# November/December 2002

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# 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 shadeloving 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

**Membership** - Subscription, dues, circulation, inquiries, and address changes: Arlene Ingles., 157 Monument, Rio Dell, CA 95562-1617; (707) 764-5407. E-mail: ingles@humboldt1.com

#### Cover

**Front:** Johanna Zinn journeyed to Portugal and found begonia riches including this *B*. *gehrtii.* 

**Back:** Westchester Branch in California had a very successful show and this photo of **Walter Pease's** *B*. 'Santa Barbara' arrived just in time to make the cover. Doesn't it look ready to celebrate the holidays? **Janet Brown** sent this and other photos of the show that you will be seeing in the future.

# In This Issue

The donors shown on page 204 have made this holiday issue with extra photo pages possible. No new holiday begonias have been named in time for this issue, but there are articles that will take you traveling around the world in your free holiday moments. You may collect begonias in West Java with Scott Hoover or visit Portugal with Johanna Zinn. Learn about growing Rex begonias from a person who has made them a lifetime passion in Queensland, Australia. Want to make a holiday begonia display? Learn the essentials of design from entries in the Houston Begonia Design Exhibit. Or design a new terrarium. Or just relax and enjoy the begonias of our other contributors.

Rex Begonias in Portugal

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## Quick

Check your mailing label. If it reads 200301 or 200302, your membership is about to expire. Please renew! We don't want to lose you.

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This holiday issue with its extra color pages is in large part a gift of the branches and individuals shown below. From all of us in ABS a thank you to them and to those who contributed articles and photos for this very special issue.

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## **President's Message**

Once more, the time differential between when this is written and when you, my friends will read it, makes it difficult to think that far ahead. Here it is the end of summer and you will see this well into fall. By then with normal conditions our cool rainy season will have begun. In the meantime there is so much to be done to prepare for that time. Winter protection will need to be put up for plants that I will try to overwinter outdoors - mainly canes and shrubs. The rhizomatous that flourished outside will have to find homes inside. They will have to be pruned so they can be jammed under lights. All will need a thorough going over for mealy bugs, and a final clean-up of debris. Plants that mildew easily will need a precautionary spray of fungicide. Now all of this seems overwhelming, but I have done it for many a year and it does all get done. So when winter storms are blowing and rain is pelting down there is a sense of security.

The seasonal holidays will have come and gone, as will another calendar year, before I next write to you. My wishes for each of you is a peaceful season, a good year of growing, and friendship. Who knows what the year ahead will bring, but change is certain for us as individuals and for A.B.S. There is much to be grateful for and much to look forward to.

Having looked to the future in the preceding, on to the past and the just held Board of Directors meeting and Annual Meeting. First, a heartfelt thank you to **Mary Sakamoto** and the Orange County Branch for once again hosting us. A great time was had by all in attendance. The Board approved the appointment of **Virginia Jens** as Public Relations Chair. She is already working on plans for public relations that will help keep the ABS name before the public and help branches with their local efforts at public relations as well. You will hear more about these plans in the future. **Michael Ludwig** also reported that the new ABS Showing is Sharing Award certificate is completed and should be available for branches who wish to request them for their shows.

Which brings me to the point of missing a goodly number of our active and valued members who were unable to attend once again because of a conflict with one of their religious holidays. This same situation will unfortunately be true for our national convention in 2003. By the time the conflict was noted, we were unable to make a change in dates because of our hotel contracts. I and the Board express our sincerest regret over this situation. Very selfishly, we will miss all of those friends affected by this serious oversight in planning.

One last item from the board meeting discussions, the advisory ballot regarding dues increase. I hope each of you responded. Your votes will help the directors reach a final decision on this issue which I hope will be reported to you next time.

May I also express for all of ABS an appreciation for the contributions reflected on the previous page and to **Wanda Macnair** for coordinating these. To those who have contributed articles and photographs for this holiday issue, and indeed for this entire year, goes our gratitude as well. It is you, our member contributors, who make it possible to have a beautiful and meaningful publication.

Hope you are all making your plans to be in Oklahoma City in April - that promises to be one of our great conventions!

> In friendship, Morris Mueller



## A Begonia named "Art Hodes" (or is it Antholes)? by Jean Mitchell

Several years ago I came across a little begonia with crinkled, rounded leaves. The tops of its leaves were densely covered with short, rosy pink hairs. This begonia was growing in a 4-inch pot in a nearby nursery and even though it wasn't a Rex begonia (the type of begonia I had been looking for), it came home with me anyway.

This purchase was made about 10 years ago, and since that time, it has been a learning experience for me to cultivate this plant. At the time I bought it, the begonia had a little tag that named it as a "Chocolate Soldier".

For many years I thought I was doing something wrong in the way I tried to grow it. It just wouldn't grow upward like either my Rex or cane begonias. It kept insisting that it be allowed to drape itself over the side of its pot in pendulous masses. These masses would easily break off whenever I moved the pot.

My first insight into understanding the proper growth habit of this plant came about when my husband and I visited "The World of Orchids" in Kissimmee, FL. There it was growing to provide a living backdrop for the orchids.

In an area used to grow terrestrial orchids, I discovered a specimen of my begonia happily creeping over much of the exposed area as a low growing carpet. Given the apparent healthiness of that begonia I finally realized that my plant was not suffering from some type of neglect that I didn't understand! It was just trying to grow as nature intended it to do. I decided that if it wanted to grow into a reasonable facsimile of a pot of hanging ivy, I would try to accommodate it.

First, I moved it into a hanging pot. As it grew longer and longer I started pinching out the terminal buds as they emerged. That process worked nicely and within a year or so "Chocolate soldier" was quite a handsome plant. But, there was still a problem. My plant really wasn't a "Chocolate Soldier." As my interest had increased in begonias I began to read about the different varieties and came across a photo of a "Chocolate Soldier." From the photo it was pretty obvious that my plant had been mislabeled.

By this time 8 years had passed and I had joined a Gardening Club that would soon have their annual plant show and I wanted to enter my plant. Hope springs eternal (at least with me) so I decided to contact the source of my plant to see if, after all those years, somehow they could identify it. Needless to say, so much for that brainstorm.

Thus began the great Internet research project to identify my plant. I looked at a lot of pictures of begonias, not knowing at that time, that I should concentrate on "rhizomatous" begonias. Although I tried very diligently to identify my begonia there were just too many resources to search. By sheer luck one night, I happened onto Brad Thompson's "Begonia World" web site. I sent a digital photo of the plant to Brad and he tried to help me identify it. I realize now that there are many begonias that look similar to each other and that I was asking a great deal. Nonetheless, he was very supportive and said he would try to identify it. It was also from his site that I learned about the American Begonia Society.

As our Show date was fast approaching it finally occurred to me to contact "Orchid World" (after all, they were growing it) and described my plant to the horticulturist there. I'm a little dense sometimes; the obvious thing would have been to have asked them in the first place! The name *B*. 'Antholes' was sent back to me. Further research on the Internet finally yielded the name *B*. 'Art Hodes'. Now, why it has such a disparity in its name I don't know, but the photos and description of B. 'Art Hodes' were identical to my plant.

Fortunately, having finally identified it, I was able to enter *B*. 'Art Hodes' in our 2001 Show. It won a **Blue Ribbon** for its class. For the 2002 Show it was entered again and not only won a **Blue Ribbon** for its class, but it also won an **Award of Cultural Merit** and, finally, also won **Best in Show**. Pretty good for a little mislabeled begonia that didn't grow the way I thought it should. By the way, my *B*. 'Art Hodes' has been officially retired. I do believe it has reached the pinnacle of its Show Career.

The Judges at the Show took the photo. *B*. 'Art Hodes' is growing in a 18-inch diameter hanging pot. At the time of it Show it was 28 inches in diameter, cascading downward about 30 inches.

Welcome, Jean, to the leagues of begonia lovers who battle misnamed plants and are eternally searching for correct names! Congratulations on finding the c orrect name and on growing it to such perfection. We are always especially pleased when a begonia wins Best of Show at a general plant show! You may write Jean at 5807 N. Bailey Road, Plant City, FL 33565.



B. 'Freddie' and B. 'John Tapia' must be trying to show the ferns how to bloom!



## Begonias That Think They Are Ferns by Mimi and Bill Schramm

Our home is built around an enclosed atrium. Three walls have windows looking into the house while the fourth wall consists of windows looking outside to the west. The room is also glass. Ferns love this place. It is full of really BIG and VERY HAPPY ferns who clearly think they are in fern heaven.

When we built the home we thought the atrium would be a great place for begonias and ferns. We were right about the ferns, but wrong about the begonias. We have tried all kinds of begonias, but most just do not like the place.

We have discovered, however, a few begonias that either think they are ferns or think like ferns because they do very well in the same environment.

*B.* 'John Tapia' is a shrub-like, hairy-leaved (over 3 inches) hybrid by **Rudolph Ziesenhenne.** Ours is loaded with beautiful flowers in the spring which then lasts for months.

Another begonia that does very well in our atrium is *B*. 'Freddie' which is also a Ziesenhenne hybrid, but in his case a rhizomatous. *B*. 'Freddie is always beautiful because of the very large leaves, but even more so when it flowers in the summer.

The bottom line is don't give up if you have some spot where you would love to grow begonias, but whatever you try just doesn't work. Keep trying and maybe you will find the right plant for your spot like we found *B*. 'John Tapia' and 'Freddie', our odd couple!

Now, Bill and Mimi, you are going to disillusion us! We thought every begonia grew magnificently there no matter the placement! But what you say is true, no matter where you are on the map or what the environment there, we bet you will find begonias that love that location. You may write to Bill and Mimi at 17 Calera Canyon, Salinas, CA 93908-9317



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## "Growing Rex Cultorum in Queensland" by Carmel Browne, Australia

My memories of my father's greenhouses filled with the brilliant coloured leaves of Rex Cultorum are my inspiration. When I was a child, I thought that "begonias" were "Rex"; these days so many people think "begonias" are "Tuberous".

Here in Queensland where we live, the climate is considered Sub-tropical. Our winters can have temperatures as low as minus 5 deg. Cel and in summer can be 40 deg. Cel and more. Also, there is a big variation between maximum and minimum in a day. Though drought conditions have been declared at this time, our normal average rainfall is 92inches a year – at this time we have had only about one third of what is considered "average".

Most of my Rexes are grown in green-houses with fibre glass roofs. Some are planted in raised garden beds in the garden in sheltered spots and others have grown in the Rainforest (shaped and planted by us only 12 years ago) where I have emptied old leaves and potting mix. These may not be Show bench quality as pieces of branch fall and damage their leaves and echidna and bandicoots dig them out in search of grubs, but they are healthy. I have been guided by my father's experiences and do not find them too difficult though some people seem to have problems. I think the worst thing you can do is to tell someone they are "hard to grow" - they are frightened before they start. I agree some are more tender than others so I suggest to first-time Rex growers and also to those who "have sent dozens to God" to start with the hardier ones and work on. Choose the hard, crisp leaved varieties rather than the soft hairy ones. Many of the hardy ones have good colours and may be spiralled as well.

A good quality, free-draining commercial potting mix is satisfactory, although for the more tender varieties I do add some charcoal and coarse sand. Those with upright stems are planted in standard pots (relative to the size of the root ball) and all others are in squat pots. I use both clay and plastic pots; but I do prefer clay. The one draw back when clay pots are used is the extra weight.

Light is very important to begonias in the Rex Cultorum group but the amount of light can vary. For those with predominately silver/green colours, lower light will give better contrast. Bright light, especially in the cooler months gives vibrant rich colours to the pinks, purples, reds and maroons. Sometimes the plant may assume an overall red colouring and lose its pattern. I prefer the pattern to remain distinct so move the plant to a lower light spot where the red does not dominate. Of course this is only personal choice as it does not affect the growth or health of the plant. The heat and very bright light of summer seems to drain the colours.

The cold, strong winds come from the south and west, so our green-houses are closed off on both these sides. Lattice provides the walls on the other two sides and this gives ventilation and enough air movement to make them strong. The "outside" rex just have to take what comes their way!!

Rex like cool humid conditions, so the benches are filled with coarse sand which is kept moist. The Rex growing in large (10 inch) pots grow at ground level where the humidity is also provided by the thick layer of coarse sand that is the floor. The cool air from the Rainforest comes through the northern end. I find that Rex Cultorum can handle high temperatures (we have registered 50 deg.Cel) so long as the humidity is kept up.

They like to be moist, but never soggy. (Those in plastic pots do not dry out as quickly as those in the porous clay.) Never stand potted Rex in saucers and I remove the saucers attached to the plastic hanging containers to allow the excess water to drain away. When water is scarce, thoroughly soak, allow them to drain and then return to their position.

Our green-houses and Rainforest are home to a good number of frogs, lizards etc., so I prefer not to use chemical sprays. Many years ago, I read that mildew spore cannot germinate where seaweed is used. I foliar fertilize with Fish and Kelp (about fortnightly) and have had no mildew problems. (If I have need to use Chemical sprays for any reason, I isolate the infected plant and spray it - not the whole area - keeping it isolated till it is clean. I use a 9 month slow release fertilizer when I re-pot - must feed the roots too!! They do not need fertilizer in winter as this is not a growing period, but I do continue to protect them with the Fish and Kelp.

Rex Cultorum propagate readily from leaf, leaf wedge, pieces of rhizome and seed. The seed germinates in about 14 days (with bottom heat) and are always a surprise package as they are hybrids. The early hybridisers used a large variety of begonia types and that influenced the growth habit, leaf size, shape, texture, surface, colour, design and patterns as well as flowers. Even tuberous were used and the full double bloom was produced on Rex leaved plants but their winter dormancy was a problem. (To my knowledge, this cross has not been tried in recent times. But I can't see that winter dormancy should be a problem; after all we do have the Elatior as winter flowering tuberous! So why not winter dormant Rex Cultorum?) The flower colours were altered by the use of the yellow flowered *B.xanthina*. The flowers on Rex Cultorum are like exquisite translucent china held above the foliage, but, Rex are grown for their colourful leaves and unless I have plans to use it in hybridizing, they are nipped out. "Flower your Rexes at the expense of your leaves" were the words of wisdom passed on by my Dad.

Plants propagated from vegetative material will produce young identical to the parent plant. Keep young plants coming on as these are more vigorous, look better (no old gnarly rhizome) and are less likely to be attacked by pest and disease. For propagating, I use 1 part peat moss and 3 parts coarse sand and have between 96 and 98 per cent success rate.

Rex Cultorum have a beauty that it becomes impossible to resist and are well worth every effort you put in to their culture.

#### Oklahoma City: Home of the Arts

What you thought Oklahoma was only the land of cowboys? Nope, Oklahoma City prides itself on being a city devoted to the arts. You will find museums of course, but also shopping. One of the more interesting areas is the Paseo Arts District which according to an article in Southern Living is like escaping to Old Spain right in the middle of Oklahoma. One of its most interesting features is the Old Trinity Gallery which photographer Tom Lee, after seeing it for sale on the internet, bought and had transported from Canada to Oklahoma City. It now houses his black and white photography gallery. At Paseo Pottery, 19 Oklahoma potters display their art. All this just 2 1/2 miles north of downtown!

## **Growing Terrariums** by Leora Fuentes

I follow Millie Thompson's recipe for preparing the sphagnum moss for the terrariums I grow. Pour boiling water onto the long fiber sphagnum moss. When it is cool, I add a couple of drops of Super Thrive and let it soak for awhile. Then I wring out as much water as I can and cut the moss into small pieces. Once that is done, I add some perlite (whatever amount looks right to me). At this point I'll leave the moss in a bucket for several days to allow it to dry further. I turn it every day until I see enough moisture has evaporated. I do this because it may look dry enough, but it is not and then your plant may rot. It is a lot easier to add additional water as needed.

When I am ready to prepare a terrarium I put some horticultural charcoal in the the bottom and add the sphagnum. Once the terrarium is planted I do not add water at that time. I'll watch for condensation on the glass or feel the mixture.

When I do water, I do so with a very light fertilizer. I am not brand specific. Whatever I have, I use.

Most of my plants are under fluorescent lights for 12 hours a day. If I see a good buy for grow lights, I'll purchase them. Most of the time I use one cool white and one warm white bulb. Some of my plants are about 4 inches from the lights and some are approximately 12 inches. I experiment with them by moving them to different locations to see where they are happiest.

I also have several in a north facing window - *B. rajah*, *B. pavonina*, and *B. 'Mumtaz'*. They are quite happy there. Since *B. versicolor* does not like the heat it is sitting on the floor next to the light cart during the summer.

I try to change the sphagnum mixture once a year.

I think the hardest part of growing terrariums is finding the appropriate container. If you are near a party store, you can purchase bowls used for catering purposes and invert one on top of the other. Some of the craft stores also have glass bubbles. You can also purchase clear glass cookie jars at Walmart (where they are the most reasonable). Some people find containers at garage sales.

You may recall from the last issue that Leora's terrarium of B. bipinnatifida won Best of Show at the 2002 Convention in Houston (see it on page 170). However, that beauty was but one of the terrariums entered by Leora. On the following page, you see two more. You may contact Leora at rayleora@msn.com or by mail at 2200 Glen Forest Ln., Plano, TX 75023.



Above is Leora's B. 'Millie Thompson' and below is her B. luzonensis.



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## Continuation of Begonia Collecting in West Java Indonesia: Summary of 2001 Expedition

by

## Dr. Harry Wiriadinata, Herbarium Bogoriense, W. Scott Hoover and James M. Hunter, New England Tropical Conservatory

Upon completion of the 1995 and 1998 Reconnaissance Expeditions in Java, Sumatra and Sulawesi, the mutual institutional decision was made to concentrate Begonia exploratory efforts on the montane forests of Java. The 2000 expedition was the first formal, research permitted collecting trip (Wiriadinata, Hoover, and Hunter 2001). Java is clearly one of the most intensely collected tropical rainforest areas of the world. Determining how much botanical exploration has historically occurred at elevations above 1500 m. in montane forests, still remains a mystery to us. We are under the impression that few mountains have been explored above this elevation.

Though our primary focus is on Begonia, collecting efforts extend to general flora associated with the genus, in order to better understand its ecology. Begonia is one of the most species rich genera of flowering plants in the world, ranked the 14th largest by Menilli (1993.) Data from Barkley (1972), Barkely and Golding (1974), Smith et al. (1986) and Doorenbos (2001) place Begonia at 1400 species, thus equaling Solonum (Solanaceae) and Psycotria (Rubiaceae) in size, thus ranking these 3 genera as the fourth largest of the angiosperms. One of our research objectives is to determine if Begonia is an indicator of floristic diversity: does high Begonia species diversity indicate high general floristic diversity? *Begonia* is easily recognized in the field, due to its characteristic leaves. This allows botanists or naturalists who are exploring montane forests for the first time to gain some initial idea of overall floristic richness of the forest, based on the number of species of *Begonia* observed. Results from the 2000 and 2001 expeditions hint we may be on the right track toward determining if *Begonia* is an indicator of overall floristic diversity; more data need to be collected before we can make such a determination.

Table 1 lists mts. over 1500 m. in Java, by province and elevational range. West Java has 39 mts. Upon completion of 2000 and 2001 expeditions, we have conducted exploratory samplings on 30 mts. (Table 2), though a number of these are local and not named on the maps used to compile Table 1. Nonetheless, our exploratory samplings have completed the majority of West Java mts., most often exceeding 1500 m. elevation.

Table 3 lists mts. explored on the 2001 expedition, ranking *Begonia* species on each mt. by observed abundance. The common *B.multangula* Blume, which Smith et al. (1986) lists as two varieties, var.*multangula* and var. *glabrata* Miquel, is observed on all mts. in West Java. Only on Mts. Tangkuban-perahu and Bukittungu, North of the city of Bandung,

is this species ranked most abundant. These mts. are dry and represented by only this species and what may prove to be a new variety of B.multangula, suggested by a number of vegetative characteristics including long, white hairs and elongated leaves. Mark Tebbitt suggest this may be a new variety based on observing all our collections from the 2000 and 2001 expedition. It is interesting to note the abundance of B.muricata Blume collected on Mts. Cikuray, Tilu, Malabar, TalagaWarna, Pengrango, Halimun-S, and Bodas. It always occurs on mts. having 5-7 different species of Begonia and is always the most abundant single species. Another observation regards B.areolata, observed on Mts. Patuha. Puncak, Pariripis, Telegabodas, Cikuray, Windu, Abig, Tilu Kancana, and Warigin. This species is often the most abundant, except when it occurs with B.muricata, Both B.areolata and B.muricata are rhizomatous vines forming large colonies that swarm steep embankments. A 1.5 m. shrub Sphenanthera (code #11 in Table 3) may be a new species. It was only observed on three mts.: Cikuray, Tilu, and Warigin. Its abundance was the least observed on each of these mts. The most Begonia rich mts. are Mt. Cikuray and Mt. Tilu, respectively having 7 and 6 species. Both mts. seem to be the most floristically rich as well, though this is simply an impression at this point. Further analysis of the general flora associated with Begonia will be required to determine if this impression is valid. Overall geographic distribution of the Begonia species deserves mention: B.multangula, B.isoptera Dry, B.muricata and B.longifolia Blume are wide spread Indonesian species. The other species collected and listed in Table 3 are regional and local endemics. B.areolata appears limited to the regional mt. area South of Bandung, with the Puncak var. locally endemic to Mt. Puncak's elevation 2300 m. in the Patuha complex of mts. SW of Bandung. The top of Mt. Puncak is blanketed by a patch of virgin forest, surrounded by tea plantation. (It is a symbol of the status of the world's tropical rainforests.) B. robusta Blume is regionally endemic to Mts. Gede, Pengrango, Salak and the Mts. of Halimun National Park. B.bracteata Jack appears limited to the same mts. as B. robusta. The Petermannia species may be new botanically and is restricted to the very narrow elevations ranges on Mts. Salak, TelagaWarna, Cikuray, Telegabodas and Botol in Halimun National Park. This species is observed as small populations of individual plants.

As the primary readers of this article are ABS members, it is important to point out that species in the genus Begonia are notorious for being highly variable, thus the likely reason for the genus being so large. Populations of different species usually exhibit different characteristics in leaf form, habit, flower characters, including color and size and many other traits that can vary considerably. Such variations are important to horticulture, though may not be of botanical significance. Seed grown by ABS members from different populations of the same species may have much value horticulturally, due to individual population variations.

Of exceptional beauty in our *Begonia* world are *B.robusta*, and *B.areolata* (var. Telegabodas and var.Puncak). The scarlet red haired *B.robusta* from Mts. Salak, Pengrango, Gede and TelagaWarna should be a highly prized plant horticulturally. It grows to about .5 m. and has large leaves, the plant being a modest sized shrub when mature if it is pinched back. *B.robusta* from the Halimun mts. is a white haired species, with exaggerated drip tips on leaves up to 15 cms. long, arising from a rhizomatous vine that creeps over the ground. It would make a fantastic, large

hanging basket. The flowers on both species are covered in dense red hairs as well. the former being a Sphenanthera and the latter being a Platycentrum. Though not of exceptional beauty like the above mentioned species, B. multangula and its varieties will make for quite a show as well. Its leaves are large, up to 40 cms in some populations, and its fruit is a cluster of berries varying in color, depending upon sunlight population variation. (Gene and Salisbury's plant exhibited in Houston is making a good start toward quite a show plant.) Good growing and we look forward to seeing more of these new introductions at ABS conventions in the future

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You may write Scott Hoover at P.O. Box 93, Williamstown, MA 1267.

#### Table 1

#### Java Mts. Over 1500 m. by Province

#### No. of Mts. in Elevational Range (in M.)\*

Island/Province/Km <sup>2</sup>	1500-2000	2000-3000	<u>Over 3000</u>	<u>Total</u>	$\underline{\mathrm{Km}}^2$
<b>Java</b> -132,187	19	18	2	39	
C. Java and Yogyakarta	a 6	12	7	25	
E. Java	7	18	6	31	
Subtotal	32	48	15	95	1391

\* Tabulations of mts. were taken from Nelles Verlag and P. T. Catra Buana maps.

### Table 2

#### Mountains Explored in West Java For *Begonia* and General Collecting\

Mit. Botol 6°42'S/106°28'E   3/3-20/00   1785/100%   3 <sup>B</sup> 1     Mit.   6°43'S/106°27'E   3/3-20/00   1867/100%   4 <sup>B</sup> 2     Kendeng   1867*   3/3-20/00   1764/100%   3 <sup>B</sup> 3     Kendeng   1764*   4   4   4     Mit.   6°50'S/106°31'E   4/15/01   104/60%   4 <sup>B</sup> 4     Halimun-South 1744*   5   6   4/17/01   862/89%   4 <sup>A</sup> 5     Mit.   6°45'S/106°52'E3018 4/11/01   1569/52%   3 <sup>A</sup> 7     Pangrango   7   7   9   8   7     Mit.   6°45'S/106°52'E3018 4/11/01   1538   4 <sup>B</sup> 8     Mit.   6°45'S/106°50'E 2958 4/3/95   1400/47%   4 <sup>B</sup> 9     Mit.   6°49'S/107°34'E2076 3/27/01   1877/90%   2 <sup>A</sup> 11     Mit.   6°49'S/107°34'E2076 3/27/01   1877/90%   2 <sup>A</sup> 12     Bukitunggu   11   14   12   14   14     Mit.   6°49'S/107°44'E2205 3/28/01   1700   5 <sup>B</sup> 15     Up	<u>Name of</u> <u>Lat</u> <u>Mountain</u> JAVA	Long.&Elevation D (in M)	ate for For Exploratory Sampling	Elevation Reached/ <u>% of Total</u>	<u>No. of Begonia</u> <u>Species Observed<sup>A</sup></u> <u>or Collected<sup>B</sup></u>	<u>Notes-</u> <u>See</u> <u>Below</u>
Mt.   6°43'S/106'27'E   3/3-20/00   1867/100%   4 <sup>th</sup> 2     Kendeng   1867"   3/3-20/00   1764/100%   3 <sup>th</sup> 3     Kendeng   1764"   4   4     Mt.   6°40'S/106'31'E   4/15/01   1046/60%   4 <sup>th</sup> 4     Halimun-South   744*   5   4   5   6     Mt.   6°45'S/106'52'E 2018   4/17/01   862/89%   4 <sup>A</sup> 5     Mt.   6°45'S/106'52'E 2018   4/11/01   1569/52%   3 <sup>A</sup> 7     Pangrango   7   7   7   7   7   7   7     Mt.   6°45'S/106'52'E 2058   4/3/95   1400/47%   4 <sup>th</sup> 9   7     Mt.   6°49'S/107'34'E 2076   3/27/01   1877/90%   2 <sup>A</sup> 1   1     Mt.   6°49'S/107'34'E 203'S 3/28/01   1754/80%   1 <sup>A</sup> 12   12   14     Mt.   6°49'S/107'94'E 2205'S/28/01   1754/80%   1 <sup>A</sup> 12   14   14   14   14   14   14   14   14   14   14   14 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Kendeng   1867*   Nit.   6°46'S/106°31'E   3/3-20/00   1764/100%   3 <sup>B</sup> 3     Kendeng   1764*   Nit.   6°50'S/106°31'E   4/15/01   1046/60%   4 <sup>B</sup> 4     Mit.   6°50'S/106°31'E   4/15/01   1046/60%   4 <sup>B</sup> 4     Mit.   6°50'S/106°35'E 966   4/17/01   862/89%   4 <sup>A</sup> 5     Mit.   6°45'S/106°35'E 2211   2/22-24/00   1757/81%   5 <sup>B</sup> 6     Nit.   6°45'S/106°52'E 3018   4/11/01   1538   4 <sup>B</sup> 8     Mit.   6°45'S/106'52'E 2958   4/3195   1400/47%   4 <sup>B</sup> 9     Mit.   6°48'S/107°33'E 2064   3/10/01-3/26/01   1723/84%   3^A   10     Burangrago   Mit.   6°49'S/107°44'E205   3/27/01   1877/90%   2^A     Tangkubanperahu   11   Nt.   6°49'S/107°44'E205   3/28/01   1754/80%   1^A   12     Bukitunggu   Mit.   6°49'S/107°44'E205   3/28/01   1754/80%   1^A   14     Mt.   Ratuba complex)   3/6/00-3/15/00   1700   5 <sup>B</sup>	Mt. Botol	6°42'S/106°28'E	3/3-20/00	1785/100%	3 в	1
Mt.   6°46'S/106°31'E   3/3-20/00   1764/100%   3 <sup>18</sup> 3     Kendeng   1764*   4     Mt.   6°50'S/106°31'E   4/15/01   1046/60%   4 <sup>19</sup> 4     Halimun-South 1744*   5   5   6   5   5   6     Mt.   Bodas   6°22'S/106°35'E 221 22-22-400   1775/81%   5   8   6     Mt.   6°45'S/106°52'E 2301 8   4/11/01   1569/52%   3 <sup>A</sup> 7     Pangrango   7   7   7   7   7   7     Mt.   6°45'S/106°52'E 2301 2/22-24/00   1775/81%   5 <sup>III</sup> 6   11     TalagWarna   (Pangrango complex)   4/11/01   1538   4 <sup>III</sup> 9     Mt.   6°45'S/106°51'E 2075 3/27/01   1777/90%   2 <sup>III</sup> 10     Burangrang   11   12   <	Mt.	6°43'S/106°27'E	3/3-20/00	1867/100%	4 <sup>B</sup>	2
Kendeng   1764*   4/15/01   1046/60%   4 <sup>B</sup> 4     Mt.   6*50'S/106*31'E   4/15/01   862/89%   4 <sup>A</sup> 5     Mt.   Bodas   6*52'S/106*28'E 966   4/17/01   862/89%   4 <sup>A</sup> 5     Mt.   6*45'S/106*35'E 2211   2/22-24/00   1775/81%   5 <sup>B</sup> 6     Mt.   6*45'S/106*52'E3018   4/11/01   1569/52%   3 <sup>A</sup> 7     Pangrango   Mt.   6*45'S/106*52'E3018   4/11/01   1538   4 <sup>B</sup> 8     Mt.   6*45'S/107*53'E 2064   3/10/01-3/26/01   1723/84%   3 <sup>A</sup> 10     Burangrang   Mt.   6*48'S/107*33'E 2064   3/27/01   1877/90%   2 <sup>A</sup> 11     Mt.   6*49'S/107*44'E2205   3/28/01   1754/80%   1 <sup>A</sup> 12     Bukittinggu   Mt.   6*49'S/107*44'E2205   3/28/01   1754/80%   1 <sup>B</sup> 13     Mt.   6*49'S/107*44'E2205   3/28/01   1754/80%   1 <sup>B</sup> 14     Mt.   79'S'S/10*0*44'E2205   3/28/01   1754/80%   1 <sup>B</sup> 14     Mt.   Runca (Mt. P	Kendeng	1867*				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Mt.	6°46'S/106°31'E	3/3-20/00	1764/100%	3в	3
Halimun-South 1744*     Mt. Bodas 6*52:S/106*28'E 966 4/17/01   862/89% 4 <sup>A</sup> 5     Mt. Salak 6*28'S/106*35'E 2211 2/22-24/00   1775/81% 5 <sup>B</sup> 6     Mt.   6*45'S/106*52'E 3018 4/11/01   1569/52% 3 <sup>A</sup> 7     Pangrango   Mt.   6*45'S/106*52'E 2058 4/3/95   1400/47% 4 <sup>B</sup> 9     Mt.   6*48'S/107*03'E 2064 3/10/01-3/26/01   1723/84% 3 <sup>A</sup> 10     Burangrang   Mt.   6*49'S/107*33'E 2064 3/10/01-3/26/01   1723/84% 3 <sup>A</sup> 10     Burangrang   Mt.   6*49'S/107*34'E 2076 3/27/01   1877/90% 2 <sup>A</sup> 11     Mt.   6*49'S/107*34'E 2076 3/27/01   1877/90% 2 <sup>A</sup> 11     Bukitunggu   11   11   11     Mt.   6*49'S/107*44'E 2205 3/28/01   1754/80% 1 <sup>A</sup> 12     Bukitunggu   11   11   11   11     Mt.   7'15'S/107*07'17'E 2434 2/11-16/00;3/14/01 2207/94% 3 <sup>B</sup> 13     Mt. Patuha complex) 3/6/00-3/15/00   1900   2 <sup>B</sup> 17     Cadaspansag   Mt.   (Mt. Patuha complex) 3/6/00-3/15/00   1900   2 <sup>B</sup> 17     Cadaspansag   3/6/00-3/15/00   1900   2 <sup>B</sup> </td <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td>	0					
Mt. Bodas   6°52'S/106°28'E 966   4/17/01   862/89% $4^{A}$ 5     Mt. Salak   6°28'S/106°35'E 2211   2/22-24/00   1775/81%   5   8   6     Mt.   6°45'S/106°35'E 2211   2/22-24/00   1775/81%   5   8   6     Mt.   6°45'S/106°30'E 2058   4/11/01   1538   4 <sup>B</sup> 8     Mt.   6°48'S/107°33'E 2064   3/10/01-3/26/01   1723/84%   3^A   10     Burangrang   Mt.   6°49'S/107°34'E2076   3/27/01   1877/90%   2^A   11     Mt.   6°49'S/107°34'E2076   3/27/01   1877/90%   2^A   11     Mt.   6°49'S/107°44'E2205   3/28/01   1754/80%   1^A   12     Bukittunggu   11   Mt.   6°49'S/107°44'E2205   3/28/01   1700   5 <sup>B</sup> 13     Mt.   00°49'S/107°44'E2205   3/28/01   1754/80%   1^A   12   14     Mt.   10°17'E   243   2/11-16/00;3/14/01 2200/80%   1 <sup>B</sup> 13     Mt.   10°17'E   243   2/16/00;3/15/00   1900   2 <sup>B</sup> 16			4/15/01	1046/60%	$4^{\text{B}}$	4
$\begin{array}{llllllllllllllllllllllllllllllllllll$			6	0.00.000		~
Mt.   6°45'S/106°52'E3018   4/11/01   1569/52%   3^A   7     Pangrango   Mt.   TalagWarna (Pangrango complex)   4/11/01   1538   4 <sup>B</sup> 8     Mt. Gede   6°25'S/106'50'E 2958   4/3/95   1400/47%   4 <sup>B</sup> 9     Mt.   6°48'S/107°33'E 2064   3/10/01-3/26/01   1723/84%   3^A   10     Burangrang   Mt.   6°49'S/107°34'E2076   3/27/01   1877/90%   2^A     Tangkubanperahu   11   11   11.   6°49'S/107°34'E205   3/28/01   1754/80%   1^A   12     Bukitunggu   Mt.   6°49'S/107°44'E2205   3/28/01   1754/80%   1^A   12     Mt. Patuha   7°15'S/107°17'E 2434   2/11-16/00;3/14/01 2277/94%   3 <sup>B</sup> 13     Mt. Patuha complex)   3/6/00-3/15/00   1700   5 <sup>B</sup> 15     Upas   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 16     Triangularis   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800						
Pangrango   Mt.     TalagWarna (Pangrango complex) 4/11/01   1538   4 <sup>6</sup> 8     Mt. Gede   6°25'S/106°50'E 2958   4/3/95   1400/47%   4 <sup>8</sup> 9     Mt. 6°48'S/107°33'E 2064   3/10/01-3/26/01   1723/84%   3 <sup>A</sup> 10     Burangrang   11   1723/84%   3 <sup>A</sup> 10     Mt. 6°49'S/107°34'E2076   3/27/01   1877/90%   2 <sup>A</sup> Tangkubanperahu   11   11   11     Mt. 6°49'S/107°34'E2075   3/28/01   1754/80%   1 <sup>A</sup> 12     Bukittunggu   Mt. Patuha   7°15'S/107°17'E 2434   2/11-16/00;3/14/012277/94%   3 <sup>B</sup> 13     Mt. Puncak (Mt. Patuha complex)   2/16/00; 3/14/01 2000/80%   1 <sup>B</sup> 14     Mt. Ranca   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 16     Triangularis   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 18     Kawahputih   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt. Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Mt. TałagWarna (Pangrango complex) 4/11/01 1538 4 <sup>B</sup> 8 Mt. Gede 6°25'S/106°50'E 2958 4/3/95 1400/47% 4 <sup>B</sup> 9 Mt. 6°49'S/107°33'E 2064 3/10/01-3/26/01 1723/84% 3 <sup>A</sup> 10 Burangrang Mt. 6°49'S/107°34'E2076 3/27/01 1877/90% 2 <sup>A</sup> Tangkubanperahu 11 Mt. 6°49'S/107°44'E2205 3/28/01 1754/80% 1 <sup>A</sup> 12 Bukittunggu Mt. Patuha 7°15'S/107°17'E 2434 2/11-16/00;3/14/012277/94% 3 <sup>B</sup> 13 Mt. Puncak (Mt. Patuha complex) 2/16/00; 3/14/01 2000/80% 1 <sup>B</sup> 14 Mt. aca (Mt. Patuha complex) 3/6/00-3/15/00 1700 5 <sup>B</sup> 15 Upas Mt. (Mt. Patuha complex) 3/6/00-3/15/00 1900 2 <sup>B</sup> 16 Triangularis Mt. (Mt. Patuha complex) 3/6/00-3/15/00 1900 2 <sup>B</sup> 17 Cadaspansag Mt. (Mt. Patuha complex) 3/6/00-3/15/00 1800 2 <sup>B</sup> 18 Kawahputih Mt. Koltok (Mt. Patuha complex) 3/6/00-3/15/00 1800 1 <sup>B</sup> 19 Mt. Tikukur (Mt. Patuha complex) 3/6/00-3/15/00 1800 1 <sup>B</sup> 20 Mt. Waringin 7°10'S/107°25'E 2140 4/9/01 1846/86% 3 <sup>B</sup> 21 Mt. Tikukur (Mt. Patuha complex) 3/6/00-3/15/00 1900 2 <sup>B</sup> 20 Mt. Waringin 7°10'S/107°25'E 21404 4/9/01 1846/86% 3 <sup>B</sup> 21 Mt. Tikukur (Mt. Ratuha complex) 3/6/00-3/15/00 1900 2 <sup>B</sup> 20 Mt. Windu 7°14'S/107°42'E 2054 4/7/01 1539/75% 3 <sup>B</sup> 23 Mt. Abig (Mt. Kancana complex) 4/7/01 1539/75% 3 <sup>B</sup> 25 Mt. Maida 7°07'S/107°35'E 2314 4/9/01 1908/82% 4 <sup>B</sup> 26 Mt. Kancana 7°18'S/107°35'E 2312 4/9/01 1908/82% 4 <sup>B</sup> 26 Mt. Kincana 7°18'S/107°35'E 2321 4/9/01 1908/82% 4 <sup>B</sup> 26 Mt. Kancana 7°18'S/107°35'E 2321 4/9/01 1939/89% 2 <sup>B</sup> 25 Mt. Abig (Mt. Kancana complex) 3/20/01 1754/80% 29 Mt. Cikuray 7°19'S/107°35'E 2321 4/9/01 1939/69% 3 <sup>A</sup> 27 Telagabodas Mt. Paripis (Telagabodas complex) 3/20/01 1754/80% 29 Mt. Ciremay 6°58'S/108°26'E 3078 3/24/01 11415/46% 2 <sup>A</sup> 30 LOMBOK		0 45 5/100 52 E50	8 4/11/01	1309/32%	5.	/
TalagWarna (Pangrango complex) 4/11/011538 $4^{B}$ 8Mt. Gede6°25'S/106°50'E 29584/3/951400/47%4'B9Mt.6°248'S/107°33'E 20643/10/01-3/26/011723/84%3^A10BurangrangMt.6°49'S/107°34'E20763/27/011877/90%2^ATangkubanperahu111111Mt.6°49'S/107°44'E22053/28/011754/80%1^A12Bukitunggu11155'S/107°17'E24342/11-16/00;3/14/012277/94%3 B13Mt. Patuha7°15'S/107°17'E24342/11-16/00;3/14/012277/94%3 B14Mt. Puncak(Mt. Patuha complex)3/6/00-3/15/0017005^B15Upas1414141414Mt.(Mt. Patuha complex)3/6/00-3/15/0019002^B16Triangularis17Cadaspansag17Cadaspansag17Mt.(Mt. Patuha complex)3/6/00-3/15/0018001^B19Mt. Kolotok (Mt. Patuha complex)3/6/00-3/15/0018001^B19Mt. Kolotok (Mt. Patuha complex)3/6/00-3/15/0018001^B20Mt. Tikukur (Mt. Patuha complex)3/6/00-3/15/0018001^B20Mt. Kancana 7°18'S/107°31'E20404/8/011508/74%3^B22Mt. Tiku Aring 7°10'S/107°31'E20404/8/011508/74%3^B22Mt. Kincana acomplex)3/6/00-3/15/0019002^B20Mt	-					
Mt.   Gede $6^{\circ}25^{\circ}5'/106^{\circ}50^{\circ}E^{2}958^{\circ}4/3/95^{\circ}1400/47\%^{\circ}4^{\circ}8^{\circ}3^{\wedge}$ 9     Mt. $6^{\circ}48^{\circ}5/107^{\circ}33^{\circ}E^{\circ}2064^{\circ}3/10/01^{-}3/26/01^{\circ}1723/84\%^{\circ}3^{\wedge}$ 10     Burangrang   11     Mt. $6^{\circ}49^{\circ}5/107^{\circ}34^{\circ}E2076^{\circ}3/27/01^{\circ}$ 1877/90\%^{\circ}2^{\wedge}   11     Mt. $6^{\circ}49^{\circ}5/107^{\circ}34^{\circ}E205^{\circ}3/28/01^{\circ}$ 1754/80\%^{\circ}1^{\wedge}   12     Bukittunggu   11   Mt. $6^{\circ}49^{\circ}5/107^{\circ}44^{\circ}E205^{\circ}3/28/01^{\circ}175/107^{\circ}47$		(Pangrango comple	(x) 4/11/01	1538	∆B	8
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Burangrang Mt. $6^{249'S/107^{\circ}34'E2076 3/27/01}$ $1877/90\%$ $2^{A}$ Tangkubanperahu11Mt. $6^{249'S/107^{\circ}34'E2205 3/28/01}$ $1754/80\%$ $1^{A}$ 12BukitungguMt. $6^{249'S/107^{\circ}17'E 2434 2/11-16/00;3/14/012277/94\%$ $3^{B}$ 13Mt. Patuha $7^{\circ}15'S/107^{\circ}17'E 2434 2/11-16/00;3/14/012277/94\%$ $3^{B}$ 13Mt. Puncak(Mt. Patuha complex) 2/16/00; 3/14/01 2000/80\% $1^{B}$ 14Mt. Ranca(Mt. Patuha complex) 3/6/00-3/15/001700 $5^{B}$ 15UpasMt.(Mt. Patuha complex) 3/6/00-3/15/001900 $2^{B}$ 16TriangularisMt.(Mt. Patuha complex) 3/6/00-3/15/001900 $2^{B}$ 17CadaspansagMt.(Mt. Patuha complex) 3/6/00-3/15/001800 $2^{B}$ 18KawahputihMt. Kolotok (Mt. Patuha complex) 3/6/00-3/15/001800 $1^{B}$ 19Mt. Tikukur (Mt. Patuha complex) 3/6/00-3/15/001800 $1^{B}$ 19Mt. Tikukur (Mt. Patuha complex) 3/6/00-3/15/001900 $2^{B}$ 20Mt. Waringin 7'10'S/107'25'E 2140 $4/9/01$ 1846/86\% $3^{B}$ 21Mt. Tilu $7^{\circ}12'S/107^{\circ}31'E 2040$ $4/9/01$ 1508/74\% $3^{B}$ 23Mt. Abig(Mt. Kancana complex) $4/7/01$ 1539/75\% $3^{E}$ 23Mt. Kancana 7'18'S/107'35'E 2182 $4/8/01$ 1939/89\%2^{B}24Mt. Kancana 7'18'S/107'35'E 2201 $3/21/01$ 1692/77\%2^{A}28Mt. Malabar 7'07'S/107'35'E 22821						
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Burangrang					
Mt. $6^{\circ}49^{\circ}S/107^{\circ}44^{\circ}E2205 3/28/01$ $1754/80\%$ $1^{A}$ $12$ BukittungguMt. Patuha $7^{\circ}15^{\circ}S/107^{\circ}17^{\circ}E 2434 2/11-16/00; 3/14/012277/94\%$ $3^{B}$ $13$ Mt. Patuha $7^{\circ}15^{\circ}S/107^{\circ}17^{\circ}E 2434 2/11-16/00; 3/14/012277/94\%$ $3^{B}$ $13$ Mt. Puncak(Mt. Patuha complex) 2/16/00; 3/14/012277/94\% $3^{B}$ $14$ Mt. Ranca(Mt. Patuha complex) 3/6/00-3/15/00 $1700$ $5^{B}$ $15$ UpasMt.(Mt. Patuha complex) 3/6/00-3/15/00 $1900$ $2^{B}$ $16$ TriangularisMt.(Mt. Patuha complex) 3/6/00-3/15/00 $1900$ $2^{B}$ $17$ CadaspansagMt.(Mt. Patuha complex) 3/6/00-3/15/00 $1800$ $2^{B}$ $18$ Mt.(Mt. Patuha complex) 3/6/00-3/15/00 $1800$ $1^{B}$ $19$ Mt. Tikukur (Mt. Patuha complex) 3/6/00-3/15/00 $1800$ $1^{B}$ $19$ Mt. Tikukur (Mt. Patuha complex) 3/6/00-3/15/00 $1900$ $2^{B}$ $20$ Mt. Waringin $7^{\circ}10^{\circ}S/107^{\circ}25^{\circ}E 2404$ $4/9/01$ $1846/86\%$ $3^{B}$ $21$ Mt. Tilu $7^{\circ}12^{\circ}S/107^{\circ}31^{\circ}E 2054$ $4/7/01$ $1539/75\%$ $3^{B}$ $23$ Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ $24$ Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ $25$ Mt. Malabar $7^{\circ}18^{\circ}S/107^{\circ}35^{\circ}E 2321$ $4/2/01$ $1939/69\%$ $3^{A}$ $27$ Mt. Abig(Mt. Kancana complex) $3/20/01$ $1754/80\%$ $28$ <			76 3/27/01	1877/90%	2 <sup>A</sup>	
Bukittunggu   Mt. Patuha   7°15'S/107°17'E   2434   2/11-16/00;3/14/012277/94%   3 B   13     Mt. Patuha   7°15'S/107°17'E   2434   2/11-16/00;3/14/012277/94%   3 B   14     Mt. Puncak   (Mt. Patuha complex)   2/16/00; 3/14/01   2000/80%   1 B   14     Mt. Ranca   (Mt. Patuha complex)   3/6/00-3/15/00   1700   5 <sup>B</sup> 15     Upas   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 16     Triangularis   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 17     Cadaspansag   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   2 <sup>B</sup> 18     Kawahputih   Mt.   Kotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt. Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19   20     Mt. Tilu   7°10'S/107°25'E   2140   4/9/01   1846/86%   3 <sup>B</sup> 21     Mt. Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 23   24   41   41'S/107°42'E	Tangkuban	perahu				11
Mt. Patuha $7^{\circ}15^{\circ}S/107^{\circ}17^{\circ}E$ $2434$ $2/11-16/00;$ $3/14/01$ $2000/80\%$ $1^{B}$ $14$ Mt. Puncak(Mt. Patuha complex) $2/16/00;$ $3/14/01$ $2000/80\%$ $1^{B}$ $14$ Mt. Ranca(Mt. Patuha complex) $3/6/00-3/15/00$ $1700$ $5^{B}$ $15$ UpasMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $16$ TriangularisMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $17$ CadaspansagMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $2^{B}$ $18$ Mt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $2^{B}$ $20$ Mt. Kolotok (Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $2^{B}$ $20$ Mt. Kolotok (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Waringin $7^{\circ}10^{\circ}S/107^{\circ}25^{\circ}E$ $2140$ $4/9/01$ $1846/86\%$ $3^{B}$ $21$ Mt. Tilu $7^{\circ}12^{\circ}S/107^{\circ}31^{\circ}E$ $2004$ $4/8/01$ $1539/75\%$ $3^{B}$ $23$ Mt. Windu $7^{\circ}14^{\circ}S/107^{\circ}32^{\circ}E$ $2182$ $4/7/01$ $1939/89\%$ $2^{B}$ $24$ Mt. Kancana $7^{\circ}19^{\circ}S/107^{\circ}35^{\circ}E$ $2182$ $4/9/01$ $1908/82\%$ $4^{B}$ $26$ Mt. Alabar $7^{\circ}07^{\circ}S/107^{\circ}35^{\circ}E$ $22182$ $4/2/01$ $1939/89\%$ $2^{B}$ $25$ <	Mt.	6°49'S/107°44'E220	05 3/28/01	1754/80%	1 ^	12
Mt. Puncak (Mt. Patuha complex) 2/16/00; 3/14/01 2000/80%   1 <sup>B</sup> 14     Mt. Ranca (Mt. Patuha complex) 3/6/00-3/15/00   1700   5 <sup>B</sup> 15     Upas	Bukittungg	Ц				
Mt. Ranca(Mt. Patuha complex) $3/6/00-3/15/00$ $1700$ $5^{B}$ 15UpasMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ 16TriangularisMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ 17CadaspansagMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $2^{B}$ 18KawahputihMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $2^{B}$ 18Mt. Kolotok (Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $1^{B}$ 19Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ 20Mt. Waringin 7°10'S/107°25'E 2140 $4/9/01$ $1846/86\%$ $3^{B}$ 21Mt. Tilu7°12'S/107°31'E 2040 $4/8/01$ $1508/74\%$ $3^{B}$ 22Mt. Windu7°14'S/107°42'E 2054 $4/7/01$ $1539/75\%$ $3^{B}$ 23Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ 25Mt. Malabar7°07'S/107°38'E 2321 $4/9/01$ $1908/82\%$ $4^{B}$ 26Mt. Cikuray7°19'S/107°35'E 2821 $3/22/01$ $1939/69\%$ $3^{A}$ 27Mt. $7°09'S/108°03'E 22013/21/011692/77\%2^{A}28TelagabodasMt. Pasripis (Telagabodas complex)3/20/011754/80\%2^{A}30LOMBOK$						13
Upas   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 16     Triangularis   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 17     Cadaspansag   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   2 <sup>B</sup> 18     Kawahputih   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt. Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt. Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt. Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 20     Mt. Waringin 7°10'S/107°25'E 2140   4/9/01   1846/86%   3 <sup>B</sup> 21     Mt. Tilu   7°12'S/107°31'E 2040   4/8/01   1508/74%   3 <sup>B</sup> 23     Mt. Windu   7°14'S/107°42'E 2054   4/7/01   1539/75%   3 <sup>B</sup> 23     Mt. Kancana   7°18'S/107°35'E 2182   4/8/01   1939/89%   2 <sup>B</sup> 25     Mt. Malabar   7°07'S/107°38'E 2321   4/9/01   1908/82%   4 <sup>B</sup> 26	Mt. Puncak	(Mt. Patuha comple	ex) 2/16/00; 3/14/0	01 2000/80%		14
Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 16     Triangularis   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 17     Cadaspansag   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   2 <sup>B</sup> 18     Kawahputih   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt. Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt. Tikukur (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 20     Mt. Waringin 7°10'S/107°25'E 2140   4/9/01   1846/86%   3 <sup>B</sup> 21     Mt. Tilu   7°12'S/107°31'E 2040   4/8/01   1508/74%   3 <sup>B</sup> 23     Mt. Windu   7°14'S/107°42'E 2054   4/7/01   1539/75%   3 <sup>B</sup> 23     Mt. Abig   (Mt. Kancana complex)   4/7/01   1939/89%   2 <sup>B</sup> 24     Mt. Kancana 7°18'S/107°35'E 2182   4/8/01   1939/89%   2 <sup>B</sup> 25     Mt. Malabar   7°07'S/107°35'E 2281   3/22/01   1939/69%   3 <sup>A</sup> 27     Mt. Cikuray 7°1	Mt. Ranca	(Mt. Patuha compl	ex) 3/6/00-3/15/00	1700	5 <sup>B</sup>	15
Triangularis   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 17     Cadaspansag   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   2 <sup>B</sup> 18     Kawahputih   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt.   Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt.   Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 20     Mt.   Waringin 7°10'S/107°25'E 2140   4/9/01   1846/86%   3 <sup>B</sup> 21     Mt.   Tilu   7°12'S/107°31'E 2040   4/8/01   1508/74%   3 <sup>B</sup> 22     Mt.   Tilu   7°12'S/107°31'E 2054   4/7/01   1539/75%   3 <sup>B</sup> 23     Mt.   Windu   7°14'S/107°42'E 2054   4/7/01   1939/89%   2 <sup>B</sup> 24     Mt. Kancana 7°18'S/107°35'E 2182   4/8/01   1939/89%   2 <sup>B</sup> 25     Mt. Malabar 7°07'S/107°38'E 2321   4/9/01   1908/82%   4 <sup>B</sup> 26     Mt. Cikuray 7°19'S/107°52'E 2821   3/22/01   1939/69%   3 <sup>A</sup>	Upas					
Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 17     Cadaspansag   Mt.   (Mt. Patuha complex)   3/6/00-3/15/00   1800   2 <sup>B</sup> 18     Kawahputih   Mt.   Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt.   Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1800   1 <sup>B</sup> 19     Mt.   Kolotok (Mt. Patuha complex)   3/6/00-3/15/00   1900   2 <sup>B</sup> 20     Mt.   Waringin 7°10'S/107°25'E 2140   4/9/01   1846/86%   3 <sup>B</sup> 21     Mt.   Tilu   7°12'S/107°31'E 2040   4/8/01   1508/74%   3 <sup>B</sup> 22     Mt.   Windu   7°14'S/107°42'E 2054   4/7/01   1539/75%   3 <sup>B</sup> 23     Mt. Abig   (Mt. Kancana complex)   4/7/01   1939/89%   2 <sup>B</sup> 24     Mt. Kancana 7°18'S/107°35'E 2182   4/8/01   1939/89%   2 <sup>B</sup> 25     Mt. Malabar   7°07'S/107°38'E 2321   4/9/01   1908/82%   4 <sup>B</sup> 26     Mt. Cikuray 7°19'S/107°52'E 2821   3/22/01   1939/69%   3 <sup>A</sup> 27			ex) 3/6/00-3/15/00	1900	2 <sup>B</sup>	16
CadaspansagMt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $2^{B}$ 18KawahputihMt. Kolotok (Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $1^{B}$ $19$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Waringin $7^{\circ}10'S/107^{\circ}25'E$ $2140$ $4/9/01$ $1846/86\%$ $3^{B}$ $21$ Mt. Tilu $7^{\circ}12'S/107^{\circ}31'E$ $2040$ $4/8/01$ $1508/74\%$ $3^{B}$ $22$ Mt. Windu $7^{\circ}14'S/107^{\circ}42'E$ $2054$ $4/7/01$ $1539/75\%$ $3^{B}$ $23$ Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ $24$ Mt. Kancana $7^{\circ}18'S/107^{\circ}35'E$ $2182$ $4/8/01$ $1939/89\%$ $2^{B}$ $25$ Mt. Malabar $7^{\circ}07'S/107^{\circ}38'E$ $2321$ $4/9/01$ $1908/82\%$ $4^{B}$ $26$ Mt. Cikuray $7^{\circ}19'S/107^{\circ}52'E$ $2821$ $3/22/01$ $1939/69\%$ $3^{A}$ $27$ Mt. $7^{\circ}09'S/108^{\circ}03'E$ $2201$ $3/21/01$ $1692/77\%$ $2^{A}$ $28$ Mt. Pasripis (Telagabodas complex) $3/20/01$ $1754/80\%$ $2^{A}$ $30$ LOMBOK	C					
Mt.(Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $2^{B}$ 18KawahputihMt. Kolotok (Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $1^{B}$ $19$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Waringin 7°10'S/107°25'E $2140$ $4/9/01$ $1846/86\%$ $3^{B}$ $21$ Mt. Tilu7°12'S/107°31'E $2040$ $4/8/01$ $1508/74\%$ $3^{B}$ $22$ Mt. Windu7°14'S/107°42'E $2054$ $4/7/01$ $1539/75\%$ $3^{B}$ $23$ Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ $24$ Mt. Kancana 7°18'S/107°35'E $2182$ $4/8/01$ $1939/89\%$ $2^{B}$ $25$ Mt. Malabar 7°07'S/107°38'E $2321$ $4/9/01$ $1908/82\%$ $4^{B}$ $26$ Mt. Cikuray 7°19'S/107°52'E $2821$ $3/22/01$ $1939/69\%$ $3^{A}$ $27$ Mt.7°09'S/108°03'E $2201$ $3/21/01$ $1692/77\%$ $2^{A}$ $28$ Mt. Pasripis(Telagabodas complex) $3/20/01$ $1754/80\%$ $29$ $A$ Mt. Ciremay $6°58'S/108°26'E$ $3078$ $3/24/01$ $11415/46\%$ $2^{A}$ $30$		1	x) 3/6/00-3/15/00	1900	2 <sup>B</sup>	17
KawahputihMt. Kolotok (Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $1^{B}$ $19$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Waringin $7^{\circ}10^{\circ}S/107^{\circ}25^{\circ}E$ $2140$ $4/9/01$ $1846/86\%$ $3^{B}$ $21$ Mt. Tilu $7^{\circ}12^{\circ}S/107^{\circ}31^{\circ}E$ $2040$ $4/8/01$ $1508/74\%$ $3^{B}$ $22$ Mt. Windu $7^{\circ}14^{\circ}S/107^{\circ}31^{\circ}E$ $2054$ $4/7/01$ $1539/75\%$ $3^{B}$ $23$ Mt. Windu $7^{\circ}14^{\circ}S/107^{\circ}42^{\circ}E$ $2054$ $4/7/01$ $1939/89\%$ $2^{B}$ $23$ Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ $24$ Mt. Kancana $7^{\circ}18^{\circ}S/107^{\circ}35^{\circ}E$ $2182$ $4/8/01$ $1939/89\%$ $2^{B}$ $25$ Mt. Malabar $7^{\circ}07^{\circ}S/107^{\circ}38^{\circ}E$ $2321$ $4/9/01$ $1908/82\%$ $4^{B}$ $26$ Mt. Cikuray $7^{\circ}19^{\circ}S/108^{\circ}03^{\circ}E$ $2201$ $3/22/01$ $1939/69\%$ $3^{A}$ $27$ Mt. $7^{\circ}09^{\circ}S/108^{\circ}03^{\circ}E$ $2201$ $3/21/01$ $1692/77\%$ $2^{A}$ $28$ TelagabodasTelagabodas complex) $3/20/01$ $1754/80\%$ $29$ $30$ LOMBOK		•	21/2/00 211 2/00	1000	2P	10
Mt. Kolotok (Mt. Patuha complex) $3/6/00-3/15/00$ $1800$ $1^{B}$ $19$ Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ $1900$ $2^{B}$ $20$ Mt. Waringin $7^{\circ}10^{\circ}S/107^{\circ}25^{\circ}E$ $2140$ $4/9/01$ $1846/86\%$ $3^{B}$ $21$ Mt. Tilu $7^{\circ}12^{\circ}S/107^{\circ}31^{\circ}E$ $2040$ $4/8/01$ $1508/74\%$ $3^{B}$ $22$ Mt. Windu $7^{\circ}14^{\circ}S/107^{\circ}31^{\circ}E$ $2054$ $4/7/01$ $1539/75\%$ $3^{B}$ $23$ Mt. Windu $7^{\circ}14^{\circ}S/107^{\circ}42^{\circ}E$ $2054$ $4/7/01$ $1939/89\%$ $2^{B}$ $23$ Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ $25$ Mt. Kancana $7^{\circ}18^{\circ}S/107^{\circ}35^{\circ}E$ $2182$ $4/8/01$ $1939/89\%$ $2^{B}$ $25$ Mt. Malabar $7^{\circ}07^{\circ}S/107^{\circ}35^{\circ}E$ $2321$ $4/9/01$ $1908/82\%$ $4^{B}$ $26$ Mt. Cikuray $7^{\circ}19^{\circ}S/108^{\circ}03^{\circ}E$ $2201$ $3/22/01$ $1939/69\%$ $3^{A}$ $27$ Mt. $7^{\circ}09^{\circ}S/108^{\circ}03^{\circ}E$ $2201$ $3/21/01$ $1692/77\%$ $2^{A}$ $28$ TelagabodasMt. Ciremay $6^{\circ}58^{\circ}S/108^{\circ}26^{\circ}E$ $3078$ $3/24/01$ $11415/46\%$ $2^{A}$ $30$ LOMBOK			x) 3/6/00-3/15/00	1800	25	18
Mt. Tikukur (Mt. Patuha complex) $3/6/00-3/15/00$ 1900 $2^{B}$ 20Mt. Waringin 7°10'S/107°25'E 2140 $4/9/01$ $1846/86\%$ $3^{B}$ 21Mt. Tilu7°12'S/107°31'E 2040 $4/8/01$ $1508/74\%$ $3^{B}$ 22Mt. Windu7°14'S/107°42'E 2054 $4/7/01$ $1539/75\%$ $3^{B}$ 23Mt. Abig(Mt. Kancana complex) $4/7/01$ $1939/89\%$ $2^{B}$ 24Mt. Kancana 7°18'S/107°35'E 2182 $4/8/01$ $1939/89\%$ $2^{B}$ 25Mt. Malabar7°07'S/107°38'E 2321 $4/9/01$ $1908/82\%$ $4^{B}$ 26Mt. Cikuray 7°19'S/107°52'E 2821 $3/22/01$ $1939/69\%$ $3^{A}$ 27Mt.7°09'S/108°03'E 2201 $3/21/01$ $1692/77\%$ $2^{A}$ 28Telagabodas29Mt. Ciremay6°58'S/108°26'E 3078 $3/24/01$ $11415/46\%$ $2^{A}$ 30LOMBOK			x) 3/6/00 3/15/00	1800	1 B	10
Mt. Waringin $7^{\circ}10'S/107^{\circ}25'E 2140 4/9/01 1846/86\% 3^{B} 21$ Mt. Tilu $7^{\circ}12'S/107^{\circ}31'E 2040 4/8/01 1508/74\% 3^{B} 22$ Mt. Windu $7^{\circ}14'S/107^{\circ}42'E 2054 4/7/01 1539/75\% 3^{B} 23$ Mt. Abig (Mt. Kancana complex) 4/7/01 1939/89% 2^{B} 24Mt. Kancana $7^{\circ}18'S/107^{\circ}35'E 2182 4/8/01 1939/89\% 2^{B} 25$ Mt. Malabar $7^{\circ}07'S/107^{\circ}38'E 2321 4/9/01 1908/82\% 4^{B} 26$ Mt. Cikuray $7^{\circ}19'S/107^{\circ}52'E 2821 3/22/01 1939/69\% 3^{A} 27$ Mt. $7^{\circ}09'S/108^{\circ}03'E 2201 3/21/01 1692/77\% 2^{A} 28$ TelagabodasMt. Pasripis (Telagabodas complex) $3/20/01 1754/80\%$ Mt. Ciremay $6^{\circ}58'S/108^{\circ}26'E 3078 3/24/01 11415/46\% 2^{A} 30$ LOMBOK					2	
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Mt. Ciremay     6°58'S/108°26'E 3078     3/24/01     11415/46%     2 <sup>A</sup> 30       LOMBOK	-					
LOMBOK						
	Mt. Ciremay	6°58'S/108°26'E 3	30/8 3/24/01	11415/46%	2 <sup>A</sup>	30
Mt. Rinjani 8°28'S/116°39'E 3726 4/23/01 1169/31% 5 <sup>A</sup> 31	LOMBOK					
	Mt. Rinjani	8°28'S/116°39'E	3726 4/23/01	1169/31%	5 <sup>A</sup>	31

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#### **NOTES**

- 1. Tea plantation tomid elevations and expanding into National Park.
- 2. Entire mountain forested. One new species possibly collected.
- 3. Entire mountain forested.
- 4. Very steep mountain.
- 5. Forest still intact.
- 6. 1 new species likely collected. Upper 2/3 of mountain forested.
- 7. Rich forest and undisturbed at upper elevations.
- 8. Very disturbed throughout mountain complex.
- 9. Top 25% of mountain still forested.
- 10. Quite dry.
- 11. Quite dry.
- 12. Quite dry.
- 13. Tea plantation covers 2/3s of mountain.
- 14. 1 new species likely collected. Only very

top ~50m forested; encroached by tea plantation.

- 15. 2 new species possibly.
- 16. Part of volcanic crater rim.
- 17. Part of volcanic crater rim.
- 18. Part of volcanic crater rim.
- 19. Part of volcanic crater rim.
- 20. Part of volcanic crater rim.
- 21. New logging near upper slopes.
- 22. Very rich forest; still undisturbed.
- 23. New agriculture at upper slopes.
- 24. Encroaching tea plantation.
- 25. Encroaching tea plantation.
- 26. Well-preserved, montane forest intact.
- 27. Rich forest, wet.
- 28. Very disturbed forest.
- 29. Very disturned forest.
- Forest intact likely from 1200 to top of mountain.
- 31. Dry forest: well preserved.

#### Table 3

Begonia species Collected in 200	West Java, Indonesia Expedition	

Mountain Explored	Species Collected	Code for Begonia Species Collected
(In c	order of observed abundan	ce) on 2001 West Java Expedition
Mt. Buranrang	2, 1, 8	B.multangula (typical species) 1
Mt. Patuha	6, 1	B.multangula (Buranrang var.) 2
Mt. Puncak	7,1	B.multangula (new hairy leaf var.) 3
Mt. Pasiripis	6, 3, 1	B.multangula (Lombok var.) 4
Mt. Telegabodas	6, 3, 9, 1	B.areolota (typical species) 5
Mt. Cikuray	10, 12, 6, 1, 9, 3, 11	B.areolota (Telegabodas var.) 6
Mt. Ciremay	3, 13, 1	B.areolota (Puncak var.) 7
Mt. Tangkubanperahu	1, 3	B.longifolia 8
Mt. Bukittungu	1, 3	Petermannia sp. 9
Mt. Windu	5, 1, 13, 3	B.muricata 10
Mt. Abig	5, 1, 13	Sphenanthera sp. 11
Mt. Tilu	10, 13, 5, 1, 3, 11	B.hirtella 12
Mt. Kancana	5, 13, 1, 3	B.isoptera 13
Mt. Warigin	5, 13, 1, 3, 11	B.robusta 14
Mt. Malabar	10, 13, 1, 3	B.bracteata 15
Mt. TalagaWarna	10, 1, 13, 14, 9	ParviBegonia sp. 16
Mt. Pengrango	10, 1, 13, 14, 15	
Mt. Pelabuanratu	16	
Mt. Halimun South	10, 13, 14, 15, 7	
Mt. Bodas	10, 13, 12, 15, 7	
Mt. Rinjani (Lombok)*		

\* The three species observed on Lombok were part of a Reconnaissance expedition and not inclusive of the research permitted expedition.

## Begonias in Portugal by Johanna Zinn

In October of 2001, my husband I traveled to Portugal. Although I knew of no begonias native to Portugal, I hoped to see a few among the castles, forts, Roman ruins, and vineyards.

Instead of the few I hoped to see, we found begonias everywhere. We saw pots of *B. grandis* ssp. *evansiana* at the mountain fort of Marvao, and Rexes, shrubs, canes and rhizomatous in Evora, Aveiro, Lisbon, and Sintra.

Begonias decorated offices, porches, front steps, curbs, and balconies. The Palace Hotel of Bussaco was one location with particularly lush and beautiful forest, which was planted and tended in part by Carmelite monks. The hotel is known for its tiled entryway, gardens, forest paths, and vaulted dining terrace. The hotel also had greenhouses filled with begonias. Maria, one of the gardeners, noticed me trying to take photographs through the whitewashed glass and unlocked the doors to give us a tour. Our very small Portuguese dictionary did not contain any words related to horticulture so I was not able to ask Maria how she grew the huge specimens in the greenhouses. I did notice that there appeared to be no heat in the greenhouses, and, by point to January on a calendar, shivering, and then pointing to the benches of Rexes. I tried to "ask" her how she cared for the Rexes in the winter. She "replied" by pantomiming slashing the leaves off the plants and sleeping. I guess gardeners will always find a way to communicate.

Another location with many, large, show stopping begonias was the Edward the 7th Park in Lisbon. With the parks was a three to four acre shade house built into a hill. It contained trees, shrubs, and many smaller plants including begonias. In their collection were several shrub-like begonias that were actually the size of shrubs - 4 to 5 feet tall and wide. A long stone wall showcased rhizomatous begonias growing in some of the crevices.

Since Lisbon experiences mild coastal winters with average temperatures in the mid 50s F, heating is not a problem.

Have you seen begonias while traveling? Share and let us all enjoy them!

Travel with Johanna on the next two pages to see the begonias of Portugal.

### Pronunciation of Begoniaceae Names for the Begonian 69:November-December, 2002 by Jack Golding

amphioxus	am-FEE-ok-us
areolata	a-reo-LAY-tuh
bipinnatifida	beye-pin-nay-ti-FID-uh
boissieri	BOYS-seer-eye
boliviensis	boh-liv-i-EN-sis
bracteata	brak-te-AY-tuh
bulbillifera	bul-bil-li-FEE-ruh
cinnabarina	sin-na-bar-EYE-nuh
convolvulacea	kon-vol-vyew-LAY-se-
	uh
floccifera	flok-si-FEE-ruh
foliosa	foh-li-OH-suh
gracilis	GRAY-sil-is
grandis	GRAND-is
subsp evansiana	e-van-si-AY-nuh
hatacoa	ha-ta-KOH-uh
incisa	in-SEYE-suh
isoptera	iss-OP-ter-uh
longifolia	long-i-FOH-li-uh
luzonensis	lyew-zon-EN-sis
	Continued on Page 238.



Did you imagine such begonia riches in Portugal? Are you ready for a trip there?





Photos above and below left were at the Palace Busaco and its greenhouses. Photos on the opposite page and below right were taken by Johann Zinn in the Edward VII Garden in Lisbon.



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### Conservation Comments by Bill Claybaugh, ABS Conservation Chairman

The National Convention in Houston in May/June was a big success in many ways. One of the activities in particular, the Species Round Table Discussion, involved most of the 150+ attendees, and gave us many good suggestions for our future Conservation Program.

Since the meeting, we have begun the execution phase. The first action taken was to ask the National Directors of each Branch to coordinate the accumulation of lists of species that the Branch or members are currently growing. At the request of several members, a "Wish List" of over 1000 species was also sent to each Branch, to aid in developing the lists of plants being grown. So far, we have only received 12 individual lists, and two botanical garden lists, but these have resulted in locating 493 separate species. This is approximately 250 more species than is currently being grown at the Fort Worth Botanical Gardens (FWBG). Based on this information, several people have been asked to propagate selected species and send plants to FWBG to supplement that collection. Hopefully this procedure will net us many more varieties in permanent care.

In another activity, just beginning, a number of selected species plants have been sent to the Palm Beaches Branch. This branch is actively taking care of the begonia collection at the Mounts Botanical Garden in West Palm Beach FL. The plan is to include these new species in the extensive begonia plantings in the Garden, sometime in the future.

A third step in the program has been the accumulation and dissemination of pictures of the Unidentified species, i.e., the Uxxx series. In August, photographs of over 100 of the Uxxx plants, plus photos of some of their flowers, were published on the Astro web site. The photos were from the extensive collection of our editor, **Freda Holley**, plus those from **Scott Hoover's** Indonesian trips, and a few of my own. The photos were integrated with a previously published database of information on the Uxxx plants, to give a very "viewer friendly" combination. This is a "must see", and everyone is invited to enjoy it by going to the Astro web site at http://absastro.tripod.com.

Now comes the pitch! To make the ABS Conservation Program a success, we need **more**. More members to send in their lists of species being grown; more plants being propagated and sent to botanical gardens for permanent care; more photographs of species plants, leaves, and flowers; and finally, for now, more attention to species in the monthly programs in every Branch.

Please work with your branch National Director to develop your individual, or your branch species lists. Also, please send to me your species pictures; address; 1702 Country Club Drive, Crosby TX, 77532. I will return all photographs after scanning them for use on the Astro web site. I will also send by e-mail, to any one submitting a species list, a unique database containing information available for their collection.

You can contact me at <u>absastro@hotmail.com</u> for additional information, or to offer comments on the Conservation program and it's execution.

And don't forget, we all need to adopt a species! If you haven't already, contact Rekha Morris at shivavana@juno.com or by mail at 318 Woodland Dr., Pendelton, SC 19670. Tell her the species you want to adopt or let her suggest one for you. It takes all of us to Save Our Species! And remember if you adopt, your receive a free copy of each Save Our Species Newsletter.

## Begonias on the Internet by Sandy Boyd

The World Wide Begonia Research Group is an internet site you will want to be sure to bookmark and visit again and again. Its home base is Australia and is hosted by Ken Browne and his wife Carmel, who incidentally are both members of our ABS as well as the French and other world societies. This site is dedicated to the "Promotion, Preservation, and Protection" of the species through cultivation. This is the bridge over the gap that occurs between the avid begonia growers of the world and the university students, professors, and botanical gardens. Each month a different country is featured. As I write this months column, the country is France. While the site has many wonderful photographs of both species and hybrids, the most wonderful aspect is the scientific articles which discuss the latest research from throughout the world. It is possible to view the latest explorations and discoveries from every corner of the globe.

The address of this site is www.wwbrgmichael.com.au

As you view the opening page you will see a map of the world. On the right side of the page is the select a country button where you can view begonias and read articles written about the chosen country. Below that is the "What's New" section. At this time there is a memorial to **Edgar Irmscher**. An excellent article was about the late **Henri Laporte** on this site recently as well. Take the time to read the article translated from French to learn the highlights of the career of this incredible scientist. Each article has a photo symbol at the conclusion. A quick click and you are feasting on fabulous photos.

As an example of the diversity of this site I chose Malaysia, under the select a

country heading, Immediately I was taken to a map and flag of the country and interesting articles on six begonias. I chose *B*. *rajah*. Culture habits were discussed in great detail plus a photo and information regarding the date it was first collected and by whom. Imagine the hours entailed in gathering all this information and photographing each plant from countries around the globe.

On the home page just below the world map are various topics which will interest all begonia lovers. Of particular interest to me were the articles on begonia research. Just click on the phrase and go to the latest articles. I feel it is important for all of us who are passionate about these incredible plants to become as knowledgeable as possible in order to become better growers and hybridizers and simply protectors of this genus.

Carmel has this great passion for Rexes and some of her named collection dates back to her father's days when he ran a begonia nursery. Ken considers himself the computer clerk and the "Begonia Home Maker". He tries to find out what the begonia species from all the countries around the world need to survive and flourish. Carmel explains exactly what each one needs, a cool root run with high humidity for instance, depending upon its original habitat and country of origin.

Their ultimate aim is to set up a "Begonia Society World Wide" where we can all share our experiences. Currently they are looking at setting up a tissue culture explain program world wide.

At the bottom left hand corner of each page is a box with a notice that if you want more information contact Ken Browne at Begonia Talk. Click on this and you will be immediately taken to another web site, again run by Ken and Carmel. This site in done on a more personal casual basis but it again is devoted to the culture of begonias, featuring a book library, a photo gallery, and growing and caring sections. It is very easy to click back and forth from one website to another.

If you have any difficulty accessing this or any other site I have written about recently please email me at samb4mail@aol.com. Remember, if you wish to join our email discussion group simply address an email to Begoniassubscribe@yahoogroups.com. After you have joined the group simply address your emails to Begonias@yahoogroups.com, There are currently 227 members who are enjoying this exchange of ideas.

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### CLAYTONM.KELLYSEEDFUND LISTING The Margaret Lee Branch, San Diego County, CA Michael Ludwig, Administrator

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

**DISCLAIMER:** The seeds distributed by the seed fund are identified as received from the donors. The seed fund cannot guarantee that the identification is correct. The species names (in italics) reported here are correct based on the latest information from **BEGONIACEAE**, Ed. 2, August 2002; Golding, and Wasshausen.

When you find that seeds received from the seed fund do not develop into the plant described please notify the Seed Fund so that a warning can be published for others who may have received seeds from the same batch. Each offering is identified by a code to be used whenever writing to the Seed Fund about the seeds. The descriptions published are from the literature and apply to the name used for the offerings.

The Seed Fund needs donations of seeds. Seeds may be traded for listed seeds. Seeds may be ordered from the master list *by nam e*. If you have a special need ask the Seed Fund Administrator.

The Seed Fund would like to augment the present list with new species. There is also a need to refresh the current store with fresh seeds from new sources. The Seed Fund always needs more seeds. Check the list of requested begonia seeds in the Jul/Aug. issue.

Most packets of species seeds are \$1.50, all packets of hybrids (including open pollinated) seeds are \$0.50 per packet. Very rare seeds and newly collected seeds will be \$2.00 or more per packet. California residents please add 7.75 % sales tax. All orders must be accompanied by check or money order, **payable in US funds ONLY**, to **The Clayton M. Kelly Seed Fund. Costs of mailing:** 

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Thank you to the following donors: Jackie Davis and Michael Ludwig.

ND02-01: B. boisseri ND02-02: B. boliviensis ND02-03: B. cinnabarina ND02-04: B. gracilis ND02-05: B. grandis ND02-06: B. pearcei ND02-07: B. U#103 ND02-08: B. U#237 ND02-09: B. gracilis bulbils (\$2.00) ND02-10: B. bulbillifera bulbils (\$2.00)

#### Hybrids

**ND02-11:** *B*. 'Bumblebee' **ND02-12:** *B*. 'Rory'

The Begonian

ND02-13: *B*. 'Skagum' ND02-14: *B*. 'Venturii' ND02-15: Mixed tuberous cultivars: upright orange/white, rose Red, basket yellow, upright pink/white, upright red, and yellow/pink x Howard Seibold cross.

Any seeds from the master list can be ordered. There will be a new master list of seeds published in the January/ February issue of the *Begonian*.

#### DESCRIPTIONS

**ND02-01:** *B. boissieri* A. DeCandolle [Mexico] (Sect. Quadriperigonia)A white flowered tuberous species. Tubers are finger-like and develop deep in the soil.

**ND02-02:** *B. boliviensis* A. DeCandolle [Bolivia, Argentina] (Sect. Barya), Tuberous species from Bolivia. Stems: tall, upright; leaves long, slender, green with serrate margins; flowers orange, drooping. **ND02-03:** *B. cinnabarina* W. J. Hooker [Bolivia] (Sect. *Eupetalum*). Low growing tuberous to 18 inches; green leaves; cinnabar red single blossoms; summer, said to be fragrant.

**ND02-04:** *B. gracilis* Kunth [Mexico] (sect. *Quadriperigonia*). Tuberous, tall stems, mostly unbranched. Leaves variable in size, crenate, fleshy, and pale green. Large pink flowers on short, axillary peduncles in summer.

ND02-05:B. grandis Dryander subsp. evansiana (Andrews) Irmscher [China] (Sect. Diploclinium II) Erect stems to 1 foot; medium green leaves with purple veins narrowing towards pointed tips; bright pink flowers in summer; bulbils that form in the leaf axils drop to the ground to grow new plants in the spring. This species is quite hardy. The tubers in the ground can withstand temperatures below freezing for an extended period if well mulched. (This description is for the most common variant of *B. grandis* in cultivation.)

**ND02-06:** *B. pearcei* J. D. Hooker [Bolivia] (Sect. Eupetalum) Tuberous; stems low, branched, succulent, pubescent; leaves 4-6 in long, obliquely ovate, acuminate, base cordate, toothed, dark green above with light colored veins; tomentose, dull red beneath; flowers 1½ in yellow on erect axillary peduncles.

ND02-07: B. U103 Bolivia. Seed distributed by Rudolf Ziesenhenne under his number RZ 6577. Tuberous: stems green, succulent, 2-3 feet high, slender requiring support; leaf blades 3-5 x 11/2-3 inches, medium green, glabrous, lobed, serrulate, 7-8 veined; stipules 1/4-1/2 inches, reticulate, rather persistent; flowers white sometimes flushed pink, glabrous, 11/2 inches across, male flowers are 4 tepaled, female flowers are 6 tepaled, 4 winged, with an unusual 4celled ovary, 2 small bracteoles; peduncles inches, reddish tan. sparsely 8-12 lenticillate; pedicels 1/2-3/4 inches.

**ND02-08**: *B*. U237 Ecuador. Seed collected by **S. Hoover** along road from Machala to Loja, 1988. Habitat: abundant population on small exposed south-facing rock cliff surface about 5 km out of Pinas; elevation 3900 ft. Also observed in small colonies up to 8000 ft. Tuberous. Acaulescent. flowers pink or white and few (white, occasionally flushed pink in cultivation.) (SF 1990: 155.) Note: See *Begonian* (ND 1995: 207) for description. photos and research information about B. U237.

**ND02-10:** *B. bulbillifera*: Link & Otto [Mexico] (Sect. Quadriperigonia) Three foot tall tuberous species; glossy, bright green, 4" lobed and dentate leaves: pink 1½" flowers on short pedicels. The leaves and the branching stems all grow out of the stem at the same juncture. Nestled between the leaf and stem is a leafy bract holding 40-80 tiny bulbils.



Photo 1 above, 3 below. See article.



Photo 2 above, 4 below.



The Begonian

## Begonias International: Houston, Texas ABS Convention 2002 Design Exhibit by Caroline Hawkins

Special thanks for the dedication of the members in Houston and the surrounding area who organized and sponsored the activities of the American Begonia Society Convention. It is no small effort to put on a convention and requires much planning and negotiation. **Tom Keepin** and **Cheryl Lenert** are highly commended but it is known also that many, many people assisted to make the meeting a success.

The design division was organized by **Marian Claybaugh**, **Bitsy Hale** and **Gay Estes** and was the first design section that I have ever seen at a begonia convention. I sure hope this is "catching" and that there will be more designs in the future. These co-chairman asked designers from three different Houston garden clubs to participate and exciting interpretations resulted. These designs were awarded ribbons by accredited judges from National Garden Clubs, Inc. and the Garden Clubs of America.

One of the most important rules was that begonias had to be the dominant plant material. There could be fresh and/or dried plant materials with no treating of fresh plant materials allowed (this includes spraying any kind of products for shine on leaves or spraying colors on flowers, etc.). You will notice that the mechanics of the designs were well hidden, mechanics being oasis, needlepoints, wires, or any other method of constructing the design. Fruits and vegetables were permitted but if they were cut they had to be treated so that insects would not gather.

Cards of explanation were required to allow the viewer to know the plant materials used (and in some there was a great variety). No live animals, fish (we are seeing these in shows swimming in the water in containers occasionally so there is a rule to prohibit them), taxidermy, antlers, feathers or natural birds nests were allowed. Environmental concerns are part of the objectives of National Garden Clubs.

Also abstraction was allowed in all classes. The best way to describe abstraction is that it involves the selection and organization of the design components in a non-naturalistic manner. Therefore you will see some plant materials or wood turned or mounted upside down, backwards, etc. It allows a designer to use imagination and creative thinking when building a design.

We regret that photos of all designs could not be shown, but those on the opposite page demonstrate a lot of the principles.

**Natural Wonders** is a creative design class and **Marian Claybaugh** (photo 1) did an underwater arrangement submersing the *Begonia rajah* in a large clear container. This treatment shows how the water magnifies the plant materials and enhances the overall design. When choosing plant material to be submerged it is important to select something that will not disintegrate and it is obvious Marian did just that. The design was striking from start to finish.

Mary Poythress (photo 2) showed us how effective begonia leaves and blooms could be displayed in her design by using a yucca stalk that was magnificently curved and circled. She placed it in a container with a circle form and organized *Begonia* 'Sophie Cecile' and *Bego*- *nia* 'Dragon Wing' blooms and foliage high in the design to draw the eye upward and back down again. Rhythm was abundant in this creative design. Although one would think there was abstraction here with materials used in a non-naturalistic manner, it is known that begonias grow happily in high areas and the yucca stalk was found in New Mexico formed just in the manner used—truly **Natural Wonders**.

**Cities of the World** inspired **Marianna Brewster** (photo 3) to represent Bangkok using dracaena, equisetum and the Begonia 'Curly Sue." This creative design won the Best In Show Ribbon and demonstrates how minimal use of plant materials can relate a theme well. Her placement of plant materials does indeed give one the idea of the beauty and qualities of mystical Thailand.

Betty Schoolar organized bricks to clearly illustrate architectural qualities and placed the *Begonia* 'Cowardly Lion' to balance this creative structure. Anne Thomas looked to the Oriental influence for her more traditional design to suggest the gardens in Tokyo and Kyoto. She used the *Begonia* 'Dragon Wings' and *Begonia* 'Persian Brocade' for developing the garden. A quiet and peaceful retreat! Cities of the World with very different approaches!

El Paso, Texas was the theme for **Debbie Robinson** using a red boot for the container. This creative selection of a container and the placement of sunflowers, ivy and the *Begonia* 'Cajun Valley' and *Begonia* 'Lemon Swirl' show ingenuity and creativity in this **Cities of the World** design.

We now move to the third class and it was to be a Pot-et-fleur type of design. This involves the selection of a container and at least two potted begonias in it. The combination of these plants reminds us of dish gardens but they are different because cut flowers or foliage may be used to enhance the overall appearance of the exhibit. It is also suggested that these plants, cut and potted, be compatible for growth requirements as it is considered a semi-permanent arrangement. Also artistic organization is suggested remembering textures, colors and forms.

The theme of **The Melting Pot** in **Virginia Woods'** (photo 4) entry involved *Begonias* 'Helen Teupel', 'Side Winder', 'Annan Grace' and 'Elda' with bird's nest and five finger fern, flax, saracina, protea and cyperus papyrus. "Variety is Our Strength," says Virginia and the different types of foliage and blooms were combined to present an interesting and representative exhibit. As one looked at this exhibit it was a tour through a large number of plants but skillfully handled.

Sidney Fay also used a large selection of plant materials in her pot-et-fleur design in The Melting Pot class and included fern, coral vine, alstromeria with the following *Begonias:* 'Seilla', 'Side Winder,' 'Wally's World,' and 'Red Dragon.' The colorful coral vine was a graceful addition and blended well with the begonia foliage.

The efforts of all of the designers who participated is most appreciated and added much to the quality of the show. If there are any questions, please feel free to contact me at **crh9999@aol.com** or send mail to 7329 Kendel Court, Jonesboro, GA 30236. *Carolyn Hawkins, ABS Member* and Plant Society Liaison for National Garden Clubs, Inc.

Order old back issues of the *Begonian* to have extra holiday reading - or even to give as a gift. **Ann Salisbury** says she has too many and wants you to order some today! To get all the details, call her at **580-628-5230** or email her at **geneann@cableone.net** 

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## **Sisters** by Charles Jaros

Human sisters have similar qualities and characteristics, but are also distinctly different. Such is also true of "sister seedlings" in horticutlture.

Cases in point are two "sister seedlings"; *B*. 'Caribbean Prince' and *B*. 'Caribbean Princess'. **Tim Anderson** of Palm Hammock Orchid Estate developed both of these beautiful hybrids.

Both hybrids were a result of a selfing of *B*. 'Boomer' in 1998. These hybrids would be considered grex, which is a group name for all plants derived from the same cross and means "seedling batch". A cultivar is an individual that has been selected from a grex because of a particular attribute or combination of attributes. It is clearly distinct, uniform and stable in its characteristics, and when propagated retains these charcteristics because it is of identical genetic makeup.

*B.* 'Boomer' was developed by **Mabel Corwin** and is a cross between *B. soli-mutata* and *B. reneformis. B.* 'Boomer' is classified as thick-stemmed; flowers are white and has ABS registration number 919.

*B.* 'Caribbean Prince' has coloration that is closer to B. 'Boomer' and that of *B. soli-mutata* although much lighter. The growth habit is that of a rhizomatous vice a thick-stemmed which is the *B. solimutata* characteristics showing. It is an easy, vigorous grower and is propagated by either leaf or stem cuttings. It makes an outstanding hanging basket.

*B.* 'Caribbean Princess' on the other hand has coloration that resembles that of *B. reniformis* and is a lovely bright green. The growth habit is also rhizomatous vice a thick-stemmed. Makes an outstanding hanging basket like its "sister" and is also propagated by either a leaf or stem cutting.

I obtained these two "sister seedlings" from two leaves given to me by Tim Anderson. I use the "Tim Anderson Method" of rooting leaves. This is done by removing the petiole of the leaf to just below where it is attached to the leaf. Using my regular potting mix, Fafard 2, I then place the leaf into the mix and with my thumb press it down into the medium. The medium is moistened before placing the leaf in. Pressing the leaf into the medium breaks some of the leaf veins and plantlets appear from these areas.

Both rooted quickly and soon I had a nice 6" container of both. I continued to move them up in container size until I had them planted in 22" hanging baskets. Both make full compact plants without constant pinching and pruning.

It is fun growing "sister seedlings" and seeing how both different and similar they can be.

Charles Jaros is the former President of ABS and shows us that begonias can be transported for show by plane or car clear across the country! Contact him at 200 Maureen Drive, Sanford, FL 32771.

### **Public Relations Quick Tip**

Business cards are an inexpensive and convenient way to give a potential member information about your branch or about ABS. They can even be posted at places where a potential begoniac might visit. They are easy to carry for both the giver and the receiver.

#### Virginia Jens



Hey, Charles, they could be twins! Above is B. 'Caribbean Prince' and below is B. 'Caribbean Princess'. Both traveled all the way from Florida with Charles to be exhibited in Houston in May. You know these have to be sturdy plants!



## Begonia convolvulacea (Klotsch) A.DC in Marius. Brazil 1861 by Johanna Kitson

At the West Palm Beach ABS Convention in 2000, I found a new begonia that I tried out as a ground cover for around my cane begonias by my front door. Most of the canes did not do that great as it was too shady getting only about an hour of direct sunlight at dawn. However, the B. convolvulacea has done very will filling in this extremely shady area between the sidewalk and the garage. Then one day I looked up on the garage wall and the begonia was climbing right up the stucco surface. So far it has gone climbing 4 feet and bloomed a few times. I never knew it was a climber!

The next time I saw this begonia it was growing at Leu Gardens in Orlando

## **Round Robins Need** Members! by Virginia Hamann

The American Begonia Society' Round Robins need members. The decline in Robins has been gradual since 1997. The Robins have been part of ABS since the 1940s with over 100 in flight. We are now down to four active robins.

Listed below are the Robins that are not in flight and need members interested in corresponding:

- #53 Rhizomatous Begonias #46 Greenhouse Growing
- **#55** Species
- #82 General Culture
- #15 Cold Climate Growing
- #31 Southwest Growers
- #11 Canes
- #123 Canes

Florida. The picture was taken in the spring time and only shows a small portion of this large bed of B. convolvulacea, which is at least 20 feet across. The tree in the background is a Live Oak about 3 feet in diameter. Again this begonia is climbing right up onto the bark and like many begonias this one grows on top of the leaf litter when it is not reaching for the sky. Happy growing everyone!

Jack Golding assures us B. convolvulacea is glabrous just as is in Johanna's photo opposite so Peter Sharp's begonia mentioned in the last issue now needs identification.

- #28 Tuberous
- #9 Growing Under Lights
- #57 General Culture
- #6 Odd, Rare and Unusual
- #16 Eastern General
- # 4 Windowsill Growing
- #12 Companion Plants

For new members, the Robins are a group of 7 to 8 members who send letters in a circle from one member to another, adding and subtracting their own letter when it comes around each time. By the time a packet arrive, it is full of information. It is a wonderful way to get to know other members and more about begonias. Join one today!

Express your interests to:

Virginia Hamann 1169 Lincoln Ave. Chester, Iowa 52-134-8508 Phone: 563-565-4208





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## Grow More Species! by Jeanie Dinsmore

I wish everyone had the opportunity to volunteer one day a week at the Fort Worth Botanic Garden Species Bank. And you too would fall in love with a different species every week. Some are so unique that it is hard to believe they are begonias.

Don't get me wrong, I love the hybrids, but there is something so special about species. Consider *B. acetosa* with its red fuzz, *B. boliviensis* with pretty blossoms, *B. dregei* with its odd caudex. And of course, *B. exotica's* bright pink splotches, *B. rajah's* wonderful foliage, *B. incisa's* fern like leaves, and who doesn't love *B. foliosa*. I could go on and on.

*B. floccifera* is one of my latest loves with its new foliage of pink and cream. An easy one to grow, but slow. The Thompsons' book lists it as rhizomatous, medium-leaved with white flowers in the spring and it was found in India and described by Beddome in 1864.

I grow about 50 different species (last count). They amaze me with color, shape and size. No matter what you like there is a species for you. I would encourage everyone to grow species and you will be rewarded with some of the most interesting and beautiful plants.

Remember the Species Bank is for all of us now and in the future. If you grow species and have some we (FWBG) don't have, please send us a cutting or plant. If we don't make deposits, someday there may not be anything to withdraw.

For more information on which species are available please contact **Linda Shires**, Begonia Curator at 3220 Botanic Garden Blvd., Ft. Worth TX 76107-3496, ph: 817-871-8744 or by E-mail at begonia@airmail.net.

At the Convention in Houston in May, I kept seeing species exhibited at the show and each time I checked the grower. In most cases, it was Jeanie Dinsmore. Her species enriched the show as you can tell from the photos of her plants on the next page. You may contact Jeanie by Email at Jblossoms1@aol.com





Above, Jeanie Dinsmore's B. floccifera. Photo is by Mary Bucholtz. Below, left, is her B. hatacoa. Of course, others exhibited species in Houston as well; below right is Armando Nodal's B. amphioxus, grown outside rather than in a terrarium where we usually see it.



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## **COMING EVENTS**

April 22-26, 2003: ABS Convention 2003; Our Begonia Heritage, Oklahoma City, OK. Hotel will be the Embassy Suites. Come the previous day to take the preconvention tour on the 22nd to Ann & Gene Salisbury's greenhouse in Tonkawa.

Continued from page 219.

multangula	mul-tan-GYEW-luh
var. glabrata	glab-RAY-tuh
muricata	myew-ri-KAY-tuh
pavonina	pav-OHN-i-nuh
pearcei	PEARCE-eye
rajah	RAH-juh
reniformis	ren-i-FORM-is
robusta	ro-BUS-tuh
soli-mutata	sol-i-myew-TAY-tuh
versicolor	ver-si-KOH-lor

#### Section Names

Barya	BAHR-i-uh
Diploclinium	dip-lo-KLEEN-i-um
Eupetalum	yew-pe-TAL-um
Quadriperigonia	kwad-ri-per-i-GOHN-i-
	uh

#### Begonias in Oklahoma City April 22-26, 2003

If you haven't been to a convention or Get-together in Oklahoma City then you may not know that the Embassy Suites where we will be staying there is a great place to meet.

All rooms are 2 room suites complete with refrigerator. They always give us a super rate and on top of that complete - and I do mean complete - breakfasts are free each morning. Plus, in the evenings, there is a reception with elaborate snacks and free drinks. This reception has proven a great place for us begoniacs to socialize and talk begonias.

This is going to be a convention to remember so be sure not to miss it. Make your plans to come.

### The Begonian

Editor: Freda M. Holley, 2015 Elvin Dr. Stillwater, OK 74074. Ph: 405-385-0484. E-mail: fholley@provalue.net Consulting Editors: Tamsin Boardman and Jan Brown. Nomenclature Editor: Jack Golding, 33 Ingram Drive, Monroe Township, NJ 08831-4641, E-mail: JGBEGNOM@aol.com

**Quick Tips: Dianna Wilkerson**, 15356 Pheasant Run, Choctaw, OK 73020, E-mail: begoniafiend@aol.com

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