenhouse this winter and will amend my description then. Nonetheless this plant is one that is totally unfamiliar to me. I find it a very pretty plant, but I shared one with **Chuck Ades** and he did not find it commercially useful in its appearance.

*B. U440* on the other hand, I believe is a form of *B. reneformis*. I have grown various forms of this species and it certainly appears to be that plant.

It is certainly hardier than *B. U439* as one survived the winter although it was undoubtedly set back. I did not plant new seed of this one, but did take several cuttings from my remaining plant in the spring. The one shown here is a cutting taken in May and, as you can see, has grown well. It has not bloomed at all yet, but I expect white flowers in the winter. The larger, older plant had grown to about 3 ft. last year.

It is definitely a thick-stem with stems that are light green initially going to brown with age. The stem I pruned to get cuttings was 1 inch in diameter. Internodes are up to 4" in length. Stipules are light green in color and fall early.

Leaves are a deep green and lobed. They have a distinctive red spot at the umbo. At first glance they appear glabrous, but to a touch they are slightly hirsute. Margins are serrulate or finely serrate. I would say it has palmate-pinnate venation based on **Jack Golding's** *Seeing Begonia* which I am using in preparing these descriptions.

*B. reneformis* was the first thick-stemmed begonia I grew and I have grown a number of variations. The 2000 ft. altitude at which I grew them in Ozone was definitely more to their liking than either Oklahoma or here so I presume they like cooler, but not cold temperatures. *B. U440* would appear to be the same in this.

If anyone else can recognize the identity of these two unknowns from the photos or the descriptions I have given I would appreciate hearing from you. **Thelma O'Reilly** always welcomes information on any of the unknowns as well. See her articles for her address and phone number.

*Continued from page 173.*

ting down on or omitting sand. If possible, use soil containing more clay.

**13 Pot Too Large.** *Symptoms:* Stems grow flabby and wither. Plant may collapse. Roots rot and decay. Soil turns sour. *Cause:* Too much soil supplies more food than roots can absorb, retains too much water, admits insufficient soil.

**14 Pot Too Small.** *Symptoms:* No new growth, especially in summer. Few or no flowers. Leaves sparse and small. *Cause:* Plant is starved for food and new soil.

**15 Too Much fertilizer.** *Symptoms:* Accumulated white fertilizer salts on soil surface form a crust so hard it can cut tender stems. Leaf edges brown and crisp (particularly in summer-flowering tuberous begonias). Tip growth crisp, brown – first sign of "fertiliser burn". When turned out of pot, roots look brown and dry, break off with small bits of soil. *Treatment:* Severe damage requires repotting in fresh soil, even flushing old soil from roots with hard water stream; and, of course, withholding fertilizer. For less serious cases, scrape off top layer of soil, flush water through from top to bottom, top-dress with fresh soil.

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## Corrections

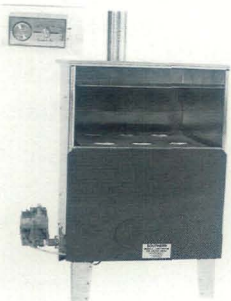
In the last issue's Editor's Notes, I misspelled the cultivar name *B. 'Tangalooma'*. In a caption for the photographs of show plants, the species name for *B. silletensis* was also misspelled and is correct as shown here. Thanks to **Ken Browne** of Australia for catching these.



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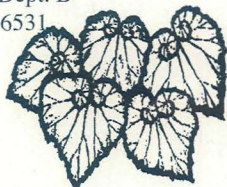
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# COMING EVENTS

**September 14-16, 2006, St. Louis MO, Southwest Region Get Together "Meet Me in St. Louie", ABS Board Meeting.** For a packet or more info, contact **Ann Salisbury** at 580-628-5230 or email at [geneane@sbcglobal.net](mailto:geneane@sbcglobal.net).

**September 16th & 17th, 2006. Combined Annual Show & Sale of Buxton Branch, ABS with NE Chapter The Gesneriad Society (TGS).** Show Entries evening of 15th and early AM of 16th. Show & Sale Open to Public at 10 am Sat & Sun. Tower Hill Botanic Gardens Boylston, MA. Extensive Show with Educational Displays & Lectures, Sale of plants grown by members and commercial growers. Fabulous World Class Gardens, plenty of parking, Cafe, family-friendly and handicapped accessible. Look for more details and lecture schedule closer to show date on Tower Hill's website [www.towerhillbg.org](http://www.towerhillbg.org). You may also email inquiries to [aventurine@mindspring.com](mailto:aventurine@mindspring.com) with TOWER HILL in the title please.

October 7-8, 2006, Saturday and Sunday, 9 a.m. to 4 p.m. The San Diego County chapters of The American Begonia Society Plant Show and Sale in Room 101 of Casa del Prado in Balboa Park. Spectacular foliage and blossoms of begonias will be on display. There will be many beautiful begonia plants for sale. Begonia experts will be available to answer questions. For more information call Marla Keith 760-753-3977 or [nandmkeith@worldnet.att.net](mailto:nandmkeith@worldnet.att.net).

**2007 American Begonia Society Convention<sup>A</sup>: Scotland! Details to come.**  
**2007 American Begonia Society Convention<sup>B</sup>, Los Angeles, CA, Palos Verdes Branch hosting. Details to come.**

**March 22-26, 2008, Association of Australian Begonia Societies Convention in Brisbane, Australia.** Begin you plans! More information to come.

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## *The Begonian*

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