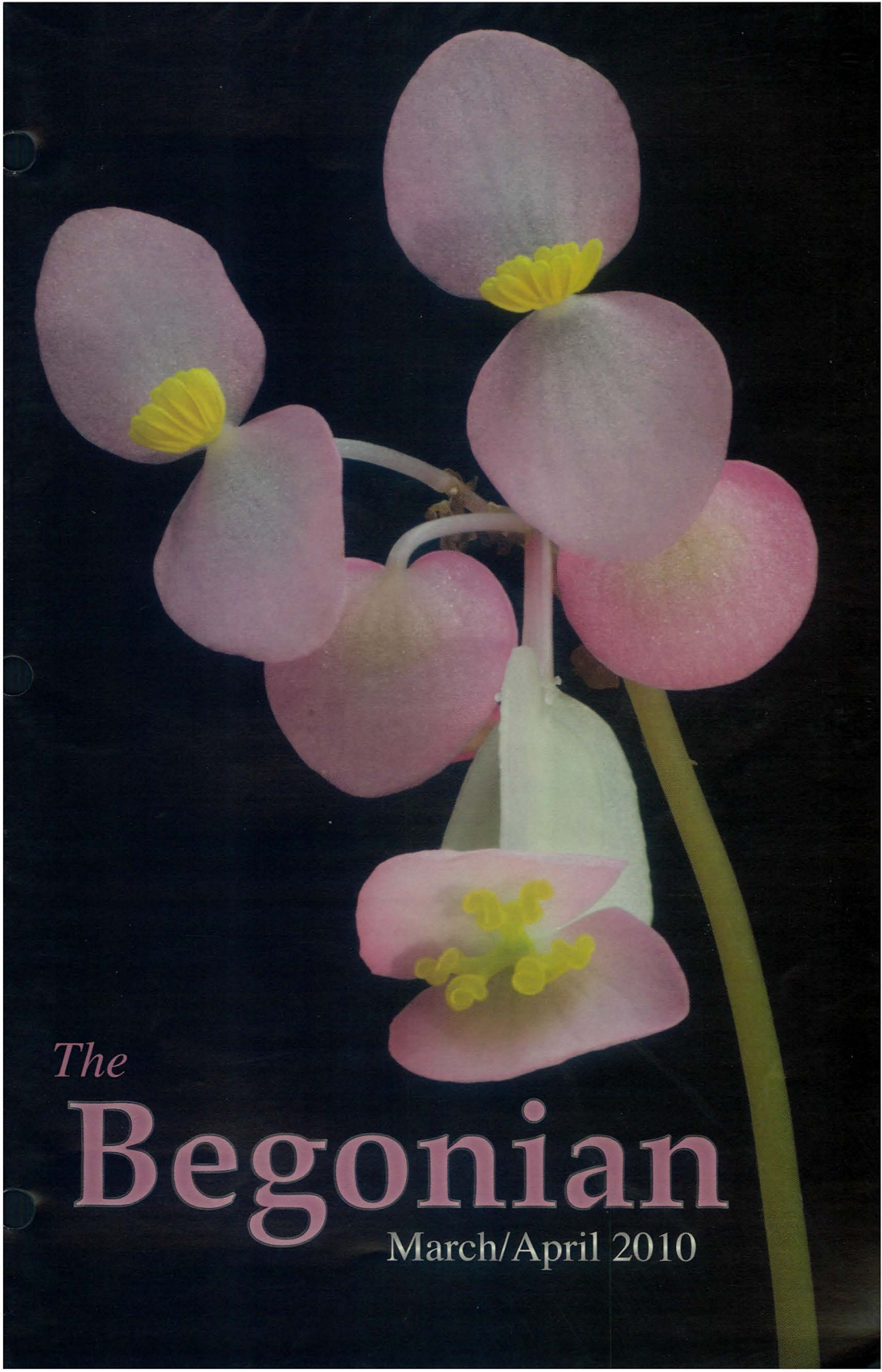
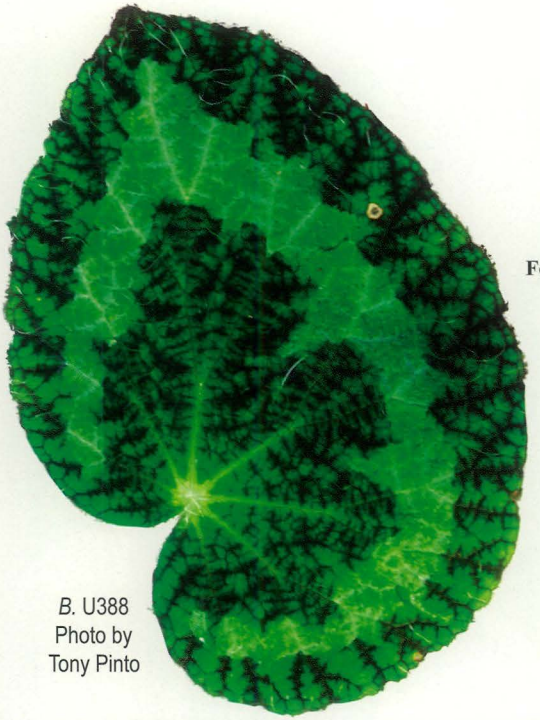


The Begonian

March/April 2010

ISSN 0096-8684



B. U388
Photo by
Tony Pinto

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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American Begonia Society - P.O. Box 471651, San Francisco CA 94147-1651

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B. 'Emerald King', a shrub begonia - pg. 64

Begonia goudotii flowers seen at Montagne des Francais, Madagascar - pg. 58

B. hirsutula observed in situ, Igotchi, Gabon - pg. 68

In This Issue

Regular Features

Front cover: Male and female flowers of Begonia goudotii, a curious species from Madagascar, all freshly opened December 26, 2009. Dan Houston shares some insight in "Exploring the Secrets of *Begonia goudotii*" pg. 58 **Back cover:** *Begonia goudotii,* seedling. Seeds were sown in a rough, well-drained mix in April 2009 and germinated quickly. By late May their first true leaves appeared. The young plants grow slowly. Both photos by Dan Houston

2010 SOUTHWEST REGION GET TOGETHER

MAY 19, 20, 21, 22

The Southwest Region of the American Begonia Society invites you to the 2010 Get-Together to celebrate the 75th anniversary of the Ft Worth Botanic Gardens.

The events kick off on Wednesday, May 19, with a late afternoon social hosted by the Mae Blanton Branch at the home of Cary and Kay Jennings.

The festivities continue through Thursday, Friday, and Saturday with tours of the Conservancy, FWBG Begonia Species Greenhouses, exhibition greenhouse, Millie Thompson Library, garden tours, seminars and workshops. Friday is the judged show and members only plant sale. Friday will include the ABS/SWR Board meetings. Saturday is programs for the morning with plant sale open to the public and the awards banquet in the evening.

Begonia 'Green Dreams' Photo by Tony Pinto

We were able to negotiate a VERY special rate with the Trinity Hotel: rates start at $69 for a king suite, $79 for a double queen. This includes full hot breakfast and happy hour. The hotel offers most modern amenities: high speed internet and WIFI with refrigerator, microwave and coffee maker in each room. Reservations: www.thetrinityfortworth.com or call toll free 1-877-9FORTWORTH 1-877-936-789-6784

Watch for your SWR-GT packet!
For more information: ABS website www.begonias.org/events/SWR
Elizabeth Cassimatis 214-662-3562

President's Message

It looks like 2010 is turning out to be a year for growing—in more ways than one!

The extreme weather conditions from coast to coast have left many of us with fewer plants to tend. Many of us have been devastated to look at the damage done to our surroundings. It would be easy to get discouraged, but my friends and I have decided to assume the attitude that this is the "opportunity" for us to re-landscape.

Already we have started the back and forth discussions of who has what to share and when they can make it available. This is also a time to give thanks that we have already shared some of our favorites. That way we know we will have the chance to replace them when the inevitable storms catch us off guard.

Gardeners are very generous people and I would like to suggest that we all make an effort to put down a few extra cuttings to share. Most of us do that anyway, but we could find more outlets for our generosity. Stop and think about all the people with whom you come into contact on a daily basis. Wouldn't it make both parties happy to share a growing experience?

And don't forget your younger friends. I can think of quite a few long-time ABS members who fell in love with begonias because they were given one when they were children. What a valuable seed to plant!

"Growing" is definitely going to be the theme for the coming year. Our membership is growing at a steady increase and we are adding new branches. Rekha has informed the Board that her latest collecting adventure has resulted in several potentially new species. At the convention in San Francisco we will hear from Hieu about the growth of a new begonia preserve in Vietnam .

So much is being added to our collections and our information.

Share your plants, your knowledge and your friendship—we all benefit.

Get growing! Cheryl

B. 'Little Gem"
photo by William McLaughlin

Tim O'Reilly's Tribute to Thelma O'Reilly

1/21/10

Article and photos by Janet Brown

Thelma and Tim O'Reilly have been active in many plant societies over the years. Thelma is not only a begonia expert but also a bromeliad scholar and she has written innumerable articles for the Begonian and the BSI Journal. Tim has been at her side helping in every way he can, despite his many stints as Convention M.C. where he told us all, hilariously, how he "Hates Begonias". The O'Reilly's have been major benefactors of the Quail Botanic Gardens in Encinitas and have given generously and frequently to the garden, the most recent being The Hamilton Children's Garden. Recently and officially at Quail's yearly Gala in September, 2009, the name was changed to the San Diego Botanic Gardens.

In 2007 as a milestone birthday approached for our Begonia Queen and scholar, Tim decided to honor his wife with the bench and plaque pictured here. The beautiful bench sits at a juncture of three paths in San Diego Botanic Gardens and welcomes plant lovers to pause a moment to enjoy the beauty and incredible diversity of the garden.

Tim O'Reilly has been honored several times by the ABS: in 2003 "For his dedicated support of the ABS, its members, and projects, and (his) repeated excellence as our Master of Ceremonies"; and in 2005 a special award was instituted as the TIM O'REILLY AWARD given to "A non-grower who has given outstanding service to the American Begonia Society". Tim was the first recipient.

Thelma O'Reilly is a "triple crown winner" (when there were only three major ABS Awards): The Herbert P. Dyckman for Service, The Eva Kenworthy Gray for contribution of original material, and the Alfred D. Robinson Medal of Honor for her beautiful hybrid *B.* 'Universe'. She is still working on the U numbers and was one of the founders of that unique and ongoing study of newly discovered species.

At present Thelma is the Vice-President and Program Chairman of the Margaret Lee

continued next page

Mark Your Calendars! Convention News

By popular demand the convention will again be in the Embassy Suites where the board meeting was held 4 years ago. The rate is $109.00 a night (single or double occupancy) and that is a great rate for the S. F. area. It also includes a full breakfast and cocktail hour. That means a lot to everyone. There is also free parking. Tours will start on Tuesday Aug. 17th with a visit to Hakone Japanese Tea Garden, which was created in 1917. Go to their web site www.hakone.us to learn more. There will also be another Arboretum we will visit later that same day.

To make a hotel reservation call 650-589-3400 or www.embassysuites.com or call 1-800-embassy. We are lining up a great group of speakers, so save your pennies and join us August 17th to the 22nd.

Carol Notaras, Chairman

Branch in San Diego. Meetings, held every month, are devoted to the study of begonias in great depth. Each member adopts a species every year and makes an annual report on their plant. Thelma conducts "Bits and Pieces" at the end of the meeting covering interesting facts about begonia species, old and newly discovered. The branch is small but distinguished. President Michael Ludwig established the KOLZ Foundation in 2006 and has collected a vast archive of begonia study. The writings and herbariums of Karageannes, O'Reilly, Lee & Ludwig, and Ziesenhenne provide a rich resource for the serious begonia lover.

Whenever you are in the San Diego area, be sure to visit San Diego Botanic Gardens and wander it's incredible grounds until you come open the lovely bench. Sit a while and think about Thelma and Tim O'Reilly who have done so much "...to bring into friendly contact all who love a grow begonias."

News from St. Louis

Five members in the Saint Louis area are organizing a branch of the American Begonia Society. Our initial meeting will be in mid-March. We welcome ABS members in Missouri and Illinois to join us. Please contact Doug Hahn, 3156 Flatboat Station, St. Charles, MO 63301-4699, doughahn@aol.com. (636) 233-1772.

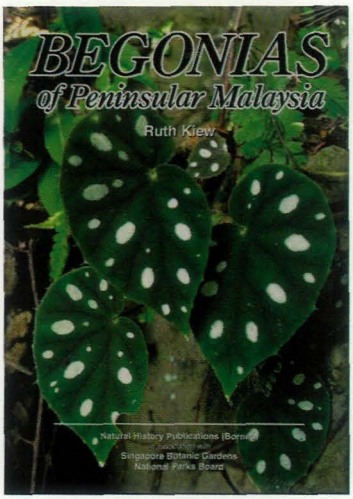
"Flore du Gabon" Vol. 39, Begoniaceae

This new volume is available now and will be reviewed in the Begonian later this year. The book has 52 illustrations/drawings and is 110 pages (ISBN: 978-3-8236-1574-3) Send inquiries to: inbox@margraf-publishers.com or check the website:

www.margraf-publishers.eu

American Begonia Society Book Store

The Book Store is a long-held tradition in the American Begonia Society, and has always been a valuable source and aid for begonia research and general interest. A list of the current inventory follows.



Begoniacae, Edition 2
by Jack Golding & Dieter C. Wasshausen, 2002 - **$55.00**

ABS's Unidentified Species Listing
by Freda Holley, 2007 - **$15.00**
Begonia U001 to Begonia U520

Seeing Begonia
by Jack Golding 2003, Revised 2005 - **$15.00**

Begonia Hybridizing: A Primer
by Freda Holly, 2007 - **$15.00**

Begonia Notes
by Rudolf Ziesenhenne, Reissued by the Thelma O'Reilly Reprint Fund
Originally printed in the Santa Barbara Branch, La Begonia Barbareña - **$15.00**

Begonias – 1984 Update
by Mildred L. Thompson, newly reissued 2007 - **$18.00**

Begonias of Peninsular Malaysia
by Ruth Kiew - **$55.00**

The Begonian on DVD
3 DVD's #1 1934-1958, #2 1959-1979, #3 1980-2005 - **$79.00**
Individual DVDs - **$33.00**

Constitution of the ABS, Revised & Approved, 2008 - $ 5.00

To order:
All prices include shipping. Send check and order to:

Carol Notaras
2367 Green St.
San Francisco
CA 91229
or order online at begonias.org by PayPal.

For questions and availability email or call Book Store Chairman Janet Brown, begoniabrown@yahoo.com 310-670-4471.

AOS Update

I thought that visitors to our 2009 ABS Convention who went on the tour to the American Orchid Society might be interested in the following. I went with a friend down to AOS's annual Orchid Show and Sale in November and am happy to report the AOS garden looks great and is open to the public. AOS ran a successful 'Save the Garden" campaign, raised some money, and enlisted a lot of volunteers and help. They are not out of the woods, and still need any help you can give, but they have new energy and are going to survive. Send contributions, or $25 for a one year garden membership, to:

American Orchid Society
16700 AOS Lane
Delray Beach FL 33446.

Nancy Cohen, 561 842 2499 or petcoh@msn.com.

Begonias for Amazonia

By Greg Gordon, Evansville, Indiana

Imagine winding your way from the majestic rainforest canopy to the flooded forest floor, surrounded by lush foliage, colorful birds, and playful primates. If you think this sounds like something you would experience in South America, you are right! However, you can have the same experience in Evansville, Indiana. The zoo had over 200,000 visitors in 2009, thanks in part to the birth in September of two baby jaguar cubs on display in Amazonia. They may be viewed at meskerjagcam.com.

In August 2008 Mesker Park Zoo opened the new Amazonia exhibit. It is a fifty-foot tall, glassed structure (think greenhouse) with 10,000 square feet of conservatory space, thousands of plants...and only six begonia species! As a Master Gardener, Plant Docent and ABS member since the late '70's I have taken on the challenge of increasing the number of begonia species on display in Amazonia with the help of ABS chapters and members. Mesker Zoo Plant Curator, Paul Bouseman is very enthusiastic about this prospect.

ABS Conservation Director, Bill Claybaugh lists 133 species of Brazil begonias in circulation. That list is available from Bill or myself. The zoo has *B. coccinea, fagifolia, glabra, maculata, thelmae* and *ulmifolia.* Bill has sent cuttings of *B. egregia, cucullata, valida, cordata, acida, convolvulacea,* and *aconitifolia.* That leaves many more to add to the collection. We need your help. They may be sent to Greg Gordon, 1101 Lincoln Ave., Evansville, IN 47714. E-mail is greggordon11@yahoo.com.

A new SW Indiana branch of ABS is also being formed from interested begoniacs among the 300 member SW Indiana Master Gardeners Association and any interested at-large members in the tri-state area. The launch is planned for late Spring. Thanks for any help provided.

B. egregia, a winner grown by Doug Pridgen, at the West Palm Beach Convention. Photo by Johanna Zinn

DELAWARE VALLEY BRANCH IS FORTUNATE

Our branch is fortunate that when we were starting up, with a handful of members, the local Meadowbrook Farm gave us meeting space - whether it was in the potting shed or some corner of the retail store. John Story, manager, loves succulent plants, but he did make sure that one of his greenhouses was filled with the best begonias he could locate. Because Meadowbrook Farms supplies material for the Philadelphia Flower Show our members have an opportunity to buy and see rare and unusual plant material.

Our branch is fortunate that Janet Welsh, lifetime member of ABS, brings a world of experience in growing begonias to our meetings. Janet oversees the judges for the begonia classes at the Philadelphia Flower Show. Some of our members clerk for the show and have an opportunity to meet skilled growers like Charles Jaros, Mary Bucholtz, Maxine Zinnman, Mike Flaherty and others.

Our branch is fortunate that we have Peace Tree Farm in our area where Lloyd Traven, owner, is determined to see that nurseries, Longwood Gardens and other places, display or carry his latest varieties of begonias. Lloyd is determined to give our area the best-grown and most unusual begonia hybrids.

Our branch is fortunate to have as a member Ed MacFarland, past president. Ed has an important role at the Philadelphia Flower Show in setting up the staging for the amateur growers in the different classes. Ed also grows herbs in a big way and is involved with a very successful yearly sale of herbs. Ed brought to our branch's board the idea to have a big tent sale of begonias, which functions as not only a wonderful fund-raiser but also attracts new members.

Our branch is fortunate that Alan Russell is one of the owners of Russell Garden Wholesale Perennials and Herbs. He will supply some of the food for our sale plus open his nursery as an added feature to attract all types of growers.

Now we need one more fortunate matter - that the weather will be perfect for our BIG TENT SALE on Saturday June 5th starting at 10AM on the grounds of Russell's is located at 600 New Road Churchville, Pa 18966. If you live in the area please mark your calendar and make sure you introduce yourself to one our members when you come to the sale.

Bernie Wiener, founder of Delaware Valley Branch

P.S. I hope to write a follow up on this article to say we were fortunate that the BIG TENT SALE was successful.

Delaware Valley Branch Upcoming Events

Delaware Valley Branch will hold their upcoming sale events where two wholesale nurseries are opening their facilities as a one time special feature to help in promoting the begonia family with an opportunity to buy new varieties.

March 13, 2010
Starting at 10am
Peace Tree Farm
295 Park Drive West
Kintnersville, PA
610-847-8152

Delaware Valley Branch Big Tent Sale
June 5th 2010 starting at 10AM at Russell Gardens, Richboro Pa 18954, 215-322-4799
Plant material will include new begonia varieties grown by Peace Tree Farm and Russell's wide assortment of perennials
Refreshments will be available
Any questions contact Bernie Wiener 610-446-2160 or wiener1@verzion.net

Two new Begonia (Begoniaceae, section Gireoudia) species from Oaxaca, Mexico Part 1: B. U535 now B. morrisiorum

Article and photos by Rekha Morris & Patrick McMillan

Every decade or so there is a year or a month which is so memorable and intensely felt that it more than makes up for the usual, slow, mundane flow of life. 2005 was one of these for me as it was the year I found *B. rex* Putzeys in the wild during my first visit to Arunachal Pradesh in the eastern Himalayas of India, and it was also the year when I found several begonias in Mexico, which had hitherto not been described. *Begonia* U533 is one of these, and the other species, *B.* U535, is described and named below by Patrick McMillan.

My first encounter with this latter species, which I registered as *B.* U535 with the American Begonia Society, was in a hollow at the base of a water run-off channel. I had been looking for *B. fusca* and was heading towards Totontepec [Mixe district of Oaxaca] in search of *B. rafael-torresii* when I caught a glimpse of something pink in the thick underbrush. A small landslide had cleared a section of the hillside of the tangled underbrush, and enabled me to reach the hollow at the base of the cliffs. Growing in deep shade was this magnificent begonia whose dark green, cordate leaves were prominently defined with red veins. Several tall floral stalks approximately 12" high carried a small

cluster of deep pink unopened flowers.

This was the only small colony I found along this route that year. However, the following day we returned to these hills, and in driving towards Zacatepec came across several waterfalls with numerous clumps of *B.* U535 growing around them. Some of these grew precariously anchored in clefts and cracks between rocks over which the water cascaded. Growing in the constant spray of water their leaves had a silky sheen, and where the sunlight hit them directly the drops of water on the foliage sparkled with the faceted brilliance of tiny diamonds.

Growing as these were in somewhat more exposed areas of these hills at approximately 5000', many were in bloom, and the large, deep pink blooms and dark carmine capsules against the glistening green leaves added to the unbelievable jewel-like, sparkling texture of the cascading water.

All the nearly dozen or so small waterfalls along these cliffs had *B.* U535 growing in and around them. Here and there were small, scattered colonies of *B. ludicra* while mammoth plants of *B. fusca* festooned the crests of these near vertical cliffs. Walking along this cool, moist ambiance with begonias in sumptuous drifts along the cliff sides, and views of unending layers of heavily forested hills stretching as far as the horizon was the nearest approximation of heaven on earth I have encountered in Mexico. I am grateful to Patrick McMillan for naming this lovely begonia for us as its mountainous habitat has an intensely atavistic resonance for me. **RM**

Begonia morrisiorum McMillan – The 3-carpellate species similar to *fimbriata.*

Section Gireoudia*; rhizomae perennis herba; similis Begaoniae fimbriatae, sed cum ovariis tribus carpellatis*

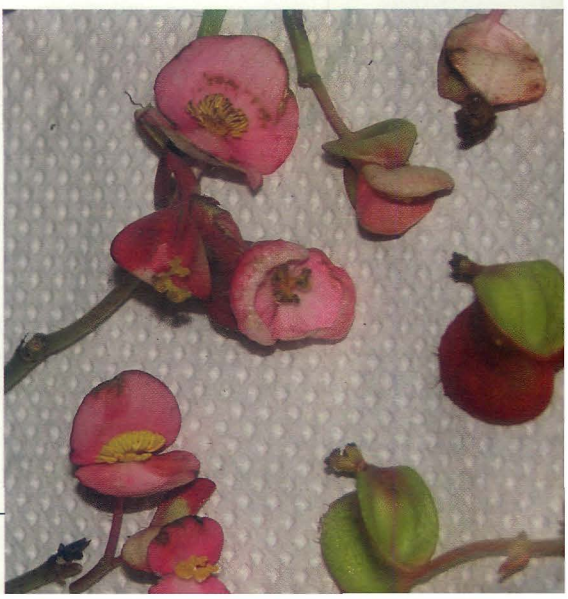
Perennial herb; rhizomes short to elongate, 5-7 mm wide, repent with extremely short internodes. The rhizomes densely covered with large stipules. Leaf blades chartaceous, evenly green or reddish along veins, palmately 7-9 nerved, oblique, asymmetrically ovate, 3.5-12.0 cm X 3.8-10.5 cm; leaf base cordate with lobes strongly overlapping; leaf apices long and gradually tapered, acuminate. Leaf surface with sparse long strigose trichomes on major and minor veins above, trichomes 0.5-3.5 mm long; lower surface also with sparse long strigose trichomes along major and minor veins, trichomes 0.5-2.5 mm long. Petioles 2.0-10 cm long, 1.5-4.0 mm wide, ascending to erect, moderately to densely villous with translucent trichomes 1.5-3.0 mm long. Stomata clustered, with 2-3 per cluster. Stipules persistent, 5.0-8.0 mm long and 4.0-7.5 mm wide, asymmetrically triangular to deltoid with acuminate to long setaceous tips, surface and margins glabrous

or sparsely ciliate on the margins distally. Inflorescence symmetrical consisting of 1 – 15 individual flowers; peduncles, 3-7 mm wide at widest point, 5.5-38.0 cm tall, sparsely villous below, occasionally becoming moderately villous above with 0.5-2.0 mm long trichomes. Bracts pinkish when fresh, drying light brown, persistent, to 9 mm long and 6 mm wide, found at main nodes along branches and at each subsequent node on branchlets, clasping and enveloping the branch, ovate to broadly ovate, villous on lower surface, especially towards tips, with a few lacerate cilia along margin. Staminate flowers with pedicels 6-21 mm long, tepals 2, suborbicular to orbicular, light pink internally, darker pink externally, 8-22 mm long and 10-26 (36) mm wide, glabrous on outer and inner surfaces, margins entire; stamens 27-40, filaments 1.2-2.6 mm long, borne on a raided torus; anthers oblong, 2.0-3.2 mm long. Pistillate flowers not observed or seen in flower, only in fruit; fruiting specimens with pedicels 1.5-3.0 cm long; capsules strongly nutant; capsule body asymmetrically broadly ovate, trilocular with bilamellate placentae, 11-18 mm long, 7-11 mm wide at widest point, light to dark tan, coriaceous; wings 3, broadly lunate, the upper 7-11 mm tall and 15-20 mm wide, completely enveloping the capsule body and sometimes fused to the pedicel well before the capsule body, the second and third wings much smaller, 2-3 mm tall and approximately as wide as the capsule at the base.

Specimens Examined (locations):
***P.D. McMillan, s.n.,* Cultivated Specimen, 8 May 2006 (CLEMS); RM 05-223 (CLEMS); RM08-334 (CLEMS); RM08-342 (CLEMS); RM05-183 (CLEMS); RM05-217 (CLEMS); RM05-224 (CLEMS);**

Range: This species has been documented by Rekha Morris in two widely separated sections of the Eastern Sierra Madre Mountains of Oaxaca, Mexico: in the environs of Totontepec and Zacatepec [both in the Sierras of Mixe district], and Sierra Ixtlan in Ixtlan district. It grows in association with *B. fusca*, *B. ludicra*, and in one instance *B. oaxacana*.

Habitat: Epilithic on or in rich, moist soil over calcium-rich, moss-covered boulders near or in waterfalls, and along seepages where there is constantly high ambient



Nomenclature Notes

By Kingsley Langenberg, Nomenclature Editor

In the last issue I mentioned that botanical scientific names came with "baggage." I would like to use the publication of **Begonia morrisiorum** McMillan in this issue to illustrate what I meant.

B. *U535 now* B. morrisiorum - *continued*

moisture. In semi-deciduous or evergreen broad leaf forests at higher elevations [approx. 5000'- 6000'].

Discussion:

This unusual little *Begonia* is very similar to *B. fimbriata*, with which it may co-occur and share the same habitat. The large flowers, borne only a few per inflorescence is also similar. It can be immediately differentiated by the 3-carpellate capsules with bilamellate placentation, which firmly places it in section *Gireoudia*. *Begonia fimbriata* is in section *Weilbachia* and is 2-carpellate.

PM

Literature cited:

Burt-Utley, K. 1985. A revision of Central American species of *Begonia* section *Gireoudia* (Begoniaceae). **Tulane Studies in Zoology and Botany** 25: 3-123.

Burt-Utley, K. 2005, Travels in the Sierra Madre, **The Begonian** 72:126-129.

Latin translation courtesy of Malcolm Taylor, University of the South, Sewanee, TN.

Rekha Morris, Ph.D.
318 Woodland Circle, Pendleton, SC 29670,
shivavaa@juno.com

Patrick D. McMillan, Ph.D.
Director of the Campbell Museum of Natural History
Clemson University, Dept. of
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Clemson, SC 29634-0314
pmcmill@clemson.edu

Following Rekha's introduction, Patrick McMillan takes over the task of naming and defining the new species. Here are the parts:

(1) **Declaration of the binomial name** which comprises three parts, the genus name, *Begonia*; the specific epithet, *morrisiorum*, or "of the Morrises" in Latin; and the author's name, McMillan. (2) **A circumscription,** which by international agreement must be written in Latin, and which states tersely how this particular taxon or "group" can be differentiated from all other such taxons.

(3) A **diagnosis**, or detailed description of the nature of the plant, beginning with the habit of growth, followed by essential details of the stem, the leaves, the inflorescence, and the fruit.

(4) Designation of a **type** specimen, a dried herbarium preparation that was used by the author as the subject for the diagnosis, along with additional specimens examined – perhaps for evaluation of the variability of measurements. This consists of a list of labels such as "RM 05-223(CLEMS)" which refers to Rekha's collection #05-223, housed in the herbarium of Clemson University (CLEMS).

(5) Discussion of the **range** of the species in the wild.

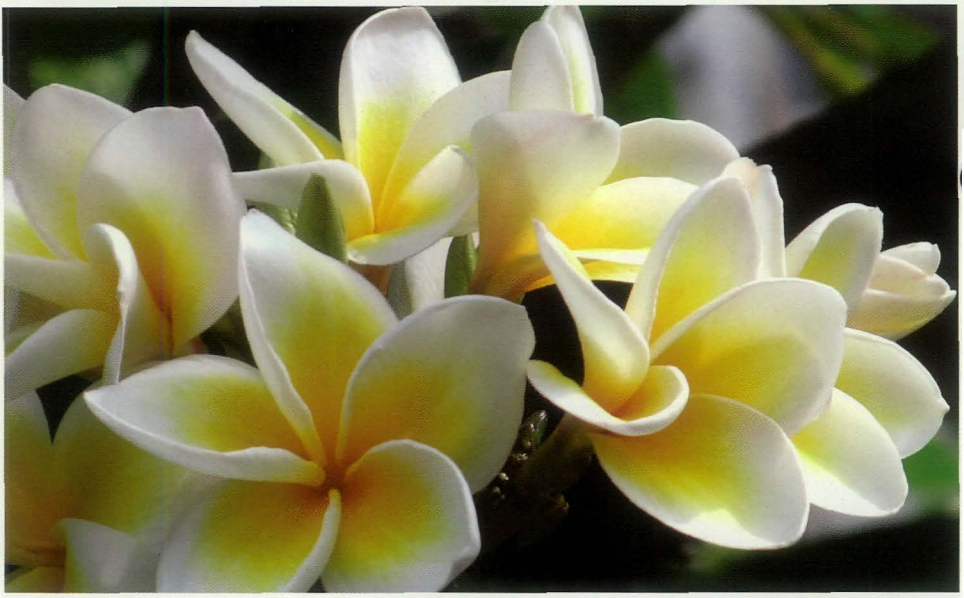
(6) Description of the natural **habitat** – useful information for cultivators.

(7) Statement of the **etymology** or origin of the epithet (name), in this case given by Rehka in the final sentence of her part of the article.

In sum, I think of "*B. morrisiorum* McMillan" as the tag on an imaginary file folder. I hope that someday in the near future we will all be able to retrieve those files online somewhere.

Plant hunters, Ferdinand Deppe and C. J. Schiede, found *B. heracleifolia* in Mexico in the 1830's. This was the "first deeply incised palmate leaved rhizomatous begonia" to be discovered as noted by Millie Thompson in her book *"Begonias"*. Many of Millie's begonias were donated, and still reside, at the US Botanic Gardens where a major begonia exhibit will be held this year. Read more about this exhibit on page 72.

Photo by William McLaughlin



Plumier's Half Dozen

by Peter Sharp (Australia)

Charles Plumier, in the year 1690, travelled to the French West Indies on a voyage of botanical discovery, having been charged by his Sovereign Louis XIV 'through the direct mandate of Michel Begon' then Intendant of the Galleys in Marseilles and later to become Intendant of the City of Rochefort, to search for new plant species in the region. Plumier was originally working with a physician, Francois Surian, whose expedition this originally was. However, Surian seems to have been pushed aside in some manner, doubtless through a falling out of some sort, and Plumier became the principal figure in the botanical discoveries which followed. Surian continued to botanise and there is a large collection of his work in Paris.

Plumier set about his search for new plants in the French Antilles, exploring the island of Martinique, and in the present day Haiti, which is the western portion of the island discovered by Christopher Columbus and named by him Hispaniola. Haiti in Plumier's time was a nominal French possession, although rightfully Spanish, having been occupied by French buccaneers who used it as base for their depredations in the Caribbean. The eastern half of the island is to-day the Dominican Republic but when Plumier visited it was a Spanish possession. At that time Spain and France were at war so that Plumier was not able to explore the eastern half of Hispaniola.

Plumier discovered, amongst many ther things, a round half dozen plants of a new genus and he named it, after his patron Michel Begon, *Begoniaceae*. It is interesting to note that Plumier began this now commonplace custom of naming plant genera after people. He recorded the results of his explorations in several books. He also produced a considerable number of illustrated manuscripts of which the most important is "*Botanicum Americanum seu historia plantarum insulis mascentium*" (1697). This work is preserved in the Biblioteque Centrale du Museum d'Histoire Naturelle in Paris.

It is unfortunate that there are no extant botanical specimens of Plumier's discoveries as he apparently endured several shipwrecks during his voyages home from the Caribbean and his specimens were lost. However, he was a most exacting collector and has left in his books and manuscripts drawings of

all his discoveries. Of the six begonias he discovered we know the modern names of 5, but the sixth seems to have been lost. These six begonias are named and described in the above mentioned manuscript and are as follows:

1. Begonia purpurea maximo, folio aurito – now *B. macrophylla Lam* = **obliqua** Linnaeus
2. Begonia roseo flore, folio aurito minor et glabra – now ***B. brachypoda*** Schultz
3. Begonia roseo flore, folio aureta, minor et hirsute – now ***B. repens*** Lamarck
4. Begonia roseo flore, foliis acutioribus, auritis et latius crenatis – now ***B. plumieri*** A. DC. var ***plumier***
5. Begonia roseo flore, folio orbiculari – now ***B. rotundifolia*** Lamarck
6. Begonia nivea et rosea maxima folio aurito – now unknown

According to Haegeman, *Bs. brachypoda, repens, rotundifolia* and *plumier* were discovered by Plumier on Haiti, and *B. macrophylla* on Martinique. He also notes that Linnaeus grouped all the begonias discovered by Plumier under the single name of *B. obliqua*.

The sketch accompanying this article was traced from a dark photocopy of one made by Plumier and included in his manuscript *"Botanicum Americanum"*.

References:

1. 'Tuberous Begonias: Origin and Development' by J. Hageman 1979.
2. Short biography of Michel Begon by Patrick Rose 1998.
3. 'Begoniaceae Edition 2' by Golding & Wasshausen, Smithsonian Institution, 2002.

Opposite page: While Charles Plumier named many plants after people he never named one for himself. French botanist Joseph Pitton de Tournefort and Swedish botanist Carl Linnaeus named the beautiful and fragrant *Plumeria*, which was discovered by Plumier during one of his Caribbean expeditions, in his honor. **Above:** A beautiful specimen of *Begonia rotundifolia* - one of Plumier's half dozen. Grown and photographed by Julie Vanderwilt. **Left:** *Clematitis indica*, discovered and drawn by Charles Plumier.

Exploring the Secrets of Begonia goudotii: Some Perspective, and the Indigenous Habitat

Begonia goudotii inflorescence with male flowers seen at Montagne des Francais. July 2004. Photo by Tim Harvey

Among plant lovers, there is a tendency to focus one's passion narrowly, and still understand that all plants deserve to engender fascination. Another dynamic, that blurs the divisions of favoritism, arises from the dynamic associated with a plant's habitat of origin. So it is that when plant enthusiasts travel to exotic locations to view specific genera and satisfy their narrow passion, they inevitably encounter interesting specimens of other genera for which their knowledge is thin, but which provide some intriguing insights into the habitat and its resident flora and fauna. Examples of this are Madagascar and Socotra, both of which have contributed numerous plants that draw the interest of succulentists and begoniacs.

By Daniel M Houston & Joseph M Stead

The material presented in this article derives from the observations and efforts of succulent enthusiasts and fanciers of xerophytic endemics. We do not pretend to be authorities on the delights of the Begoniaceae. Still, the presence of plant life clinging to barren rock formations engenders in us a sense of recognition. These are also harsh environments, akin to the desertic lands that typically fascinate us. In particular, we refer to the Madagascan geophyte *Begonia goudotii*. The population of plants that initially attracted the attention of our succulentist collaborators is found in Northern Madagascar in the vicinity of Diego Suarez. It is found in the northern most regions of Province Antsiranana, growing from small soilless pockets and crevices on the vertical face of karstified Jurassic limestone formations such as Montagne des Francais and Windsor Castle. Specimen plants are observed along the upper and lower expanses of the rocky vertical faces along every point of the compass, however, they are not observed terrestrially. The species is also found in similar habitats at a few locations on the Western Coast of Madagascar, however, these areas were not explored as part of the expedition referenced here.

There are other non-geophytic and shrubby begonias found in the surrounding scrub environment. Among them are, *B. humbertii, B. francoisii, B. lyallii, B. madecassa,* and *B. nossibea*. Some succulent plants sharing the limestone cliff faces of Windsor castle are *Euphorbia bulbispina, Pachypodium windsori, Euphorbia aureoviridiflora, Aloe suarezensis*, and an orchid species of the genus *Bulbophyllum*. Some additional flora that the roving eye might find in the areas surrounding the limestone formations are: *Adansonia suarezensis, Delonix velutina, Hildegardia erythrosiphon, Laportea*

Limestone formations in the vicinity of Frenchman's Hill (Montagne des Francais), surrounded by dry brush in July 2004, are home to *Begonia goudotii. Photo by Dan Mahr*

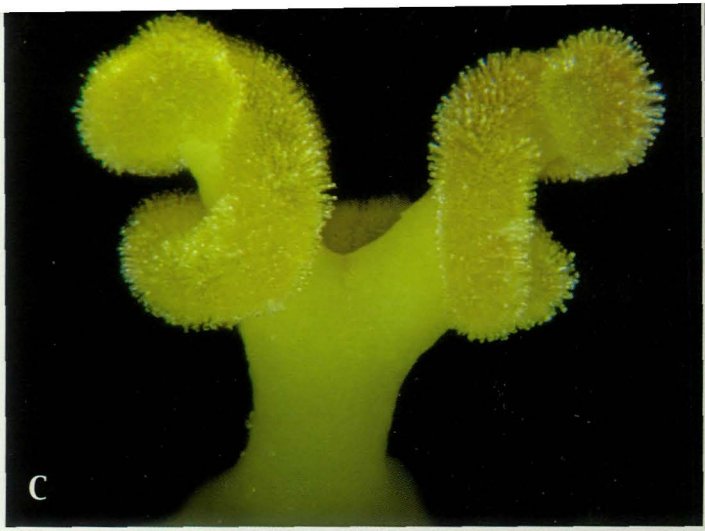
sp, orchids such as *Angraecum leonis, Oeceoclades* and *Madlabium,* various cyphostemmas and adenias, *Euphorbia ankarensis, Pachypodium decaryi, Pachypodium rutenbergianum,* and *Aloe roeoslii.*

Native Habitat versus the Propagation Environment

The Diego Suarez region is roughly 12.3° south of the equator. The climate is mild, averaging about 70° F as a daily low, and 90° F as a daily high. This pattern is fairly consistent all year round. Temperatures are slightly cooler from May to October, when the days are somewhat shorter. This also coincides with the dry season, when rainfall averages less than an inch per month. Conversely, temperatures are slightly higher from November to April, when the days are somewhat longer. This corresponds to the wet season when rainfall exceeds 12 inches per month (typically peaking in January).

This climate data is important because it gives a sense of the conditions that cultural practices must follow. However, we must also take into consideration the response of the organism to environmental cues in its new environment. In our experience, many exotic plants adapt, and one of the key triggers is length of day. In habitat, *B. goudotii* begins its flowering cycle in July, at the height of the dry season, and when the days are shortest. As the days lengthen the flowering cycle progresses to pollination. By the time that seed is ready to disperse, precipitation has increased, and germination can begin with a 4-5 month growing season ahead.

For the plant propagator, it may be unrealistic to attempt to duplicate all of the conditions of habitat. In our experience, here in Southern California, *B. goudotii* began its flowering cycle in November/ December/January the short day months. (When exposed to the dimmer end of the Propagation house, the flowering cycle began earlier, when exposed to the brighter



A. Tubers come out of dormancy and inflorescence stalks begin to appear with just unopened male flowers present. *Begonia goudotii* is monoecious, thus the plant expresses itself reproductively with distinct male and female flowers. An additional complexity owes to the sequencing of the inflorescences. Male flowers precede female flowers by several weeks on specialized stalks. Typically no leaves are present at this time. (Hysteranthous) As the male flowers present themselves, the propagator anxiously awaits the emergence of a female flower. If you have but one tuber, as we did initially, this can be quite an exciting experience.

B. The anther cluster of a freshly opened male flower is spectacular to view, however, pollen is not available until some aging has occurred and the perfect form has evolved a bit.

C. Female flower opens. The stigmatic surface spirals around the bilobed style and has a complex papillose surface composed of thousands of tiny receptive fingers.

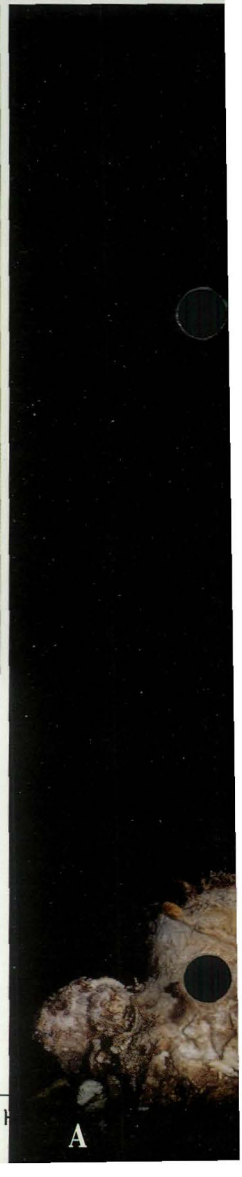
D. Pod is ripe and full of seed presuming a successful pollination. Six weeks after pollination, once the swollen ovary has dried, it should be carefully removed. There are many seeds within the fragile fruit, and they are quite small. Up close you can detect differences and infer that the larger seeds are the most viable.

E. Leaves emerge from the tuber. First foliage on the mother plant is a spectacular display of reddish and green hues.

F. Leaves getting larger. One to two weeks after emerging they remain striking in their appearance.

G. Mature leaves. The leaves grow fast and take on an astonishingly large sizeóeasily 8 inches in diameter.

Back Cover - The back cover image represents 90 days of growth from the sowing of seed date.




E


F


G

Begonia goudotii finger-like tuber sprouting.
Photo by Daniel M Houston

end of the Propagation house it began later.) The conclusion that we draw is that the flowering cycle is triggered by length of day (actually length of night). And, we should emulate the wet season / dry season conditions in correlation with the plant's behavior.

Cultural practices

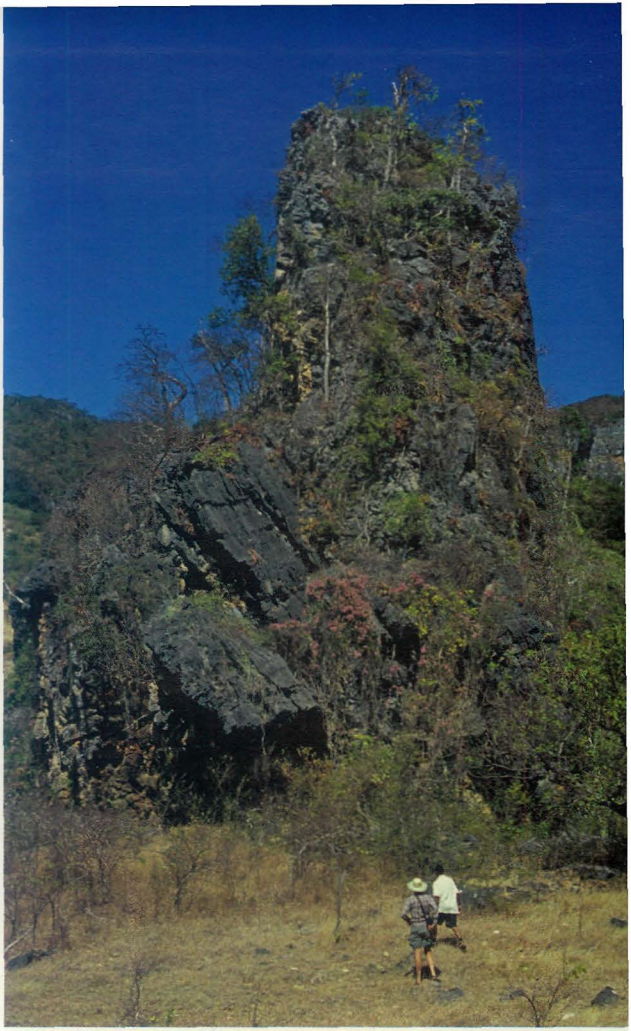
Begonia goudotii has been little cultivated, and our experience as shown in the propagation images included here may assist in altering that situation. We do not claim that it is easy to maintain, however, we have managed to keep the plants shown in the images alive for some years, and at the time of this writing, one of our plants was in the flower phase, and offered the opportunity to revisit the original set of propagation notes. In general, we would say that this is not an easy plant to grow. (Some of this may stem from the realities associated with providing an optimized and specialized environment for just this plant, when others sharing the available space have opposing requirements.) We have seen many successful seed germinations (bottom heat in a misted environment with a very fast-draining mix). However, we have also seen successful germinations dissipate before successful tuber formation. Based on our experiences, and the input of a few others who have successfully grown this plant, we offer the following recommendations regarding cultural practices: Warmth year round is important. We have grown our specimens in a climate-

The young plant, derived from seeds sown in early April, continues to develop. At one year old it may not be ready to flower, but the leaves are just as spectacular as those on the mother plant. By 18 months it will have a fully-grown tuber. Photo by Daniel M Houston

controlled propagation house. Good drainage is essential, with a bit of peat added for a slightly acidic soil environment. The tubers don't want to sit in water. Some shading during dormancy is probably a good thing (no lower than 60° F). We had more success at the dimmer end of the propagation house. Remember, that this is an understory plant in habitat as illustrated by the in situ images. The plants can take more heat and light during the growth phase (up to 85°). During the growth phase they want to see water, but the light mix ensures that they dry out between waterings. Small pots replicate the situation in habitat. A gentle feeding during the growth phase is advised.

Begonia goudotii has been referenced under some other nomenclature. In the wonderful book *Succulent and Xerophytic Plants of Madagascar* by Werner Rauh, the same plant is erroneously designated as *Begonia tuberosa*. And, we have seen it referenced elsewhere as *Begonia madagascariensis,* also erroneously.

As a final point, it is important to note, that the mother specimen's tuber sections employed in the propagation discussed in this article were legally collected and transported to California. All sown seed illustrated here resulted from that propagation work.



Limestone formations in the vicinity of Frenchman's Hill (Montagne des Francais), surrounded by dry brush in July 2004, are home to *Begonia goudotii. Photo by Dan Mahr*

Acknowledgements:
The authors wish to thank the following individuals for their generous contributions of field experience, habitat photos and botanical knowledge:
Gary James (Collector of Plant material and habitat photos)
John Lavranos (Knowledge of habitat and allied plant materials)
Dan Mahr (Habitat photos)
Tim Harvey (Habitat photos)
Dylan Hannon (Assistance in resolving taxonomic issues)
All other photos by Dan Houston

About the authors:
Dan Houston, Vice President of Infinite Optics in Santa Ana, Ca. A thinfilm coating company. Passionate about all types of photography, but in particular, making the small large. Currently very focused on photomicroscopy and the modification of microscopes to enhance image capture. Quite taken with succulent plants and their use in landscape environments. Has turned his front yard into a desert garden.

Joe Stead, Master Propagator and Instructor in the Ornamental Horticulture Department of Orange Coast College in Costa Mesa, Ca. Passionate about all types of plants, but with an emphasis on plant propagation of all sorts. Very experienced in the use of plants in the landscape, especially xerophytic plants. Annually supervises the raising and sale of 15,000 poinsettias for the Horticultural Department.

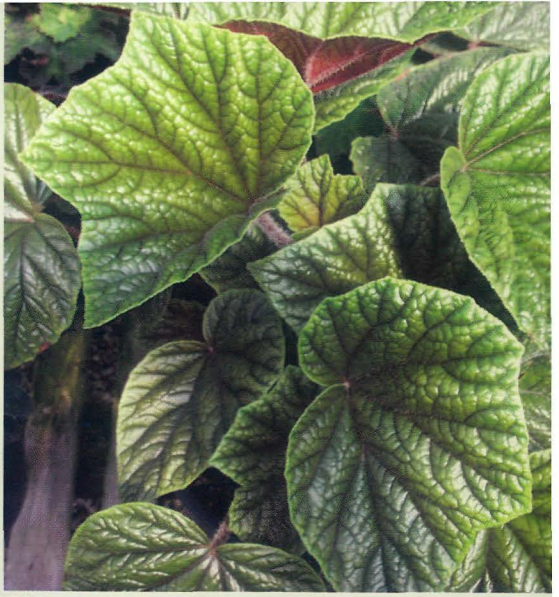
Hairy-Leaved Shrubs

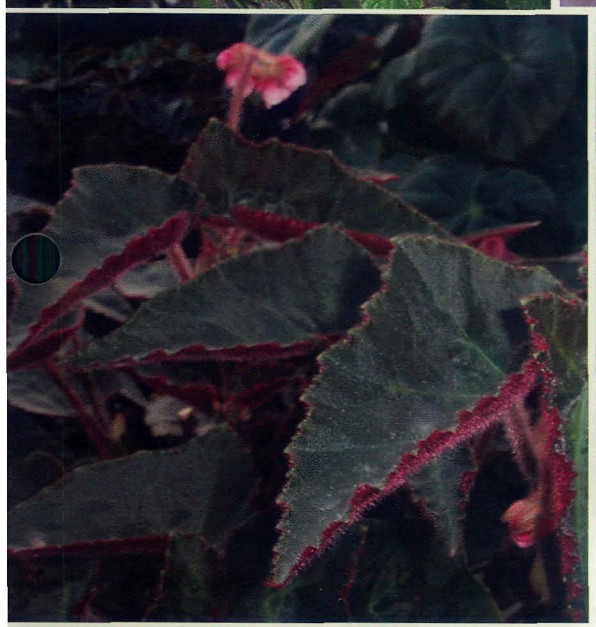
Article & photos by Brad Thompson, Vista, CA

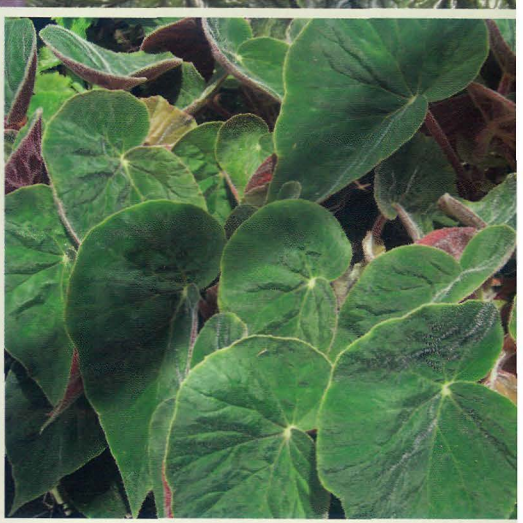
Most growers wouldn't say the hairy shrubs are their favorites. One problem is there were so many hybrids of hairy-leaved shrubs created that many of the old hybrids can't be identified with any surety if their tag has been lost. Also, with the shear multitude of hybrids, many hairy shrubs are considered to be "ordinary" or that they all look alike. All that said, hairy-leaved shrubs fill a niche and can actually be spectacular specimen plants. Even out of bloom, their leaves lend interesting texture to the garden. It was a hairy shrub that first attracted me to the world of begonias. It was a *B.* 'Ramirez' in a four-foot wide moss basket that cascaded nearly ten feet to the floor. Thelma O'Reilly told me on many occasions that the best way to test the hairiness of a begonia leaf was to lick it. If you lick any of the begonias below you will find they all have hairs.

B. 'Ginny', *B.* 'Penny Lahn', *B.* 'Pastel Princess' and *B.* 'Carol Pease' are four smaller leaved hairy shrubs that are ever-blooming or nearly so. They send up so many stems that they can take a hard pruning for such a compact plant. *B.* 'Penny Lahn' is like a miniature *B.* 'Ginny'. Both have dark green leaves with dark pink fuzzy flowers. *B.* 'Pastel Princess' is like *B.* 'Ginny' but the leaves are olive green and the fuzzy flowers are a pleasing soft pastel. *B.* 'Carol Pease' has the largest leaves and is a good contrast when grown with the others because of its bright green leaves and pure white fuzzy flowers.

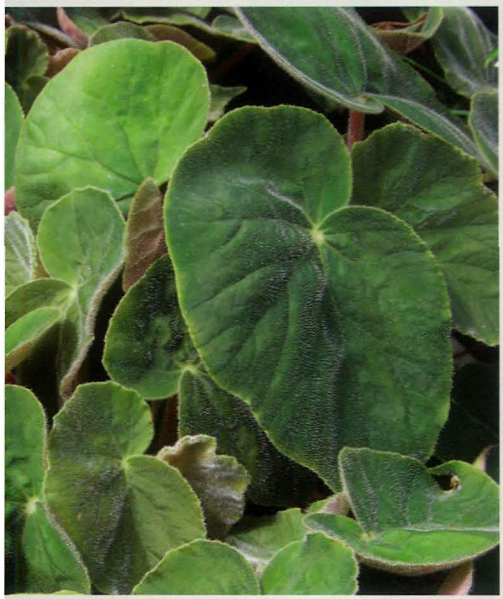
B. scharffii, B. scharffiana, and *B. metallica*, are just a few of the many species that were used in the creation of many of our popular hairy hybrids. They were combined with themselves and with even non-hairy shrubs to create a multitude of hybrids. People mix up *B. scharffii* and *B. scharffiana* but they are distinctly different, only the names are confusing. *B. scharffii* has very hairy light green leaves and large







Opposite page: *Begonia* 'Don Englund' is a fabulous felted leaf begonia by Patrick Worley. Leaves are long but the plant stays compact. Clockwise from top left: *B. jairii* is a cute small hairy-leaved begonia with white flowers in spring. Although it doesn't show in the photo, the hairs give it a lavender sheen when the light hits it just right. Top right: *B.* 'Emerald Glow' Middle, right: *B.* 'Alta Loma' is an old hybrid that is like *B.* scharffiana on steroids getting leaves two to three times larger with larger flowers. Bottom, left: *B.* 'Steve Tapia' is often an object of dispute with *B.* 'John Tapia'. John is the big one; Steve is the smaller, fuller one. Both are Rudy Ziesenhenne hybrids. Middle, left: *B.* 'Gary Hunt'



pink fuzzy flowers while *B. scharffiana* has dark green leaves with sparser hair and white flowers. Both are summer blooming. *B. metallica* has been used for many hybrids because of its hairiness and metallic sheen. It is a heavy summer bloomer with fuzzy red to pink flowers.

B. 'Rameriz, *B.* 'John Tapia', *B.* 'Iron Maiden', and *B.* 'Morocco' are all large growing shrubs. *B.* 'Ramirez' has large dark, nearly maroon leaves, especially if grown in good shade. (*B.* 'Ramirez' is an improved selection *of B. 'Alto Scharff'* created by Rudy Ziesenhenne repeating the original cross and choosing the best bloomer). *B.* 'John Tapia' has huge very fuzzy leaves and has probably the largest fuzzy blooms of any shru*B.* *B.* 'Iron Maiden' has large, textured, light green metallic leaves with dark veins and fuzzy pink flowers in summer. *B.* 'Morocco', although probably considered distinctive foliage, does have very hairy leaves. It grows quickly into a wide full spreading plant. It also produces variegated foliage just before its spring and summer blooming.

B. 'Gary Hunt', *B.* 'Cimarron', *B.* 'Emerald King', and *B.* 'Emerald Glow' are all *B. metallica* hybrids. *B.* 'Gary Hunt' has cupped bronze fuzzy leaves with a faint *B. listada* type center line. It grows very upright and has pink fuzzy flowers on upright petioles. *B.* 'Cimarron" has bronze, lightly hairy leaves and a faint *B. listada* type green line down the center. It has white flowers with dark hairs. *B.* 'Emerald King' and *B.* 'Emerald Glow' are both emerald green with a metallic sheen and fuzzy pink flowers. They are different in that *B.* 'Emerald King' grows tall with large leaves while *B.* 'Emerald Glow' grows extremely full and compact.

I know I was only able to give a brief touch on the multitude of hairy-leaved shrubs there are but hope the brief descriptions and included pictures will inspire you to take a renewed interest in this type of begonia. My next article will be a more specific article on caring for and growing all types of shrub begonias and the specific cultural oddities you may encounter.

Opposite page - clockwise from top left: *B.* 'Penny Lahn' **Top right:** *B.* 'Morocco' **Middle, right:** *B.* 'Pastel Princess' **Bottom:** *B.* scharffii **Middle, left:** *B.* 'Ramirez' **Below:** *B. 'Cimarron'*

A Begonia Under The Microscope

Begonia hirsutula *Hooker 1871*

Equatorial Africa Section [*Scutobegonia*]

Article & photos by Jacky Duruisseau, la Romade, France

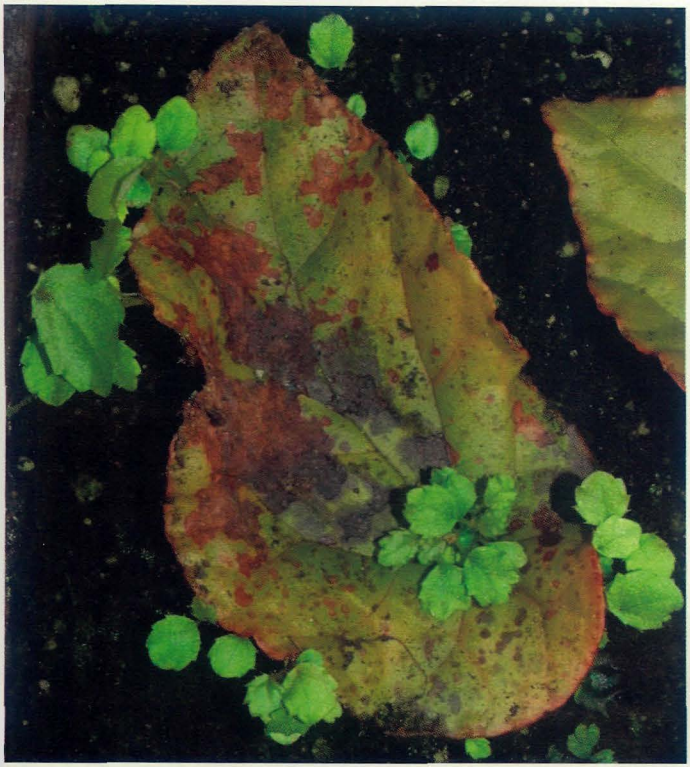
Begonia hirsutula Hooker is a yellow flowered Begonia. However, Marc Sosef (**Begoniaceae, section Scutobegonia**) writes that rarely we can see ones with white flowers. I found this very nice plant in Gabon on November 2003, near Igotchi, in the South near the Nyanga river, and in the Crystal Mountains in the North. It is a common Begonia in these areas but unfortunately, it was not in bloom at this time.

Description: *B. hirsutula* is extremely variable; plant up about 20 cm tall, rhizomatous, shrub, erect, hirsute especially on the petiole, flowers, pedicel and ovary; the leaves are not peltate or sometimes peltate; the blade is entire, held in a more or less vertical position, asymmetrical, pale or bronze green to dark red, often ovate and acuminate; the margin is entire or shallowly dentate; the base is rounded or rarely cordate in peltate leaves; the inflorescence has 2 to 5 male flowers and 1 to 3 terminal female flowers, positioned at the base of the plant, hidden below the leaves on dark red peduncles, very hirsute; the two male flower tepals are often circular, yellow to orange, rarely white (as I wrote above) with red stripes at the base of the upper tepal; the female flower is similar the male one; the ovary is very hirsute, often dark red and usually nearly triangular with three wings; the pedicel of the fruit is recurved towards the ground and the fruit is pendulous.

Top:: B. hirsutula in habitat
Bottom: Hairy stems and bright blossoms

Distribution: this plant grows from southern Ghana and southeastern Nigeria to Zaïre and through Cameroon, Equatorial Guinea and Gabon.

Ecology: usually terrestrial on clay or sandy soil, or on rocks or decaying trees, often at the base of mossy tree trunks, and occasionally seen



Starting from a leaf, after 5 months!

along river banks and beside forest trails; grows up to 1000 m in primary or secondary forest; may be locally common; often found in association with *B. mildbraedii, B. scutifolia* and *B. erectotricha*.

Cultivation: ***B. hirsutula*** is not an easy-growing begonia. Of course, it requires a terrarium: it needs 80% humidity and 20-25°C (68-77°F). However, it will grow even without these conditions, but the result is a fragile plant that is slow to grow and propagate. In my greenhouse, blossoming occurs in June and lasts a month. Male and female flowers appear together.

I use a a 50:50 mix of perlite and peaty compost. In the terrariums during the summer I spray with rain water once a day and water the soil with rain water once a week, keeping the terrarium open for an hour after watering. I rarely water in the winter. I never use fertilizer. I have grown this begonia for six years and I got the first flowers only last year! But now the conditions are good in my greenhouse. Additionally, I use artificial light so as to have about 14 hr light a day.

Propagation is easy but takes a very long time from a leaf. The cutting roots quickly, but then we must wait several months for plantlets. These appear at the petiole insertion and often at the leaf margin, so we get spontaneous starts when leaves fall. We can also propagate from stems or rhizomes with quicker results.

As I said above, it is impossible to get seeds. Why? We had a talk with Marc Sosef about that: he thinks that these plants (of **Scutobegonia** and **Loasibegonia** sections) are not self-fertile. In cultivation, if we do not have several strains, the pollination is not successful. But we are only amateurs. I would like to go back to Gabon and … look for seeds!

UPDATE FROM JACKY

On November 2009, with Johanna Zinn's help, I have completed a grant application for a May 2010 trip to Gabon in west central Africa. I plan on looking for seeds of yellow flowering begonias (sections Loasibegonia and Scutobegonia) and will be bringing them back. The seeds will be shared between donators and the ABS Seed Fund. Afabego (France), JBS (Japan) and perhaps, QBS (Queensland /Australia) have also offered their support. Should you want more information please contact me at jacky.duruisseau@akeonet.com.

Above: *B.* 'Pink African Violet', a beautiful and unique hybrid from a cross with *B. socotrana* and *B. herbacea,* does well in terrarium culture with high light, warm temperatures and high humidity.
Below: A favorite with hybridizers, the attractive *B. imperialis* thrives with low light and cool temperatures. Give this hairy leaved species high humidity but avoid splashing it with water.
Photos and culture notes by Charles Henthorne

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. Please self pollinate your species begonias, collect the seeds and send them to the seed fund. We depend on your contributions of seed to make a wider variety of species available to the members.

Listed below is the newly received seed now available from the Seed Fund. A special "thank you" to Cathy Knoblauch for this contribution of seed:

B. dregei suffruticosa
B. venosa
B. socotrana

Please refer to the January/ February issue of the *Begonian* for a list of all available seed.

Packets of seeds of species and U numbers are $1.50. All packets of cultivars (including open pollinated) seeds are 50 cents per packet. Very rare seeds and newly collected seeds will be $2.00 or more per packet. California residents please add 8.75% 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**

Cost 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 a s received from the donors.**

In it's native Mexico, *B. lyman-smithii*, grows on limestone outcroppings under deciduous forest. Photo by Tony Pinto

Begonias at the United States Botanic Garden

Article & photos by William McLaughlin, Curator with Eric Leavitt, Supervisor, Collections and David Anderson, Gardener, Begonias

With approximately 1,200 individual begonias and 146 different accession kinds of begonias, begonias constitute one of the United States Botanic Garden's largest collections. Our diverse collection includes species and hybrids and showcases the vast number of growth forms within the genus. In our collection, you will see everything from the curious to the common, from tiny terrarium jewels to large varieties with leaves more than 12 inches in diameter.

B. U475

While the U.S. Botanic Garden does not own any critically endangered species, it does house species that are becoming more rare in the wild and are uncommon in cultivation, such as: *Begonia kenworthyae*, *B. tonduzii*, *B. burkillii* and *B. bogneri*.

Because begonias can be found throughout the world in every conceivable climate and environment, the United States Botanic Garden does not have one recommendation for their care. They are grown in our production facility, the largest greenhouse supporting a public garden in the United States, and cultivated in the temperature and humidity conditions appropriate to each variety. The exhibition brings together all of them briefly in one show, to give our visitors a glimpse of the marvelous breadth of this family.

The Garden's collection was greatly enriched by an association with the local chapter of the ABS, whose members donated many plants to the collection. In addition, in the 1980s, the Garden was the fortunate recipient of plants from the collection of the late Mildred Thompson, and many of those plants and their progeny remain in the collection today.

From the large begonia collection at the US Botanic Gardens, *Begonia sizemoreae* has intriguing little blooms.

As begonia lovers know, there is a begonia for everyone, whether for a container, as a hanging plant or bedding plant, from the subtle foliage to bold, dramatic patterns. All will be on view at the U.S. Botanic Garden in our exhibit, *Begonias!*, on display from February 20 through May 27. The U.S. Botanic Garden is open every day of the year from 10 a.m. to 5 p.m. – and it's free!

A Word with You: Pinnate or Palmate

Article and photos by Claudia Goodridge, New Haven, CT

Vein patterns, a.k.a. venation, seem to affect leaf/blade shapes, so it's helpful to understand just the veins for starters. Leaves of monocots, like the grasses, have a parallel venation (fig. 309), in which the veins don't branch. Dicots, like begonias, do have different branching venation, namely "pinnate" and "palmate."

Pinnate venation (from the Latin pinna meaning feather) has a central vein/rib running right down the center of the leaf from stem/petiole to the point, almost bisecting it (fig. 307). Veinlets branch from that central vein. The pattern is like a bird's feather as in *B. cooperi, B. eminii, B. herbacea, B. macrocarpa, B. parilis,* and *B. ulmifolia.*

Palmate venation (from the Latin palma meaning palm of the hand) displays multiple veins radiating from one point (fig. 308), as fingers through the hand from the wrist, or even more visually, the feet of a water bird as in *B. 'Ebony.'* After searching begonia photo reference, I sense that the vast majority of begonias have palmate venation, such as *B. 'Piccolo,' B. rajah, B. 'Serenade,' B. 'Silver Star,'* and *B. 'Santa Monica.'*

Compound leaves also can be described as pinnate and palmate; *B. luxurians*, pictured in the January/February 2010 *The Begonian*, is palmately compound as are *B. carolineifolia,* and *B. hemsleyana.* A pinnately compound begonia eludes me, but I'll keep looking.

Now, a word about the illustrations. I love old gardening books. One of my favorites is a beautifully illustrated textbook written by Asa Gray back in 1858, *How Plants Grow*. He was a pioneering Harvard botanist who corresponded with Charles Darwin, helping introduce Darwin's theory in the U.S. http://www.huh.harvard.edu/libraries/asa/ASABIO.html Slightly more modern is another text from 1889, by Alphonso Wood, *Lessons in Botany*. http://virtualology.com/apalphonsowood/ Both old texts are densely packed with beautiful illustrations. The illustrations of venation comes from Wood's book. I'm relying on recent reference materials to research and share my understanding of some begonia vocabulary.

Leaf vocabulary is complex and even very modern definitions may vary. I've limited my verbiage to what is consistent in modern reference for non-scientists – and even that's been a challenge.

Studying begonias or photos of them, I can fairly easily identify both palmate and pinnate venation, but occasionally the difference is less obvious. Take a look for yourself; it's fun and enlightening.

Next time, a word on shapes.

IN THE MAILBOX

Soil Mixes and Amendments

by Greg Sytch, Horticultural Correspondent

We all understand that Begonias enjoy a well-draining, light potting mix. Heavy, cheap soils do not work well with begonias. While there are many "Professional" style mixes out there, nothing beats the potting mix you can make yourself out of rough ingredients. If you follow the general formula, it will work for almost any begonia, and most tropical plants. The exception might be terrarium plants.

Start with a light, fluffy, dry peat moss. Do not use it wet! Do not use the heavy, garden style peat. Then mix in perlite and horticultural vermiculite (larger size). This ratio should be 2:1:1 except in the most extreme environments. Here in Central Florida, I add handfuls of fine charcoal to my mix to "sweeten" it and add extra drainage. Mix well.

Once the soil has been mixed in dry, I add generous handfuls of magnesium sulfate and half that of a bone meal or super phosphate. Magnesium helps leaves stay lush green and bone meal or super phosphate promotes blooming as it breaks down. Only use super phosphate for plants that are big bloomers.

As for propagation, everyone has their own recipe, but a general recipe works as follows:

RHIZOMATOUS LEAVES: Half perlite and half vermiculite with a handful of peat moss to retain moisture. Rhizome pieces also root well in this. If your environment is a little drier, add additional peat moss.

CANES/STEM CUTTINGS: Mix the formula above in an equal ratio of 1:1:1. Using Rootone cannot hurt. I begin fertilizing all cuttings once they have been in two weeks, and usually just a foliar spray. In summer, cuttings root quickly so fertilizing can begin in earnest once the cuttings are stepped up.

B. barsalouxiae. This plant was identified at one of the Houston ABS Conventions by Dr. Kathleen Burt-Utley (*B. plebja* according to Jack Goldings book). Photo by Tony Pinto

This winter has been one for the record books in Tampa Bay. As I write this, sleet has fallen this morning in my yard and snow about 100 miles to the north in Ocala. It has not been above 60F since the New Year began, and covering and protecting plants has been the primary goal. This sustained cold has not been seen here in decades. We shall see how hardy begonias truly are. The landscape plants have yet to show much damage, but I am sure that will change with the hard freeze anticipated the next two nights.

If you want to know how I fared with the cold, or have any general questions just email me at gsytch@cs.com or feel free to call (727) 841-9618.

Happy Growing! Greg

Unkown Rex Photo by Tony Pinto

From the editor

The next issue of the Begonian will mark one year that I have been your editor. While I handle the mechanics of this job though, the real credit goes to those who submit articles, events and photos as well as those who handle all the business of making sure you get your copy of the journal. I would like to say a special thank you to Kingsley Langenberg, Charles Jaros, Tom Keepin and Jem Wiseman who double check nomenclature, photo identifications and do general proofreading – often at the last minute.

After years of growing a variety of plants and attending many plant society meetings I have found that something can always be learned from the experts but also from the beginners. Share your knowledge in The Begonian!

The issue deadlines for the rest of 2010 are: **March 28, May 28, July 28, September 28 and November 28.** A style sheet is now available with submission guidelines. Just contact me for a copy. Thanks! Linda

The curious sausage tree (*Kigelia africana*) produces beautiful, but malodorous, scarlet-colored blooms followed by the strange fruits (pictured) that can grow up to 26" long and dangle from the tree by long cords. A native of riverbanks throughout tropical Africa, this specimen was photographed at Gene Joyner's garden during last year's convention in West Palm Beach, Fl. Pulp of the fruit has long been considered to have medicinal value, including as a cure for snakebite, rheumatism and evil spirits. The fruit which can weigh up to 20 pounds, is poisonous in its fresh state, and must be roasted, fermented or dried before it can be consumed. Roasted fruits are also used to flavor a beer-like drink.
Photo by Johanna Zinn

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'Antonelli #12' grown by Paul Carlisle, from the recent Gazebo Flower and Begonia Show held in Montecito, CA. Photo by Gary Hunt