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The BEGONIAN 

The BEGONIAN

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American Begonia Society

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Aims and Purposes

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

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

To standardize the nomenclature of begonias.

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

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

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

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Cover Photos:

Front - The "Chameleon Begonia," photographed by Don Miller. See article, p. 84.

Back - Mary McClelland took this shot of B. 'Wings', a recent semperflorens introduction, in her garden last summer

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August 3-6: ABS National Convention
"Begonias by the Bay"
San Francisco, California

A photographic record of Roberto Brin's experience with the "Chameleon begonia"



Original plant, identical to B. U059

B. U059 sent out a branching stem of B. U093. Note buds and large flowers.



photos by Roberto Brin



The branch was rooted, and continued to grow into B. U093. Leaf sections were propagated, and grew like B. U093.

THE CHAMELEON BEGONIA

by Thelma O'Reilly

Is it Begonia U093? Or is it Begonia U059?

These puzzling questions have been asked over and over during the past few years.

Comments and inquiries about their strange relationship increases as the two beautiful begonias become more widely distributed. Even the most attentive growers find confusion reigning when B. U059 suddenly begins to take on the appearance of B. U093. It seems that the leaf blades of B. U059 perform subtle transformation in front of one's eyes.

B. U059 was assigned to a begonia collected in the fall of 1980 on the Island of Borneo, which is situated in the Malaysian archipelago. Bob Cole of Reseda, California collected it on a hillside in a wild area while visiting a friend in the state of Sabah on the northern coast of Borneo.

Bob reported seeing a similar plant purchased by Martin Johnson in October, 1980 from a lady who lived at the base of Mt. Banahao, Philippines. (Our cover photo is of this begonia; see the **Begonian**, May-June, 1988, P. 81, for a description). During a later visit to the Philippines, Martin purchased on Palawan Island the same plant, which he described as a superior form.

To complete the collection records, Pat Christianson of Los Angeles, California, imported a plant purchased in The Philippines in December, 1981, which was assigned number U085. This plant was not widely grown. Mabel Corwin, Martin Johnson, and Patrick Worley agreed that it was identical to B. U093.

I am going to share a few specific experiences that have been reported by members who have grown B. U059 and B. U093.

Bob Cole was the first to report that many of the cuttings taken from B. U059, which has silvery green leaves with dark green along the veins, gradually developed leaves like B. U093, which are clear silver covered with fine, red hairs that create a pink flush.

In 1986 Bob and I spent several hours at his nursery where we discussed and examined this phenomenon that was occurring on his bench plants. He reported that for several years he self-pollinated, cross-pollinated, and tried every combination of these two begonias with other species and hybrids. Occasionally, fertilization occurred but the harvested seed that appeared healthy never germinated. It was also puzzling that leaves of B. U093 never reverted to B. U059.

A fascinating story arrived from Roberto Brin, Panama, after he received the MAL newsletter that contained a "Begonia Profile" by Joan Campbell about B. U093. He writes, "I received newsletter #5 and found it very interesting. I think I also have B. U093. This was one of the first begonias I planted from a cutting my mother gave me. She obtained it here in Panama City from a nursery. At the beginning it was growing as a shrub-like species, exactly as you can see in photo 1 (with green and silver leaves), then, after months, one of the branches started changing to "all silver and pink" and growing like a cane (photo 2). At the beginning I thought it was a mutation. I planted

that branch and it started growing like a cane. It bears pink flowers. It does not like hot temperatures and low humidity (male flowers do not open in this condition) but loves the rainy season, even with hot temperatures. Also, I propagated this plant from 4 leaf sections and I got the same type of plants (see photos 3 and 4)). So, you also think this is B. U093?"

It is interesting to note that Roberto's mother found this begonia in Panama. Obviously, Panamanians visiting the Philippines or Malaysia have been intrigued by its beauty, too.

Mabel Corwin gave me a specimen plant of B. U093 in 1987. I immediately put cuttings and leaves to root. About five months later, following an operation, I checked the cuttings and leaves. I was amazed to discover that one of the leaves had produced a few tiny leaves with the coloring of B. U059. It is now over one foot high and is still B. U059. This is the only record I have of B. U093 reverting to B. U059. Flowers are identical to those of B. U093, including the sweet fragrance.

It has been a challenge to all who grow these begonias to set seed that will germinate when sowed. To date I have two records of success. Several years ago Patrick Worley crossed the two and raised a few seedlings that were exactly like B. U093. The other report came from Martin. A grower in the Solomon Islands reported a successful cross using B. U093 and an unknown begonia. He sent Martin several cuttings but all were rotted on arrival.

Following Professor Doorenbos' advice, I tried crossing two plants of B. U093 that I obtained from different sources. I was excited when one seed capsule remained on the plant until dry. The seed appeared healthy, rolling and making music when shaken! No germination after six plantings at monthly intervals. Roberto sent me some of his selfed B. U093 seed. No germination.

B. U093 is referred to constantly as "The Mallet Begonia." This is understandable, because it certainly resembles B. 'Tingley Mallet' and B. 'Arthur Mallet'. When I first saw Martin's plant my pulse raced because I thought at last we had found the elusive species that was one of the parents of these beautiful begonia treasures. Then the "let down" when it seemed impossible to self the begonia. Because B. U085 and B. U093 were obtained as cultivated plants their species status is questionable. But, what about field-collected, in a wild area, B. U059 that reverts to B. U093? A chameleon that changes its color!

The objective of this article is to share the information recorded in the unidentified species files, the Members-at-Large newsletters, and personal contact with growers in hope of solving the questions surrounding the strange behavior of these two begonias.

Somewhere, Somehow, I hope to reach Somebody who can assist with solving the mystery of "The Chameleon Begonia."

Begonia Detective Thelma O'Reilly grows, works, researches, writes, and lives at 10942 Sunray Place, La Mesa CA 92041.

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ROOTING TUBEROUS BEGONIA CUTTINGS



by Howard Siebold

Beginning growers of tuberous begonias would do well to start out by buying inexpensive tubers, because they may have some heavy losses until they learn to grow the plants in their particular climate. As they gain experience, they will want to step up to the more expensive tubers - even to the costly "named" varieties. There is always the possibility of losing one to rot or a pest, so, to maintain the stock of tubers or to increase it, cuttings from the prized varieties should be rooted.

Rooting cuttings in the traditional way is accomplished by removing a short stem from the tuber or a short branch from the main stem. Older tubers may have several sprouts and, since only one or two are necessary, any extras can be used as cuttings when they are four or five inches long. These are almost certain to form roots, and be weeks ahead of other methods.

Use a sharp sterile knife and remove the sprout with just the thinnest slice of the tuber. Dust the cut surface of the tuber with dusting sulfur or a fungicide. Trim off any thin edges of the cut end of the sprout that might rot, and any stipules that might be under the rooting medium.

Where the tuber has only one or two stems, the practice has been to wait until one or more branches are about four inches long and slice them from the stem. Again, take as little of the stem as possible, but be sure to take the growth bud or "eye" at the base of the branch. This is to insure that a viable tuber will be obtained for next season. Also, remove any material that might rot in the medium, but don't damage the bud.

Since the branch always appears at a leaf axil, the leaf can interfere with the operation above. It will help to remove the

leaf several weeks before you plan to take the branch.

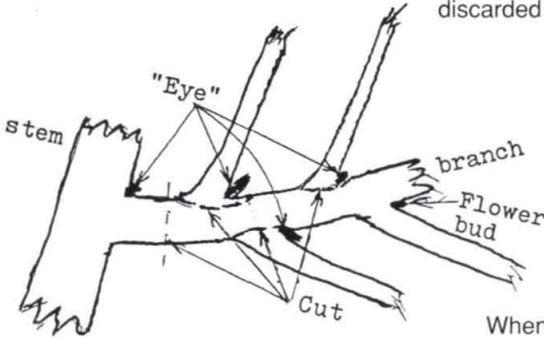
Cut the branch off about an inch from the stem. The stub will heal and fall off in about two weeks. This simplifies removing the branch for rooting. Dust the cut surface on the stem as above, and watch for signs of rotting at the wound. This can happen, and does far too often.

There is a way to avoid that possibility. The first few nodes on a branch will have growth buds or "eye" buds in the leaf axils. On pendula types, this may be at the first four or five nodes. It is possible, therefore, to cut the branch off just below the first nodes and get the "eye" bud without any harm to the main stem. If there is no bud at the first node, cut the branch off just below the second node - unless that bud is a flower bud. If the bud is already a starting branch, so much the better. The short stub left on the stem will heal and fall off in a few weeks.

Dr. Eric Catterall, author of Growing Begonias,* spoke to the Begonia Society in Australia last spring. Ken Mackey of New Zealand attended the meeting and reported on it to the members of Round Robin Flight #8 - Tuberous Begonias. He mentioned several somewhat different methods of rooting cuttings. I asked Dr. Catterall for more details and he kindly sent them. Several of the methods require a bit more testing, but I have tried one that is an improvement on those mentioned above. It gives more rooted cuttings in a shorter period of time.

His sketch shows removing a 5 or 6 inch branch from the main stem. For the reasons mentioned above, I cut it off as shown in this sketch. I also wait until the first flower bud has appeared so I can have the maximum

number of cuttings from that branch. By that time, the lower buds in the leaf axils may be small branches. They will work fine.



Carefully cut the leaf with its associated branch bud or small branch from the main branch as shown. Trim off any excess tissue that might rot, being very careful not to break off the bud. Insert the bud end of the leaf stem into the rooting medium. Some of the leaves may have a large area. Reduce that area to about six square inches (2" x 3").

There is never any "eye" at the base of a flower stem so it would seem that it would be a waste of time to try rooting cuttings taken at a node with a flower bud in the leaf axil.

Any of the above methods will root cuttings easily without using a rooting hormone, but using a hormone does no harm. Since most of them contain fungicides, I use a #1 hormone routinely.

The rooting medium is not critical. Sterile sand, perlite, vermiculite, and milled sphagnum moss are all good. I use a mix of half perlite and half finely chopped sphagnum moss. Fertilizer is not essential until the roots are quite long. The rooted cuttings are then repotted and treated as small plants. The small tuber will build up faster if all flower buds are removed as they appear. The exception would be where one reason for rooting the cutting is to obtain pollen for hybridizing. In that case, do not remove the flower if it shows stamens which can provide pollen.

The cuttings are rooted in small 2 1/2" or 3" pots. I use styrofoam cups with holes punched around the bottom. They can be discarded after using.

When first started, the cuttings have no roots and can replace only a fraction of the moisture evaporated through the leaf. A mist system is ideal for avoiding trouble, but, where only a few cuttings are involved, a glass jar or tumbler inverted over the pot and cutting will usually do the trick. Roots will form best if the temperature is close to 75 degrees F. They will usually show in 5 or 6 weeks, but some may take longer.

When the roots will support the growing plant, repot into 6" azalea pots, using a good potting mix.

Cuttings started in June will form a fair size tuber by mid-December. Those started in August or September will have only a tiny tuber by mid-December; these should be allowed to grow in plenty of light for as long as possible. It is a good idea to let all of the rooted cuttings remain in their pots until they show sprouts in spring. Just don't allow the potting mix to get wet. It is best if there is just enough moisture to prevent loss of moisture from the little tuber.

*Dr. Eric Catterall is Secretary and Editor of the National Begonia Society of England. His book covers tuberhybrida and other begonias, and is available from the ABS Book Store.

Howard Siebold grows tuberous begonias and creates new hybrids at 32050 Westwood Dr., Fort Bragg, CA 95437.



LINDE SACKSEN'S SECRET INGREDIENT

by Frank Green

Linde Sacksen: no one who attended the show at the 1988 Convention is likely to be unaware of her name, because all of her plants were well-grown, some of them were huge, and her wins were substantial. *B. hispida cucullifera* was all of five feet tall, and nearly as broad, decked out in full bloom. A plant of B. 'Ginny' was only a bit smaller, and the bloom was even fuller. A *B. ulmifolia* seedling won the division in the 18 month class, and appeared too big for the class. A couple of unnamed canes from the seed fund were the same age, but not entered in the seedling classes because they were so large; one of these, also, won a division trophy. A lovely *B. chlorosticta* seedling won the 6 month class — it was not grown in a terrarium, or even a greenhouse, but spent all summer on an outside bench. Possibly the most impressive plant in the show, from the standpoint of sheer size and floriferousness, was *B. scharfii*, which was awarded the Massachusetts Horticultural Society award.

The most common question was, "What does she use for fertilizer?" The answer: nothing very exotic. The "magic ingredient" is love for her plants, and dedicated attention. She is, in her words, a "vigorous re-potter." Most plants are repotted more frequently than would be done by the average grower. Nothing is stressed by being underpotted, or underwatered. The entire collection, which includes hundreds of plants in everything from 3" pots to half-barrels, is watered individually, by hand, with a little two-quart plastic watering can (without a hose). Half-barrels of water sit in a couple of spots in the courtyard surrounding the greenhouse in the summer. One rests on a dolly in the greenhouse during the winter.

Linde's collections include a large selection of Euphorbia, many cacti, a collection of scented geraniums, another of ferns, and a miscellany of other plants accumulated from many sources over the years.

The physical arrangement for the collections which Linde maintains consists of a bow frame greenhouse 24' x 60' which is built in a courtyard at the Lunenburg High School, surrounded on all sides by classrooms. There are several young maple trees, possibly 30' tall, two old apple trees, and grape arbor in the courtyard. In the spring, everything goes out of the greenhouse onto benches in the courtyard, which is shaded by the trees and buildings. In mid-September, everything is cut back severely (Linde is also a vigorous pruner - not only in the fall) to facilitate getting it back into the greenhouse. Many of the large plants, but relatively few begonias, go into the classrooms and offices for the winter. Apparently the shade through the summer is enough to enable the plants to adjust to the low light in the classrooms, since they come out in the summer little the worse for wear.

Activities at the greenhouse include several sales during the year: one for students at Christmas, another for Easter, another for Mother's Day (when a standard price for smaller plants for the kids is 25 cents). In past years, there has also been a large production of bedding plants for sale to the general public. Apart from the organized sales, the greenhouse is open during the week, and anything found on several tables of plants can be purchased by anyone coming into the greenhouse.

Although Linde is a teaching aide at the school and paid for forty hours a week, in fact she is at the greenhouse seven days a week; she goes in to water and whatever else needs doing on the weekends, and has not really taken a vacation in twelve years. This is her "secret ingredient:" dedication.

Considering the fact the Linde won five divisional trophies, the "Showing is Sharing" trophy, and a Massachusetts Horticultural Society award, it is interesting to know that this lady had to be persuaded (no easy task) to exhibit at the convention; had never shown a plant before; and until a few days before the convention felt only that she was "helping out" by entering some plants. She had never thought of the competitive aspect of exhibiting. None of her plants were grown for exhibition; all of the pruning and grooming was done in the six weeks before convention. Could she have done better, if she had tried harder?

A sobering footnote to the above:
In the terribly cold weather we had in one brief spell this winter, heat in the greenhouse malfunctioned, and, while not a tremendous number of plants were actually lost, there were few that escaped unscathed. Gorgeous tall plants full of bloom one day were six inch stubs the next. It was necessary to cancel the April Buxton Branch meeting which was planned at the greenhouse, because there will really be little to see. However, I am confident that the indomitable will of Linde Sacksen will prevail and the magnificence of this collection will be restored.

Frank Green spearheaded the Buxton Branch commercial booth at the New England Flower Show (watch for a report on their success). His address is Richardson Road, Fitchburg, MA 01420.



GLADYS ELLERBUSCH HONORED

by Katharine Olson

At their 1988 Christmas party, the East Bay Branch honored Gladys Ellerbusch in celebration of her 30th anniversary as a member of the Branch and ABS.

Gladys joined in 1958 with her late husband, Edward. She has held every branch office except treasurer.

After selling her home and moving to the Salem Lutheran Home in Oakland, Gladys remained an active gardener. The Home's management brings their visitors to see Gladys' garden. She oversees the maintenance people and lets them know when they do something that is incorrect.

We are fortunate to have her as a member.

ATTENTION, MEMBERS AT LARGE!

If there's no ABS branch near you, you can participate in activities through the Members at Large Committee. Members work on projects and exchange information by mail. MAL Newsletter #14 is available now. Send a stamped, self-addressed legal size envelope to MAL Director Thelma O'Reilly, 10942 Sunray Place, La Mesa, CA 92041 to receive your copy.

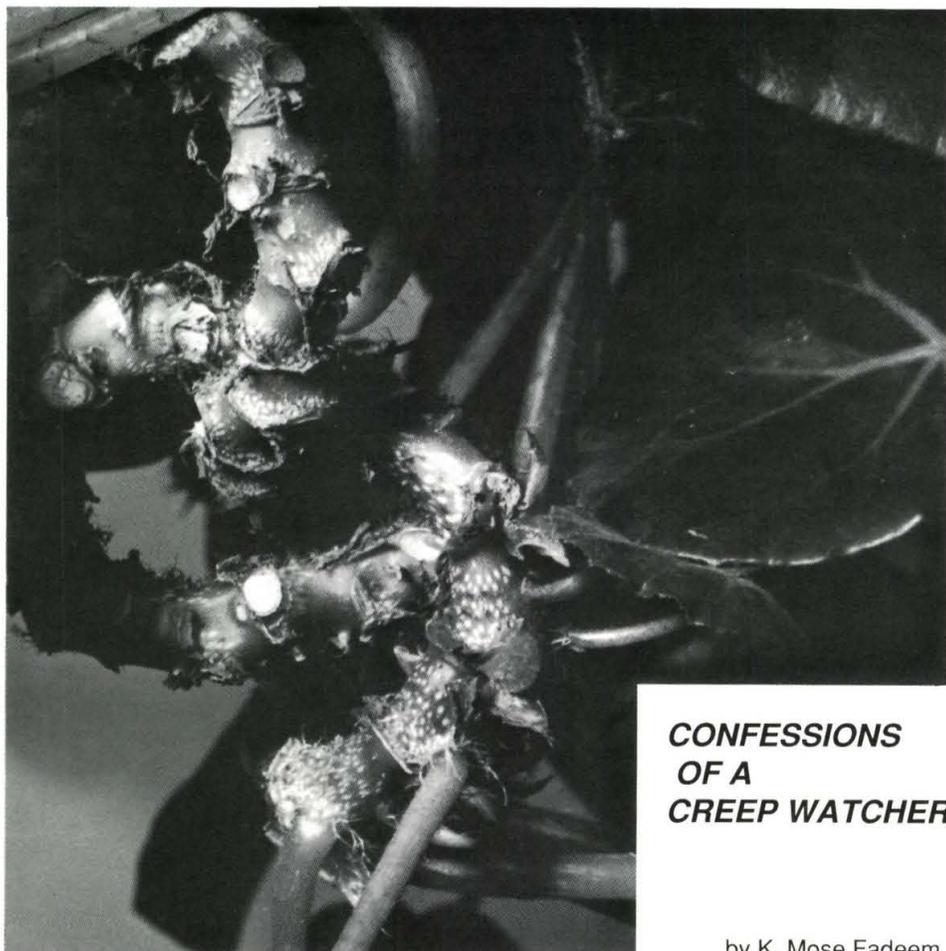
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**CONFESSIONS
OF A
CREEP WATCHER**

by K. Mose Fadeem

Observing fleshy chunks of vegetable matter creep slowly along the soil surface may not be to some people's fancy an exciting way to spend Saturday night. While not quite thought of as "living on the edge," it nevertheless, for those addicted to such things, takes on a crawling adrenaline of its own. It is also not without aesthetic appeal. To paraphrase an old rose adage:

"He who would have beautiful begonias
in his garden,
Must have creeping rhizomes in his
heart."

It seems to me that the ultimate goal of studying an organism is to understand why it behaves the way it does. If a rhizome creeps along the ground rather than stands erect as the majority of stems do, it is not very satisfying to hear that this unique habit is the result of structurally weak stems. It may then be asked: does it creep because it is weak, or is it weak because it creeps?, and we enter into a horse-and-cart predicament that leads nowhere. Besides, crawling does not necessarily imply weakness, and under certain conditions creeping rhizomes display uncanny strength with structural ingenuity.

What we search for microscopically are the mechanics of purpose, while on the surface of things we witness the purpose of design. What we observe is the orderly expression of a plant's will and strategy to flourish. Put another way, we can measure the simple geometry of action, and hopefully we will soon learn more about what sort of knowledge within the plant ensures this action as purposeful behavior.

That some stems creep along the ground is to my mind a most unusual mode of behavior. What we're speaking of is not a thing - a creeping rhizome is a vital act. It is a way of living, and to live in this particular manner requires a unique arrangement of biological tissues that allows it. Conversely, the genetic makeup of the plant demands this lifestyle - roots, stems, and leaves all with balanced regulation of their processes exclusively convey this creeping model. While it is not known as yet how genetic information is translated into specific anatomical patterns, we might do well in the meantime to recognize the patterns.

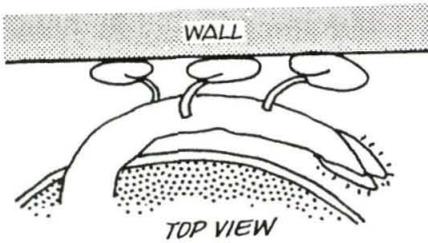
The begonia rhizome has all the characteristics of a stem. It is not a root-like stem, nor a stem-like root, and I can see no way to call it anything other than a stem, unless you wish to call it a fat noodle. As we all know, it is situated above ground, forming a cylindrical axis which promotes and supports buds for branches, leaves, and flowers. In addition it often promotes adventitious roots on the darker sides of its path. Unlike most plants, however, it grows directly atop and along the earth surface.

One might be inclined to say that their plumbing (vascular tissues) and secondary thickening which forms supportive woody stems in plants are simply inadequate for an upright habit, but it's more productive subscribing to a view of nature that organisms are constructed in a positive and purposeful way. If a particular mode of behavior is the outcome of adapting to a genetic weakness or inadequacy (relative to environmental influences), then that weakness has evolved

into a strength, positive and biologically discretionary. Born to crawl or learned to crawl, however these rhizomes evolved, they continue to live in the lower spectrum of the environmental niche because it is a position in which they successfully ensure their vital needs. If "creeping" is an acquired mode of behavior generated over 120 million years (dating roughly from the beginning of tropical forests), then these rhizomes may be an entry to further study along the line of acquired inherited characteristics. All of this sparks the notion that there is an overall plan or strategy in this lifestyle to which all practical and immediate maneuvers are subservient.

I've been observing a 'Beefsteak' (B. 'Erythrophylla') in a 14" hanging azalea pot. It's about five years old, uncut, measures close to 40" across, and beneath the heavy canopy a great many rhizomatous events are taking place. This plant has an animal air about it, something like leaves-on-the-hoof. Not long ago one of the rhizomes was heading straight for a wall which was only a few inches from the lip of the pot, but shortly after its leaves touched the wall the rhizome curved upward. It appears that contact by the leaves triggered a behavioral response in the rhizome, which continued ascending while never contacting the wall itself. In a similar situation but with more room to maneuver a rhizome curved horizontally when its leaves contacted a wall ahead of it. The rhizome has continued bending steadily out of the pot but at the soil level for some 8" along this divergent path.





These bending movements are known as tropic responses, and they are called "negative" in that they lean away from the direction of the stimulus, in this case the wall. You might get the feel of it when you recall the wienerwurst that always bends away from your mouth when you try to bite into it. That's negative tropism. In both situations above the rhizome responded to a physical environmental block and reoriented its growth toward more optimal conditions, but it's the leaves by all appearances that are serving as tactile antennae or probes, prompting the necessary maneuvers. It makes sense that a plant exploring the territory of a forest floor for its survival would be prepared for a lot of touching.

Other than keeping contact with the wall (thus maintaining indefinite duration of stimulus), the leaves themselves display no outward response to the touching. They appear to serve the rhizome as a sensory device, triggering signals that are translated eventually into curvature of the rhizome in a direction more profitable than crawling head-on into a wall. In systematic terms a sensory component (leaf) is coupled to a responding component (rhizome) by steps that transfer energy from one system to the other. Most likely the leaf produces chemical promoters for a hormone in the stem tip, and asymmetrical distribution of the hormone results in curvature of the stem by stimulating growth on one side - the leafbone connected to the stembone, that sort of thing - and the rhizome thus curves away from the wall.

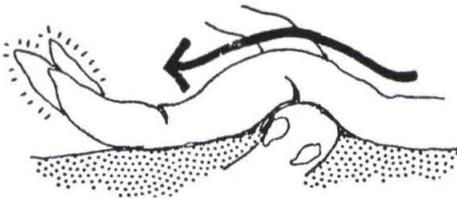
In the limited amount of scientific literature I have come across most or all touch-responsive (thigmotropic) experiments have been applied directly to parts of a plant in the way of rubbing or vibration to elicit responses from those same parts. The work done with vine tendrils is rather widely known. But other than tendrils, thigmotropism has not been observed in vascular plants too often. Only one case of thigmotropism in shoots was reported by M.J. Jaffe, "Mechanical Effects in Development and Behavior of Plants" in the *Encyclopedia of Plant Physiology*, 1985. Experiments along this line might prove more fruitful if the strategic growth pattern of entire plants were tested rather than individual parts. The stressful behavior of rhizomes can be described only in terms of leaves as well and the relationship between the two.

Since the growth strategy of this creeping rhizomatous plant is to radiate outwards from the center for territorial reasons (discussed later), the behavior of a single rhizome confronted with a stressful situation could be considered a local issue. The maneuver will most likely affect only a small part of the overall plan. A rhizome curving away from a cul-de-sac could easily intrude upon the territory of a neighboring rhizome - enter its slice of the pie, so to speak - thus competing for soil, moisture, and light, but a plant spreading from a full circle should well have other opportunities. It will be interesting to see if the plant puts up other rhizomes in the direction of the wall; could there be a memory and learning process? It would also be of interest to know if leaf contact from a direction other than that of the forward motion of the rhizome would elicit a response. If not, how does the leaf 'know' the rhizome direction? Possibly through chemical contact with the tip.

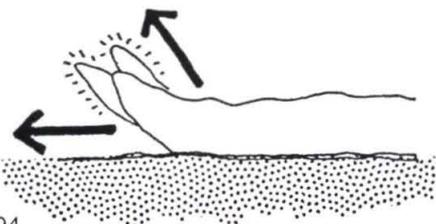
As if to complicate matters, one branching rhizome traversing the pot toward a neighboring rhizome suddenly stopped half way between them and has shot straight up in the air at as much of a right angle as one could expect from these fleshy cylinders. Why it turned at the point it did is not imme-

diately evident. There was no physical barrier, and the leaves were entangled only with other leaves as is their habit throughout the plant. As they say in showbiz, "the plot sickens."

Bud scales as well as leaves could serve the rhizome as sensors. Hairy overlapping bud scales protect the delicate enclosed rhizome tip from desiccation and, more importantly here, from mechanical injury. The scale or its hairs could trigger a rhizome response to obstacles along the ground over which the rhizome then crawls. The same sort of hormonal mechanisms as described above could alter the rhizome's growth to conform to the obstacle. It begs experimenting to find the limits of conformity to obstacles.



The tip always curves upward, as we have all observed, and I assume it does so to avoid soil abrasion, which, incidentally, makes for an interesting configuration of growth: the tip (apical meristem) and the area just behind it (subapical zone of cell extension) are on different vectors as the stem grows. Assuming the rhizome is polarized to keep itself oriented with respect to ground, the tip either remains independent of this force or somehow serves it from an oblique angle. The complexity of the matter increases when one hears that gravity (geotropism) is not sensed throughout a plant but only at the stem tip. Sounds like a berserk challenge for a bioengineer.



Life in the prostrate position could have several advantages - I do it all the time and love it! - such as a thickened rhizome that need not become rigid under its own weight or the ability to traverse light planes, but these have been enumerated elsewhere. What has grabbed my interest is the model itself of growth at right angle to gravity which is called, colorfully, diageotropism. As far as I know, the limits of diageotropism in begonia rhizomes has never been tested. I devised a rather crude experiment in a narrow box which I call a "rhizome run." It incorporates an incline of soil and sphagnum (held by wire) about 10 degrees off the vertical and 8" high. I roughly wanted to see whether, given the opportunity of soil, the rhizome will conform to the steep embankment and take root on it.



However, as many members of ABS may have discovered, begonias are not always thoroughly cooperative; to say they have a mind of their own is the least offensive way to put it. The rhizome presently rooted in the run has shot upward far from the slope and looks about to curl over the side just to prove its independence. So, while awaiting results that are dubious in the first place, I set to simply watching the behavior of rhizomes as they abandoned pot and ground for a precarious life in open space.

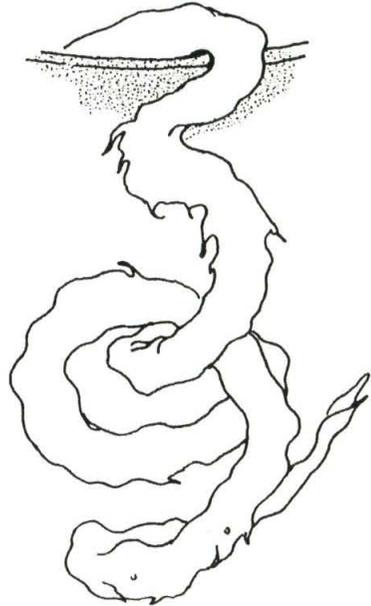
Now it's known that some rhizomes will not travel far beyond the edge of a pot, even though there's no barrier to stop them - there is only a lack of ground. They turn back within the confines of their potted domain. Have they developed a sense of space or ground that is imperative and beyond which they will not venture? It's easy to presume they would continue in an outward direction if further ground were available, so could it be then that some rhizomatous begonias have de-

veloped a sensitivity to surface matter at their belly? I refer to these particular plants as "soilbellies." The fundamental question in my mind is whether a soilbelly has sustained perception of its territory. If one considers that consciousness lies within nature and is a capability of organic structure, then the possibility does not appear unrealistic.

Rhizomes that continue uninhibited beyond the edge of their pot-defined territory, referred to here as "airheads," show a remarkable degree of engineering skill once they are free-falling. Their ability to reinforce themselves in open space by twisting and curling dramatically, sometimes into complete circles and over themselves, I find extraordinary - from creepers to stunning acrobats. I can't imagine why anyone would cut them off; it's the best part of the show, an adventure "beyond the edge" after all.

As the vascular system is drawn out, the rhizomes could be protecting themselves, much as Liana vines coil and twist for that purpose. Aside from structural integrity they might be attempting to maintain some altitude for their leaves which are losing light intensity as the rhizome drops. Or they could be in a "search pattern."

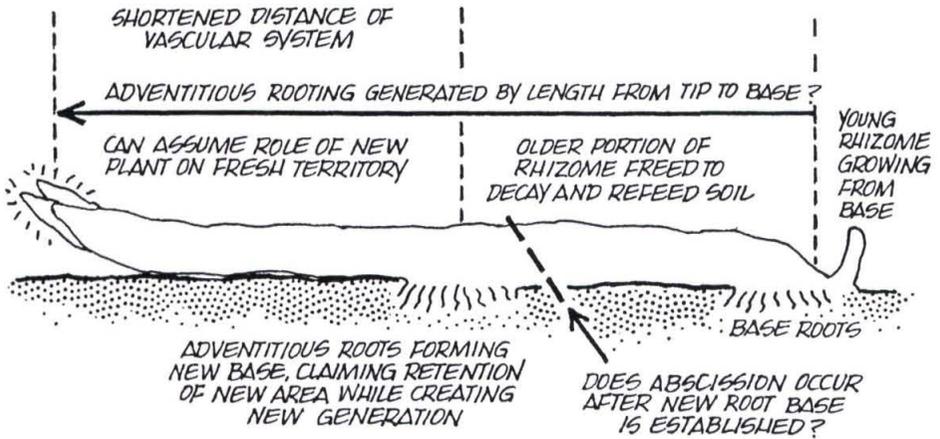
While not much credence is given these days to the willful notion of searching, the question persists: is the rhizome searching and if so for what? Support? Soil? As it continues to grow the free-falling rhizome becomes further removed from its own roots. It's possible that the rhizome is internally programmed to favor rooting within a prescribed distance so as to maintain vascular efficiency. A sort of ruler may be built into the stem tip, perhaps counting a sum of nodes but more likely measuring water pressure in the xylem. Since the lay of the land may not always be cooperative, a good deal of tolerance can be built into the program, but there is likely to be a limit. How long will a rhizome grow without rooting? The longest free-falling rhizome I'm observing is presently 36" from its nearest and last established root system.



SPATIAL ORIENTATION OF RHIZOME WITHOUT GROUND POLARITY

Cells in a rhizome cannot differentiate into root cells unless they are polarized with respect to a suitable ground. If it's assumed then that rooting is a high priority for the rhizome, then it will be searching for a suitable rooting medium rather than trying simply to maintain a specific gravitational pose. One might even question whether there is such a force as diageotropism, or is it merely a descriptive term for horizontal orientation?

The mechanics of the convolutions of free-falling rhizomes might be likened to orientation movements in trees. Microscopic examination could verify whether something like "reaction wood" is formed with excess wood on the upper side of rhizome loops. An elliptical cross section is formed with excess wood on the upper side of stems in angiosperms, resulting in internal tensions that are responsible for orientation movements. The mechanism is not altogether clear, but it is known that reaction wood is formed under the influence of gravity. It has been studied in trees which, as we all know, grow perpendicular to the ground.

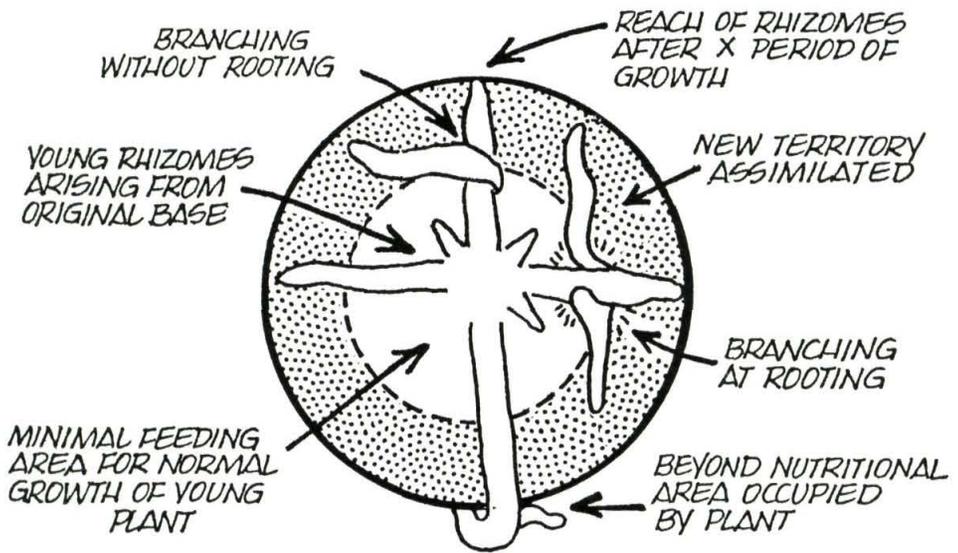


ROLE OF INDIVIDUAL RHIZOME

Now if we turn the whole matter ninety degrees, starting from a horizontal orientation as in the case of creeping rhizomes, what can it tell us? As trees strive to reorient to the vertical, our rhizomes would be striving to reorient to the horizontal...??? And if gravity is causing orientation movements, that could lead us back to a notion of diageotropism...I think. It sort of boggles begonia brains! The first step, of course, is to examine the cross sections of convoluted free-falling rhizomes for unequal development of wood.

Inspired by E.J.H. Corner's comment, "Growing up in botany means occupying more room" (The Life of Plants, 1964), I began watching rhizomatous begonias for habits that may be translated into a territorial strategy. Rhizomes spread radially from a root base. They then may radiate from their next established root base, but it appears that new shoots rising from the second generation will not grow back towards the first, where they would be competing with their forebearers. The plant appears to perceive and respect its territorial center (in airheads); some overriding force seems to be at work in soilbellies).

Overall, rhizomes are directed outward from the root centers to increase their nutritional area and to ensure a greater chance of finding fertile territory for propagation. Exploration in a multitude of directions increases the probability that some if not all of the rhizomes will be successful. This roughly radial pattern looks like an effective design to assimilate territory. It increasingly provides roots for further development and is additionally useful for intercepting planes of light, thus providing greater opportunity for photosynthesis.



TERRITORIAL STRATEGY OF CREEPING RHIZOMATOUS BEGONIA

While it appears to me that an internal program is providing for this pattern, external stimuli obviously influence the precise shape of it. The immediate environment can alter directions to create optimal opportunities for individual parts, but it seems unlikely such deviations would seriously interfere with the overall plan.

There is a great deal of rough testing and observation that can be done outside of laboratories by people who are interested in adding to the begonia repertoire in this way. Classification and refinements of cultivation are certainly worthwhile, but this creep watcher believes there are other dimensions to explore in the way of observing behavior.

These notes have been intended to share with others my own rather clumsy observations and thoughts in the hope that we all might be stimulated to challenge and stretch our understanding. To my mind that is our human obligation to nature.

Special thanks to Ed Espinoza at University of California Berkeley for help in research.

A member of the Monterey Bay Area Branch, K. Mose Fadeem is known as "The Fanatic Gardener" on radio KAZU and in his newspaper column. His own garden, named "Mulchdown," is located at 319 1/2 English Ave., Monterey CA 93940.



TIPS FOR BEGONIA BEGINNERS

by Dorothy Patrick

ODDS AND ENDS

WATERING:

Depending on where you live, the weather should now be warm, or hot! So, the advice of "going easy" on watering of begonias, given in cool weather, changes. It is now: don't overwater your begonias! Let me try to explain the corner I've painted myself into: to avoid overwatering a begonia, here are some of the things to be considered:

1. Is the potting soil a free-draining, loose soil that isn't going to compact the tiny hair roots when it gets wet?
2. Is the width and depth of the container a near-fit for the rootball? If not, the portion of the soil unused by roots will stay wet and turn sour.
3. "Don't overwater" does NOT mean giving the plant a sprinkle of water. It means don't water until the soil on the surface and down for at least one finger joint feels dry. Then, when you do water, do it thoroughly, until water drains from the drainage holes of the container. (You wouldn't ever plant a begonia in a beautiful ceramic container with NO drainage holes, would you?)
4. "Don't overwater" means different things in different locations and different climates. A hanging basket of begonias in a very hot geographical area might have to be watered, and thoroughly, every day, maybe twice a day if it is in a small, shallow basket. In an area of mild summer temperatures, this same begonia in a hanging basket might not need to be watered more than several times a week - but, again, it needs to be watered thoroughly.

SUMMERING OUT TIPS

Begonias benefit from a vacation, too.

1. Do not set your pots of begonias directly on the soil of your yard. Begonias are susceptible to root nematodes, unseen critters which can infect your plant when the pot is sitting on the ground. Just to be safe, set the

container on a cement block, a few bricks, a small foot stool, an inverted saucer (inverted so water won't collect in it), etc. This also prevents earthworms from invading your container - in the garden, they're the good guys, but in a pot, they wear black hats.

2. Be sure your containers of begonias are in areas with appropriate lighting, and, if possible, protected from the wind. Depending, again, on your climate, canes, semper-florens, some of the shrub-like types, and even some of the trailing-scandents will tolerate morning and late afternoon sun, while rhizomatous and rexes do best in bright, filtered light - no sun. If your begonia leaves look bleached, or sunburned, or brown and crispy around the edges, they need to be more sheltered from light. If the petioles (leaf stalks) seem to be stretching out too far, getting stringy-looking, the plant can stand a little more light - add it very gradually.

3. Most begonia stems are brittle and break easily. For hanging baskets you can purchase a very inexpensive "swivel" gadget to hang your basket from. That way, the entire basket turns with the breeze, and you're less likely to have branches break.

METHODS OF FERTILIZING

It is generally accepted that a well nourished plant is less susceptible to disease, so:

1. NEVER fertilize a dry plant. Water it first.
2. Use a water-soluble, complete, balanced fertilizer of your choice, such as NPK (nitrogen, phosphorus, potassium) 10-10-10.
3. Constant feeding: use minute amounts of fertilizer every time you water during the active growing period. Read the instructions on the plant food container - some brands give instructions for constant feeding. Even on those designed for constant feeding, I use slightly less than the amount called for.
4. Routine feeding: feed every 2-4 weeks, instead of with each watering. Again, I always use less fertilizer than called for.

5. If your plants are outdoors, and you have more than just a few of them, you might want to try using an inexpensive gadget called Siphonex for either type of fertilizing. It makes the process much easier and faster. You should be able to find it anywhere garden supplies are sold, and the instructions for use are easy to follow.

6. When growing in containers it is important to leach the fertilizer salts out of the soil about once every 4-6 weeks. This is a simple procedure: just water each plant slowly with clear water until the water runs from all the pot's drainage holes.

7. Don't ever try to play catch-up with fertilizers by using a larger dose because you've missed a feeding or two. You could burn the roots, maybe beyond recovery.

8. You can aid a begonia grown for blooming by following the suggestions above until about a month prior to the expected bloom time, then using a special formula for blooming for about a month. Fertilizers designed to promote bloom contain more phosphorus, which is shown on the label by a larger middle number - for example, 10-15-10.

PROPAGATION OF CANES AND SEMPS

It is best to take your cuttings from these types early in the spring, before blooming starts, for an axil from which a bloom has sprouted will not have a leaf bud. With semps, you can take a stem cutting at soil level (called a "basal cutting"); with canes, use the tips of new growth, not an old cane.

Enjoy your begonias this spring. Look around for a new variety to add to your collection. Give a rooted cutting to a friend, along with a gift membership in ABS - or at least the address of John Ingles, ABS membership chairman (it's 157 Monument, Rio Dell, CA 95562-1617).

And if you have a problem, remember help is just a letter away for ABS members. Mae Blanton, a very knowledgeable lady, will answer questions about begonias. Her address is 118 Wildoak, Lake Dallas, TX 75065. And watch for the QUESTION BOX feature in the **Begonian**. The questions, and her answers, might be just what you're looking for.

Dorothy Patrick's address is P.O. Box 2515, South Padre Island, TX 78597.



COMING EVENTS

May 5-7: Southwest Region Get-Together, "Begonia Trails," at the Harvey Hotel Addison, Dallas, TX.

May 12-14: "Begonias by the Bay," combined Pinellas County and Tampa Bay Branches show at Gateway Mall, 7885 9th St. North, St. Petersburg, FL. Show hours 10 a.m. to 9 p.m. May 12 & 13, noon to 5 p.m. May 14.

May 13-14: Jacksonville Branch annual show and sale at Roosevelt Mall, Roosevelt Blvd. at San Juan Ave., Jacksonville, FL. Show open during mall shopping hours.

May 19-20: Edna Stewart Pittsburgh Branch will participate in the Pittsburgh Civic Garden Center's May Market.

**August 3-6: ABS National Convention,
Clarion Hotel, San Francisco, CA**

PALOMAR BRANCH Urges: Support Your Seed Fund!

by Phyllis Bates

Many of the people who join the American Begonia Society do so to find sources for begonias.

Seeds of *Begonia* are generally unavailable through commercial sources. Where seeds are available the selection is limited and the seeds are exceedingly expensive. As an example, a recent catalog lists *B. masoniana*, the Iron Cross Begonia, at \$8.75 for 30 seeds. In this catalog, only one other species and some semperflorens hybrids are offered as seed.

As the rain forests which serve as the home for many of our begonia species are threatened, seed is becoming increasingly important in preserving the existence of the plants.

Species seeds also contribute to hybridizing. Growers cannot make new cultivars indefinitely without species seeds, and the greater the choice of species the greater the possibilities of good new plants. In some instances cultivars cannot be continued without a supply of species seeds to remake the cross each time.

For many years the ABS has maintained the Clayton M. Kelly Seed Fund with a marvelous selection of species available. The seed supply depends upon continual contributions from various sources.

In the past the society received large donations of seeds from Dr. Jan Doorenbos as a byproduct of his research at the Agricultural University at Wageningen, the Netherlands. Now Dr. Doorenbos is retired, and the *Begonia* research project has been concluded.

Another traditional source for seeds has been overseas members and persons who traveled overseas. The changing economy has diminished this source.

The loss of these sources places greater emphasis on the efforts of individual ABS members.

Directly or indirectly, each member of the American Begonia Society benefits from

the Seed Fund. Ensuring a continuing supply of seeds is not only a *benefit* to each member, but also a *responsibility* of each member. One way a member can help ensure that we keep the species we now have is by producing species seed and sending it to **Seed Fund Director Diana H. Gould, 4860 Idaho Dr., Sacramento, CA 95823.**

Members should check among their species to see which ones are likely to come into bloom so they can be prepared when the blooms appear. They might want to move a likely candidate plant into an isolated spot so insects or unintended physical movements don't spoil production of pure seed.

Palomar Branch is making this goal easy for its members by supplying information, advice, and encouragement. The branch will even package and submit the seeds for its members.

Chairman Jeannette Gilbertson will be reviewing the procedure for setting seeds at the March branch meeting. Other ABS members can get directions from the **Begonian**, Nov.-Dec. 1986, pages 156-159.

Palomar Branch hopes that all ABS members will join in this effort to ensure continued sources of good seed for the Seed Fund and to preserve our *Begonia* species.

Phyllis Bates does her part to preserve begonia species by growing them, sharing them, setting seed. Her address is P.O. Box 502, Encinitas, CA 92024.



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93103

UNIDENTIFIED BEGONIA SPECIES LIST

Thelma O'Reilly, project director

The ABS Nomenclature Department maintains a list of unidentified species. These are assigned numbers preceded by "U" (for "unidentified").

Your cooperation in supplying any information, including observations, photographs, slides, or drawings for this group or any other unidentified species will be appreciated. Write to Thelma O'Reilly, 10942 Sunray Place, La Mesa CA, 92041.

B. U101

Laguna, Philippines. Plant purchased by Martin Johnson, February 1983. Rhizomatous; bronze leaf blades with green veins; small pink flowers. Seedlings from original plant were grown by Bob Haussler, CA and produced two forms, one with bronze leaves and light green veins, and one with plain green leaves.

B. U102

Mount Banahao, Philippines. Seed imported by Martin Johnson, February 1983. Collected at 4000 feet. Martin reports that this species has a creeping habit.

B. U103

B. U103

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

July 4, 1988 Carrie Karegeannes and I visited Dr. Lyman B. Smith at the Smithsonian Herbarium. We checked the Bolivian herbarium specimens but found nothing to match my specimen of B. U103. Dr. Smith said it could be a new species. I find that it likes to grow as a hanging plant in preference to staking which is necessary if grown upright. The perennial tubers are fast growers, each filling an eight inch pot within a few years. A dormant tuber I measured at Rudy's nursery was nine inches across. See S.F. listing N-D7, **Begonian** November-December, 1983; and N-D1, **Begonian** November-December, 1987.



photo by Millie & Ed Thompson

B. U104

Santa Rosa, Costa Rica. Seed collected by Lynda Goldsmith, 1984 under her number LG 2. Rhizomatous; small rhizome that tends to crawl across container then grow partially upright; leaf blades green, puberulent above, short, matted, woolly hairs below; petioles 5 inches, scattered woolly hairs; stipules persistent, reticulate, setiferous; male flowers white, 2 tepals, glabrous; peduncles 1 1/2 inches, puberulent. See S.F. listing, M-A1, **Begonian**, March-April, 1984.

B. U105

Seed supplied to S.F. by Professor J. D. Doorenbos, 1984. Shrub-Like; habit lax; small green leaves; large clusters of white flowers. A good basket plant. See S.F. listing M-A8, **Begonian**, March-April 1984.

B. U106

Panama. Collected by Roberto Brin near the road from Panama City to Colon. Rhizomatous; leaf blades medium green, shallowly lobed, cordate, glabrous or nearly so, convex, marginated with red hairs; petioles pale green, somewhat pilose. Terrarium care required. See S.F. listing M-A9, **Begonian** March-April, 1984.

B. U107

Panama. Seed collected by Roberto Brin near road from Panama City to Colon. Rhizomatous; leaf blades medium green, shallowly lobed, cordate, glabrous or nearly so, concave; petioles pale green, somewhat pilose. Terrarium care required. See S.F. listing M-A10, **Begonian** March-April, 1984.

B. U108

Panama. Seed collected by Roberto Brin near road from Panama City to Colon. Rhizomatous. Description same as B. U107. Brin reports that leaves are large in habitat. See S.F. listing M-A11, **Begonian** March-April, 1984.

B. U109

Records incomplete. No distribution.

B. U110

Records incomplete. No distribution.

B. U111

Panama. Seeds collected by Roberto Brin from Madden Dam area February, 1984. Rhizomatous; leaf blades green; flowers pink. Seed sold at 1984 ABS Convention, Dallas, Texas.

B. U112

Panama. Seeds collected by Roberto Brin near El Valle. Rhizomatous; leaf blades large, dark green, pubescent. See S.F. listing M-J3, **Begonian** May-June, 1984.

B. U113

Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous; seed sold at 1984 ABS Convention, Dallas, Texas.

B. U114

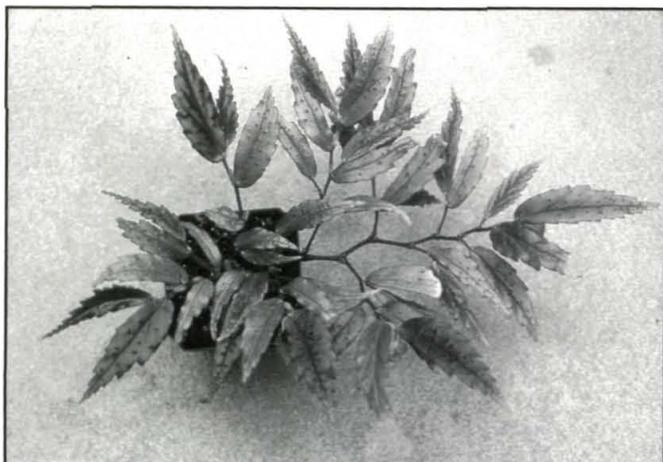
Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous. See S.F. listing M-J4, **Begonian** May-June, 1984.

B. U115

Panama. Seed collected by Roberto Brin from cultivated garden plant near El Valle. Thick-Stem; leaf blades green above, red below; pink flowers. Identified as *B. multinervia* by Professor Doorenbos and Thelma O'Reilly who collected the same form with bicolor leaves in Costa Rica, 1977. See S.F. listing M-J5, **Begonian** May-June, 1984.

B. U116

West Sepik Province, New Guinea. Prof. Doorenbos sent plant cuttings to Mabel Corwin in 1982. Shrub-Like; leaf blades 3 x 3/4 inches, dark green, glossy, with prominent, stiff, dark red trichomes scattered above, light green flushed red below, margin edged with a narrow red band and cut in an angular pattern; stems red with short hairs; male flowers pink with 2 tepals, female flowers pink with 5-6 tepals, ovary flushed pink with 3 wings. Terrarium care required.



B. U116

plant grown by
Mabel Corwin

photos by Ed Bates

B. U117

Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous; leaf blades green, 8 x 5 inches, hirsute, serrulate marginally, apically acuminate, shallowly cordate. See S.F. listing M-J7, **Begonian** May-June, 1984. Identified as *B. villipetiola* by Prof. Doorenbos. Dr. Kathleen Burt-Utley determined that *B. villipetiola* is a synonym of *B. urophylla* in Tulane Studies, published in 1985.

B. U118

Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous; description similar to B. U117. Identified as *B. urophylla* by Prof. Doorenbos. See S.F. listing M-J8, **Begonian** May-June, 1984.

B. U119

Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous; description similar to B. U117 and B. U118 except leaf blades are smaller. See S.F. listing M-J9, **Begonian** May-June, 1984.

B. U120

Panama. Seed collected by Roberto Brin near La Mesa. Shrub-Like; leaf blades 6 x 3 inches. A large plant with beautiful foliage. See S.F. listing M-J10, **Begonian** May-June, 1984.



B. U116, female flower

For previous B. U# listings, see the **Begonian** issues listed below.

U001-U032: February 1981, p. 33

U033-49: March-April 1986, p. 53

U050-62: July-August 1984, p. 85

U063-79, 88-89: November-December 1984, p. 124

U080-87: July-August 1982, p. 83

U090-100: May-June 1988, p. 81

There is a listing of changes, corrections, and questions in the July-August 1987 issue.



THE ABS PRESIDENCY

Memories, Musings

by Clarence Hall

The California Begonia Society, which became ABS, was founded in January, 1932. Clarence Hall has provided some reminiscences of presidential duties...

The first meeting of the first branch was held in the loft of the Coca Cola building in Ventura, California, with 15-20 attending. First president was Katherine Weitz, who with her husband Herman were the grand beginning of the ABS branches. They had a wonderful begonia garden. The covering was washed-out flour sacks! But the begonias, ferns, and other allied plants were beautiful. Many stories can be told of groups visiting their garden.

The national president had a \$15 monthly allowance, which was to cover all expenses. That included the presidential obligation of visiting all of the branches. The idea was to give members a lift, cheer them to greater heights, grant branch requests, and always show them the way. Speeches had to be made, with no specified time schedule, but time was precious. So one branch hit on the idea of using signal lights, and someone in the back would put the yellow sign up, then the green, and then the red (some speakers, as you know, are long-winded - as are some writers!). Presidents were advised not to get into technicalities (we were trying to show an enticing ABC of begonia-land), and never, never let religion or politics enter our talks.

Of course the \$15 allowance was used up quickly. But, rain or shine, the visiting was done. During the war years, with car headlights blacked out and just a minute circle showing the way, the national president would travel to whatever branch he was scheduled to visit, often miles of driving (I lived in Ventura, with no freeways and 60 to 70 miles the usual distance to a meeting). But we loved it. It was for Begonias!

Then as now the term of office was one year. But the President was required to serve as President-elect for one year prior to, and as Immediate Past President for one year after, the term of office. Duties were to help produce new begonia pamphlets, and go to all meetings covering decisive matters; write letters; get together material for the **Begonian**. In the earlier days, we had to make sure the mimeograph machine was working. Names and addresses of all new members were published in each issue.

Above all, the President had to stand upright, never falter, and keep boosting, boosting, telling, telling. Sometimes, to get someone else moving, the boot would have to be used (figuratively speaking). Always, we were to tell about the pleasure in growing begonias.

This is getting too long and my one finger operation doesn't lead to good typing. So - the best to you and all the other Begoniacs. Nothing on earth just like them!

Here's a list of the dedicated begonia lovers who have served ABS as President:

1932	Herbert P. Dyckman*
1934	Fred Reidman
1935	J. Paul Walker
1936	Dr. M. B. Dunkle
1937	T.H. Smith
1938	J.S. Williams*
1939	Dr. W. M. Casely
1940	Frank M. Harrison*
1941	Herbert P. Dyckman*
1942	Ferdinand P. Neels
1943	John L. Bailly*
1944	Clarence A. Hall
1945	Arthur E. Nelson*
1946	Harold W. Hart
1947	George G. Lawrence
1948	Mary Hazel Drummond
1949	Col. C. M. Gale



SPOTLIGHT ON TUBEROUS BEGONIAS AT 1989 CONVENTION IN SAN FRANCISCO

1950	William E. Walton
1951	Frank Moore*
1952	Calvin Trowbridge
1953	Edna L. Korts
1954	Glen Motscham
1955	Jack Koebig
1956	Joe Taylor
1957	Calvin Trowbridge
1958	Frank Coe
1959	Bert Slatter*
1960	Clarence A. Hall
1961	Edna L. Korts
1962	George Schlannert
1963	Carl E. Naymann*
1964	Terry Olmsted
1965	Mabel Corwin
1966	Muriel Perz
1967	Everett Wright
1968	Chuck Taggo
1969	Walter Pease
1970	Vera Nauman
1971	Pearl Bennell
1972	Margaret Taylor
1973	John Provine
1973-5	Margaret Ziesenhenn
1976-7	Charles Richardson
1978-9	Nathan Randall
1980-1	Gilbert A. Estrada
1982	Chuck Anderson
1983-4	Robert J. Ammerman
1985-6	Margaret Lee
1987-8	Arlene Davis

*deceased

Soon you will receive a ballot listing the candidates for ABS offices. Please vote! Your vote will express support for those who are willing to give a major portion of their time in the coming year to help ABS grow.

If you read the list of presidents, you saw Clarence Hall's name more than once. Still actively involved with ABS, he lives at 707 Sunrise Ave. #266, Roseville, CA 95661.



The ABS San Francisco Branch, which includes some of the world's most accomplished growers of tuberous begonias, will host the 1989 ABS convention and show Thursday, August 3, through Sunday, August 6, at San Francisco.

A highlight of Begonias by the Bay will be a tour of some of the spectacular gardens of branch members. The late summer timing of the convention was picked to coincide with tuberous begonias' peak bloom on the West Coast.

Hugh McLaughlin, champion grower of tuberous begonias and exhibition vegetables in Scotland, is scheduled to speak at the Saturday evening convention banquet. McLaughlin is a representative of the Scottish Begonia Society. This will be his second ABS convention appearance.

A packet containing the full schedule and registration information will be mailed to ABS members in late spring. The convention is chaired by Carol and Peter Notaras, 2567 Green St., San Francisco, CA 94123.

Bringing Plants to the Convention?

We hope members from all over the country will bring plants to the show and sale in San Francisco. However, every state has regulations regarding interstate transport of plants, and the regulations vary greatly. If you live outside of California, please **check with your state department of agriculture** before leaving home to find out which regulations apply to plants entering California from your state, and which to plants entering your state from California. If you're driving, check on the regulations of states you will be crossing. Don't take a chance on having your prize show plant or exciting new sale purchase confiscated at the state border. - Bob Hamm

Before or after convention '89,

NORTHERN CALIFORNIA BECKONS IN AUGUST

by Chuck Anderson

The early August timing of *Begonias by the Bay*, the ABS 1989 convention and show at San Francisco, provides superb summer vacation opportunities in Northern California.

The convention will run Thursday through Sunday, August 3-6. If you schedule two or three days preceding or following the convention, you can take advantage of California sunshine at destinations ranging from the endless Pacific beaches of Monterey Bay to the wildly scenic redwood-lined Sierra Nevada Mountains. Or reserve a week and combine two or more tours.

Here is a sampling, along with suggested gardeners' sights and sources of further information:

AROUND THE BAY AREA

Circle big San Francisco Bay slowly, visiting cities in five counties. Check out the Conservatory of Flowers and Strybing Arboretum in Golden Gate Park, San Francisco; Berkeley Horticultural Nursery, 1310 McGee Ave, Magic Gardens Nursery, 729 Heinz Ave., The Gardener Store, 1836 Fourth St., and the University of California Botanical Garden in Strawberry Canyon on the U.C. campus, all in Berkeley; Smith & Hawken garden supplies at Stanford Shopping Center, Palo Alto; the estate and grounds at Filoli in Woodside; and Peters & Wilson Nursery, 11 Rollins Rd., Burlingame, near San Francisco International Airport. *Information: San Francisco Convention and Visitors Bureau, 201 Third St., Ste. 103, San Francisco, CA 941033.*

THE WINE COUNTRY

Napa, Sonoma, and Mendocino counties north of San Francisco provide the nation's finest wines - some rivaling renowned French vintages - as well as winery tours and tastings and stunning agricultural scenery, resorts, and restaurants. Check out Western Hills Rare Plant Nursery, 16250 Coleman Valley Rd., Occidental, and Sonoma Horticultural Nursery, 3970 Azalea Rd.,

Sebastopol. *Information: Redwood Empire Association, 1 Market Plaza, Ste. 1001, San Francisco, CA 94105.*

THE MONTEREY BAY AREA

Santa Cruz and Monterey counties' beaches are renowned, as are picturesque Carmel and the Monterey Bay Aquarium in Monterey. Don't miss Antonelli Brothers Begonia Gardens, 2545 Capitola Rd., and the University of California Arboretum, both in Santa Cruz, and Carmel Valley Begonia Gardens on Carmel Valley Road, Carmel Valley. *Information: Santa Cruz County Convention and Visitors Bureau, P.O. Box 1476, Santa Cruz, CA 95061; Monterey Peninsula Chamber of Commerce, P.O. Box 1770, Monterey, CA 93942.*

OTHER SIGHTS

Consider heading south to Big Sur, Hearst Castle, and San Luis Obispo; eastward to Sacramento, the Sierra (including Yosemite National Park), Lake Tahoe, and Reno; or the Gold Country in the Sierra foothills north of Sacramento.

For information on all of Northern California, contact the California Office of Tourism, 1121 L St., Ste. 103, Sacramento, CA 95814.

Chuck Anderson, an ABS past president, has traveled extensively in Northern California. He lives at 826 Santa Rita Ave., Los Altos, CA 94022, and is on the 1989 ABS Convention committee.





1989 AMERICAN BEGONIA SOCIETY AWARDS

Each year the American Begonia Society may make awards to members of the Society who have made contributions, beyond what is expected of a member, to the advancement of the Society's aims and purposes, and to the most outstanding *Begonia* hybrid.

The recipients are determined by the members of the American Begonia Society Awards Committee, to whom members submit nominations of persons or plants considered worthy of such outstanding awards.

Eva Kenworthy Gray Award

The Eva Kenworthy Grey Award may be presented to a person for one of two reasons:

1. For contributing something of a spiritual value toward cementing goodwill and harmony among members.
2. For contributing original material toward helping our rank and file members in furthering their study of *Begonia*.

Herbert P. Dyckman Award for Service

The Herbert P. Dyckman Award for Service is presented to a member who has rendered *long-term* or *very outstanding* service above and beyond the normal duties of a member or officer of the American Begonia Society.

Alfred D. Robinson Medal

The Alfred D. Robinson medal is awarded to an outstanding *Begonia* hybrid, according to the following rules which govern this award:

1. All *Begonia* plant nominees must have been registered with the American Begonia Society Nomenclature Director prior to nomination.
2. The originator of the *Begonia* nominee must be a member of the American Begonia Society.
3. The *Begonia* nominee must have been released to the public for at least five years

but not more than fifteen years prior to nomination.

Only members of the American Begonia Society will be considered as recipients of these awards, and the recipients must be nominated by an American Begonia Society member. Your nominations, stating the qualifications which you believe entitle the person to the award, shall be sent to the Chairman of the American Begonia Society Awards Committee. A particular award may be given only once to a member in any one of the three categories.

Nominations must be received by June 9, 1989. Send them to Rudolf Ziesenhenné, Awards Chairman, 1130 N. Milpas St., Santa Barbara, CA 93103.

The previous recipients are:

Recipients of the Eva Kenworthy Gray Award

Bessie Buxton	1955
Charlotte Hoak	1956
Constance Bower	1957
Alice Clark	1958
Rudolf Ziesenhenné	1959
Louise Schwerdtfeger	1960
Helen K. Krauss	1961
Bert Slatter	1962
Bernice Brilmayer	1962
Dr. Clyde Drummond	1963
Mary Gillingwaters	1965
May Taft Drew	1966
Sylvia Leatherman	1967
Drs. Lyman B. Smith and Bernice G. Schubert	1968
Harry M. Butterfield	1969
Ruth Pease	1970
Elda Haring	1972
Dr. Fred Barkley	1973
Carrie Karegeannes	1974
Dr. J. Doorenbos	1975
Alva Graham	1976
Mildred L. & Edward J. Thompson	1977
Jack Golding	1978
Thlema O'Reilly	1980
Phyllis & Ed Bates	1983
Scott Hoover	1984
Hikoichi Arakawa	1985
Chuck Anderson & Karen Bartholomew	1986
Pat Maley	1987
Mabel Corwin	1988

Recipients of the Herbert P. Dyckman Award for Service

Florence Gee	1968
Herb Warrick	1968
Alva Graham	1969
Edna Korts	1969
Everett Wright	1972
Walter Barnett	1973
Hazel Snodgrass	1974
Mae Blanton	1975
Gordon Lepisto	1976
Gene Daniels	1977
Margaret & Paul Lee	1978
Margaret Taylor	1979
Rudolf Ziesenhenn	1980
Mabel Corwin	1981
Clarence Hall	1982
Goldie & Doug Frost	1983
Pearl Benell	1984
Joy Porter	1985
Martin Johnson	1986
Thelma O'Reilly	1987
Mildred L. & Edward J. Thompson	1988

Recipients of the Alfred D. Robinson Memorial Medal for Begonia Hybrid

B. 'Silver Star' (Frey)	1945
B. 'Freddie' (Ziesenhenn)	1946
B. 'Golden West' (Reinelt)	1949
B. 'Ricky Minter' (Turner)	1950
B. 'Glendale' (Slocum)	1950
B. 'Virbob' (Walker)	1951
B. 'Orange Rubra' (Woodriff)	1954
B. 'Verde Grande' (Zug)	1957
B. 'Kumwha' (Horton)	1961
B. 'Madame Queen' (Bath)	1964
B. 'Sophie Cecile' (Kusler)	1966
B. 'Purple Petticoats' (P. Lee)	1968
B. 'Lady Frances Jean' (Leatherman)	1969
B. 'Eunice Gray' (Nuss)	1970
B. 'Paul Bee' (Bud)	1973
B. 'Universe' (O'Reilly)	1974
B. 'Wanda' (Porter)	1977
B. 'Bowtique' (Nave)	1978
B. 'Murray Morrison' (Kusler)	1980
B. 'Buttercup' (Kartuz)	1981
B. 'Nokomis' (M. Lee)	1984
B. 'Withlacoochee' (Michelson)	1986
B. 'Christmas Candy' (Corwin)	1987

IN MEMORY

Betty Putnam, a long time member of Edna Stewart Pittsburgh Branch, passed away in early December. Our sympathy is extended to her husband Sam.

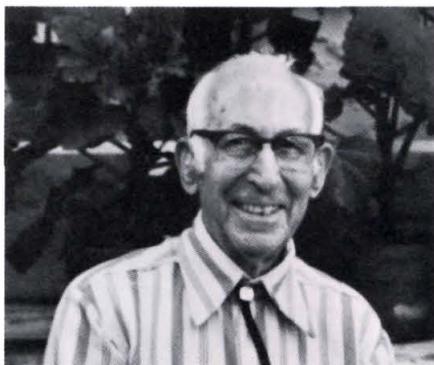


photo by Laura Schaefer White

Martin Boyd

The East Bay Branch will long remember its last surviving charter member **Martin Boyd**, who died in January at the age of 98 (almost 99).

A native of Leslie, Arkansas, where his parents were farmers in the Ozarks, he moved to Hanford, California around 1916, then Berkeley in 1927. He became acquainted with Frank Reinelt, who operated Velerle & Reinelt Nursery in Capitola in 1928. There he learned the techniques of hybridizing and proceeded to reproduce whole banks of flowers from a single cutting, experimenting in a rainbow of colors; his favorite was B. 'Pink Choice'.

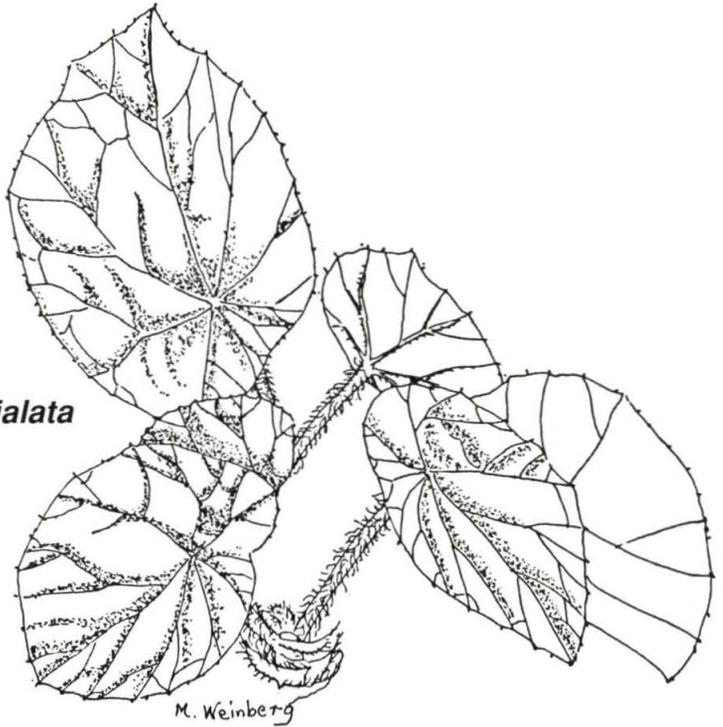
For the past eight years, Boyd has held open garden at his home in the Berkeley hills. There he nurtured more than 225 plants without additional help. The last showcase was in August, 1988.

The Oakland-East Bay Garden Center honored him as "Man of the Year" in 1988.

The East Bay Branch has established a revolving Martin Boyd Award in honor of its earliest member.

SPOTLIGHT ON:

Begonia quadrialata



by Mary Weinberg

B. quadrialata Warburg was discovered in the Congo, Africa, and described by Otto Warburg in 1895. It is in section *Scutobegonia*.

B. quadrialata is classified as a rhizomatous begonia with distinctive foliage, unusual surface and/or unusual coloring, with medium-sized leaves. Rhizomes are short and creeping, leaves are a dull olive green with a coppery sheen, edges have a rosy narrow margin, and are peltate, broadly ovate and strongly fimbriate, but otherwise glabrous except the veins on the underside. The petioles are red in color and pilose. The inflorescences bear one to three female and two to five male flowers. The fruits are elliptic to obovate with four nearly equal rounded or truncate wings. Flowers are orange-yellow in color; bloom time is spring-fall. It is considered a moderate bloomer.

Since the Congo has an equatorial climate it is constantly covered by warm maritime air masses, and variations in the

monthly and daily temperatures are less pronounced than in a tropical wet or dry region. Rainfall may be monsoon-like in nature.

The Congo is mainly tropical rain forest and wooded savannah with some swampy areas. The soil is red tropical lateritic to red-brown lateritic; the red color reflects the presence of iron oxides and other types of oxides in the soil. Temperatures do not fluctuate a great deal: the low is 75 degrees, with a high of 90 degrees. Humidity is high, due to the 40-80 inches of rain annually, and in some areas as much as 120 inches of rain fall each year.

My plant of *B. quadrialata* came from Dr. Doorenbos. It had two limp leaves attached to a small piece of rhizome. With prior knowledge as to the behavior of this begonia, which tends to be difficult, I decided to root it with the safest method, that is, by placing it in a plastic zip-lock bag with a mixture of moist shredded sphagnum moss and perlite.

IN THE NEWS...

I dipped the cuttings in a rooting compound, placed it in the sphagnum mix, closed the bag, and hung it on the end of a light fixture with a clothes pin; the light is dim but bright enough for rooting cuttings. I left *B. quadrialata* alone for about a month before checking to see if the moisture content in the bag was sufficient; it had new roots, and the two leaves looked perky. I removed it from the plastic bag a few weeks later and placed it in a small terrarium. It was not too long after it was transplanted that the first flowers appeared.

CULTURE

Light: *B. quadrialata* does very well with low light conditions. My plant sits to one side of the light fixture, and leaf color is very good with this light. If your plant is grown in natural light, a north window would be ideal.

Temperature: 70-75 degrees is fine.

Humidity: 70% humidity is necessary to keep this plant in good condition. Terrarium care is recommended.

Growing medium: *B. quadrialata* does well in a mixture of the long fiber sphagnum moss and perlite.

Water: When the terrarium has little or no moisture collected on its sides, feel the mix before proceeding. At this time a small amount of fertilizer may be added to the water.

Note: For the last two decades Africa has been experiencing severe drought conditions in the vast expanse below the Sahara Desert. This area includes the Congo and other habitats for so many of our lovely begonias. This cannot help but have a devastating effect on the begonia population of the future. Therefore propagation of the species is vital to their survival.

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

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

Our Authors!

Scott Hoover had an article in the January-February issue of **Fine Gardening** magazine. Entitled "Ancient Ideas in Landscape Art," the article included lovely photographs of gardens he has designed.

Don Miller had articles on begonias and growing them in the Southwest in both the March and April issues of **Gardens & More**. His accompanying photos are gorgeous - you've seen his work on several **Begonian** covers, including this issue.

Tovah Martin has written a book on growing houseplants in the Victorian era. [Once Upon a Windowsill](#) is available through Logee's Bookstore for \$29.95 plus \$3 for handling and postage. Watch for a review in our next issue.

Daniel Haseltine has sent a beautiful clipping, a photo from the [National Enquirer](#) of an oriental "carpet" made in China of 650,000 begonia flowers, and shipped to Brussels, Belgium for their annual flower exhibit. It measured 213' x 79' of breath-taking beauty!

The [New York Times](#), on March 11, noted that Flower Shows are "essentially democratic," in that even those with limited resources can produce beauty. The article went on to single out the display mounted by the **Knickerbocker Branch** and state that anyone:

"...can find inspiration at the booth sponsored by a branch of the American Begonia Society. .. even though the display is intended for children, heavy consumers of, for instance, avocados can discover how to turn today's pits into tomorrow's plants..."

Thanks to Tim Last for sending in the clipping.





JUDGES' CORNER

Michael Ludwig, Judging Department Director

An interesting question has come to me recently: "What do show chairpersons do?"

Speaking from experience, a better question would be: "What don't they do?"

The show chairman has been chosen to show off, to the public, the society's efforts through a display of their plants. He (or she) is the president of a group of people known as the show committee, and must organize the jobs that must be done: writing the schedule, inviting judges, arranging for people to sell plants and answer questions, and numerous other details. The chair must make sure that all other committees complete their required assignments.

A branch putting on its first show has a difficult time, because its members have no experience from which to draw. If there is a judge, or someone who has served on a show committee, in the group, that is the ideal person to ask, convince, volunteer, twist his arm, or bribe to take the job as show chairperson. His experience will be a resource that could set the ground work for many successful shows.

A committee should not, however, be content with past experiences and do everything a certain way "because it is always done that way." Yes, some things must be done the same way, but there is always room for improvement. Perhaps the schedule could be changed to accommodate in a more competitive way the plants that appear at the show. Floor plans might change to give a better flow of traffic through the show; or is there room around the sale areas for a demonstration or lecture to better serve the public?

The most important job of the chairman is to see that all parties involved in the show work together, and that communication between the branch and show committee remains constant. They work independently of each other, but are working toward the same goal: to show and educate the public about BEGONIAS and increase interest in

their branch, which in turn will help the American Begonia Society.

There is a booklet prepared by the ABS for staging shows, and it is available through the Judging Department: Guidelines for Shows and Conventions, by Thelma O'Reilly, is only \$2.50, and contains plenty of information. The new judging course also has a section on staging a show.

NOTICE TO ALL JUDGES

If you are planning to attend the convention in San Francisco please inform me so that when I send invitations to judge I will have a list of judges attending. If there is a large response I cannot promise you will be asked to judge, but your chance is better than if I don't hear from you. Please write to:

Michael Ludwig
7007 Mt. Vernon St.
Lemon Grove, CA 92045

NOTICE TO CLERKS AND FUTURE JUDGES

The new judges' course requires all new judges to have clerking experience before becoming a judge. If you wish to clerk at the convention, please write to me at the above address.



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CLAYTON M. KELLY SEED FUND

May-June 1989

Diana H. Gould, Seed Fund Director

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

COST

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

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

Costs of mailing in the U.S., Canada, or Mexico are: 1 to 12 packets of seed, 45c; 13 to 24 packets, 60c; 25-36 packets, \$1.05

Foreign mailing costs are: 1 to 12 packets of seeds, \$1.20; 13 to 24 packets, \$2; and 24-36 packets, \$3.

Two sets of planter dishes with free instructions in one mailer costs 62c. If ordered with seed and sent in one mailer, the cost of 2 sets of planter dishes and 1 to 12 packets is 75c; two sets of planter dishes and 13 to 24 packets is 92c; and 2 sets of planter dishes and 25 to 36 packets is \$1.27.

CALIFORNIA RESIDENTS PLEASE ADD 6 1/2% SALES TAX TO ALL ORDERS.

Please send your check or money order to:
MS Diana H. Gould
4860 Idaho Drive
Sacramento, CA 95823 USA

WANT LIST

Seeds! Tested seeds, especially of species. Write for list of criteria for donations.

Photos of plants you have raised from SF offerings.

Data: germination times, growth habits, etc. of plants you have raised from SF offerings.

Inventory: the Seed Fund listing is made up 6 weeks prior to the time you receive your **Begonian**; for a more current listing, send \$3.25 to handle copying & postage.

CORRECTION

In the March-April issue the Seed Fund offered B. U095/U186. This is my error. These are two different species; they are not synonymous.

NOTES ON THE SEEDS LISTED:

B. albo-picta and *B. albo-picta* var. *rosea* are both native to Brazil and are considered to be low-growing canes (under two feet at maturity) which make them ideal for cane-loving growers with limited space. When left unstaked, they can become outstanding in hanging containers. *B. albo-picta*'s flowers are greenish-white, intermediate and profuse, while flowers of *B. albo-picta* var. *rosea* are rose-pink and profuse.

In contrast, *B. angularis*, *B. corallina*, and *B. maculata* are all tall-growing canes (generally over four feet at maturity). These three are also natives of Brazil. *B. angularis* has sparse white flowers during winter-spring, while *B. maculata* has profuse white flowers. I'm sorry that I have no further data on *B. corallina*; we will all have to wait for seed growers to send in photos and data on this cane.

Our rhizomatous offerings for this issue include: B. U025, B. U067, B. U107, B. U 150, B. U159, *B. diadema*, *B. heracleifolia* var. *pyramidello*, and *B. tenuipila* C.D.C. var. *kennedyi* Ziesenhenné. (*B. tenuipila* is a form of *B. plebeja* Liebm. Please check the **Begonian**, April 1977, p. 96-103, for the background on this species.)

B. U025 is from the Philippines, has 5" to 7" ovate leaves, is listed as having yellow flowers, and was last offered in Nov-Dec '86.

B. U067 is from Nicaragua, has manicate leaves with rippled margins finely edged in red, shows large clusters of pink flowers in late winter and was previously offered in Nov-Dec '87.

B. U107 comes from Panama (see Unidentified Species List in this issue for description). B. U150 is native to the El Valle area of Panama and has pink flowers; it also has a strange growth habit in that the rhizome is more confined to a large lump rather than running. Petioles are reddish brown and thickly covered with white hairs about 1/4" in length. The first set of leaves are few, plain and glossy green with both sides devoid of markings, but the next set of leaves is entirely different, not as glossy, with black markings on the margins. Flowers are abundant, medium-sized and medium to pale pink in color.

B. U159 is from Panama, and has been offered in Jan-Feb. '86.

B. diadema has an erect rhizome, has fragrant, moderate pink flowers in spring and was previously offered in Jan-Feb '87.

B. heracleifolia var. *pyramidello* is quite velvety on the surface and has grey/green markings which commence at the petiole point and are only as wide as the veins until they reach the top of each parting, then the grey/green becomes wider. The underside of the leaf is maroon with light-green veins. A small hairy collar surrounds the maroon petioles at the leaf point, and this plant produces medium-pink profuse flowers. *B. tenuipila* is a medium leaved plant from Costa Rica with white flowers during winter and early spring.

Unless otherwise noted, the seeds have not been offered in the last three years.

For that matter, neither has the trailing-scandent selection of *B. radicans*, which has also been known as *procumbens*, *limminghei*, *limmingeana*. It is an easy grower in spite of its many confusing synonyms. Its natural habitat is Brazil, and it has profuse, deep coral flowers that bloom during the winter and early spring.

Also from Brazil are our thick-stemmed selections:

B. lindleyana is native to Guatemala and has white blooms in spring and summer.

B. petasitifolia is an easy grower with glossy, 5" x 6" leaves on red petioles and small white flowers.

B. guadensis is native to Panama and can be found growing at an elevation of approximately 2300'. It is possible that *B. guadensis* may have a common name of "Washington Street".

B. parilis is a versatile grower in that it offers a choice: to stake or not to stake. It does branch naturally, so early pinching will produce a fuller plant.

B. vitifolia has large, bare leaves and moderate white flowers during the winter and early spring. It can be pot-grown to a height in excess of 6 ft., or it can make a very exciting bonsai plant! The choice is yours.

As is the choice yours with our eight shrub selections:

B. hookeriana has bare, medium-sized leaves and pinkish-white flowers in February.

B. taiwaniana is an erect rhizomatous plant that can reach a mature height of 2 ft., with medium-sized leaves.



Masuo Yamada's *B. taiwaniana*, which supplied the seed offered in this issue. Thank you, Masuo!

B. convallariodora is native to Guatemala, has medium-sized, oval leaves and a possible mature height of 2 to 3 ft. Its floral fragrance has been compared with *Convallaria majalis*, a.k.a. "Lily of the Valley."

B. elatostematoides is a Philippine species that is lightly branched, has green leaves with red undersides, pink and white flowers, and achieves a possible mature height of 16" which makes it very desirable for those with limited space.

From Colombia, we offer *B. alnifolia*, a medium-sized, bare-leaved plant with white flowers, and *B. foliosa* var. *putzeysiana*, a small-sized, bare-leaved plant with white flowers.

B. glandulifera comes to us from Venezuela and has 5-6" leaves. It does require high humidity.

B. U249 was found growing in a garden, by a stone wall, exposed to full sun at 2600 ft. Leaf blades are pale green, asymmetrical, hairy; flowers are white.

B. U250, also from a private garden and growing in the sun at 2600 ft., has pale green succulent leaves 4" x 5", will grow to 4 ft., has white flowers.

I am sorry that I have no information to offer for *B. setosa*. Nor, for that matter, do I have any data to offer you on *B. crateris*, *B. merrittii*, and *B. mindorensis*.

Last, but by no means least, we offer our Begonia Companion Plant. This month's selection is *Platynerium superbum* or the "Elkhorn Fern," so named because of its tremendous spread (in excess of 5' at maturity). It requires high light, with NO direct sun, and it is an epiphyte that requires very little water. It can take up to six months to germinate.

The Seed Fund would like to thank Jackie Davis, Jan Goodwin, Kevin Handreck, and Masuo Yamada for their most generous donations to this issue's selections.



Unidentified species grown by Jan Goodwin. Insert at upper right is close-up of leaf. Seed offered Jan-Feb '89. Thank you, Jan.



Seed Fund plants grown in France by Catherine Bijault

CLAYTON M. KELLY SEED FUND

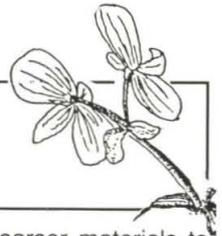
species seed
\$1 per packet

- B. albo-picta*
- B. albo-picta* var. *rosea*
- B. alnifolia*
- B. angularis*
- B. convallariodora*
- B. corallina*
- B. crateris*
- B. diadema*
- B. elatostematoides*
- B. foliosa* var. *putzeysiana*
- B. glandulifera*
- B. guadensis*
- B. heracleifolia* var. *pyramidello*
- B. hookeriana*
- B. lindleyana*
- B. maculata*
- B. merrittii*
- B. mindorensis*
- B. parilis*
- B. petasitifolia*
- B. radicans*
- B. setosa*
- B. taiwaniana*
- B. tenuipila*
- B. vitifolia*
- B. U025
- B. U067
- B. U107
- B. U150
- B. U159
- B. U249
- B. U250

Platynerium superbum

ROUND ROBIN NOTES

Margaret Coats, Round Robin Director



Some of the members of a Rex Robin are having a difficult time rooting leaf wedges. Mary McClelland (NE) suggested the following method, which proves successful for her. Mix up a little moss and perlite, put it in a plastic bag, and let it sit a while before using. Place a thin layer in a sweater box, put the wedges down, and you will soon have babies all over. Mary adds that rexes hate a change in temperature - this will make them go dormant. She tries to keep the temperature about the same all year around. Also, putting rexes in terrariums, under lights, sometimes keeps them from going dormant. Doug Hahn (OH) finds propagating rexes easier from leaf cuttings and wedges. He thinks the key is uniform warmth, so he uses heating cables underneath his sweater boxes.

I'm sure you have a favorite way to propagate, but if you are pressed for space, here's a good way you might want to try. The tip comes from Kit Jeans Mounger (FL) in a Robin on this subject. She places about 3/4 cup of damp Pro-Mix in a ziplock bag and places one cutting in. The bag is then hung from a "clothesline," unsealed and partially open. You might even clip the bag to your light stand with a clothespin.

The Research Robin has some "movers and shakers" and is full of ideas of the future. Kevin Handreck (AUS) gave his report on the different peats imported into Australia, including Canadian, Irish, German and Russian. According to Kevin: "They do vary considerably in physical properties - their fineness or coarseness - and somewhat in their chemical properties. They are all deficient in copper if they have not been amended and some are rather low in iron. Normal feeding with slow release fertilizers or with liquids will provide everything else. It is variation in physical properties that causes the most problems. The fine peats need

higher proportions of coarser materials to ensure that the amount of air available to plant roots in them is adequate. With them, a coarser grade of perlite or a higher proportion of it is necessary as compared to the more open and lighter colored peats. We generally find that Canadian peats are consistently of high quality and are good, open white peats." We can expect other equally interesting reports in the future from this group of growers.

In one of the odd/rare/unusual groups, a discussion of *B. bogneri* brought out some interesting facts on propagating this odd begonia. Bill Voss (VA) put his 2" pot of it into a plastic container in which a cake had come. The bottom has a honeycomb pattern, so he sprinkled water on it. Several leaves dropped off due to bumping over, and he noticed they had touched the water and tiny roots were forming. He took these leaves and potted them in wet sphagnum in a terrarium under lights, and within weeks he noticed the start of new plant leaves.

I doubt if anyone experiments quite as much as Houston Knight (CA). If we were all so inclined, no telling how much farther down the road we would be in growing our favorite plants. This new experiment of his comes from a Propagation Robin. Houston has a friend who roots leaves in water with fantastic results, so he got a bunch of test tubes to try his luck. The idea is to re-supply the water by adding peroxide for the needed oxygen. He promises everyone a report if anything comes of the idea.

Mabel Corwin (CA) likes to use perlite in sweater boxes for her rex leaves, and waters with distilled water. She finds this method very successful for her, except in very hot weather. However, lately she has been putting one inch of mix in the bottom of her sweater boxes, then about one inch of per-

lite. She has found the roots go down into the mix and she gets a better plant faster.

Hats off to the Mae Blanton Branch of ABS! Glennis Crouch (TX) told the other members of a Greenhouse Robin about her branch's "Gala Bazaar" held in November. Besides a good variety of begonias, they sold other plants, handwork, delicious baked goods, and cookbooks the branch had published. They made over \$900.00 for their treasury. How about that!

Pauline Chambers (FL) has this super tip for successfully wintering your semperflorens. Water and feed lightly, and never cut too much foliage off, as the plants need all the foliage possible to utilize the sun's rays, which keep the roots healthy and growing. Before she learned this trick, she confessed to losing more in winter by overpruning than from the cold weather.

Frances Hurley (IL) is convinced the most important factor in successfully growing begonias (or any plant) is adequate light. She says her cane begonias grow in the west window, as close to the window pane as possible, unless the temperature gets near zero at night; then she takes them out of the window for the night. In summer, they go outside to a semi-sunny location, which she finds is a tonic in itself. Her rhizomatous and rexes are grown in her basement under lights, as they aren't as cold tolerant and seem to need an evenly warm environment. All her plants receive a mild solution of fertilizer year around, as she uses a soilless mix and finds the plants depend on this feeding.

Another member of the Midwest Growers Robin comes up with an excellent idea for cat lovers. Virginia Hamann (IA) was having problems with her cats digging in her begonias until she started putting steel wool in their favorite pots. No more problem now!

In answer to a question by one of the members of the Southwest Growers group as to how to save pollen, Mae Blanton (TX) explained how she does it. She puts the male

flowers up for a day so they can dry. Utilizing small plastic boxes with six compartments, she nests cotton in each compartment and places the male flower there, making sure to label the compartment with its name. To the inside of the box she tapes a small packet of dessicant which came in a bottle of vitamins. Mae said a small packet of powdered milk will work also. She then places the plastic boxes in ziplock bags and stores them in the refrigerator. Experience has taught her that some species survive and remain viable longer than others.

*Make friends while learning about begonias!
To join the fun, join a Round Robin. Find out more about the flights (there are over 60, on a wide variety of begonia-related topics) from Round Robin Director*

Margaret Coats
11203 Cedar Elm
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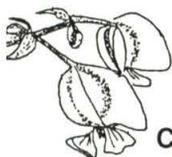
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UPDATES, ADDITIONS, CORRECTIONS

New President of Rubidoux Branch is
Sonny Wilder, 3941 5th St., Riverside, CA
92501.

If you wondered, while reading the description of B. 'Frilly Pink' on page 47 of the March-April issue, why the flowers were described as "blazing orange," it's because some lines were left out. The paragraph should have read,

"B. 'Frilly Pink' because of its frilled, luscious pink flowers, and its treasured memories of my marvelous trip to Costa Rica."

That paragraph should have been followed by, "B. 'Tropic Fire' because of its intriguing semi-double, usually fasciated, blazing orange flowers, and its colorful foliage of green, bronze and orange-red when grown in bright light."

The error crept in during editing. My apologies to author Thelma O'Reilly.

Thelma O'Reilly writes to say that *B. tenuipila*, pictured on the back cover of the March-April issue, is a synonym for *B. plebeja* Liebmann var. *plebeja*.

We have a mystery. In the January-February issue, *B. acetosa* was featured in the Begonia Spotlight. It now appears that the plant artist/author Mary Weinberg grew may have been mislabeled. Mary writes that her plant does not match the original description of *B. acetosa*, and that there is doubt as to the identity of this begonia. Mary, Jack Golding, and Thelma O'Reilly are attempting to clear this up, and will let us know how the question is resolved.

Jack Golding has been tracking *Begonia acetosa* through the literature. There are descriptions and photographs of their habit and leaves, but not of the flowers. To make a positive identification of a species it is necessary to have detailed knowledge of the flowers. If you have a *Begonia* that is labeled

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acetosa, *itaguassuensis* or *costello* please send a photo, sketch, or detailed description of the male and female flowers direct to Jack Golding, 47 Clinton Ave., Kearny, NJ 07032.

MINUTES OF THE BOARD OF DIRECTORS' MEETING

March 5, 1989

The March 9, 1989 meeting of the Board of Directors of the American Begonia Society, held at the home of Michael and Sharon Ludwig, 7007 Mt. Vernon Ave., Lemon Grove CA was called to order at 10:30 A.M. by President Arlene Davis. Aims and Purposes were read by Michael Ludwig. Minutes of the Dec. 4, 1988 meeting were corrected to read (Treasurer's Report) "checking accounts, savings accounts," and were approved as corrected.

Treasurer's Report showed a balance as of Feb. 28, 1989 of \$18,539.06 in checking, \$37,739.33 in savings, for a total of \$56,278.39.

Membership reports 81 Life Members, 124 institutions, and 1360 dues paying members. Membership is up slightly. We have two new foreign members: one from USSR, one from Lithuania. A group of members in France is working on becoming a Branch of ABS.

Correspondence was read and commented on. Seed Fund reported \$585.14 in gross receipts, and sent a check for \$402.32. Diana Gould has been very busy corresponding with Botanic Gardens and foreign sources to set up seed exchanges.

Conservation: Letters were received from Scott Hoover requesting donations for a research project on begonia stomata and also a collecting trip to S.E. Asia in Jan-Feb. 1990. Board moved to forgo donation to the begonia stomata research project, but send a \$500 donation for the S.E. Asia trip with the firm stipulation that all begonia seed collected on this expedition by any expedition member shall be sent to Thelma O'Reilly of the Nomenclature Dept. for distribution and testing. Martin Johnson requested that A.B.S. handle fund raising for the Conservation Committee. It was decided that it is the duty of the Conservation Committee to send out letters to the Branches giving particulars about specific trips and soliciting funds. Mailing labels may be obtained from John Ingles.**members and branches who wish to donate funds should send checks, indicating where the donation is to go, directly to the treasurer for proper recording and handling. Such donations are tax deductible.**

Judging: The judging course is progressing. Another section has been completed. Board moved that the Convention Planning booklets be transferred from the Bookstore to the Judging Dept. Any Branch planning a judged show may request the booklet from Michael Ludwig. The booklet will be updated in the future.

Historian Norma Pfrunder is still requesting Branch newsletters.

Members-at-Large: 51 MAL newsletters #13 were sent out. South Australia is now represented on the MAL Committee.

Nomenclature Dept. has been very active. Two applications to register new begonias are being processed. The Dept. is correcting Bob Hamm's list of begonia names, and reviewing the list of begonia names John Ingles is working on. Three new U#s have been assigned; 249, 250, 251. The Dept. mailed the **Begonian** editor a new list for U#s 101-120.

Convention: The first mailing will be sent to Branches immediately. The second mailing will be sent out April 1 to the members. The convention will be held at the Clarion Hotel, San Francisco, CA Aug. 3-6. Rooms will be \$65.

John Howell has submitted a proposed statement of conservation goals and code of conduct for growers and collectors. It has been sent to Scott Hoover, Martin Johnson, Charles Jaros, and Michael Ludwig for comments.

New Business: President appointed John Ingles, Jr., Houston Knight, and Joy Porter as Nominating Committee.

The Astro Branch has reorganized and sent copies of their constitution, by-laws, membership, and officers. The Board was pleased to accept them as a Branch on receiving their charter. Board approved printing of the new A.B.S. membership cards.

Branch reports were given by Palomar, San Miguel, Rubidoux, Orange County, Whittier, San Gabriel, Garden Grove, Westchester, and Alfred D. Robinson. Details of their upcoming shows may be read in **The Begonian**. Palomar Branch has started a project to set seeds for the Seed Fund, and encourages other Branches to do the same.

Next meeting will be held on Saturday, June 3, 1:00 P. M. at the home of the Ziesenhennes, 1130 N. Milpas, Santa Barbara, CA. Meeting adjourned at 1:30 P.M.

Respectfully submitted,

Jeannette Gilbertson for Ingeborg Foo



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