

January/February, 1989

# *The* BEGONIAN



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## **American Begonia Society**

Founded January 1932 by Herbert P. Dyckman

### **Aims and Purposes**

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

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

To standardize the nomenclature of begonias.

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

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

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

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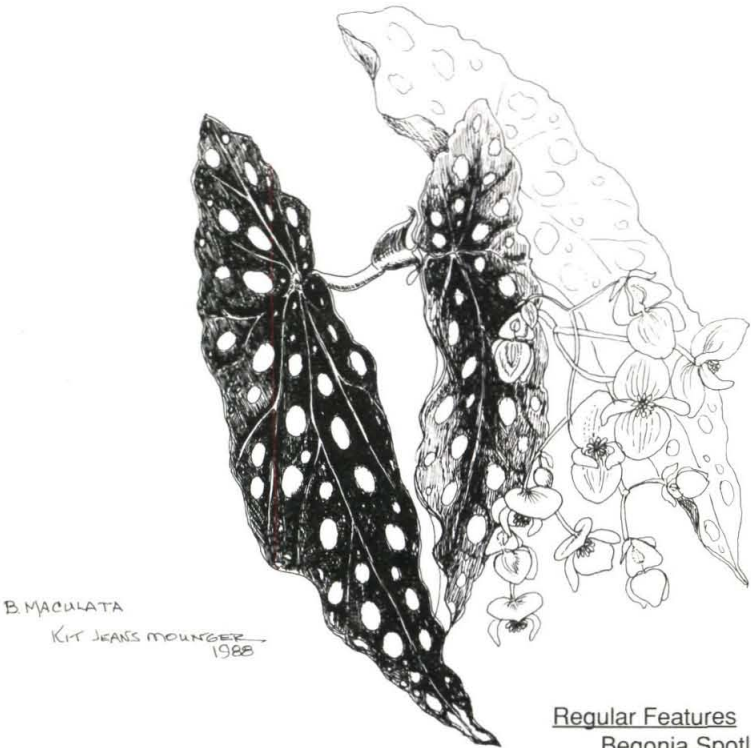
**Advertising Manager**—James Hankerson, 3010 San Paula, Dallas, TX 75228

**Cover photos:**

**Front** - *B. huegelii*, at home

**Back** - *B. collaris*, shot from underneath to show the "collar" that gives its name.

Both were photographed in the state of Rio de Janeiro, Brazil, by Jacques Jangoux. See article, p. 5, for an exciting account of his begonia safari.



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**COMING THIS YEAR!**

- January 21: Long Beach Parent Chapter 57th Birthday Party for ABS
- May 5-7: SWR Get-Together, Dallas, TX
- August 3-6: ABS National Convention, San Francisco, CA



## "I HAVEN'T RECEIVED MY BEGONIAN!"

by Membership Chairman John Ingles, Jr.

"Why haven't I received my **Begonian**?" is a common question that we get from members. Well, you haven't gotten it for one of three reasons: (1) you have not renewed your dues; (2) you have moved but not sent us a notice with your new address; or (3) someone in your post office likes it better!

Numbers 1 and 2 we can handle with some cooperation from you. Renewal notices are sent to each member 15-20 days prior to the date their dues expire. If you forget to pay your dues on time, and you don't get your **Begonian**, it is simply because you are not officially a member any longer. When you send your dues in late, we mail the copy that you missed - but it costs us 65 cents. There are also charges made to delete and then to restore your name to our mailing list; delays in renewing are expensive. (If you want to know when your membership expires, check the upper left hand corner of your mailing label; you can send dues in early, either directly or through your branch, and save your society the expense of notifying you.)

The Post Office will forward your 1st class **Begonian** if they know your new address; if not, the magazine will be returned to the Membership Chairman. But **Begonians** sent 3rd class will *not* be forwarded, *even if the Post Office knows your new address*; the back page is returned to us, at a cost of 30 cents - if you want your missing copy, it may be obtained from the Book Store at a cost to you of \$2.50.

Another problem is that if you notify the Post Office to hold your mail while you are away temporarily, they will not hold 3rd class mail; again, the back page is returned to us at a charge of 30 cents, and you have lost your **Begonian**!

It would help us a great deal, and save the society a lot of money which is better used in other departments, if you would pay your dues promptly, and notify us quickly when you move.

Problem no. 3 has to be handled between you and your post office, as all the **Begonians** are sent out at one time, banded together by ZIP code. There are fewer problems with those sent 1st class.

Should you receive a defective magazine, write and ask for another. You don't have to send in the defective copy.

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*John Ingles, Jr., just may be our busiest member. In addition to being Membership Chair, he is Business Manager and is updating the Buxton Checklist (the definitive list of all begonias). You can help make his job less frustrating by sending in your dues on time (or early!) and letting him know when you move. John's address is P.O. Box 56, Rio Dell CA 95562-0056.*

## WOODRIF HONORED

The California Association of Nurserymen's annual award for research of proven merit to the nursery industry went this year to **Leslie Woodriff** of Fairyland Begonia and Lily Garden for his begonia and lily hybrids.

Paula Schaeffer, spokeswoman for the association, said: "Woodriff has worked for more than 50 years to cross plants. He has developed hybrids with the best characteristics of both parents, creating hardy specimens that bloom year-round with long lasting, fragrant flowers...His contributions have benefited the industry nationally and worldwide."

Leslie Woodriff has also been honored by the North American Lily Society, and ABS presented him with the Alfred D. Robinson Memorial Medal in 1954 for his B. 'Orange Rubra.'

**Please send in officers for Branch Directory! It will appear next issue (we ran out of space this time).**



## BEGONIA SAFARI IN BRAZIL

Photographs and Text by Jacques Jangoux

How about spending your next vacation on a "begonia safari," hunting and photographing begonias in the wild? In some regions rich in begonias it can be done with relative ease. Here is how I did it during several days of my vacation with my wife and 5 year old son in September-October, 1987.

Coming from Belém at the mouth of the Amazon where we live, we rented a car at the Rio de Janeiro International Airport and, in about 3 hours, we reached Nova Friburgo, a city of 120,000 founded in 1818 by Swiss settlers at an altitude of 847 m. in the heart of the Serra do Mar, or Mountains of the Sea.

The Serra do Mar is a mountain range running parallel to the coast in southeastern Brazil, separating the coastal plain from the inland plateau. It lies in the Mata Atlântica

(Atlantic Forest) vegetation zone, which formed, originally, a coastal strip of rain forest running from northeastern to southern Brazil. The Mata Atlântica is separated from the Amazon forest by an extensive area of wooded savannah, called *cerrado*, and, in the northeast, by xerophytic thorn scrub called *caatinga*, characterized by numerous cacti. Unlike the Amazon forest, which is relatively poor in species of begonia, the Atlantic forest has a rich begonia flora, especially in its mountainous part corresponding to the Serra do Mar. Less than 5% of the Mata Atlântica remains today; it has been exploited and destroyed for agriculture (sugar cane in the northeast, coffee in the southeast, cocoa in the State of Bahia), for cattle pastures, by logging, for the production of charcoal, etc.

As we approached Nova Friburgo on the mountain road, we ran into dense fog formed by the clouds hitting the mountains, which gave us an idea of the ecological conditions under which the begonias of the region grow.

We took our first excursion to the Furnas do Catete State Park, about 10 km. along the road going northeast to Bon Jardim, along a trail going up rocky hills from which there is a view of the Cão Sentado, a rock that looks like a seated dog. There we found, among open vegetation of small trees and shrubs, our first two begonias: the thick-stemmed *B. reniformis* Dryander (synonyms: *B. vitifolia*; *B. dichotoma* hort.) and the cane *B. angularis* Raddi.

*B. angularis*



*B. reniformis*





The next excursion, up a steep and winding dirt road, was to Pico do Caledônia, one of the mountains that dominate Nova Friburgo. We found there at an altitude of about 2,000 m. on the road embankment an unidentified begonia with spiraled basal lobes, but unfortunately it was too high to be photographed.

After these first two days of exploring the region I was not satisfied: we had been driving too much, and not hiking enough. I found it very difficult, not knowing the region, to find hiking trails in the Serra do Mar, as a lot of land is private property and often has been deforested.

Our luck was to come when we took an 11 km. dirt road, which started at Mury, 10 km. from Nova Friburgo on the road to Niteroi and Rio de Janeiro, which lead to the Hotel Fazenda (Farm Hotel) São João. The road was winding through relatively little disturbed forest. It had to be taken almost entirely in 1st and 2nd gear, which gave us plenty of time to look for begonias. The first one, in bloom, remains unidentified, but is possibly *B. paleata* Schott ex A. de Candolle.

Unidentified - *B. cf. paleata*?



A few hundred meters farther along the road we found *B. huegelii* (Klotzsch) A. de Candolle in Martius, a plant about 2.50 m. (8 ft.) tall, with huge leaves, about 40 cm long and 35 cm. wide., bearing a terminal inflorescence of numerous small white flowers. Close to it grew *B. digitata* Raddi, typical with its compound leaf blades with digitate (radiating from a central point) petiolulate leaflets, also with inflorescences of numerous white flowers.

#### *B. digitata*

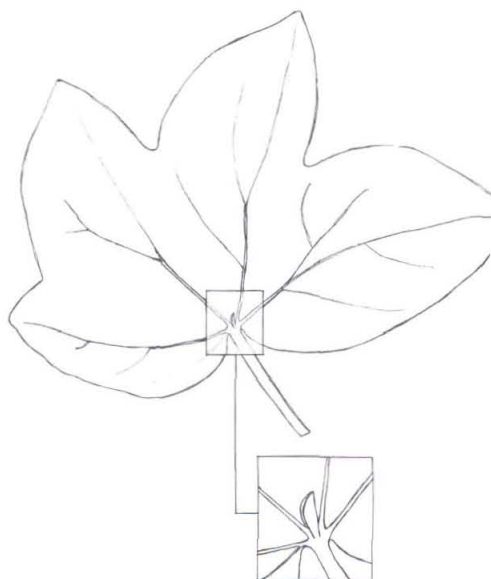


Nearby was the trailing *B. convolvulacea* (Klotzsch) A. de Candolle in Martius and, on the wet road embankment, *B. fischeri* Schrank with small pink flowers.

Toward the end of the road, as we approached the hotel, was an exciting find: a young plant of a begonia with lobed leaf blades which remains, to this day, an identification puzzle.

My impression is that it may be a natural hybrid between *B. digitata*, a species with compound, digitate leaves and a species with simple leaves, such as, perhaps, *B.*

*huegelii*. This hypothesis is supported by 1) the presence on some adult leaves on the plant now in cultivation, of a tiny foliaceous appendage or leaflet at the base of the radiating nerves, as occurs with *B. digitata* (compare the photograph of *B. digitata* and the drawing of the leaf of the plant being discussed); and 2) the similarity of the hair of the blades with that of *B. digitata*, and the similar general appearance of the leaf surface; the leaf margin, however, is crenate on this plant whereas it is serrate on *B. digitata*, and the stems of this plant are much hairier. Another possibility would be that it is *B. apparicioi* Brade, a species from the State of Espírito Santo, or a closely related species. *B. apparicioi* is described by Brade (1948) as having lobate leaf blades with triangular lobes (whereas the lobes on this plant are ovate), dispersedly verrucose-strigose (strigose: covered with sharp, appressed, rigid hair), which corresponds to this plant.



Unidentified begonia with lobed leaves. Natural hybrid? See "leaflet" at base of nerves; compare with photo of *B. digitata*. Or *B. cf. apparicioi*? (Crenate leaf margin has not been represented)



After having lunch at the Hotel Fazenda São João, we went back to Nova Friburgo, but decided to come back and spend a few days there. Despite more rain than we had hoped for, we were rewarded by the peace of nature and by new begonia finds. First, walking along a dirt (or rather, mud) road which followed the course of the Macaé River, I found a slender stemmed, sarmentose begonia, tentatively identified as *B. pulchella* Laddi: it looks exactly like the illustration accompanying the Latin description of *B. imilis* Brade (Brade 1944), considered a synonym of *B. pulchella* (Smith et al., Begoniaceae, 1986).

Close to it was a beautifully backlit unidentified young plant, its leaves rendered translucent by backlight. The photograph doesn't do it justice in black and white.

Young plant of an unidentified begonia

*B. cf. pulchella*



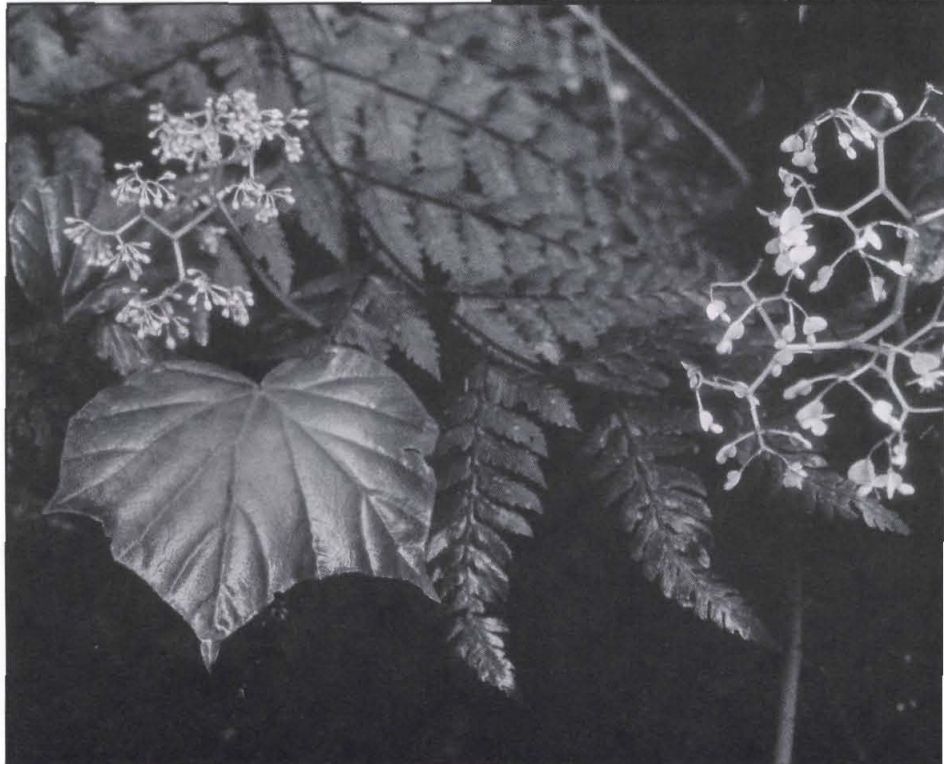
Farther down the road was a true woody shrub, tentatively identified as *B. hookerana* Gardner.

*B. cf. hookerana*



Some of the best forest was to be found along a trail that went up the slopes of Morro São João, the mountain that dominates the landscape. Starting at the hotel, the trail went first through pastures, then through shrubs, and soon entered the forest. There I found again *B. convolvulacea*, this time in bloom, *B. cf. pulchella*, and, in a natural clearing or light gap, *B. huegelii* (cover photograph), *B. digitata*, and *B. cf. paleata*. These three species, already found at the roadside clearing, appear to be among the colonizers of light gaps in the forest.

*B. convolvulacea*, with fern





Farther up the slope the forest changed into a mixed bamboo thicket. Here I found a rare species: a cluster of plants of *B. collaris* Brade, with its shiny leaf blade subtended by a membranaceous ring or "collar" at the top of the petiole (see back cover as well as picture below), known previously only from the State of Minas Gerais.

*B. collaris*



Then it started raining and I went back to the hotel where a lunch of *feijoada*, the bean-based national dish of Brazil, consisting of beans cooked with various meats and served with rice, was waiting.

We were somewhat less lucky in Teresópolis, a city of 100,000 hidden in the mountains among spectacular scenery 76 km southwest of Nova Friburgo at an altitude of 872 m. The trails in the Serra dos Orgãos National park had been closed for safety reasons after landslides. The only way to visit the park was by car, and, as our luck would have it, there was dense fog that day.

We saw, however, a climbing begonia on a small tree and, on a rotting tree trunk, a small begonia with lanceolate leaves, pertaining to the group of *B. herbacea*, *B. velloziana*, and *B. attenuata*.

Frustrated by the impossibility of visiting the National Park I went to the tourist information office and inquired about trails to hike in the forest. They were totally unprepared for that unusual question! Fortunately a young man who happened to be there offered to guide me to the forest in a valley called Jacaranda on the Atlantic versant of the mountains. We arranged to meet the next morning. He suggested that we take a bus trip to the trail head, as it would have been unsafe to leave the car unattended there, at a *favela* (Brazilian slum) on the outskirts of town.

From the end of the bus line we walked first along a dirt road which after a few km. turned into a trail in disturbed forest. Locally on the embankments was a begonia with scaly petioles, and, on plants receiving direct sunlight, red young leaves, which turned green as they matured. The scaly petioles suggested *B. paleata*, but it was not the same species as the plant found on the road to the Hotel Fazenda Sao Joao in Nova Friburgo. We saw again the climbing begonia seen at the National Park. In wet and sunny spots grew *B. fischeri*.

As we progressed along the trail the vegetation became less disturbed; the canopy closed as we entered primary forest. Here, in the deep shade and high humidity of the undergrowth, was shrub-like *B. arborescens* Raddi, about 1 to 1.5 m (3 to 5 ft.) tall, perhaps striving for more light in the rare openings provided by the trail. Its older leaves were covered with epiphyllous lichens, witnesses to the high humidity. (See photograph, next page).

It was now about 2 p.m., and we had a long hike back to Teresópolis. I was sorry that I had to leave this forest when it was beginning to get really interesting. On the way



back we ran into a man carrying a load of *palmito* (heart of palm or palm cabbage) which he had collected illegally from the palm *Euterpe edulis*. The palm has to be felled in order to harvest its heart; for that reason *Euterpe edulis* is endangered in the Atlantic forest.

*B. arborescens*



On the way back to Nova Friburgo after several days in Teresópolis, we saw a sad sight: burning forest on the mountain slopes. From Nova Friburgo we drove to Cabo Frio on the coast east of Rio de Janeiro, and spent a few days at the beach.

The remains of the Atlantic forest of Brazil are, like the Amazon forest and most other tropical rain forests in the world, suffering strong destructive pressures. We can all help slow down and, hopefully, in some cases stop that destruction by joining one of the conservation organizations dedicated to the protection of the rain forest. In most tropical countries there are local organizations; in the U.S., among several organizations, I suggest two: the Rainforest Alliance, 295 Madison Ave., Suite 1804, New York, NY 10017, phone (212) 599-5060. and Rainforest Action Network, 300 Broadway #28, San Francisco, CA 94133. I urge you to join

one of these organizations. By doing so you will help protect some rain forest somewhere. In it begonias probably grow. And, maybe, someday you will do a begonia safari in a tropical forest that you helped save.

POSTSCRIPT: As I am finishing writing this article, there are numerous and dramatic reports on television and in the newspapers of huge forest fires all over Brazil. It is the dry season now (September). Fire is used to clear the land for agriculture, cattle pastures, land speculation, etc. The National Parks of Itatiaia and of the Serra dos Orgãos, both in the State of Rio de Janeiro, as well as the Caparaó National Park in the States of Minas Gerais and Espírito Santo, the Serra da Canastra National Park in Minas Gerais, and the Parque Nacional das Emas in the State of Goiás were severely affected. The first two, and probably also the third, are rich in species of Begonia. No doubt several populations of Begonia were destroyed.

#### CORRECTION:

In the article "A Begonia from the Rainforest" about *B. cf. maynensis* in the May-June 1987 issue, I wrote: "It has produced numerous flowers, both pistillate and staminate (borne on different inflorescences) but so far has produced no seed..." I wrote the article at a time when the plants were not in bloom, and I had poorly observed the inflorescences. Actually they carry both male and female flowers. The male flowers open first, which gives the impression of a male inflorescence; after the male flowers have fallen, the female flowers develop, which gives the impression of a female inflorescence. What actually happens then is a successive development of first the male, then the female flowers on the same inflorescence.

As for the deformed leaves mentioned in the same article, I suspect now that they were not, as I wrote then, due to a virus, but may rather have been caused by some nutrient deficiency. My plants rarely present deformed leaves now.

Jacques Jangoux is a Belgian freelance photographer with a background in botany. He specializes in the photography of the Tropical Rain Forest. He lives at Rua dos Timbiras 1375, Apto. 1001, Batista Campos, 66.000 Belém, Pará, Brazil.

## MICRONUTRIENT SUPPLEMENTATION FOR BEGONIAS

by Kevin Handreck

*In the July-August, 1988 issue, Dr. Louis Manning wrote of the need for micronutrients in plant nutrition. He gave formulas for supplementation he had used in the garden, and suggested experimentation in growing begonias, urging caution in application. In editing, one of his cautions was omitted: he did not intend for micronutrient supplementation to be used with every feeding or watering. In the following article, Mr. Handreck makes suggestions specifically for begonias.*

In his excellent article Dr. Louis Manning stressed the importance of micro-nutrients to the healthy growth of all plants, including begonias. I would like to add to what he has written, filling out some detail from my own experience and professional research on the supply of nutrients to plants growing in potting mixes.

First, let us look at the micronutrients that must be supplied. They are iron, copper, manganese, zinc, and boron. (Others, such as molybdenum, chlorine, and nickel are never in short supply outside of the most stringent experimental situations). The order of listing I have chosen is approximately from that nutrient most commonly in short supply to that least commonly so. But the order depends very much on the components used in the mix, water quality, and fertilizers used. Let's look at these micronutrients in turn.

**Iron.** A deficiency of iron shows up as yellowing of young leaves (interveinal chlorosis) and shoot tips. Iron is taken up mainly through root hairs near root tips, so if there is no new root growth, the plant cannot get much iron. Soggy mix or soil reduces or stops root growth and iron uptake.

Iron uptake is also reduced as pH rises. This effect is bigger in soilless mixes than in soils or mixes with soil in them. One of the main benefits of including some loamy soil in potting mixes is this beneficial effect on iron supply. I am not suggesting that we should all rush out and start adding soil to our mixes,

because it is easy enough to provide plenty of iron to plants in soilless mixes.

The cheapest way of adding iron to a soilless mix is via iron (ferrous) sulfate. The amount needed by soilless mixes is 0.5-1.2 grams per liter of mix (a level teaspoon per 2 gallons). The iron is quickly grabbed by the organic components and within minutes no more than a tiny portion of it can leach from the mix. Therefore almost all of the addition is there for all time. It will remain available to plants so long as the pH remains below about 6.5.

The amount of iron sulphate needed by peat-based mixes is probably at the lower end of the range, while additions should be near the upper end for mixes based on bark. As long as there has been enough iron added before potting, and the pH remains below 6.5, there is no need for extra iron in the liquid plant food. I have had begonias growing in the same pots for up to three years without any extra iron.

The other way of supplying iron is via chelates. These are more expensive and may need to be applied at least a couple of times a year if there is little iron in the mix itself.

It is useful to compare the amounts of iron to be added before potting with the amounts that can be supplied by the Taylor formula quoted by Dr. Manning. The concentration of iron in the diluted solution would be 1.32 mg per liter. Applying this at a rate of 500 ml per 2 liters of mix (about 1 pint per half gallon container) would add about 5 mg per liter of mix in 15 applications and 20 mg in 60 applications. These amounts are much lower than the amounts needed to ensure an ample supply of iron if there is little in the mix at the beginning. Most of the iron would be absorbed by the mix components, so plants in the mix would not get enough for many, many months.



**Copper.** Peat-based mixes have often been shown to need additions of copper if plants are to grow well in them. The amounts needed are very tiny indeed. Typical additions in commercial nurseries are 2-5 milligrams per liter of mix (about 1-2 grams of copper sulfate - bluestone - per 30 gallons, or 1/3 to 2/3 of a teaspoon of copper sulfate per 50 gallons of mix). A simple way of supplying enough copper is by including about 5 to 10% garden compost or leaf mold in the mix.

**Manganese.** A deficiency of manganese causes leaf symptoms that are quite similar to those of iron deficiency. Most peats and barks contain enough naturally for at least some months of plant growth. There have been reports that some redwood barks contain too much manganese. So, do we add some to our mix or don't we? It really is a bit of a guess without an analysis. Adding about one teaspoon of manganese sulfate per 50 gallons of mix would be reasonable for all except those containing redwood bark.

**Zinc.** This element is all around us in the form of galvanising. I don't have too much evidence for it, but I suspect that zinc deficiency is very rare in nurseries and home gardens. It is, however, rather easy for plants to get too much zinc from such items as pipes, wire netting and galvanised structures (and galvanised tanks if we use rainwater most of the time). Composts and leaf molds often contain quite high levels of zinc, and it seems to be readily available to plants. The amounts that would be applied by following the formula given in Taylor's Encyclopedia of Gardening, as quoted in Dr. Manning's article, would be equal to recommended maximum commercial doses within 20 applications, so if there were already plenty in the mix from compost or other source, toxicity would be possible. Mild toxicity is difficult to detect without laboratory tests, as the only symptom is somewhat stunted growth. Severe toxicity gives damaged roots and symptoms of iron deficiency in young leaves.

**Boron.** Most organic components of potting mixes supply some boron. All water supplies contain some boron, and indeed some contain too much. The Peters fertilizer company suggests that water sources with 0.25 ppm boron are potentially a problem for boron sensitive plants. J.F. Knauss of that company (Grower Talks, January, 1986, p. 106) includes begonias in a list of boron-sensitive plants, so we must be very careful that we do not give toxic amounts of boron to our first or second loves.

The Taylor recipe gives a solution containing 0.64 ppm boron. That is far too high, so this solution should not be used on our begonias. We might get away with it on a once-every-couple-of-months basis, but certainly not by using it at each feeding.

Toxicity would appear especially quickly in areas with high levels of boron in the water. Knauss lists these as Zip code areas 95616, 60042, 60101, 60106, 60174, 60410, 60423, 60462, 60538, 48446, 49423, 63801, 07822, 45345, 73044, 17884, 18846, 57567, 75115, 78064, 78801, 53220 and the Colorado Springs, Albuquerque and Brownsville areas. The California aqueduct water is listed as containing 0.3 ppm boron, plenty for any plant. All effluent waters contain high concentrations of boron. Water supply authorities will soon tell you how much boron is in your water supply. If it is very low, then you could supply some several times a year, but otherwise it would be wise not to do so.

### **A strategy for supplying micronutrients.**

The simplest way of ensuring an adequate supply of all micronutrients in potting mixes is to include 5 to 10% of a compost which has been enriched by adding to it 80 grams (2 1/2 ounces) of iron sulfate per 2 gallons of compost. An alternative (not an addition) is to use a proprietary micronutrient formulation such as Micromax (Sierra Chemicals, Milpitas, CA) at the recommended rate. Yet another is to include some soil in the mix. This is satisfactory as long as you are sure that you are not introducing disease with the soil and that air space is still adequate.



Convention 88! reports...

## MICHAEL KARTUZ ON NEW ENGLAND HYBRIDS

Lynda Goldsmith introduced Mike Kartuz, whose origin was New England, as a "grower, author, branch worker, and hybridizer," as well as being the "guru" of plant societies in the entire area while he lived in Massachusetts. I'm sure that he is missed now that he lives in California.

Mike began by handing out a list of nearly 100 northeastern begonia hybrids which he had drawn up using the Thompson's Begonias: The Complete Reference Guide, but stated that there are probably others. Sadly, some of the begonias on the list are, to the best of his knowledge, no longer in cultivation.

He showed slides of many of those on the list, commenting, as he went, on the parentage of the hybrid and whether or not it is easy to grow. The rooms resounded with "oohs!" as the beauties flashed before our eyes.

After the slides, Mike answered questions from the audience. One dealt with selecting seedlings: how, when hybridizing, does he determine which seedlings in a flat to keep? He answered that, at the seedling stage, you don't discard - you grow them on. At least 20 must be grown. But he has found that in California, where he is not

faced with the need for greenhouse space, he can grow many, many more than that. He went on to say that, even after all the trouble of growing them on, he may end up tossing them all away - he doesn't like to do that; but a new hybrid needs to have good growing capabilities and should be distinctively different from any other begonia on the market.

An example of this distinctiveness was given as he showed the slides. In the mid-70's, Mike knew that the only orange-blooming begonias available had green leaves. He set out to produce one with coppery-colored leaves. The result was the lovely (my word) B. 'Mandarin Orange.'

Mr. "Guru," the membership of ABS thanks you, and all of the other prolific hybridizers of New England, for all of the beauty you have made available to us!

by Dorothy Patrick

*Mike Kartuz of Kartuz Greenhouses is responsible for many fabulous begonias, including Robinson Medal winner B. 'Buttercup.' Dorothy Patrick is particularly fond of his orange-flowering cultivars.*

### Micronutrients, continued:

By following one of these simple strategies, there is usually no need to be concerned about including micronutrients in liquid feeds. You can concentrate on supplying major nutrients and on keeping the pH of the mix close to 6. Begonias may have problems if pH drops below 5 or rises to 7 or above in soilless mixes.

*Kevin Handreck is a researcher in plant nutrition for the Commonwealth Scientific and Industrial Research Organization of the Australian government, and chairman of a committee which is engaged in setting standards for potting mixes sold throughout Australia. He is also senior author of the horticultural textbook Growing Media for Ornamental Plants and Turf. His address is 2 Birdwood St., Netherby, South Australia, 5062, Australia.*



## PAGE ONE

by Paul P. Lowe

*At the ABS convention in Boston, Tamsin asked me to write an article on the reasons why I make crosses, and how I name my hybrids. I replied that there was a different reason in each case, and that it would take a book to enumerate all the different reasons since each case was different. She then suggested that I write one page of the book and describe a few cases. Here is PAGE ONE:*

B. 'Honeysuckle' x B. 'Rubacon' (my latest hybrid)

In this case, I wanted a white blooming angel wing that would have the fragrance of B. 'Honeysuckle,' and would be a constant bloomer like Honeysuckle.

As I watched the seedlings mature and start blooming, I was disappointed to see that they were all different shades of pink. Then, Surprise! Surprise! One bloomed white with bright yellow stamens and just a hint of pink in the petals when exposed for a few days to bright, filtered sunlight.

But it had no fragrance. However, it is a good bloomer and an outstanding, medium-sized plant with beautiful blossoms. It will be named for the member of our Palm Beaches Branch who brings in the most new members.

**B. 'Rubacon'** (B. 'Orange Rubra' x B. *convolvulacea*)

Here, I wanted a vining plant like B. *convolvulacea* that would have color in the petals and would be a good bloomer like B. 'Orange Rubra.' I was disappointed in the flowers, as they were white and similar to those of B. *convolvulacea*. But the plant had large, crinkled and puckered, bright green leaves, and it blooms almost constantly, so I decided to keep it. My neighbor grows it as a ground cover in his flower beds in the shaded area of his yard.

Then of course there is the Begonia family of Jaros: B. 'Chuck Jaros,' B. 'Helene Jaros,' and B. 'Charles Jaros.' These were named out of love for my adopted family. Charles and Helene used to come to my nursery in Goulds, Florida, and when we discovered a mutual love for begonias, we started closing up the nursery and going on field trips as far away as Tampa to buy begonias from other growers.

So you can see that my reasons for making and naming all my different crosses are so many that I would have to write a book on the subject. This is Page One.

*Hybridizer Paul Lowe has given us such diverse begonias as B. 'Little Joe' (miniature rhizomatous) and B. 'Curly Silver Ribbons' (rex). He is president of Palm Beaches Branch, and lives at 5741 Dewberry Way, West Palm Beach, FL 33415.*



## IN MEMORY

Maurice G. Hanssens of Pebble Beach, California, founder of Carmel Valley Begonia Gardens nursery, died in October after a brief illness. A native of Belgium, he had lived in California since 1927. When he first arrived in this country, he worked for Hyde Co., the first nursery in the United States to grow tuberous begonias. In the late 1940's he founded his own nursery, and grew begonias from seed. His begonias received many awards at the Monterey County Fair and drew customers from all over. He is survived by a daughter, Anna Hoffman of Carmel.





## RANDOM THOUGHTS on TUBEROUS BEGONIAS

### Part 2

by Howard Siebold

**POTTING MIX-** I first met the tuberhybrida in 1930 and spent the next twenty-five years trying to find the ideal potting mix for them. I found that every author and expert had his or her own favorite mix. After trying various mixes as well as growing in outdoor beds, I reached the conclusion that they will do quite well in plain coarse ground sphagnum peat moss - with proper feeding.

Obviously, peat moss alone would not be suitable for most areas and climates. Experience has shown that tuberhybridias will do well in a wide range of different mixes or garden soils. In 1957, the U.C. mixes were announced and I climbed aboard. The Cornell mixes came about the same time, but I liked the added weight of the sand in the pots. The 50-50 mix worked fine - 50% sand and 50% sphagnum peat moss. When I moved to another area, however, I couldn't find the same sand that I had been using. The U.C. manual #23 gives the specifications of the best sand but if the supplier didn't have it, I didn't know what to take. All that I could say was that it must be a sand that would not pack. Most of the time I wasn't sure that it was right for the job.

Then I discovered baled sphagnum moss and I knew that I had the ideal ingredient. Sphagnum moss run through the compost mill at slow R.P.M. will be chopped into pieces three or four inches long; run through at top speed, the bits are much smaller.

The mix must retain enough moisture for growing purposes, yet must drain well to avoid a soggy mixture. Perlite and vermiculite are both quite uniform and available in all areas, so they were the logical substitute for

sand. For potting my prize tubers, I mix two parts by volume of the sphagnum moss (3-4") with one part each of perlite and coarse vermiculite. Coarse perlite is best - if available.

The moss is costly, so for most of my pots the mix is one part sphagnum moss with one part each of perlite and coarse vermiculite.

That is a fairly standard mix but it can be modified to suit your requirements. The variations come in what is added to the above. The possibilities include fish meal, fish compost, fish emulsion, sewage sludge, alfalfa pellets, vitamin B1, and on and on. Professor Gil Harlow feels that steer manure is best, and I am inclined to agree with him.

Another additive should be dolomite lime. Tuberous begonias like a pH of 6.4 to 7.0. Most mixes based on peat moss or sphagnum moss can have a pH as low as 5.4, which is ten times as acid as 6.4. As a starter, use 2 cups of dolomite lime per cubic foot of mix. The pH of your water will affect the final pH, so a means of testing for acidity is advisable. Use a pH meter or litmus paper. If you use a meter, check it for calibration often. I find that the 4.25% solution of boric acid available in the drug stores tests at 5.0 and since distilled water is 7.0, you should be able to get a good check.

For many years, I have recommended including a slow release fertilizer in the mix. Most of them are triggered by heat, and they can create problems. They may never release, or they may release all at once. I now depend on more economical fertilizer feedings on a regular schedule.



The vermiculite breaks down rather quickly, so I don't recommend using the same mix for a second year. You might add part of it to the new mix before mixing. I add it to the outdoor beds to keep them in good shape.

I was always intrigued by the popular mix using partially rotted oak leaf mold and sand, but never lived where I could find it. Three years ago, I visited the late Nels Hanssens and brought home a supply. In comparing it with my mix, I tried to keep all other factors equal. I took large tubers of B. 'Tahiti,' B. 'Sceptre,' and my B. 'Princess.' Each had several sprouts and I cut them in half. I dusted the cut surfaces and after they healed I planted one half of each in the oak leaf mold and the other half in my mix. By mid-September, I felt that my mix was showing slightly better results. Since I may be prejudiced, I probably should say that there was no difference in performance.

The mix for starting seeds is a bit different from the above. Take equal amounts - by volume - of perlite and coarse ground sphagnum peat moss in a bucket and stir with a trowel to reduce the size of the peat chunks a little. When it is well mixed, wet it with distilled water containing a bit of surfactant (Joy, etc.) and a fungicide in the recommended amount.

The mix for transplanting can be the regular mix stirred considerably to reduce the chunk size. Distilled water is not required for wetting it, but the fungicide is still a good idea. An alternative could be a good potting mix with more perlite added.

The mix for rooting cuttings would be two parts of sphagnum moss chopped fairly fine mixed with one part of medium perlite and one of medium vermiculite. Have the mix quite wet for inserting the cuttings.

To summarize - use whatever material is readily available in your area. Be sure that your mix drains readily and remember that

the most important additive you can give is Tender Loving Care.

**TUBER SIZE** - When buying tubers, don't pay a premium price for large or jumbo tubers unless you plan to enter competition where flower size is the primary consideration. If that is the case, there are several things that you must also do that take the growing of tuberous begonias out of the category of fun.

The medium size tuber will perform as well and at the end of the season it will be a large tuber. Seedling plants start with no tuber and still put on a splendid display.

Just be sure that the tuber is firm to the touch and has no soft spots. A small pink or white bud is a good indication that the tuber is healthy.

The size of the tuber at the end of the growing season will depend on the size of the pot. The tuber will not grow as large in a six inch pot as it will in a bigger one. Tubers will reach maximum size when grown in an outdoor bed.

**DIVIDING TUBERS** - A common question is, "can begonia tubers be divided like a potato tuber?" The answer is "yes - but." If you have an old favorite that is hard to propagate in other ways, you can cut it in two if both halves show growth buds. Use a sharp, sterile knife and cut so as to expose the smallest area of cut surface. Dust that surface with powdered sulfur or a Rose Dust containing sulfur. Allow the cut surface to heal for a few days.

The healed surface is scar tissue and will not produce roots. The performance may be a bit below par as a result. When you feel that division is necessary, you should plan to root cuttings from that favorite and start anew.

UNSYMPATHETIC CLIMATE - Tuberous begonias will not do well in ALL climates, but they are being grown successfully in some unlikely areas. Just be prepared to spend a little more time and thought to overcoming the drawbacks.

As a rule, the hanging basket types are more adaptable to hot climates than the upright varieties. You can cover the hanging pot with burlap or sphagnum moss and keep it wet. Clay pots are usually cooler due to evaporation. Uprights in pots can be treated the same way. A mist system may help keep the temperature in a reasonable range. A lath house or plastic shade cloth will probably be a necessity. Choose a shade cloth that will give you about 4,000 to 5,000 foot candles of light at midday without clouds.

Other items that might help would be a large fan, an evaporative cooler, a dehumidifier, and such.

With your best efforts, you may still suffer high losses. You should then make enough rooted cuttings each season to replace your probable loss. A mist system would be required.

BUD DROP - This common complaint means that the plant is not happy with the growing conditions. It may be Too Hot or Too Cold, Too Wet or Too Dry, have Too Much Humidity or Not Enough, or just not be feeling well. The plant is telling you that something isn't right - it is up to you to figure out what it is.

*Howard Siebold's name will be familiar to all who read the Nov.-Dec. listing of New Cultivars: he has hybridized fragrant tuberhybrida. His address is 32050 Westwood Dr., Fort Bragg, CA 95437.*



## COMING EVENTS

JAN. 21: Long Beach Parent Chapter invites all ABS members to a celebration of the **57th birthday of ABS**. Contact Ruth Hurd, 2924 Sawyer, Long Beach CA 90805 for more information.

FEB. 12-19: **Atlanta Flower Show**, at Atlanta Apparel Mart, 250 Spring St. Theme: A Southern View." Begonias may be entered in Horticultural Class III, under "Foliage" or "Flowering."

MAY 5-7: **Southwest Region Get-Together**, Harvey Hotel Addison just north of Dallas, Texas. Packets will be mailed in late February. Contact chairman Don Miller, 1005 Mt. Auburn, Dallas, TX 75223 if you would like to be put on the mailing list.

**Kew Gardens** is sending on tour a selection from their original watercolors, many of which will be familiar to us as the Curtis Botanical Prints. The Curtis Botanical Magazine, now called Kew Magazine, is the first continuously published, color-illustrated magazine in the world to achieve a bicentennial. Until 1948, each engraving and lithograph had been hand-colored by copyist working from master paintings. Viewing these prints would make a nice club outing. Exhibition schedule:

The National Museum of Natural History, Smithsonian Institution, Washington, D.C. Jan. 26-April 30, 1989.

The New York Public Library (with the NY Botanical Garden), New York. June 3-Sept. 2, 1989.

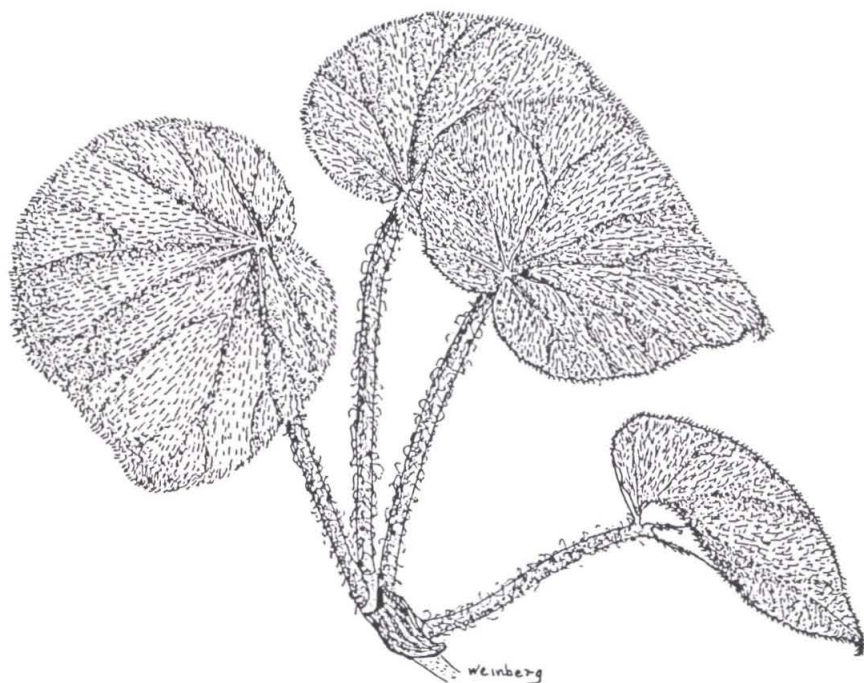
Missouri Botanical Garden, St. Louis. Oct. 12-Nov. 30, 1989.

Chicago Botanic Garden, Chicago. March 9-April 22, 1990.



## SPOTLIGHT ON:

### *Begonia acetosa*



by Mary Weinberg

*B. acetosa* Velloza was discovered in Brazil before 1811 and described by Jose Mariano da Conceicao Velloza, a Portuguese-Brazilian botanist, sometime before his death in 1811. It was not published until some time later: the drawings first appeared in 1831, and the description and drawings still later, in 1881.

*B. acetosa* is in Section *Pritzelia* and has 38+ chromosomes. It is rhizomatous, with distinctive foliage and a compact growth habit. Leaves are large, entire/subentire, cordate, of a subdued olive green color with short white hairs covering the upper surface; edges have short pink hairs, and the underneath is a deep wine red. Petioles are deep

wine red, covered with short incarnate wool. It is a moderate bloomer, with small white flowers spring and early summer.

*B. acetosa* is a beautiful plant, very low and compact. Rhizomes are small and well covered with leaves. My plant is grown in the basement all year round, and has done very well in this environment. While some consider it difficult to grow, I have not found this to be true. With care and attention to its watering needs (see culture notes below), it is no more difficult than other begonias.

For a description of the physical characteristics of Brazil, see the November-December, 1988 issue of the **Begonian**.

## CULTURE

Light: *B. acetosa* likes bright light, but keep it out of sunny areas as the beautiful coloration of the leaves will fade. It grows beautifully under lights.

Temperature: The ideal growing temperature for *B. acetosa* is between 68 and 75 degrees. It can take a slightly lower temperature in the winter months.

Humidity: Terrarium care is not necessary, but it does not like a dry atmosphere. The leaves will curl, indicating a need for additional humidity.

Water: *B. acetosa* likes a moist growing medium in the summer, but do not keep it wet or there will be rhizome and stem rot. It tends to rest in winter; keep it only moist enough to prevent wilting.

Growing medium: To obtain vigorous growth, use a heavier growing medium than for most begonias. A heavier mix would be 2 parts loam, 1 part peat, and 1 part sand.

Potting: I recommend a plastic pot for better control of the soil mix.

Propagation: *B. acetosa* propagates easily from leaves or rhizome cuttings during its active growing season.

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Reprinted with the author's permission from the September, 1985 Chicago Begonian.

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Artist/writer/begonia grower Mary Weinberg lives at 1527 W. Highland Ave., Chicago, IL 60660.



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## ABS NEEDS YOU!

At the convention in Boston, Dr. Louis Manning presented a resolution from the Atlanta Branch that ABS actively seek new members by advertising. The membership voted to set up a committee to look into buying ads in gardening magazines, and President Arlene Davis appointed Maurice Amey of Dallas, TX as chairman.

In its first meeting the committee made a list of likely magazines, and is contacting them for advertising prices. But to start with, **they would like to enlist you, the members, to help publicize ABS.** At the beginning of the year, you will receive in the mail a camera-ready flyer promoting ABS; you can have it xeroxed (or for large quantities, printed) to hand out at plant sales, garden club meetings, shows, state fairs, or just take it and thumbtack it to the bulletin board at your nursery center, grocery store, laundromat - wherever you think someone who might like to know more about begonias might see it. The idea is to saturate the country with the fact that ABS exists!

What difference can it make to you whether our membership grows? Why should you bother helping? Because there are benefits beyond making new friends; with additional funds, ABS could be instrumental in such diverse activities as setting up reference collections of begonias all over the country, awarding grants for begonia scholarship, helping to conserve tropical forests, promoting our international begonia conference, and perhaps even publish the **Begonian** - your magazine - in full color and/or monthly.

Whether you live on an isolated farm or in the midst of an immense city, please help by reaching out to contact an unknown begonia friend who doesn't know about ABS yet. All together, we can grow. **Thanks!**



## CLAYTON M. KELLY SEED FUND

January-February 1989

Diana H. Gould, Seed Fund Director

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

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

All orders must be accompanied by check or money order payable **ONLY** in US funds, and made payable to the Clayton M. Kelly Seed Fund.

The cost of mailing to the U.S., Canada, or Mexico is 45 cents for 1 to 12 packets of seeds and 60 cents for 13 to 24 packets of seeds. Overseas cost is \$1.20 for 1 to 12 packets of seeds.

Two sets of planter dishes with free instructions in one mailer costs 62 cents. The cost of mailing 2 sets of planter dishes and 1 to 12 packets of seeds in one mailer is 75 cents, whereas the cost of mailing 2 sets of planter dishes and 13 to 24 packets of seeds is 92 cents.

**California residents must add 6% sales tax.**

Please send your check or money order to:

Ms. Diana H. Gould  
4860 Idaho Dr.  
Sacramento, CA 95823  
USA

I would like to thank JOAN CAMPBELL for the outstanding work she has done with the Seed Fund over the past years. Unless one tries to manage this Fund, one really has NO idea of what is involved. Thank you, JOAN, for helping all of us...especially me!

The Seed Fund is in desperate need of TESTED, DONATED SEED. When named or identified seed, whether species or hybrid, is donated, the only information required is the name of the donated seed and the germination time.

When U# or unidentified species seed is donated, please include the germination time, classification (i.e., cane, shrub, tuber, etc.), a brief description of the plant that results from your donated seed, and the country of origin whenever possible, because information on these species is virtually unavailable. When hybrid seed is donated, please include all parent plants involved. The names of the seed donors will be published unless otherwise requested. *With your help*, the Seed Fund will try to provide at least one rare selection in each issue of the **Begonian** this year. All members who receive these offerings will be asked to submit their "growing experiences" with these plants, and, hopefully, photos of their results, so that this valuable data can be published in subsequent issues of the **Begonian**, enabling all of us to benefit. Unfortunately, much of the seed is in small or limited quantities and will be mailed out on a first-come basis; an asterisk will mark the offerings which are available only in limited quantities. When ordering these selections, please include substitutions of your choice as you order. The Seed Fund will try to substitute in your order of preference.

Now for some good news. Still available, in limited quantities, are many of the 1988 selections. Not available are Bs. 'Santa Barbara,' U175, U179, U230, U241, U245, *incarnata*, *thomsonii*, *heracleifolia* var. *nigricans*, *hydrocotilyfolia*, *macduffieana*, the Mixed Malaysian species, and the Jan-Feb. 1988 cultivars. Any others may be ordered. Many are tuberous species.

The remaining quantity of B. 'Rory' seeds will be a free gift - while it lasts - with all orders of 23 seed packets.

## Notes on the Seeds Listed:

*B. boliviensis* was discovered in the mid 1800's high in the Bolivian Andes. It is a tall-growing tuberous species with slender, erect stems that require staking. Its blossoms are quite beautiful and distinctive because of their scarlet color and long, tubular shape. This is an easy grower.

*B. ulmifolia* is a thick-stemmed, semi-erect growing species with elm-shaped leaves; from Venezuela, it was first described in 1805. It is the tallest growing within its group, with a potential height of 6' at maturity. It must be pinched regularly, during its early growth, to become a full plant.\*

*B. undulata* is an intermediate cane species discovered in Brazil in 1827. This species has been a favored plant in the early development of the cane hybrids. It is definitely a prime selection for the collector.\*\*

*B. brevibracteata* is a very rare field-collected species from Malawi, with a germination time of approximately 18 days.\*\*

*B. dregei* is a tuberous species from South Africa that was discovered in 1836. It can be a very striking plant grown in a hanging basket because of its branching and minimal staking requirements. It has moderate bluish-white flowers from summer to fall, and it is a very easy plant to grow in semi-shade.\*

*B. grandis* ssp. *evansiana* is an intermediate tuberous species from China which was discovered in 1690. It is quite hardy in climates where the winter is not too severe. One of the interesting features of this species is that it forms cormels at the leaf axils from which new plants will develop when the cormels drop off. It has profuse, pink, fragrant flowers from summer to fall.

*B. homonyma* (syn. *caffra*) is a tuberous species first discovered in South Africa in 1840. Like *B. dregei*, *B. homonyma* lends itself quite well to a hanging basket because of its branching and minimal staking requirements. It has moderate white flowers from spring through fall. Germination time is 11 days without heating.\*\*

*B. wollnyi* is a tuberous species from Bolivia discovered in 1909. It is an eye-

catching plant with elegant silver markings on its 4" leaves. It has a strong, erect growth pattern with moderate greenish-white flowers in winter.

*B. michoacana* is a very rare, low-growing corm species from Mexico with profuse white flowers.\*\*

*B. oaxacana* is a medium, bare-leaved shrub with profuse rose-pink flowers from December through March. It has a growth pattern similar to *B. incarnata*, but has a red underside and will grow to 2 or 3 feet. *B. oaxacana* was discovered in Oaxaca, Mexico, in 1859, and is quite rare.\*\*

*B. coccinea* is being offered again this year. It is a beautiful, free-flowering cane species of intermediate height (2-4' at maturity), which was discovered in 1843 in the Organ Mts. of Brazil. Like *B. undulata*, this species was a favorite among early cane hybridizers. It is very easy to grow and to enjoy with its coral-red flowers in spring.\*\*

*B. conchifolia* is a small-leaved or miniature rhizomatous species with a creeping growth pattern, discovered in Costa Rica in 1851. It has very fragrant pink-tinted white flowers, and blooms profusely winter and spring. Germination time is only 16 days.\*

*B. thelmae* is a trailing-scandent species only discovered in 1981. It can be quite temperamental and does require extra humidity, but makes an outstanding terrarium plant. It is truly a collector's delight.\*\*

*B. thiemei* is a giant, compound-leaved rhizomatous species with moderate greenish-white flowers in late winter and early spring, discovered in Honduras in 1895. This selection has excellent germination time.\*\*

*B. reniformis* (syn. *vitifolia* var. *grandis*) was discovered in 1864 in Brazil. It is an upright rhizomatous species with very distinctive foliage and sparse yellowish-white flowers with red hairs that blooms in May.\*\*

*B. carolineifolia* is a very large, erect-growing rhizomatous species with compound leaves which was discovered in Mexico in 1852. It has moderate, pale-pink flowers with dark pink spots and usually blooms in February and March.\*

*B. philodendroides* is an underground



rhizomatous species that was discovered in Mexico in 1954 and so-named by Rudy Ziesenhenné because its leaves are cut similarly to a philodendron. It has moderate white flowers in the fall, and it is a "no-winter-work" plant because it dies down in the winter.\*\*

*B. nelumbifolia*, the "water lotus-leaved begonia," was discovered in 1830 and has a growing range from Mexico to Colombia. It is a large-leaved rhizomatous species with a peltate leaf. It has moderate white flowers with a deep pink edge, and blooms winter and spring.\*\*

*B. heracleifolia* var. 'Sunderbruchii' originated in Costa Rica and was identified in 1892. It is a large, parted-leaved rhizomatous cultivar whose leaves will measure 6" to 12" at maturity. It has profuse, pale-pink flowers in late winter through early spring.\*

*B. plebeja* is an erect-growing, rare rhizomatous species that was discovered in 1853 in Costa Rica. It is green-leaved with moderate pink flowers that bloom December through early spring.\*\*

*B. geranioides*, a corm species from Natal, South Africa, named for its geranium-like leaves, is offered again in this selection to help the tuberous growers with their early planting. This is a rare opportunity for a very rare species in extremely limited quantity.\*\*\*

*B. scharffiana* is a shrub-like species with wide, hairy leaves that was discovered in Brazil in 1888. Staking is necessary for a well-shaped plant, but it can also have a picturesque appearance when grown in a semi-erect fashion as a basket plant. It has moderate ivory-colored flowers that bloom from June to November.

*B. unknown* species has been graciously donated by Jan Goodwin, Seed Fund Director of the Australian Begonia Society. There is no U# nor identity for this selection. It is rhizomatous, with tiny (1 1/2" x 3/4") leaves with hairy margins. Its surface is not hairy, and the leaf is medium green with black markings, particularly where the nerves occur. The underside is green with red veins. The rhizome is approximately 1/4" wide, and it is shallow-rooted. Flowers are pale-pink and quite profuse, and foliage is

extremely dense. It does not require much water, and is similar to *B. bowerae* in several respects. It is best to grow this plant on the dry side. This species germinated in 13 days. Because of its rarity and limited supply, those who receive seed are requested to provide cultural information and photos, and, hopefully, seed donations from this most exciting offering!!!\*

I would like to thank all of the members who have sent me their best wishes. I shall do my best to provide the members with the seed that they need, and I shall try to do it with accuracy and punctuality from this point on. Please bear in mind that the Seed Fund operates through the generosity of the members. Thank you all for your gracious support, especially Joan, and I wish you all a very happy, healthy, and prosperous New Year! Good growing, Diana H. Gould.

#### CLAYTON M. KELLY SEED FUND

##### Species Seed \$1 per packet

*B. boliviensis*  
*B. ulmifolia*\*  
*B. undulata*\*\*  
*B. brevibracteata*\*\*  
*B. dregei*\*  
*B. grandis* ssp. *evansiana*  
*B. homonyma*\*\*  
*B. wolnyi*  
*B. michoacana*\*\*  
*B. oaxacana*\*\*  
*B. coccinea*\*\*  
*B. conchifolia*\*  
*B. thelmae*\*\*  
*B. thiemei*\*\*  
*B. reniformis*\*\*  
*B. carolineifolia*\*  
*B. philodendroides*\*\*  
*B. nelumbifolia*\*\*  
*B. plebeja*\*\*  
*B. geranioides*\*\*\*  
*B. scharffiana*  
*B. unknown* species\*\*

##### Hybrid Seed 50 cents per packet

*B. heracleifolia* var. 'Sunderbruchii'

\*limited quantity

\*\*very limited quantity

\*\*\*extremely limited quantity

## BEGONIA QUESTION BOX

Mae Blanton, ABS Horticultural Correspondent

**Question:** My tuberous begonias are rotting at the base, where the stems come out of the bulb. What can I do?

WISCONSIN

**Answer:** Your question is answered by a grower of tuberous begonias, Howard Siebold, who recommends the following:

1. Purchase seed or tubers only from stock resistant to stem rot and powdery mildew.

2. Provide adequate ventilation by spacing plants 18" apart. Remove lower leaves as they show brown spots or edges. If plant has two or more stems, remove inner leaves to allow air movement.

3. Do not overwater. Water only when soil surface is dry.

4. Do not use cloth or wire ties. Plastic ribbon is best.

5. Inspect frequently to detect rot when it is just starting. Cut out any rot found and dust the cut surface with a Rose Dust containing sulphur.

**Question:** Please advise how to propagate and grow *B. prismatocarpa*. WASHINGTON

**Answer:** I grow *B. prismatocarpa* in a covered terrarium. Put dry long Canadian sphagnum moss (the kind used for hanging baskets) in a pan. Heat one gallon of water, add 1/4 strength soluble plant food, and pour over the moss, stirring well to dampen. Allow to cool enough to handle, then squeeze out as much water as you can, fluff the moss, and put about two inches in your terrarium. Some growers cut the moss into short pieces and add perlite, but my plants do as well without that. Tuck your plant (or a cutting) into the moss and cover the roots, which should have any soil washed away before inserting in moss. Pat the moss down gently, but allow it to remain somewhat loose. A leaf or cutting may be propagated in moss in a closed terrarium; a clear shoe box is good for this. A damp mix of vermiculite and perlite may be used instead of the moss. I often propagate

right in the terrarium with the mother plant. Grow *B. prismatocarpa* under lights or in a window with good light, but do not allow sun to shine on the bowl and cook your plants. Keep moss damp but never soggy. Do not overwater.

**Question:** I have a plant labeled B. 'Sunderbruchii.' It is all green. Another plant is identical to it with same size and shape of leaf, but it is two-toned green, one a pretty kind of dark green. Are there two kinds of B. 'Sunderbruchii?' OHIO

**Answer:** There are six known varieties of *B. heracleifolia*, one of which is *B. heracleifolia* 'Sunderbruchii.' Your unlabeled one could be another variety of *B. heracleifolia*, or one of its hybrids.

**Question:** Several years ago I had plants that looked like ordinary wax leaf begonias but the flowers looked like little globes or spheres, and were the size of a dime. One had pink blooms and one had red blooms. Can you give me the name of that particular begonia? NEW JERSEY

**Answer:** I believe the begonias you are seeking are double-flowered semperflorens. One with rose-pink flowers is B. 'Joan Strong.' It has bronze foliage. One with white flowers is B. 'White Christmas.' It has green foliage. There are many other named varieties offered by advertisers in the **Begonian**. Logee's Greenhouses is near you and they list several varieties in their catalog.

**Question Box** is a service for ABS members. Send horticultural questions about begonias to:

Mae Blanton  
118 Wildoak  
Lake Dallas, TX 75065.

You'll receive a prompt answer.

Questions of general interest will appear in the **Begonian**.





## ROUND ROBIN NOTES

Margaret Coats, Round Robin Director

Alton Lee (FL) of the Greenhouse Robin is amazed at the ease of rooting the "Iron Cross" begonia, *B. masoniana*. He has found that any leaf or piece of leaf that is put down will stand right up and grow into a plant. As he tends to overwater, and it is grown where it sometimes gets too much rain, he always keeps lots of it in various growing stages. He also seems to have mastered B. 'Venetian Red' after many trials. Putting individual leaves in terrariums made of soda water bottles and using a sand, perlite, and charcoal mixture works best for him; he had trouble with rot when he tried to root them in plastic shoe and sweater boxes along with other plants.

For those of you who have plants that are intent on going to higher ground once a cutting has been taken, Kit Jeans Mounger (TN) of the Species Robin told of a chance discovery she made. She found that dropping melted wax on the cut stem of the mother plant kept it from going into sudden shock and dying. Everyone in this Robin agrees that "U" numbers are confusing, as numbers are not as easily remembered as names, but that this system is much better than before, when each grower gave plants his own i.d. number.

Marvin Kahr (IA) read the following unusual treatment for mold and mildew in the Rodales' gardening book and wanted to share it with his fellow General Culture group. A light dusting of cinnamon should take care of your problem! It seems there is a naturally occurring fungicide in cinnamon called ortho-methoxyanna-maldehyde. Fungi refuse to grow on cinnamon even under optimum temperature and humidity.

Pros and cons of rooting in water came up in one of the Propagation flights. Risa Young (FL) said she had been told that begonias grow different types of roots in

water than in rooting medium, making it difficult to transplant successfully. She was told that water-rooted cuttings should be moved to potting medium when roots are no more than 1" long. Alton Lee (FL) agreed that what Rita said made sense, and that is why he always roots in a soil media.

In the Small Commercial Growers group (there are openings in this Robin), Houston Knight (CA) says enough perlite on top of the soil in a pot will reflect the sun's heat. This actually helps to keep the root ball from absorbing the heat, which can be deadly. Houston says if a root ball gets much above 70 degrees F., all the roots kick off.

The very knowledgeable growers of the Semperflorens Robin always have good growing tips. This round's best tips came from Pauline Chambers (FL). She has made a practice of pinching her semps, to prune and encourage new branching, but she also pinches out tips with first flower buds. Pauline has found that if first buds are left to bloom, especially on rooted cuttings, the plants tend to grow leggy. She found that the pinched tips will root if there are two leaves and one node, and will grow into lovely plants. Pauline says re-using rooting mix is an excellent idea, as rooted cuttings seem to leave something in the mix that helps the next cuttings to root even faster and better. She also roots some of her semps in water, and at the first sign of tiny roots she adds one or two small granules of MagAmp 7-40-6 to the water and then begins adding perlite without replacing evaporated water. By the time the water has evaporated down to the perlite, the cuttings are well rooted. When potting up the cuttings, she usually puts 3 to 4 of them into a 4" square pot, or 6 to 8 in a 5" squat pot.

Here's a new twist on bottom heat for seed pans. The idea comes from Kit Jeans

Mounger (TN) in the Growing from Seed Robin. If you come across an old waterbed heater at a yard sale or flea market, they make wonderful heating coils for seed. The heater is actually a long, flattish, rubberized mat about 18" wide and 3' long, with a switch and thermostat, and seed flats can be set right on the mat for gentle bottom heat.

Houston Knight (CA) writes that Rudolf Ziesenhenné spoke at his last Branch meeting and warned that only **dolomite** lime should be used when adding lime to potting mixes. Houston says dolomite is not really lime at all, but calcium magnesium carbonate.

A request has come in for a Robin on Begonia Memorabilia. If you make, collect, or want to start a collection of items relating to begonias and want to join this group, please send me your name and we'll get it started. Maxine Zinman of Boyce, VA, will lead the group.

*There's a Robin to suit every begonia interest, and Robins are a great way to increase your growing skills while making begonia friends. To find out more, write Round Robin Director:*

Margaret Coats  
11203 Cedar Elm  
San Antonio, TX 78230

*for a list of Robins and their topics.*



## BEGONIAN MINI-ADS

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

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**BEGONIA CUTTINGS AND PLANTS** Send \$1 for list. Kay's Greenhouse, 207 W. Southcross, San Antonio, TX 78221.

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

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

**BEGONIA CUTTINGS** (no list), Bromeliads and Orchids (4 page list - send legal size SASE). Paul Lowe, 5741 Dewberry Way, West Palm Beach FL 33415.

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## CONSERVATION NEWS

by Martin Johnson

*Take a minute and imagine yourself in the rainforests of Penang, Malaysia. Your ancestors have lived in this beautiful and bountiful land for centuries. Now huge machines are cutting down all the trees, scraping off the ground cover, and your land and home are devastated. You protest and your government arrests you, imposing fines and jail sentences for protecting your home.*

This nightmare is happening to the Penang people right now. They are losing their valiant struggle to preserve their imperiled rainforests, home not only to the Penang people but to an immense diversity of animal and plant life. Not only conservationists are alarmed; even the Wall Street Journal has written of the devastation.

*Now take five or ten minutes. Write a respectful letter to YAB Datuk Patinggi Haji Abdul Taib Mahmud, Chief Minister of Sarawak and Minister of Resource Planning, Chief Minister's Office, Petra Jaya, Kuching SARAWAK, Malaysia, and ask that logging in the Penang forests be halted and the rights of the Penangs to their homeland be respected.*

The Conservation Fund has received several contributions since the national convention. Rather than attempting to raise funds towards a specific Hoover expedition, we hope to have an ongoing fund that will have money available as projects arise. *Please consider making a Conservation Fund donation.* A contribution of \$10 from each ABS member, supplemented by the branches and regions, would go a long way towards creating a fund that would allow the ABS to finance a major project. But you needn't be bound by a specific amount, or by this or other appeals for money: you can contribute in any amount, as often as you like. Send your check, made out to ABS - Conservation Fund, to Martin Johnson, 959 Glennan Dr., Redwood City, CA 94061 (contributions are tax-deductible if you itemize).

Scott Hoover is looking into the rainforests of Southeast Asia as the focus of his next expedition.

Martin Johnson is co-chair (with Scott Hoover) of the ABS Conservation Department.



## ATTENTION, MEMBERS AT LARGE

by Thelma O'Reilly, MAL Director

Are you a member of the MAL Committee? If not, consider starting 1989 by joining this group of ABS members. You are eligible if your location prevents membership participation in a Branch.

The Members at Large Director writes and distributes three newsletters annually. This newsletter is available to any MAL who sends a self-addressed, stamped, legal sized envelope to Thelma O'Reilly, 10942 Sunray Pl., La Mesa CA 92041. Receipt of this envelope automatically makes you a member of the MAL Committee.

The newsletter will give you an opportunity, on an informal basis, to share and enjoy begonias and begonia personalities. Topics of discussion include ABS news, begonia questions and answers, cultural information, seed projects, unidentified species, "Portraits" about new and old begonias and the members' "Mailbag." We have fun, too.

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## AROUND ABS

Notes from our Newsletters

There are some very exciting and ambitious projects being undertaken by ABS branches across the country. Maybe Hurricane Gilbert scattered "organizing dust" over the countryside! Back in the March-April, 1988 issue, we reported that Diana Gould (now Seed Fund Director) had suggested that Sacramento Branch draw up a computerized list of all the begonias members grow, with the hope that other branches would follow suit, lists could be exchanged, and begonias located all over the country. For Sacramento, the list is now a reality! It is to be updated every six months. They are willing to exchange their list with other branches who have listed their collections - what a boon to finding that rarity you just must have!

Back in Boston they're not resting up after hosting the 1988 convention. Buxton Branch member Frank Green is spearheading a drive to catalog the Barkley collection and every other begonia collection in the area, and they're planning a commercial booth and sale in the New England Flower Show this spring.

Pinellas County Branch (FL) is undertaking another exciting project. They are photographing every begonia grown by their members, and will have a collection of slides to be used in the future to help identify begonias, and for programs. Member Bill O'Geary purchased a backdrop and reflectors for the photo sessions. The branch also is listing their collections, and Secretary Bob Moore has written to other branches to set up a cuttings exchange. Neighboring Tampa Bay Branch is cataloging their collections, too.

The Barkley Branch of Oklahoma City is taking on an ambitious endeavor, too. This spring they'll have a "promote begonias" weekend, with members holding a show and sale, with literature and demonstrations, at every shopping mall in the city simultaneously!

All is not work across the country, however. There's room for some playful humor. Here's a quote from the Westchester Branch newsletter, edited by Marion Lindgren:

"I'm careful of the words I speak,  
I keep them soft and sweet,  
I never know from day to day  
Which ones I'll have to eat!"

The Begonia Leaflet of the Southwest Region (edited by Maurice Amey) offers a helpful hint:

"A drippy watering can or hose may stain leaves with fertilizer salts. And unless you scrub pretty hard, plain water won't wash off those mineral deposits. To dissolve the white spots without mauling the foliage, mix 1 teaspoon of vinegar in 1 quart of water and apply this solution with a soft cloth or sponge. Don't worry about rinsing the leaves afterward; that small residue of vinegar is harmless to the plants."

Do you have more cuttings than you can root or give to friends? Martha Curry of the Mae Blanton Branch takes her extras to the high school in nearby Weatherford, TX, which has a greenhouse for horticulture and botany students. The students have raised some lovely begonias. Perhaps a school or residential facility near you has a horticultural training or therapy program which would be thrilled to receive cuttings or plants from you!



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# MINUTES OF THE ANNUAL BUSINESS MEETING

September 17, 1988

The annual business meeting of the American Begonia Society was held after the Saturday luncheon at the 56th Convention, in the Burlington Marriott Hotel, Boston, Massachusetts. Michael Ludwig was acting President in the absence of President Arlene Davis.

Charles Jaros read the Aims and Purposes. The minutes from the 1987 Annual Business Meeting were dispensed with, as were the reading of the minutes of the last Board of Directors meeting.

**Treasurer's Report:** Eleanor Calkins reported an income of \$48,447.19 from the period of August 1, 1987 to July 31, 1988. Expenses were \$49,129.81. Year end balance was \$11,362.16 in checking and \$35,892.03 in savings for a total of \$50,856.43.

**Long Range Planning for Conventions:** Bob Hamm was approved as Long Range Chariman, and thanked for all his hard work. He reported conventions to be held as follows: 1989, San Francisco, CA; 1990, San Antonio, TX; 1991, Washington, D.C.; 1992, Orange County, CA; 1993, New York, NY. The New York show is to be an international convention.

**Board Meeting:** The Board of Directors will meet only quarterly. The next meeting will be in December.

**Awards Committee:** Rudolf Ziesenhenné will be the new Awards Chairman. Thelma O'Reilly will be a new committee member.

**Special Activities Report:** Sacramento Branch has compiled a booklet listing all the begonias each member grows. The idea is that all branches do so and exchange the lists. Jack Golding suggested that these lists be sent to the Nomenclature Department for correct spelling. Sacramento members have post cards featuring begonia photography for sale; proceeds will go to the New York convention. All branches will be asked to contribute.

**Judging Department:** Michael Ludwig reported the course revision is coming along well and possibly will be completed by the end of the year.

**Historian:** Norma Pfrunder urged the branches to send in articles about their activities.

**Members at Large:** Thelma O'Reilly invited everyone to attend the annual meeting immediately following the luncheon.

**Membership Contest Report:** Michael Ludwig reported 1,339 dues paying members, 114 institutions, 81 Life Members as of August 1, 1988. The Buxton Branch had the most new members, 16. Wanda Macnair won the \$25 gift certificate from Kartuz Greenhouses for bringing in 12 new members.

**Nomenclature** director reported 14 new cultivars, 5 registrations published, 14 applications received, U numbers past 248, 11 articles for the **Begonian**.

**Convention and Show** Chairman Wanda Macnair thanked all her hard working committee members and those who came to the convention. Nancy Kingman, Show Chairman, also thanked her committees. There were 33 exhibitors and 217 entries in the show. Nancy Kingman awarded the Cultural Awards. Corliss Engle won Best of Show. The Award for Hybrid of Distinction New Introduction and Sweepstakes went to Philip Seiden. Award for Showing and Sharing went to Linde Sachsen.

**Publicity:** There was a lengthy discussion on using advertising to increase membership. A motion that the American Begonia Society develop a national campaign of advertising and that a committee be formed as soon as possible carried. It was suggested that we try a method used by the Australian begonia societies: when they have a show, a "coupon" is sent to local garden clubs and plant societies which can be redeemed at the show for a free begonia. This will increase interest in the society.

Meeting adjourned at 2:30.

Respectfully submitted,  
Ingeborg A. Foo, Secretary

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(707) 764-5407

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

First Vice-President ..... Michael Ludwig  
7007 Mt. Vernon Ave., Lemon Grove, CA 92045

Second Vice-President ..... Charles Jaros  
2621 NW 23rd Court, Miami, FL 33142

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

Secretary ..... Ingeborg Foo  
1050 Melrose Way, Vista, CA 92083

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

## APPOINTED CHAIRMEN & DIRECTORS

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

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

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

Book Store ..... Bob Bailey  
5190 Mission Blvd., Sp. 90, Riverside, CA 92509

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

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

Clayton M. Kelly Seed Fund ..... Diana Gould  
4860 Idaho Dr., Sacramento, CA 95823

## Conservation Committee

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

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

Judging Department ..... Michael Ludwig  
7007 Mt. Vernon Ave., Lemon Grove, CA 92045

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

Long Range Planning ..... Bob Hamm  
10065 River Mist Way, Rancho Cordova, CA 95670

Members At Large ..... Thelma O'Reilly  
10942 Sunray Place, La Mesa, CA 92041

Nomenclature ..... Carrie Karegeannes  
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Round Robin ..... Margaret Coats  
11203 Cedar Elm, San Antonio, TX 78230

Convention Advisor ..... Wanda Macnair  
177 Hancock St., Cambridge, MA 02139

Convention Chairmen ... Carol & Peter Notaras  
2567 Green St., San Francisco, CA 94123

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

Slide Librarian ..... Daniel Haseltine  
6950 W. Nelson St., Chicago, IL 60634

Speakers Bureau ..... Muriel Perz  
1917 Pine St., Long Beach, CA 90806

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..... please send manuscripts to editor, with SASE if return requested.

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