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The BEGONIAN



The BEGONIAN

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American Begonia Society

Founded January 1932 by Herbert P. Dyckman

Aims and Purposes

To stimulate and promote interest in begonias and other shade-loving plants.

To encourage the introduction and development of new types of these plants.

To standardize the nomenclature of begonias.

To gather and publish information in regard to kinds, propagation, and culture of begonias and companion plants.

To issue a bulletin which will be mailed to all members of the society.

To bring into friendly contact all who love and grow begonias.

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COVER PHOTOS

Front - *B. U261*, grown and photographed by Don Miiller. See article, p. 5

Back - Winter is highlight time for the semi-tuberous Reiger begonias, descendants of winter-blooming *B. socotrana*. This beauty was photographed by Gene Daniels.



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MOVING? Please let
the Membership
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won't miss an issue.
Thanks!

QUICK! Check your mail-
ing label! If it reads 1/91 or
2/91 your membership is
about to expire. Please
renew! We don't want to
lose you.

This is the Year!

Australian Begonia Society Convention, Perth, Western Australia , March 29-31

Southwest Region Get-Together, Oklahoma City, Oklahoma, May 3-5

American Begonia Society Convention,
Alexandria, Virginia September 12-15

LOCATION, LOCATION, LOCATION !

by Barbara Nunes

The three most important ingredients in real estate are location, location, location. The site of the 1991 ABS National Convention, hosted by the Potomac Branch, will be Alexandria, Virginia, just across the Potomac River from Washington, D.C., and we have location, location, location.

Alexandria, founded in 1749, retains its colonial charm. The Old Colony Inn is just eight blocks from the original part of the city referred to as "old town." Old town is charming, with many historic buildings, a few cobblestone streets, interesting shops and restaurants, and lots of atmosphere.

The Torpedo Factory Art Center, which was built in 1918 and manufactured torpedo shell casings during World War II, is now a huge art complex with individual studios for painters, sculptors, and potters, who produce, display, and sell their works. It's a fun place to browse, and perhaps pick up a few treasures.

Christ Church, built in old English country style between 1767 and 1773, still holds Sunday services. George Washington and Robert E. Lee attended church there, and Lee's boyhood home is nearby.

Mount Vernon plantation, the home of George Washington, is a short scenic drive along the Potomac. Nearby is Woodlawn, Martha Washington's home, and Gunston Hall, the colonial plantation of George Mason, author of the U.S. Bill of Rights.

PBS' recent documentary on the Civil War may have stirred interest in the site of the Battle of Bull Run (known here in the South as the Battle of Manassas), a short drive through lovely Virginia countryside.

The Old Colony Inn has a free shuttle bus to the clean, safe, efficient metrorail, which takes you in just a few minutes across the Potomac River to downtown Washington D.C. and the Washington Monument, Jefferson Memorial (which overlooks the Tidal Basin), the Capitol, Supreme Court, Library of Congress, Lincoln Memorial, and Viet Nam Veterans Memorial, White House (where George, Barbara and Millie Bush live), the Smithsonian Institution with its many museums - Natural History, American History, Arts & Industries, Air & Space, the Sackler with its oriental treasures, and the African Art Museum - just to name a few. Horticulturally, this area has the U.S. Botanic Garden, located on the Mall; the National Arboretum, with 444 acres of different kinds of trees and plants, plus a bonsai collection and herb garden; and a lot, lot more.

Plan to come early or stay late, and see some of these delightful places. You see, we have location, location, location.

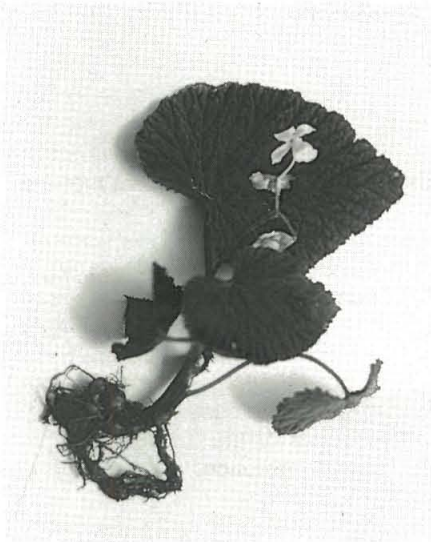
Barbara Nunes of Potomac branch is Convention Chair for the 1991 National Convention, and she hopes to see you there in September!

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Begonia U261:



Original plant of B. U216,
brought back July 1989
photo by Don Miller

In July 1989 I first laid eyes on a remarkably beautiful begonia in a greenhouse at Paute, Ecuador. Paute is about 35 kilometers northeast of Cuenca at an altitude of approximately 7000 ft. With twinkling eyes and a spasmodic twitching of the fingers I was drawn to the bench where this strikingly gorgeous begonia was growing.

This was my third collecting trip to Ecuador. I was with my friend and collecting partner Betty Girko, a bromeliad collector who plays string bass for the Dallas Symphony Orchestra when not roaming the jungles of Ecuador. We had just finished collecting in the Cordillera Cutucu area of southeastern Ecuador, and had stopped in the small village of Paute to see Betty's friend Padre Angel Andreetta.

Padre Andreetta is well known to botanists and scientists all over the world as a collector and guide in Ecuador. Some notable botanists who seek his expertise

A Black Beauty from the Dark Jungles of Ecuador

by Don Miller

are Professor Werner Rauh of the University of Heidelberg, Germany (of bromeliad fame) and Dr. Lyman Smith of the Smithsonian Institution (Dr. Smith works with the taxonomy of bromeliads and begonias). Padre is a self-educated botanist and has discovered many new species. A few orchids that bear his name are *Lycaste andreettae*, *Tristella andreettae*, *Scaphosepalum andreettae*, and *Masdevallia andreettaena*. He came to Ecuador 40 years ago from his native Italy as a missionary to the Shuara indians at the Silician mission of Bomboiza in southeastern Ecuador. The Shuara are known by the Spanish as the Jívaro (HEE vah roh), and were infamous for shrinking the heads of their defeated enemies; fortunately, they have given up this practice.

Now the Padre is administrator of an orphanage in Paute, where he grows and sells orchids to help support his studies and the orphanage. He grows high altitude orchids and bromeliads, with special interest in the orchid genus *Masdevallia*. His greenhouses, fixed up in old cement block dairy barns, are divided into three climatic zones. The cool house lets cool air in through the open top. The intermediate house is covered with fiberglass, to trap some of the solar heat. Then the warm house is covered with fiberglass and heated with warm water which runs through shallow canals in the floor.



Padre Angel M. Andreetta
in front of one of his greenhouses
photo by Betty Girko

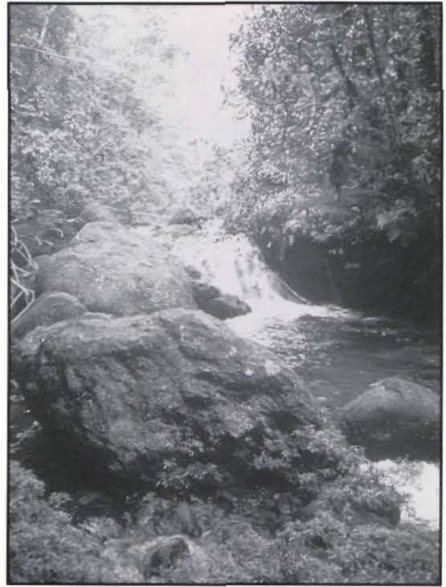
It was in the warm house that he grew the one lonely begonia. When he learned of my interest in begonias he gave me a plant to be identified; his only request was that I name it after him if it should turn out to be a new species. This plant is on our ABS unidentified species list as B. U261.

Padre Andreetta collected the plant we have labeled B. U261 in the Province Morona-Santiago along the Mendez-Morona road, at an altitude of 2300 ft. There were many individuals growing in the dense shade of this humid tropical habitat. They were growing in soil and on rocks along a rushing stream. Other plants that the Padre found growing in the same habitat were the orchids *Masdevallia rex* and *Paphinia herrerae*.



Masdevallia orchids in Padre's greenhouse
Photo by Don Miller

Habitat of B. U261
Photo by Betty Girko



He reports that, if given enough water, this begonia will grow year round, but in its native habitat it loses its leaves and goes dormant during the dry season. The habitat photograph, taken by Betty Girko in February, 1990, is thought to be the site where B. U261 was collected. She did not find any begonias there; hopefully, they were only dormant.

When my plant arrived in Dallas I planted it in a terrarium under lights where the temperature reaches 80°. It bloomed only briefly. Then as temperatures dropped in December and January it bloomed again and continued until May. In the terrarium it has showed no tendency to go dormant, and has gotten quite bushy with pinching.

The delicate light pink flowers contrast strikingly with the black rugose leaves. The leaves when growing in Paute were 9 cm. x 6 cm. But in the terrarium they measure 10-12 cm. x 7-8 cm. The leaf shape is cordate and the margin is dentate. The leaf is covered with red hairs and is red on the back. Growth habit appears to be shrub-
(please see next page, bottom)

IN MEMORY

Tiny Phillips, long-time member of East Bay Branch, died on October 5, 1990 in El Cerrito, California...He will be missed at our meetings and in our hearts. - East Bay Branch newsletter

Evi Bossanyi Loeb died in October in Jenkintown, Pennsylvania. A long time ABS member, her horticultural interests were broad in spectrum, ranging from growing from seed to maintaining her family's garden estate "Three Brooks"; she was also an expert on conifers, and wrote for the Pennsylvania Horticultural Society's magazine "Green Scene" and for The Kew Magazine. In 1988-9 she established and raised funds for the Mildred and Edward Thompson Trophy given annually at the New England Spring Flower Show. Intelligent, active, charming, she will long be remembered as a caring friend who was generous in sharing her time and her love.

It was with great sadness that we learned of the death of **Bob Oliver** in Modesto near the end of October. Many of us remembers him for his friendliness and generosity. When his health permitted, he was very active in the Branch and gave programs, served on the Board, and worked hard on annual shows. Many enjoyed his begonia propagation program in pantomime, which was set to Dixieland jazz with all the appropriate props. Our heartfelt sympathies go out to all his family. - Sacramento Branch Begonia Leaf

like or thick-stemmed, but it may be semi-tuberous in its native habitat. I have not grown this plant outside the terrarium, but believe it will grow nicely in a humid greenhouse.

B. U261 is an exciting new find from the dark jungles of Ecuador. Its unique leaf color and texture and its delicate flowers present fascinating breeding possibilities.

BULLETIN BOARD

The ABS Research Department thanks the following donors who contributed to Dr. Tracy McLellan's trip to Africa:

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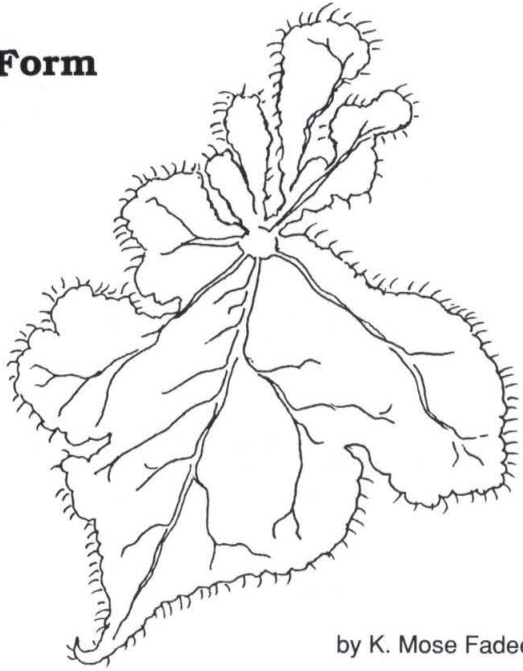
Bob Hamm will serve as Director Pro-Tem and Arlene Davis Ingles as Treasurer-Membership Chair for the newly organized Northwest Region. Plans for the future include annual Get-Togethers and a regional newsletter with news, events, and topics of interest to begonia growers in the Pacific Northwest. Annual dues have been set at \$6 (add \$2 for each additional person at the same address). To join, mail dues to Arlene at 157 Monument, Rio Dell, CA 95562-1617.

I thank Betty Girko for helping me assemble this information, and Padre Angel Andreetta for sharing this beautiful begonia.

Southwest Region Director Don Miller lives at 1005 Mt. Auburn, Dallas, TX 75223 when not on jungle trails.



An Ancestral Leaf Form of *B. carrieae*?



by K. Mose Fadeem

Through the winter of 1989-90 a two year old *B. carrieae* in my 45°-50° greenhouse lost all of its leaves from the only rhizome the plant had thus far produced. One small undeveloped leaf at the tip hung on until March before succumbing. Shortly after, a most unusual lacinate leaf developed from the tip of the now defoliated plant. "Lacinate" generally means fringed, but botanically is defined as "cut deeply into narrow jagged segments." Considering that the normally large 12" leaves of *B. carrieae* are shallow-lobed, the unfolding of this oddly shaped leaf presented an enigmatic contrast.

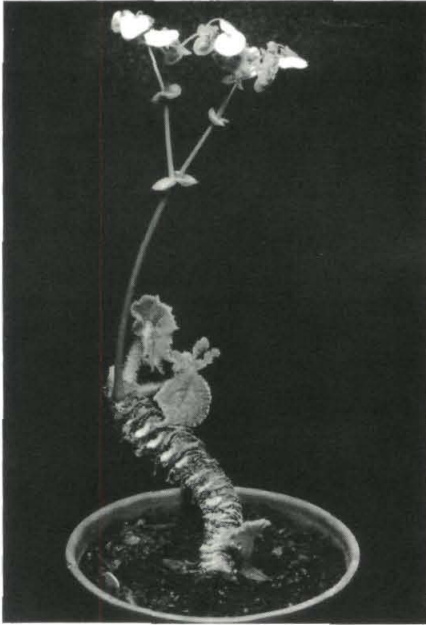
At about the same time a flower stalk developed from the node before the odd leaf, the node to which the last leaf had clung so tenaciously through winter. The inflorescence developed quite naturally and was in bloom for several months. By some time in April, after the lacinate leaf had reached its peak of 5" length, the next bud of a normal leaf was quite apparent, though progressing slowly in the still cool nighttime temperatures. Also, a new rhizome was beginning to emerge from the base. With the development of a normal leaf, the lacinate form began deteriorating rapidly,

and by early May I removed and flattened it out to make a trace (shown above). That was roughly the situation over a period of 6 to 7 weeks, and if this description is confusing, I trust the photographs will make it clearer.

So what have we? A *Begonia* species completely defoliates in winter and at the time of spring flowering generates a leaf that may be reminiscent of an ancestor. In short, I believe we're looking at an act of phylogenetic recapitulation. I speculate that defoliation of the plant produced a change of metabolism, which altered the embryonic formation of its next leaf; the leaf departed from the modern form and reverted to something of an ancestral form, which lay concealed in the modern organism. That is, phylogenetic recapitulation occurred.

Dostal, 1967: "A valuable guide to the study of the causes of individual development (ontogeny) is Michurin's basic law of the unity of ontogeny and phylogeny. Phylogeny represents the sum of all the ontogenies that have gone before and have been modified by external influences of the environment. Through continuous repetition

May, 1990: *B. carrieae*
Close-up of lacinate leaf at right



altering their growth pattern radically (recapitulation?) is evidently associated with flowering.

they have gradually become concealed in contemporary organism..." In a nutshell, old forms are inherently combined in recent forms.

In humans we speak of "racial instincts" or "atavistic tendencies," characteristics of a remote ancestor lying cloaked within our present biological makeup. In plants, however, with their ability to continuously generate new parts of the organism, it seems to me there is far more opportunity actually to materialize these old forms - that is, when conditions are conducive.

I have no way of telling if the lacinate form of the leaf on *B. carrieae* developed fully. I also don't know if there is any relationship between the advent of this form and period of flowering, but I suspect there is. Flowering requires some inhibition of vegetative growth, so it's likely that the metabolic processes inducing sexual production may have aided in the regeneration of a leaf of ancestral form. The curious behavior of *B. U016* and *B. formosana* in

Additionally, defoliation of *B. carrieae* may have released inhibitions at the base of the rhizome and induced an adventitious bud to evolve. One notion put forth is that adventitious buds begin to form as a reserve should the growing tip become damaged. My experience with *B. carrieae* is that it puts out new rhizomes begrudgingly, at least while young. The lower part of the rhizome remains strongly inhibited until the growing tip either develops far enough away or is undergoing deterioration.

However, root systems also play a role in the integration of growth. It's possible that mature plants of *carrieae*, with better developed root systems, may be inclined to shoot more often. While this theory sounds reasonable, observations to date do not support it.

K. Mose Fadeem would like to hear from other members interested in unusual growth patterns. His address is 319 1/2 English Ave., Monterey, CA 93940.

Improved Technology for Chromosome Counting in *Begonia*

SOCOTRA, Garancieres, France

Dr. Thi Hai Phan and other researchers at SOCOTRA have been improving on the technology for counting chromosomes in order to facilitate commercial hybridizing of *Begonia*. While morphological descriptions (i.e., accounts of form and structure) are informative, one of the best ways to identify the specific character of a plant is through knowledge of its chromosomes. Failure in hybridization can often be explained in terms of a chromosomal feature, and this can help the breeder in future choice of parents. What is achieved in fact is a reliable signature for a given plant that contributes overall to a better understanding of the hybrids.

Chromosome counting in *Begonia* is a rather tedious affair for a variety of reasons: there is a great deal of variability in the genus, the chromosomes are very short and small, mechanical damage can occur in the process, and there is a reduced number of complete metaphase (the stage in cell division during which the split chromosomes are arranged along a spindle). An improved method that we developed at SOCOTRA of counting chromosomes



Photo 1: Several mitotic metaphase plates in root tip cells

using root tip cells is designed to overcome some of the problems and is helping us to correlate scientifically the characteristics of a parent plant with those of its progeny. Chromosomes offer a view of a plant that may appear abstract to many home growers and hybridizers, but inevitably its usefulness is realized in very real terms...in the stems, leaves, flowers, and habits of *Begonia* hybrids.

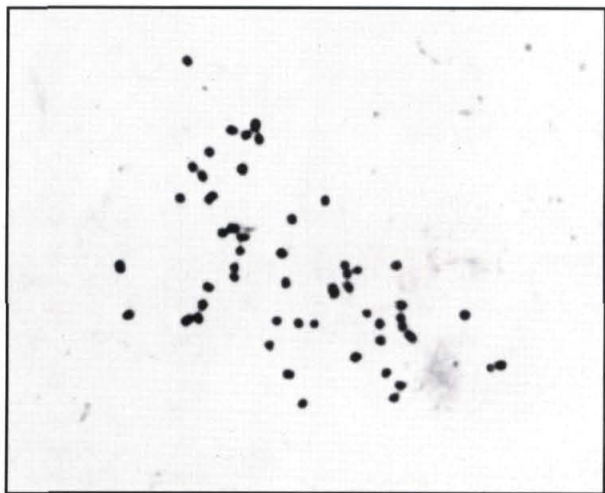
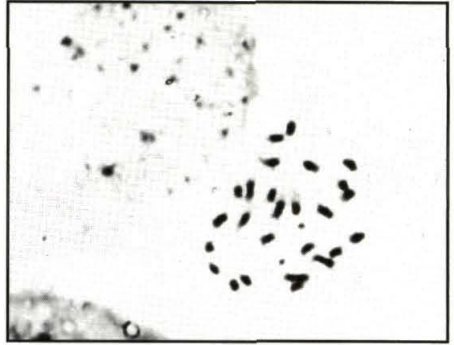


Photo 2: Tamaya - Mitotic metaphase showing 54 chromosomes

Photos 3 & 4: *B. partita*. On right, mitotic metaphase showing *partita's* 28 chromosomes



DETAILS

METHOD: Root tips are cut out and pretreated in 8-hydroxyquinoline to condense chromosomes, then fixed in acetic alcohol. They are submitted to acid hydrolyse at high temperature and to enzymatic maceration. Following this treatment the root tips are soft enough to be dissected and squashed (under microscope) in a tiny drop of acetic water on a slide. This operation allows a spreading of chromosomes in cells at mitosis stage or nuclear division (photo 1). The chromosomes are colored in GIEMSA staining solution and the slide is dried by air before preparing it in a permanent mounting. Chromosome observation is realized under optical microscope.

ADVANTAGES: The observation does not require phase contrast, additional accessory on the microscope; the GIEMSA solution stains only chromosomes and does not reveal parasite cytoplasmic granulations which can be confused with short chromosomes; and the acetic water clarifies the cytoplasm, which improves contrasted chromosome vision.

OBSERVATIONS: Our own observations thus far have revealed that chromosome numbers or ploidy levels are variable even in one particular variety. Aneuploidy and mixoploidy observed in these somatic cells are probably resulting from continuous vegetative multiplication. It is possible, however, to give representative chromosome numbers for some species. In the example shown in photo 2 the chromosomes are short and olive shaped without central constriction. The number varies from 52 to 57 chromosomes, with a majority of metaphases presenting 54 chromosomes. In this hybrid with a high chromosome number they tend to gather themselves. In another example, that of the species *B. partita* (photo 3), the chromosomes are longer and their number is reduced, from 25 to 29, with a majority of 28 chromosomes.

While other methods (pollen size, chloroplast counting in epidermal cells) have been used previously to determine the ploidy level, we feel the cytological analysis presented here could give the accurate chromosome number. It's a good tool in haploid searching and control of somaclonal variation.

SOCOTRA is a commercial hybridizer and grower of begonias and other ornamentals in France and the Ivory Coast, Africa. ABS members who attended the 1990 Convention may have met Agnes Galibert, Chargee de Recherches at SOCOTRA. Their address is 31 Rue Louis Bellan, 78890 Garancieres, France.



A Year in the Life of a Tuber

or, Our Way of Growing Tuberous Begonias

Text and Photographs by Alice & Isadore Gold

Growing begonias is a joint effort on our part. When my husband decided to take up this hobby I joined him in self-defense: he worked 6 days and 3 nights a week, and if I wanted to see him I knew I'd find him in the garden. Of course, one begonia called for two, two for three, etc.! You become fascinated with the beauty and fragility of the flower - yet it is such a strong plant! We have found that our begonias love much T.L.C. and it is our delight to see our garden filled with such color - sometimes we just can't believe it!

We must say if you are having success with your methods of growing, please continue to follow them. If we can share our knowledge with you and perhaps give you a new idea or two - that's just fine. But remember, we have to learn to garden where we live, with different weather - heat, cold, fog, rain, etc.

Getting Started: **February**

Our tubers' yearly cycle starts on George Washington's birthday, because it seems as though our tubers wake up then. We take them out of the cold and put them in a warmer place: the laundry room. We place newspaper on the floor, sprinkle rose dust all over it, put our little baskets of tubers (with their name markers) on the newspapers, cover them with more newspapers, and watch for growth buds ("pinkies") to appear.

While we wait, there are other things to do. First, pots have to be cleaned. Our method is to soak them in a solution of 1/4 cup Lysol liquid cleaner, 1/2 cup vinegar, 10 quarts warm water.

Our leaf mold has been put out in the garden in two piles during the winter - left exposed in the rain, sun, and cold. We have one pile of new leafmold and one pile of last year's mix getting ready to use. When potting time comes we mix the leafmold all together, in equal parts.



February: "pinkies" show the tubers are awakening

We keep watching and examining our tubers and when nice big growth buds appear on tubers we get ready to put them into leafmold. We start our tubers in flats which we prepare by dusting the bottoms with rose dust, putting a sheet of newspaper over that, and filling the flat with leafmold. The rose dust and newspaper are used just in case some bugs have crept into our leafmold to feast on tubers or the tender growth as it emerges... and don't forget to include the name tags! We lightly cover the tops of the tubers, water the flats lightly, and dust everything with sulfur as a mildew preventative, then place the flats in the glasshouse until the plants are 3" to 5" high.

Potting Up: **April**

Then we pot up. We fill the bottom third of the pots with our mixed leafmold, plus 1 tablespoon of our fertilizing mix (which consists of equal parts of bone meal, cottonseed meal, blood meal, potash, and fishmeal) and mix all together well. Then we finish filling the pots with leafmold.

We place the upright plants to the back of the pots, with their leaves pointing to the front. We put a bamboo stake in back of each plant, and the name label in the front.

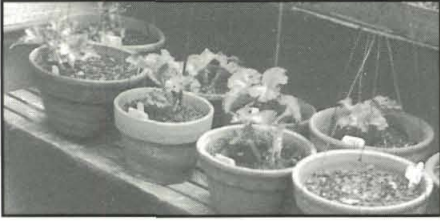
Hanging begonias go in the center of their pots. When the hangers are about 6"

high we pinch out the ends of the stems and side growth, to give us more branches - the more branches the more flowers; and a good basket has a skirt all around the pot with lots of blooms! Some baskets are stiff and may have to be pinched twice.

Next we water, and dust off the top of the soil with sulfur. And this starts the growing season.



Now they're growing: May



First group potted up: April 20



Bud opens, B. 'Honeymoon': June 24



First pinching

Feeding: May

About three weeks after potting up, when we are sure the plants are growing, we start our feeding program. Uprights are fed every other week with 1 tablespoon fish emulsion (5-1-1) and 1 tablespoon Liquinox Grow (10-10-5) to a gallon of water. Hangers are fed every week with the same solution.

When we see signs of flower buds forming on plants, we switch to 1 tablespoon of fish emulsion plus 1 tablespoon of a high phosphorus food such as "Bloom" or "High Bloom" (2-10-10). The upright types are fed every other week and the hangers every week - *on the same day of the week* - methodically!

Cuttings: Summer

We take cuttings of all our tubers. We like to take growth bud cuttings. We only leave 1 or 2 stems to a tuber. We use a sharp, clean knife and wash the knife in chlorox water immediately after each cut - we keep a small jar of chlorox water handy at all times.

We put our cuttings in a flat of leafmold and sand mixed - or in small pots, depending on how many cuttings we are making. We firm them in, water lightly, and place them under the bench with their name tag and the date. We trim leaves so that the plant does not have to support leaves and can start making a tuber.

Soon growth can be seen, and then we pot our cuttings up and start our regular growth fertilizing. These cuttings are left in their pots over the winter and watered lightly so that the soil does not dry out and compact, causing the small tuber to dry out. In January we dump their pots, as the



Left: the work pays off in beauty. See also page 3.

Dealing with Problems

In our climate we watch for mildew at all times. When we see a spot we spray the plant with "Doo Spray" or "Milldon't" immediately. We find that anything that can be used on African Violets can be used for our begonias. There is no regular time for mildew - just keep watching - always. Try not to spray the blooms.

As our plants grow larger, they must have air circulation - but not wind. The plants must not be crowded together. Uprights must be tied to bamboo stakes with some kind of "twistem" for support - the blooms get so heavy that they can cause the stem to break away from the tuber.

One of our strictest rules is: do not overwater! Careful watering, and keeping the plants and growing area clean, are two of the most important factors in growing tuberous begonias.

Whenever one of our tubers seems tired, slow, or sluggish, we have a nice spot in our garden where we plant it to revitalize itself, and it receives the same attention as the other tubers. Sometimes plants just need a little rest from being on exhibition at the shows!

tuber forms at the end of the stem at the bottom of the pot. We cover this small tuber with leafmold, water, and when signs of growth appear we take it out and pot it up.

Dormancy & Storage: **Fall, Winter**

In the winter when the tuberous foliage dies back we gradually withhold water and taper off on feeding until it is time to stop both. We then take each tuber out of its pot and gently shake off the excess soil. Each tuber and its name marker go

into a basket (we use the plastic containers that strawberries come in) and are cured in the sun for about a week (weather permitting). Then the baskets are stored in a cool dark place until Washington's birthday...when we move them to a warmer place...and the whole cycle is again started.

Even during the winter, however, we are always examining our tubers, because sometimes they just dry up, or become hard, or rot. In this case you are either glad you made a cutting - or you wish you had!

Alice & Isadore Gold won Best of Show at the San Francisco convention in 1989, and treated visitors to a seminar on their growing methods and tours of their incredibly colorful garden at 120 Corona St., San Francisco, CA 94127.



BEGONIAN INDEX 1990

1990 TOPICS AT A GLANCE

Jan-Feb: hybridizing; Membership Challenge; B. U062; Damping Off; *B. gehrtii*

March-April: *B. hirtella*, *B. holttumii*; Membership; *B. dipetala*; Members' Gardens; Building Begonia Column; Heat-tolerant Begonias; Moving Begonias Outdoors; *B. nepalensis*, *B. silletensis*, *B. glandulosa*, *B. pinetorum*

May-June: Begonias of Malaysian Borneo 1; Leaf Variations, *B. dregei* varieties; "Begonia Fever" 1; Monterey Project; Adopting a Garden Plot; Dr. Fred Barkley

July-August: Convention 1990; Awards; Growing in Drought; Conservation of Rainforests 1; B. 'Phil's Phantasy'; U# Listings: U# Update; Begonias of Malaysian Borneo 2; "Begonia Fever"2

Sept-Oct: Conservation of Rainforests 2; Begonias of Malaysian Borneo 3; Edibility; U# Listing; Epiphyllous Growths; Tissue Culture Project Update

Nov-Dec: "Little Martian" Update; Tuberous Begonias from Seed; Conservation of Rainforests 3; Thailand Expedition; *B. soli-mutata*, B. U003; B. 'Lubbergei'; Florida Freeze; Species Project

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Show News Around the Country



Annie Calhoon's B. 'Bunchii'
photo by Tamsin Boardman



Pat Sage's B. 'Essie Hunt'
Photo by Eleanor Calkins

Annie Calhoon took Best Begonia in Show and a Cultural Award at the *Sacramento Branch Show* in September, 1990, with B. 'Bunchii'. Another big winner was **Paul Tsamtsis**, who with 15 blue ribbons won the Sweepstakes trophy; with 117 total points scored in the show won the John R. Williams Memorial Trophy for most begonia points; and earned 3 Cultural Awards. Cultural Awards also went to **Alecia Anderson, Betty Alcorn, Oakley Murphy, Loretta James, and Shirley Price**. The Clarence Hall Memorial Trophy for most tuberous points was won by **Bob Parish**.

Quail Gardens in Encinitas was the site of the *Palomar Branch Show & Sale*. **Pat Sage** won Best of Show with B. 'Essie Hunt', which was awarded 98 points and a Cultural Award. **Mabel Corwin** took Sweepstakes; Cultural Award went to Mabel for B. 'Tangiers' (97 points), B. U168 (96) and B. *solimutata*. (95); **Ingeborg Foo**, B. 'San Miguel' and B. 'Mini-Merry', both 95 points; **Pat Sage**, B. 'Red Reign' (95); **Rafaella Poedtke**, B. *dregei* (95).

The extremely successful sale was helped by a display of begonias mounted by **Kartuz Greenhouses**.

Julia Meister won Best of Show at the *Rochester County Fair*, and at the *Rochester Men's Garden Club Show* at the Fair. At the *New York State Fair*, she took Best Begonia in Show, winning the H. Gilbert Harlow Trophy for the third year in a row.



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COMING EVENTS

February 22-24: Sacramento Branch participates in Home & Garden Show at Cal-Expo.

March 6-10: Atlanta Flower Show, "Fantasia." Begonias may be entered in flowering or foliage divisions, by pot size. Order show book from Atlanta Botanical Garden, Box 77246, Atlanta, GA 30357.

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

May 3-5: Southwest Region Get-Together, "Begonias, Oklahoma Style." Holiday Inn, Oklahoma City. Packets will be mailed in February. For more information contact Chairs Linda & Mike Clemons, 3512 N.W. 65th Terrace, Oklahoma City, OK 73116.

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

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

Deadline for next issue is January 15

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DIRECTORY UPDATE

Mr. Akira Tanaka is Director of the Japan Begonia Society, not President.
Mr. Tatsuo Suzuki is President.

CORRECTIONS, ADDITIONS

Please don't search the newstands for "American Horticulture"; it's American Horticulturist which will feature Lorra Almstedt's article on begonias in February.

The Mini-Ads in November-December gave the wrong price for Paul Lowe's rhizomatous leaves. They are \$30 per 100, not \$20.

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Fort Worth Botanic Garden Begonia Collection: Growing, and adding a Species Bank

by Pam Lee

Begonia Curator Kelton Parker of the Fort Worth Botanic Garden has a two-fold goal: to create one of the most complete begonia collections in a public garden, and to establish a begonia species bank. He's off to a good start. At the time of writing, the collection stands at 838 plants (319 are species), with more varieties on the propagation bench and in flats of seedlings. He's looking forward to receiving and registering the 1000th begonia variety.

Fort Worth has long had a good begonia collection, and in 1985 opened an exhibition greenhouse for their begonias and orchids. Now the begonias have their own Curator, and a large production greenhouse as well.

A begonia lover with a horticultural background, Kelton has been on the staff at the Gardens for eight years and two years ago was appointed Curator of Begonias. Under his care, the collection has multiplied and assumed a new direction. Beautifully grown specimen plants are still on display, but back in the production greenhouse there's serious work going on.

Thanks to the help of volunteers under the direction of Eve Fox, a member of the Mae Blanton Branch, a computer catalog of the collection has been compiled. The book includes all available information on each variety such as description, country of origin or hybridizer and parentage, cultural comments, known crosses, where

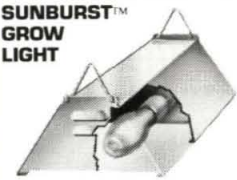
the plant can be located. Each variety is being photographed, with slide programs planned that can be made available for garden clubs and civic groups.

The collection list is being traded with other institutions with begonia collections: New York Botanic Gardens, Montreal Botanic Gardens, Selby Gardens; and with many individual growers. Donations of begonias have come from all of these, and from ABS' Clayton M. Kelly Seed Fund.


The list is also on file with ABS' Conservation Department. In line with his goal of establishing a species bank, Kelton hopes to locate and grow as many begonia species as space and climate limitations permit and to make these species available to anyone interested in begonia conservation.

If you're in the North Central Texas area, drop by and see the collection. Kelton enjoys "talking begonias" and swapping information. The Fort Worth Botanic Garden is located at 3220 Botanic Garden Boulevard, Fort Worth, Texas 76107. Display greenhouses are open from 8 a.m. to 5 p.m. in winter, and until 7 p.m. in summer. The production greenhouses are open during the week only.

Pam Lee lives at 1424 Holcomb Road, Dallas, TX 75217. She's active in the Dallas Area and Mae Blanton Branches, and visits the begonias in nearby Fort Worth at every possible opportunity.

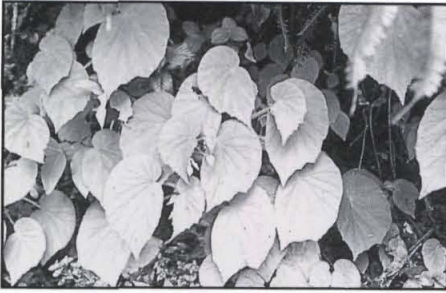


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Perak Province, *B. maxwelliana*

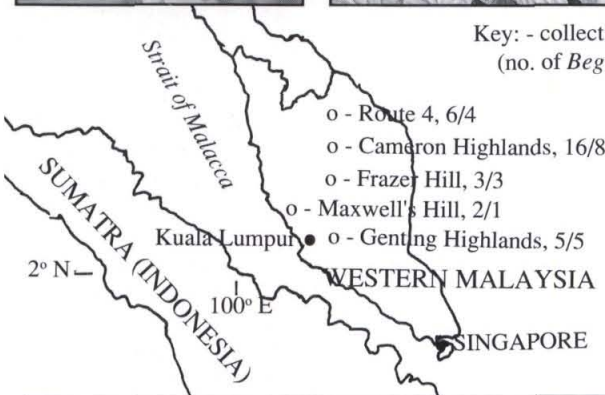
Perak Prov., *B. pseudoisoptera*

Pahang Prov., SH#773, 774, 775

Pahang Prov., SH#758



Key: - collecting locations, x/x
(no. of *Begonia* populations/no. of species)



Begonia Collections from Western Malaysia

pressed specimens	species collected	populations sampled	epidermal peels & leaf sections	photos taken
200	10	31	300 each	150

Summary of 1989-90 Expedition

Part 2: Western Malaysia

by Scott Hoover, Conservation Department

On Feb. 17, 1990, my nephew Scott and I departed for Western Malaysia on the "Bangkok-Butterworth Orient Express" train. We had planned to rendezvous with Don Miller at the Kuala Lumpur airport at 10:00 a.m. Feb. 19, but lo and behold, who should appear on our Orient Express train: none other than Don himself. It was great to see him and know we were all together.

Upon reaching Kuala Lumpur, we contacted David Jones of the Botany Dept. at the University of Malaysia to arrange for leaving a duplicate set of herbarium specimens. We then rented a Peugeot 305, a snappy little car, got a couple of maps of the country, stocked up on food supplies and other essentials such as newspaper and alcohol for pressing and preserving plants, and were off to collect the begonias of Western Malaysia, or at least some of them.

Compared to the rigorous hiking involved in collecting in Thailand, Western Malaysia was like a vacation; *Begonia* were much easier to find once we reached suitable habitat. It so happened that the British adored the cool, refreshing mountain areas of Malaysia and built several officers' retreats in lovely areas. Some of these have since become resorts for tourists, all with black-topped roads and comfortable lodging and dining facilities. After a good day's work collecting *Begonia* along the streams bordering these roads, it was paradise to reach these modestly-priced resorts on the tops of mountains. Each resort served for a day or more as a base camp from which we operated our collecting operations.

We collected 10 different species in Western Malaysia, and I'm sure quite a number remain to be discovered. Probably some could be found quite easily in the

country's largest national park, Taman Negara, which we did not visit because of the time involved and permits required to enter. Also, a large section of the interior of Western Malaysia remains unexplored due to the presence of the Malaya Communist Party. I suspect there are new species of *Begonia* to be discovered in this vast area, but not until it is safe to go there.

Germplasm in the form of cuttings or seed was collected from all populations observed and as a result a great deal of material has been distributed to ABS members. For the time being only the Society's recognized experts have this first generation material, but with luck and successful propagation, these newly introduced species will become available to the general ABS membership. It is our objective as the Conservation Dept. to document and monitor the germplasm introduction of these Thailand and Malaysian begonia species as systematically as possible, and publish the results in a well-known horticultural magazine. The first phase concerns the propagation of the cuttings introduced; a description of the seed material will come later. Through the combined efforts of field collecting, propagation, species U-number identification, and documentation of species distribution within the ABS community, we hope to develop the best method for ensuring the preservation of species within *Begonia*. The results of this expedition are a test of all our efforts.

When not field collecting, ABS Conservation Department Co-chair Scott Hoover can be located at 718 Henderson Rd., Williamstown, MA 01267.

Photos on previous page by Don Miller

QUESTION BOX

Mae Blanton, Horticultural Correspondent

Question: In my area winters are somewhat mild with occasional short freezes. *Semperflorens* left outside and mulched usually come back in spring. Are there other types of begonias I could try to winter over outside? What special precautions I should take besides mulching? TEXAS

Answer: Many of the cane-like begonias do well under these conditions, including the *Superba* types; shrubby types such as *B. 'Ginny'*; and even the more robust of the rhizomatous types, such as *B. 'Texas Star'*, *B. 'Immense'*, and *B. 'Erythrophylla'* if planted in a raised bed. A protected bed on the east side next to the house is ideal. Be sure the plants have excellent drainage, as they won't survive in waterlogged soil. Do not cut off frozen tops until new growth begins in spring. If a protracted severe freeze is imminent, cover the plants (large flower pots, upside down, work well), then pull mulch up around the base of the pot and cover the pot with plastic, newspapers or paper bags, sheets, or blankets. Another trick is to put a plastic milk jug filled with hot water next to the plant, then cover both plant and jug with a cardboard box. The hot water can be replaced as needed. Remove all these coverings during mild spells.

But just in case, take cuttings in the fall to root as insurance in case the plant doesn't survive. Some growers declare a young plant set out in spring will outdistance the older plant left in soil.

Also, *B. grandis* ssp. *evansiana* is winter hardy even in more severe climates.

Question: I recently acquired *B. picta* and was told not to dispose of it when it died back. How do I care for it while it is dormant? Do you treat *B. sutherlandii* and *B. pearcei* the same way when they are dormant? TENNESSEE

Answer: *B. picta* goes dormant when conditions are not to its liking. My first seedlings had tubers the size of pinheads when they died back. They surprised me later by reappearing! So do not toss yours

away when growth ceases. I grow *B. picta* under lights in a fruit-ripening bowl, which offers good drainage, as it likes copious amounts of water when growing. When it dies back, I let it dry out quite a bit before setting it aside away from the lights for 2-3 months. Keep it covered during this time and feel the soil mix occasionally to make sure it is barely moist (add a few drops of water if needed) and watch for new growth. Put it back under lights as new growth appears. If new growth hasn't appeared in 3 months, move it back under the lights and water sparingly.

B. picta propagates easily from a leaf, and you can reverse its seasons so that you always have some tubers growing while others rest. I have not grown the other two, but experts say to keep *B. sutherlandii* cool and dry while dormant. Elda Haring says *B. pearcei* does not go dormant under lights.

Question: In terrariums and under lights my *B. prismatocarpa* and some other plants occasionally get mildew and lose all their leaves. What can I do to prevent this? FLORIDA

Answer: In terrariums under lights mildew is seldom a problem unless you introduce spores with your hands and the room is very cold. In this case, increase heat. However, if your home is airconditioned in the summer, with temperature set at 78 to 80, and you are growing under lights, terrariums can get too much warmth: the lights cause heat to build up in and around them. Leaves will rot in the heated, steamy air. Give terrariums adequate ventilation by putting holes in covers or tilting covers to one side to expel the heated air inside. Run lights on shorter hours if need be during the hotter months. Place a small fan to blow away excess heat caused by light ballast. Keep soil or moss a bit dryer.

Problems with your begonias? Write Mae Blanton at 118 Wildoak, Lake Dallas, TX 75065.



Plant Riches

by Phyllis Bates

There was a red gleam against the gray gravel. As I tidied the sales area at the Palomar Branch's Show and Sale in August, 1989, I stooped to investigate. A rex begonia leaf had become detached from its plant and either was discarded or fell to the ground under the sale table. I tossed the other bits I had cleaned into the trash, but this particular leaf I laid aside in my knitting tote - it seemed too nice to throw away.

I didn't think of it again until the next morning. Yes, it was too nice to throw away. It was worth an attempt at propagation. I put it in a bowl of cool water. For a prop box I drew from my stash of recyclables a clean plastic clam shell that had once contained muffins from the bakery. I stirred a mixture of about equal parts potting soil and perlite together, and moistened it lightly. A layer about an inch or so deep went into the clam shell to "age."

Later that afternoon I dried the leaf on a paper towel. Then I cut the rex leaf into wedges with a vein running down the cen-

ter of each one. I inserted the wedges into the medium with the end that had been closest to the central vein or stem pointed downward. I made sure the top snapped securely into place and put the prop box on the light table.

Occasionally I looked at the clam shell and was heartened to see the little plantlets forming. At a convenient moment sometime near Thanksgiving I removed the little plantlets carefully and put them into individual pots. I used the same potting medium as before, and I put the pots into a taller box (a rigid clear plastic sweater box) to allow more headroom. There were 15 little plants. Already they were showing some color variation.

Since I had seen that the *leaf wedges* were firm and had tiny roots, I had tried to remove the plantlets so that the wedges were disturbed as little as possible. I added a little moist potting soil to fill in a few gaps and sprayed lightly with dilute fertilizer. The prop box went back on the light table, alongside the sweater box.



The third group of cuttings (above), with the second group (at top right) and the initial group, now full-sized rexes (right)



Like most people during the busy weeks in December I didn't pay much attention to the plants. The light table is in the garage, and the only heat is that from the sun on the roof and from the fluorescent fixtures. The weather in January was decidedly on the chilly side. Temperatures were in the forties and fifties for a large part of the time. So I was surprised when I inspected in late January to find that the little plantlets in the sweater box needed to be moved to larger pots. A whole new set of plantlets were touching the cover of the clam shell prop box. So I transplanted, and now had two sets in sweater boxes. The wedges still looked firm, so I felt challenged to see how far I could carry this procedure. The clam shell was handled in the same manner as before.

By April the first set of plantlets was too big to remain in the box. The plants went into 4" pots and onto the window sill in the garage. They were not all alike, some be-

ing silvery and some red on maroon background, and some of the leaves had more rippled blades. The second set of plantlets were now moved into bigger pots, and the little ones in the clam shell were touching the top. I decided to take their pictures, and then I repeated the removal of the plantlets from the wedges as before.

There were not quite so many plantlets at this third removal. Now, almost a month later, I can see half a dozen more plantlets forming on the wedges and, unless something disrupts, I foresee removing them and carrying on a fifth group. Who could predict that being on the show clean-up committee would bring such riches!

*Phyllis Bates of Palomar Branch is editor of the Los Angeles International Fern Society journal, and past editor of the **Begonian**. Her address is P.O. Box 502, Encinitas, CA 92024.*

UNIDENTIFIED BEGONIA SPECIES LIST

Thelma O'Reilly, Project Director

B. U152

China. Mildred L. Thompson received a leaf of this species from Masuo Yamada in the fall of 1983. He originally received it from Kunming Botanical Gardens in China. The following description was written by M. Thompson and published in the Eastern Regional Newsletter. "The leaves have deep tones of green-tinted gun metal silver with a deep chocolate brown pattern along the main veins that resembles *B. masoniana*; however, B. U152 has a band of chocolate brown along the edges. The mature leaves measure 7" x 4 1/2" and are ovate with a cordate base and an acuminate apex; the margins are toothed and edged with short red hairs. The main veins are depressed; the textured surface is covered with compact, tiny elevations with a short red hair on top of each elevation. The leaf undersurface is light silver green with wine-red markings along the main veins. The light green petiole is covered with deep pink hairs." The name of this species was published in Begoniaceae, Part II: Annotated Species List, Corrections and Additions published September, 1988 by Jack Golding.

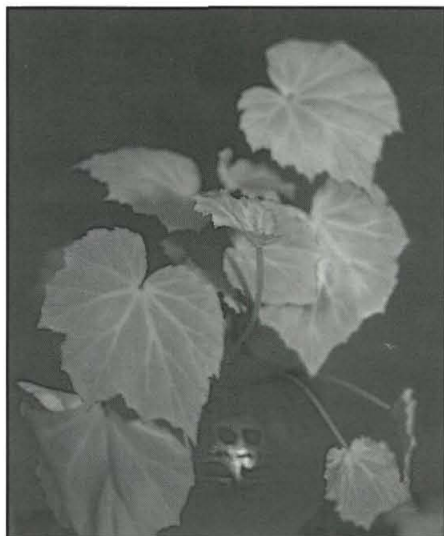
B. masoniana Irmscher var. *maculata* S.K. Chen, R.X. Zheng, D.Y. Xia, *Acta Botanica Yunnanica*, 8 (2):222, 1986 China.

B. U153

Zamboanga, Philippines. Seed collected by Martin Johnson, 1983. Described by M. Johnson as cane-like or shrub-like with pink flowers.

B. U154

Las Cascadas (The Waterfalls), Panama. Seed collected by Roberto Brin in the Forest Reserve, 1985. (1985:62, 1989: 68-69.) Rhizomatous. Plant blooming without leaves at the end of the dry season in habitat.



B. U155, grown & photographed by Thelma O'Reilly

B. U155

Las Cascadas, Panama. Seed collected by Roberto Brin along road to Madden Dam, 1985. (1986: 18, 1989: 68-69.) Rhizomatous. Rhizome repent, internodes very short with trichomes. Leaf blades medium green, ovate, shallowly cordate and lobed, dentate, ciliate, sparsely pilose, 7 nerved. Petioles light green, lenticellate, pilose. Stipules quickly drying, persistent, apically acuminate, sparsely pilose, barely keeled. Staminate flowers white, 2 long, narrow tepals; pistillate flowers white, 2 tepals, occasionally 3, ciliate and serrulate; white ovary has three unequal wings, one larger and distinctly triangular. In Southern California this species requires an enclosed atmosphere to avoid dormancy. Tentatively identified as *B. plebeja* by Thelma O'Reilly.

B. U156

Las Cascadas, Panama. Seed collected by Roberto Brin 1985. (1986: 18, 1989: 68-69.) Rhizomatous. Leaves green, 7" x 4", shallowly lobed.

B. U157

Las Cascadas, Panama. Seed collected by Roberto Brin in the Forestal Reserve between Summit Gardens and Madden Dam, 1985. (1985: 62.) Collector commented, "I like this one." This species is identical to B. U155. See description for B. U155. Tentatively identified as *B. plebeja* by T. O'Reilly.

Complete U# Listing now available from ABS Bookstore! \$1.50 postage paid. Order from **Anita Ruthenberg**, 1016 W. Arlington, Fort Worth TX 76110

**BEGONIAN
MINI-ADS**

Mini-ads are a service to our members. The charge is \$1 per line per insertion with a minimum of \$4. Payment must accompany order. Make checks payable to ABS and mail to:

Martha Curry
P.O. Box 1232
Weatherford, TX 76086

BEGONIA CUTTINGS AND PLANTS

Send \$1 for expanded 1991 list. Kay's Greenhouses, 207 W. Southcross, San Antonio, TX 78221.

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

B. U158

Panama. Seed collected by Roberto Brin near Las Cascadas, 1985. (1986: 18, 1990: 30-32.) Rhizomatous. Leaves green, 5" x 3", shallowly lobed.

B. U159

Panama. Seed collected by Roberto Brin near Las Cascadas, 1985. (1986: 18, 1989: 113-114.) Rhizomatous. Leaves green, 5" x 3", shallowly lobed.



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

"VICKI'S EXOTIC PLANTS" Beautiful Begonias, Episcias, and Hoyas. Large variety of each. Please send \$1 for list to 522 Vista Park Dr., Eagle Point, OR 97524.

BEGONIAS, GESNERIADS, TROPICAL & EXOTIC PLANTS; all in 3" pots or larger. These are well-rooted cuttings, plants, rhizomes. Send for **FREE CATALOG** to: **SUNSHINE STATE TROPICALS**, P. O. Box 1033, Port Richey, FL 34673. Wholesale list also available. Inquire.

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

Please note: the Mini-Ads in the last issue misquoted Paul Lowe's price for 100 rhizomatous leaves. The correct cost is \$30.



THE AMERICAN IVY SOCIETY

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

CLAYTON M. KELLY SEED FUND NOTES

January-February 1991
Diana H. Gould, Seed Fund Director

Germination times for this issue's selections range from 9 to 67 days; please be patient.

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

The Seed Fund thanks **Judy Becker, Jan Goodwin, Jake Hafer, Joy Porter**, our anonymous donors, and the international exchanges for making this issue possible.

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

About 85% of the begonia species on the Convention Listing are still available.

I expect to be moving around January 26. Please order before then! My new address will be in the March-April issue, and in the Seed Fund News which goes to out with all seed orders at the end of December. Please forgive any delay in service.

I wish you all a very happy, healthy, prosperous New Year, and thank you very much for your most generous support.

Update on last issue:

Thank you to **Jan Goodwin** and **Michele Cole** for descriptions.

B. beddomei is described as follows: the leaf blades

are obliquely broad-ovate, medium green with an olive cast and white-silver spots, with light red reverse, glabrous; leaf margins are slightly scalloped, basal lobes very slightly overlapped, red veins at leaf base. It seems to have a thick, reddish main stem and reddish petioles.



Can you help us identify this begonia?

Listed in the last issue as *B. species SF #8*, it is thick-stemmed, with leaves 11" x 7", ovate, medium green. The surface has a slight lustre with tiny, bristly, white hairs and slight blistering. Its main stem and petioles are covered with very tiny bearded-like groups of coarse hair that curl under; these give a most unusual effect and are a shade or two lighter than the main stem, which is medium green.

Notes on Seeds Offered Rhizomatous

B. bowerae Ziesenhenne var. *major* (Mexico): medium-sized leaves, green, with profuse pink-tinted white flowers in Jan-March.
B. fenicis (Philippines): large leaves, dark green and

glossy, heart-shaped, broad, ovate, acuminate, serrated margins with tiny points at nerve endings, and profuse pink flowers Jan-April. *B. heracleifolia* var. *pyramadillo* (Mexico) has large, parted green leaves. *B. manicata* (Mexico) is rhizome erect, has waxy green leaves, and soft-pink flowers during winter and spring. *B. megaphylla* (Mexico) has large lobed leaves and fragrant white flowers. *B. pruinata* (Costa Rica) has leaves of medium green color and white flowers in winter; this plant needs high humidity.

B. xanthina (India) RARE, ENDANGERED, distinctive foliage, terrarium care required, very beautiful and DIFFICULT TO GROW, has large leaves and yellow flowers.

Shrub-like

B. chlorosticta (Sarawak/ Borneo; formerly known as "ex Kew Sp." and *B. U038*) RARE, distinctive foliage, terrarium care required, very beautiful and DIFFICULT TO GROW, has medium-green leaves with large yellow-green spots and brown outlining, and VERY sparse flowers in fall. *B. cooperi* (Costa Rica) has medium-sized, bare, green leaves with sunken veins on the surface, which gives a quilted appearance; flowers are moderate, white. Should receive extra humidity.

B. foliosa (northern South America) requires higher humidity. It has small green, bare leaves with red stems and petioles and reverse veining, and sparse white flowers spring and fall.

B. macrocarpa (Cameroon) requires terrarium care, has small bare green leaves with red reverse and reddish stems and petioles; flowers are white.

Tuberous/semi-tuberous

B. dregei #1 (South Africa) has dark green leaves with wine-colored veins above and below, with the color gradually fading towards the margins. Coloring is very distinctive at the petiole point and barely visible around the serrated margins. Petioles are greenish-brown.

B. dregei #2 (South Africa) has dark green leaves, serrated margins finely edged in red, and some leaves at the base of the plant are heavily spotted with silver.

B. dregei #3 (South Africa) has paler green leaves with wine nerves above and below, wine-colored sinuses, serrated margins, and wine-colored petioles.

B. dregei #4 (South Africa) is low-growing, compact variety with dense foliage and tiny dark green leaves with wine-colored, serrated margins and pale green petioles. A large quantity of main stems rise from this tuber.

B. dregei #5 (South Africa) is a truly magnificent variety of this species which is quite apart from the rest. Leaves are lime-green with a very

glossy surface and a distinct deep purple spot at the petiole point. The margins are scalloped (crenate) rather than serrate, with a dark purple spot at each sinus, and light brown petioles.

B. dregei var. *macbethii* (South Africa) came with no description.

(Editor's Note: It is the *B. dregei* complex that Dr. Tracy McLellan is studying and collecting in Africa).

B. fimbriatipula (China): this time it germinates! This is an ENDANGERED SPECIES in China. It is low-growing with olive-green, white-hairy, heart-shaped leaves 5" x 6 1/4", and it is massively veined with reverse red veins, and fragrant, light pink flowers. This species is very slow growing, hard to grow, but vital to our international species preservation. Its leaves are used to make tea in China, and the tea is regarded as a very rare and prestigious delicacy.

B. sandtii (Mexico) has hairy leaves with an abrupt leaf point and wavy, double-toothed margins. Like a number of other Mexican tuberous species, *B. sandtii* produces bulbils in the leaf axis. The bulbils will produce a flowering plant in the second year. Described in the **Begonian**, August, 1969.

Thick-stemmed

B. involucreta (Costa Rica) requires higher humidity for its large hairy green leaves and profuse, fragrant white-pink flowers that bloom January-April.

Unknown classification

B. rostrata var. *rostrata* (West Africa) came in with no description.

Hybrids

Still available are packets of mixed canes, mixed frillies, mixed rex cultivars, mixed rhizomatous, mixed semps, mixed shrubs, mixed tuberhybrids, mixed seed from Mickey Meyer.

Detectives Needed!

We have another group of begonias that can only be listed as "mysteries and problems." For the time being we are designating them as S.F. #73, S.F. #251, Brazil #2, Brazil #4, and "Jan's Problem", which came in as *B. huegellii* but isn't. All came in with no descriptions, seem to be species, but no one recognizes them.

Seed has come in as "jamaicensis" and "suffrutiana", neither valid species names. "Suffrutiana" is described as having dark green leaves and a satiny sheen to its interestingly shaped leaf. At the sinus, margins are folded and have a wine-colored spot. Petioles are reddish brown.

If you're willing to help with a baffling group of begonias, please order seed and let's see what you get! The Seed Fund would like to have reports and photos of these.



CLAYTON M. KELLY SEED FUND LISTING

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

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

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

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

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

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

CALIFORNIA RESIDENTS PLEASE ADD 6 3/4% SALES TAX TO ALL ORDERS.

Please send your order with payment to:

Ms. Diana H. Gould
9940 Falcon Meadow Dr.
Elk Grove, CA 95624
USA

species seed

\$1 packet

B. bowerae var. *major*

*B. chlorosticta***

*B. cooperi***

B. dregei #1

B. dregei #2

B. dregei #3

B. dregei #4

B. dregei #5

B. dregei var. *macbethii*

*B. fenicis***

*B. fimbriatipula***

B. foliosa

B. heracleifolia var. *pyramadilio*

*B. involucrata**

B. macrocarpa

B. manicata

B. megaphylla

B. pruinata

B. rostrata var. *rostrata**

*B. sandtii***

*B. xanthina***

B. mixed species

B. mixed tuberous species

mystery species:

"jamaicensis"**

"suffructiana"**

S.F. #73*

S.F. #251*

Brazil #2*

Brazil #4*

"Jan's Problem"

hybrid seed

50 cents packet

mixed canes

mixed Frillies

mixed rex cultivars

mixed rhizomatous*

mixed *semperflorens*

mixed shrubs

mixed tuberhybrid

mixed Mickey Meyer seed

*extremely limited supply

leaf prints,
B. dregei varieties offered:



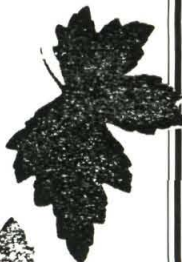
1



2



3



4



5



"suffructiana"

MINUTES OF THE ANNUAL BUSINESS MEETING

September 8, 1990

The Annual Business Meeting of the American Begonia Society was held after a banquet at the Red Lion Hotel in Sacramento, California on September 8, 1990.

President Gilbertson called the meeting to order at 8:55 p.m. and gave a short State of the Society address. The fiscal year 1989-1990 was a good one for ABS, with over 100 new members, a revitalized Bookstore, new programs in progress for the Slide Library, and two successful conventions. The new judging course is in use; several judging schools have been held. Conservation and Research have been busy and the Seed Fund has more listings than ever before. President Gilbertson says the credit for all this goes to the officers, chairmen, and all the members who poured in their energies.

Arlene Ingles read the Aims and Purposes.

The reading of the Minutes of the last meeting was omitted.

Treasurer's Report: Balance, August 1, 1989, \$53,550.57; Income \$70,026.24; Expenses, \$76,442.69; Balance, July 31, 1990 \$47,134.12.

Special Item: the proposed By-Law change regarding the sending of ballots was defeated.

Committee Reports

Audit: complete.

Awards: Two new members will be appointed at November Board Meeting.

Branch Relations: New Branch information requests came from New York, Ohio, and Missouri. There is a possibility of a new branch in the Portland, Oregon area. Seattle Branch disbanded. The first issue of Branch Relations "Branching Out" newsletter was sent; Doug Hahn spent \$12.25 for postage, asked that reimbursement money be given to Research, asked the Board to establish a fund of \$75 per year maximum for expenses.

Business Manager - John Ingles reported the Bookstore had \$794.70 on hand as of July 31, 1990.

Seed Fund - Diana Gould reported receipts of \$918.31 and expenses of \$343.72 between May 12 and August 12, 1990. A check for \$574.59 was sent to ABS. Diana will have 800 species listed after September 30, 1990; her goal is 1,000 species by December, 1990.

Conservation - Donations have been received from individuals and branches. A lamp by Kit Jeans Mounger brought \$700 in auction, and an auction by Santa Clara Branch brought \$400. Kit

spoke on the species listing project, urged member input, requested and was granted reimbursement for \$40 in expenses. Martin reported that Scott Hoover's next expedition will be to the South Pacific.

Publications - In the works are a New Member Begonia Handbook and a Catalog of Species. Members-at-Large - Kit Jeans Mounger reported the latest newsletter is ready.

Membership - As of August 31, 1990: 84 Life Members; 133 Insitutions; 1,458 dues-paying members.

Nomenclature - 5 new cultivars have been registered, 2 earlier registrations published, 4 applications for registration received, and 11 application forms mailed.

Research - Houston Knight proposed one, five, or ten-year plans for continuing projects. Projects at Northeastern and Colorado Universities are on hold. John Howell requested information on the temperature range in which members grow begonias.

Convention Report -

The 1991 Convention will be held in Washington, D.C. September 12-15, 1991, at the Old Colony Inn. The theme is "U" numbers.

Insurance - 9 branches responded. Michael Gilbertson reports that insurance is too expensive.

New Business

Motion to reimburse the president for her travel expenses was made, seconded, and passed. Board meetings will be held every 2 months. There will be a budget meeting in January, 1991. There were some complaints that National Directors were not receiving the Minutes. In some cases it is not known who the Directors are. President Gilbertson made an appeal to the branches and the National Directors to take a more active role in the ABS and vote on important issues and cooperate with the Branch Relations Director. Only 3 branches sent in their annual report.

New officers were installed by Margaret Lee.

The meeting was adjourned at 10:40 p.m.

Respectfully submitted,

Ingeborg Foo,

Secretary

Minutes are condensed because of space limitations. Any member may order a copy of the full Minutes from the Secretary.

ELECTED OFFICERS

President Jeannette Gilbertson
410 JoAnn Circle, Vista, CA 92084

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

First Vice-President Tracy McLellan
575 Pintura Dr., Santa Barbara, CA 93111

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

Third Vice-President Millie Thompson
P.O. Drawer PP, Southampton, NY 11968

Secretary Ingeborg Foo
1050 Melrose Way, Vista, CA 92083

Treasurer Eleanor Calkins
910 Fern St., Escondido, CA 92027

APPOINTED CHAIRMEN & DIRECTORS

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

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

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

Begonian, Back Issues Betty Tillotson
3912 Wildrose Way, Sacramento, CA 95826

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

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

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

Clayton M. Kelly Seed Fund Diana Gould
(see Seed Fund listing for address)

Conservation Committee

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

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

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

Convention Chairman Barbara Nunes
6025 Greeley Blvd., Springfield, VA 22152

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

Horticultural Correspondent Mae Blanton
118 Wildoak, Lake Dallas, TX 75065

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

Long-Range Planning Kay Tucker
207 W. Southcross, San Antonio, TX 78221

Members At Large Kit Mounger
Rt. 1, Box 319, New Johnsonville, TN 37134

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

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

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

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

Research Librarian Lorra Almstedt
1965 Celeste, Fullerton, CA 92633

Round Robin Pat Sage
1635 Lanoitan Ave., National City, CA 92050

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

Slide Librarian/Co-Chairman Daniel Haseltine
6950 W. Nelson St., Chicago, IL 60634

Slide Librarian/Co-Chairman Charles Jaros
2621 NW 23rd Court, Miami, FL 33142

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

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