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The Cover: A horned fruit *Begonia* was photographed by Scott Hoover in the South American rainforest during his collecting trip in 1984. The *Begonia* was assigned U-number, U136, pending identification. For a report on the trip and additional views of this rare species, see page 28.

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MEMBERS-AT-LARGE NEWSLETTER

The second number will be ready for mailing on May 10, 1985. It will include a report on the members-at-large meeting at the Miami Convention. See the Convention program for time and location for the meeting. Let's have a good turnout!

If you did not request the first issue, it is still available. Include a self-addressed, stamped envelope for each issue.

Thelma O'Reilly
10942 Sunray Place
La Mesa, CA 92041

REGIONAL ORGANIZATIONS

Both the upper midwest and the eastern coast are contacting members to form regional organizations for the purpose of holding regional meetings and shows. If you have not been contacted and would be interested in activities, you are urged to contact the organizer in your area:

Daniel Haseltine
6950 West Nelson
Chicago, IL 60634

Barbara Berg
16 Highview Terr.
New Canaan, CT 06840

Mildred Thompson
P.O. Drawer PP
Southampton, NY 11968

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When a member fails to send a new address soon enough, the ABS pays 25 cents for the post office notification of the new address. The copy itself is trashed. The membership secretary has to send a new copy and it takes 37 or 54 cents postage plus envelope, not to mention the time.

Therefore, the board has instituted a charge to cover the costs of a replacement issue where the member fails to guarantee forwarding costs and does not notify the ABS office soon enough to intervene in the routine postal action. The replacement cost is \$2.85.

MEMBER REPLIES

The president, secretary, editor, and various board members received letters and other communications from members and branches in reply to Facts and Figures (page 3, last issue). Each letter is being considered very carefully, and shortly there will be action reflecting the majority of the opinions.

There were numerous good suggestions, and the officers thank the persons who wrote to them to let them know how they felt. It seems unlikely that all the letters can be answered individually and with the thoroughness they deserve. It really is helpful to know what the members consider important, and we appreciate the fact that you took time to respond at length.

SUMMARY OF 1984 SOUTH AMERICAN COLLECTING EXPEDITION

W. Scott Hoover

In early January 1984, a research assistance friend and I flew to Bogota, Colombia, to spend two weeks in this country and six weeks in Ecuador in order to carry out botanical work allied with the conservation and preservation of tropical rainforests. Ecuador was chosen as a location for field work because the National Academy of Sciences (1980) considers parts of this country's forests to be among the most critically threatened in the world.

Several different phases of work were involved, all pertinent to rainforest conservation. These included collecting seed material and herbarium specimens from endangered populations of *Begonia*, photographing species of *Begonia* in their natural habitat, obtaining additional epidermal peels from populations to further ecological research on *Begonia* stomata, and conducting a remote exploratory penetration into northwestern Ecuador for general botanical collecting and the regular field work on *Begonia*. Each of these separate phases will be described in more detail. Fig. 1 indicates the geographical locations where this field work was carried out; Table 1 summarizes the collections made.

Collection of Seed Material and Pressed Specimens

From a conservation standpoint, collecting seed material in the wild and thus introducing germplasm into cultivation is very important because natural populations are being destroyed so rapidly that plant species are becoming extinct every day. This applies not only to species of *Begonia* but to all flowering plants. In Colombia, the sparsity of *Begonia* populations was particularly noticeable. We would drive

for hours on end during the two weeks we spent there and find only small populations tucked into residual patches of forest around streams flowing through steep gorges adjacent to the roadside. Statistically, 32% of Colombia's tropical rainforests remain intact; the remaining 68% have been converted to other uses by man (N.A.S. 1980). All the original tropical forest has been stripped off and now the land is under various kinds of agriculture or secondary forest. Everywhere in Colombia that we collected was like this except west of Popayan, around the town of Vient de Julio. The mountain areas we visited in Ecuador had better forest, but signs of encroachment were evident; 60% of Ecuadorian forests are still intact; the other 40% have been converted (N.A.S. 1980). The Pacific coastal forests in Ecuador are virtually eliminated except in the extreme northwest, bordering Colombia.

In terms of the availability of seed material, 39% of the *Begonia* populations observed had seed we were justified in collecting. The other populations either were not in flower at all, not in a fruiting and seed stage of development, or in few instances the populations were so small that it was not justifiable from a conservation perspective to collect the minimal seed that was available. Seed was obtained from 16 species in Colombia and from 18 in Ecuador. Of this total amount of seed, an estimated 65% represent species that are likely new to cultivation.

The horticultural requirements of many of the species collected are likely to be very different from the *Begonia* usually grown. All species in the section *Casparya* were collected at elevations above 5,000 feet, averaging around 7,000 where temperatures would go to the low 50s and high 40s at night. Often the habitats were very moist or wet. Very likely much cooler germinating temperatures will be required

W. Scott Hoover is cochairman of the ABS Conservation Committee. He received the ABS Gray Award in 1984. He lives at 718 Henderson Rd., Williamstown, MA 01267.

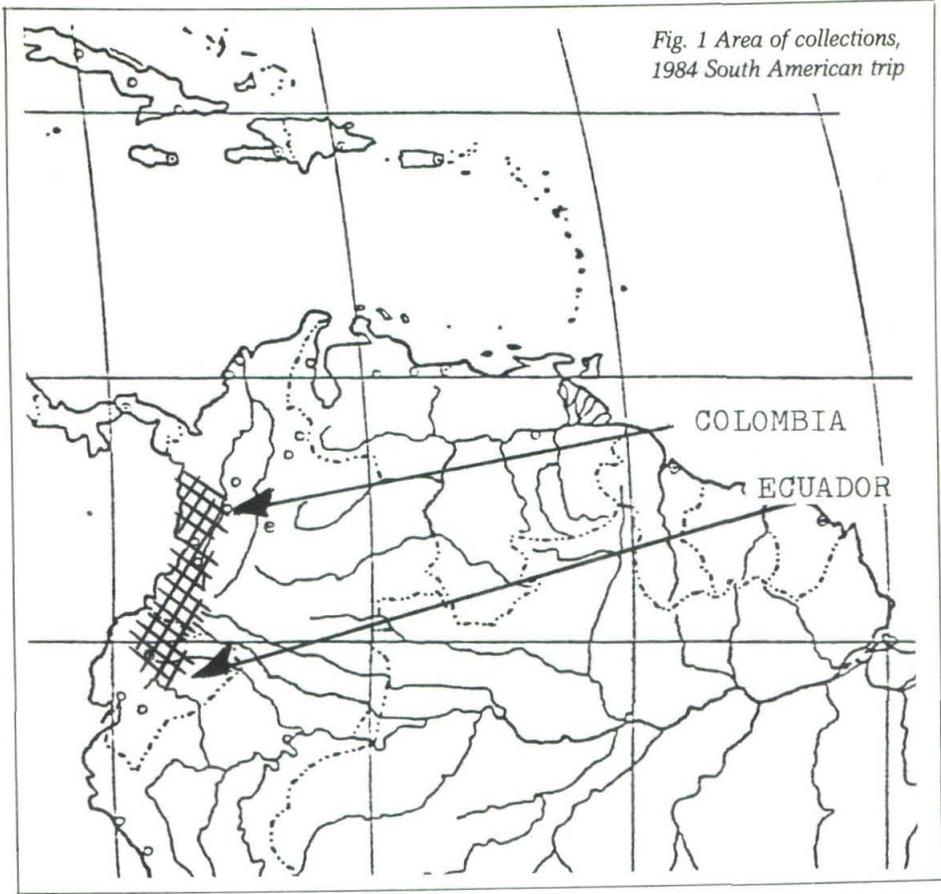


TABLE 1
SUMMARY OF 1984 COLLECTIONS FROM COLOMBIA AND ECUADOR

Approximate number of <i>Begonia</i> herbarium collections and duplicates	182
Number of species observed	40
Number of populations sampled for epidermal peels	88
Approximate number of epidermal peels obtained	850
Number of <i>Begonia</i> photographs (habitat, habit, closeups)	162
Number of photographs of rainforest destruction	28
Number of populations collected for seed in Colombia	16
Possible new introductions from Colombia	9
Number of populations collected for seed in Ecuador	18
Possible new introductions from Ecuador	13
Possible new species collected	10



*Germinating seed pod on **Begonia** U136 in the rainforest.*

for these horned fruit species, and terrarium culture may be required for mature plants.

Pressed specimens were collected for the Universidad Nacional in Bogota, Colombia, Universidad Catolica in Quito, Ecuador, with duplicate specimens distributed to Harvard University and the Missouri Botanical Garden. Collecting herbarium specimens is of great importance to our conservation objectives because it is through these collections that systematic botanists describe species and determine the overall richness of the tropical rainforests that are so rapidly disappearing. When plant species become extinct there will at least be a pressed specimen substantiating the existence of the species.

Photographic Documentation of *Begonia*

The cover of this issue of the *Begonian* illustrates one of several likely new species we collected in the section *Casparya*, along the road from Quito to Santo Domingo de Los Colorados on the west slopes of the Andes in Ecuador. This was the first time I ever observed seedlings germinating while the seed pod still remained on the plant.

The photographic documentation of rainforest plants represents an important

conservation effort because, again, a record is provided of a particular species and its habitat in a specific time and space. In several years that habitat, and the plants in that habitat, may no longer exist; the plant populations and the entire habitat could be destroyed. Photographs documenting various stages of rainforest destruction were taken as well as photographs of rainforest that was still untouched. Clearly, photographing wild rainforest is a very important conservation objective, and documenting forest destruction indicates how severe the problem truly is.

Ecological Research on *Begonia* Stomata

For several years I have been collecting epidermal peels from *Begonia* populations in order to study the variation of stomata and stomatal clusters, both within and between species and populations. The ecological response of stomata to varying habitats is of particular interest, as is determining the functional significance of clusters.

In terms of a conservation perspective, ecological research such as this is limited, again, by the availability of the habitats. Once the habitats and plants are destroyed, the possibility for conducting scientific research of any kind is lost. The curious aspect about *Begonia* stomata is that their occurrence in clusters is a very unusual characteristic among all plants.

The last three expeditions have provided me with approximately 5,000 epidermal peels. This year represents the first time for several of my papers to be submitted and published in professional journals. Once research papers are published in journals my qualifications as a scientist will become more widely known and may afford more opportunities as a tropical biologist.

Exploratory Work in a Remote Area of Northwestern Ecuador

The last remaining section of natural tropical rainforest on the Pacific lowlands of Ecuador is found in the northwest corner, bordering Colombia. The National



Two views of the flower of *Begonia* U136. Photos by S. Hoover

Academy of Sciences (1980) considers these Pacific coastal forests of Ecuador to be among the most critically threatened in the world. As mentioned earlier, this was the reason for choosing Ecuador as an area in which to conduct a collecting expedition.

Exploration serves a very valuable function for conservation and preservation of tropical rainforest because normally forest farmers, loggers, or cattle farmers gain access to wild areas before they can be explored biologically. The exploratory work carried out on this trip represents the first botanical collections to be made from the Catholic Mission at San Marcos and extending to Toban Donoso. These areas were reached by foot starting at the town of Maldonado in the province of Carchi. Totally, we hiked 235 kms into Toban Donoso and back. All the activities involving *Begonia* were carried out and general collecting was accomplished. General Collections, which amounted to a modest quantity of 275, were given to the Universidad de Católica and sold to the Missouri Botanical Garden. The west slope of the Andes in Ecuador are considered to be the most diverse rainforest in the world (Gentry 1982). Thus, it is very important biologically to collect in this area before it is destroyed along with the rest of the Pacific lowlands of Ecuador.

Archaeological and Anthropological Observations

From the Maldonado area to an area past San Marcos a large archaeological region was observed. A Peace Corps volunteer we met in Maldonado pointed out a number of earth mounds near the school, Pina Blanca, along the trail to San Marcos, which likely represents the work of some ancient people who lived in this area. Associated with these mounds were two large stone blocks weighing several tons each, exhibiting what appeared to us to be sculptural square carvings. Also, and perhaps of the greatest significance of all, was the presence of ancient stone grinding bowls. The present people living around Maldonado find broken pieces of these bowls in stream beds or washed out on hill slopes. In the southwestern United States stone grinding bowls such as these are called metates. The distribution of these metates was estimated to cover an area of approximately 150 square miles, ranging from the mountains east of Maldonado into the region where the Coiquer Indians lived. The presence and widespread distribution of these metates would seem to indicate that an earlier people occupied a fairly large area in northwestern Ecuador. It is possible that this may be the first archaeological report of this region, although it will

be necessary to contact appropriate specialists at the American Museum of Natural History in New York and elsewhere to determine if the site has been discovered before.

Summary

Overall, this expedition went very well from a logistical standpoint. From the standpoint of rainforest destruction, the disaster continues, and the effect this will have on mankind is just beginning to be felt. The tremors of climatic change may just be beginning; the approach to possibly the second largest mass extinction of organisms in the history of life on earth continues. Mankind watches while his world slowly crumbles.

What is man's destiny to be when earth is vacated of much of the life it previously had? We, as members of the A.B.S., have more responsibility than simply appreciating *Begonia*; our conservation efforts are important. Each of us as an individual can only make a small contribution, but together we can achieve a recognizable goal, namely: preserving *Begonia* and supporting collecting expeditions. Within several years, if not right now, for particular ones your plants may be the only survivors of an entire species because the wild species are becoming extinct day by day. Let us continue making our contribution to a better world by supporting conservation and preservation of tropical rainforests.

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Buxton, Greater Chicago, Mae Blanton, Palomar, Sacramento, Santa Barbara, and Westchester. The members of these branches who contributed personally I thank very much. I appreciate the individuals of the A.B.S. who made donations to this expedition, including the following: Chuck Anderson, Karen Bartholomew, Howard Berg, Mabel Corwin, Joan Coulat, George Fix, Dan Hazeltine, Martin Johnson, James Jones, Joy Martin, Thelma O'Reilly, Barbara Philips, and Rudy Ziesenhenné. Also, I am very honored to have received the 1984 Eva Kenworthy Gray award. Had it not been for all the generous people contributing to these last several expeditions, I would not have had the opportunity to carry them out and thus receive the award.

This report was delayed, pending available cover space for this very rare species.

Seeds collected from this expedition were offered through the Seed Fund and plants should be available to limited extent at sales during the year. Information will be forthcoming through Seed Fund and U-number Project. Those who can furnish data should contact any of these chairmen.

RAINFOREST HABITAT

If you are interested in reading more about the environmental conditions of the rainforest, see "The Canopy of the Tropical Rain Forest" by Donald R. Perry in *Scientific American Magazine*, Nov. 1984, pages 138-147. It should be available at your local library.

From the Nomenclature Department:

A paper by Kathleen Burt-Utley describing a new species, *Begonia xilitlensis*, appeared in *Brittonia* 36(3) 1984, pp 232-235 (New York Botanical Garden, Bronx, NY 10458). The paper also discusses *Begonia glandulosa* and related species and *Begonia stigmosa*.

Pat Maley

Like many newcomers to the world of begonias, what first caught my eye were the colorful, exotic looking leaves of Rex begonias. Led by them into the world of begonias, my eyes opened in wonder at the myriad varieties of begonias of all shapes and sizes. Through the years I have tried nearly all types and have found most of them to be a joy to grow.

After several years of growing begonias, however, one naturally comes to consider one group or the other as his or her favorites. My own favorites are the cane begonias. Why canes? Canes have proven themselves to me. They are the toughest, the survivors; they come back again and again from the worst of conditions. They are, in general, the best survivors of any sort of trauma; extremes of heat and cold, the shock of a major move, neglect and abuse. Cane begonias, with their long season of bloom, give more "pleasure per plant" than any other type.

And, there is a cane begonia for anyone's growing conditions. If you have the space and climate, the magnificence of a six foot tall superba cane, dripping with gigantic clusters of bloom, cannot be denied. Canes, however, do come in all sizes: the tall growers, medium sized 2 to 4 ft. varieties, low growing and spreading varieties. Thanks mainly to the hybridizing genius of Patrick Worley, we also have an ever increasing selection of miniature canes, especially developed for those with minimal space and for light garden growers.

Cane begonias are also versatile. They can be adapted to your own particular spaces and needs. They can be grown as tall, sturdy uprights or be pinched and

Pat Maley lives at 7384 White Oak Drive, Placerville, CA 95667. At last count she had at least eighty different cane begonias, all growing without benefit of a heated greenhouse.



Begonia 'Lucerna' grown and photographed by Ayako Yamamoto.

pruned into spreading mounds of color. Many make outstanding hanging baskets or wall pocket specimens. They are excellent candidates for in-ground plantings in mild climates. Just because a particular cane is a superba type, a person need not feel obligated to grow it in its usual tall-growing manner. My friend Ayako Yamamoto, of Japan, once sent me a beautiful photo of *Begonia 'Lucerna'* as a magnificent hanging basket plant, dripping with blooms!

If you are a relative beginner at begonias, try some canes. The hardier varieties are far more tolerant of "learning mistakes" than rhizomatous, and generally more quickly form a good sized plant. There are, of course, as in any group of begonias, varieties that are more difficult, slow growing, or need special conditions. The majority of canes, however, are adaptable, easy growing, and give great pleasure with little work. No other type of begonia can offer such variety of size along with a range of bloom time lasting nearly year round in many cases.

Most cane begonias have erect, smooth bamboolike stems with swollen nodes. Spaces between the nodes are generally long. Many canelike begonias do not branch readily, but they do send up new canes from the base of the plant. Newer hybrids seem to tend more toward branching, but even the nonbranching varieties can be grown into full, shapely plants.

Obviously, cane begonias are particularly admired and enjoyed for their spectacular inflorescences, oftentimes measuring 8 to 10 inches across in pendulous clusters containing dozens of long-lasting, often fragrant blooms. Their colors vary from white to pink, salmon, orange, red and rose. Many are everblooming or nearly so. Others offer seasonal blooms over many weeks or months. Even the few which are sporadic bloomers oftentimes have beautiful foliage which compensates for the lesser amount of bloom.

Culture of canes is similar to most begonias, although this group of begonias generally requires more light than most other types. Lacking sufficient light, cane stems will be leggy and weak, foliage will show poor color and substance, and bloom will be poor. Most canes need at least a few



Pruning cane begonias is not for the faint-hearted. Results are rewarding.

hours of direct sun, generally in the early morning or late afternoon, and plenty of filtered sunlight the rest of the day. A bit of growing experience soon points out which canes need less light, which need more. They tolerate a wide range of temperatures, but prefer a range between 55 and 75 degrees. They are the least demanding about humidity of any begonias.

Although moderate pruning and pinching is necessary through the year to produce well-shaped plants, late winter and early spring are the preferred times for more severe pruning. Hard pruning is, especially for newer growers, one of the most difficult things to make oneself do, for it always seems so drastic. The exact best time to prune will vary with your location and climate. In Southern California coastal areas and other basically warm winter areas, pruning is often done quite early, in November, December or January, as spring growth in these areas starts early. In colder areas, it is best to wait until late winter or early spring, so that new growth, which is stimulated by pruning, will not be damaged by cold.

Most young plants under two years old should not be heavily pruned. Light pruning or tip pinching is generally all they need to shape them into well grown plants. Older plants, however, usually benefit from more severe pruning. Newer basal shoots from the previous season should not be cut unless they are too tall, then should only be tip-pruned. Slightly older canes can be cut back to three or four nodes above the soil. On a vigorously growing plant, older, previously pruned, and branched canes should be cut out entirely to the soil line. This will encourage much more new growth from the base.

At this point your plant is not going to be exciting to look at; a few nearly bare canes of various heights. But look more closely. Note those tiny little tips of new growth barely showing at the nodes of those bare canes. Each one of those will produce new, sturdy canes and a fuller, more beautiful plant will result.

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*=photo or illustration
f=facing page number

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BEGONIA STARS ON BISCAYNE BAY/Time to sign in.

Romantic! Exotic! Tropical! The Miami Branch promises that the 53rd Annual American Begonia Society Convention and Show will be that and a whole lot more.

Hugh McLauchlan, President of the Scottish Begonia Society, will talk about "Begonias and the Scottish Begonia Society," one of the many events of the convention that will provide insight into the art of begonia growing.

Two days of seminars will also further the effort to provide more information about begonias under the capable direction of such speakers and leaders as Carrie Karegeannes, Pat Maley, Thelma O'Reilly, Joy Martin Logee, Millie and Ed Thompson, Wanda Macnair, James McArthur, Gene Joyner, and Mrs. Henry Bassing. Ralph Beaudry, naturalist for the

city of Miami, promises to tell all how *not* to grow a begonia, too.

April is usually the best month for viewing begonias in southern Florida and the show promises to be a treat for all. As an enticement to entrants in the competition, the committee has arranged for hand-painted china trophies.

A convention is always a means to see old friends and make new ones, to see familiar sights and explore new paths, and to review and learn new things about *Begonia*.

A convention packet has been mailed to each ABS member. Peruse the contents carefully and plan to take part in all the events that interest you. If you did not receive one, you may write for it to Convention Chairman Charles Jaros

FRANCIS MICHELSON — ABS PIONEER

Thelma O'Reilly

The pursuit of begonia information can be rewarding as well as frustrating. Now, I would like to share with you one of my rewards while searching for information during my term as co-director of the ABS Nomenclature Department.

Through correspondence that started in 1979 when I received a request for registration applications, I became friends with Francis Michelson, an ABS pioneer in the southeastern part of our country. Members from the East, especially the Florida area, know of his dedication to begonias, the Miami Branch, and the ABS. Since 1979 I have been aware of his deep interest in growing and hybridizing but only discovered recently how long ago this interest began for Francis and his wife, Helen.

Francis was born in Orlando, Florida in 1911. Helen was born in Indian Orchard, Massachusetts. They were married in New York and moved to Daytona Beach in 1932, later moving to Miami. The twenty-four begonias Helen carried south included *B. heracleifolia* 'Sunderbruchii'.

In February 1937, the weatherman predicted morning frost and recommended the covering of all plants. Francis disagreed with the weatherman so the plants were left unprotected. The following morning a sad sight met their eyes; all the begonias looked like "cooked mush." Tearfully, Helen cut the rhizomes in small pieces as for cooking potatoes and Francis planted them in gallon cans filled with rotted leaf-mold. They all survived, growing into strong plants. Francis says, "It seemed as if all the eyes on the rhizomes sprouted. That's what caused my deep interest in collecting begonias."

Around 1939 Francis and Helen ordered their first begonias from A. D. Robinson's Begonia Gardens, Point Loma, San Diego. Francis comments, "What a difference in prices then and now."

Sometime later a local nurseryman, Ray Rosengren, told them about Gertrude Peterson, who was in charge of the



Helen and Francis Michelson

Simpson Memorial Gardens. This was the meeting place for all the local garden clubs. Francis says, "Mrs. Peterson contacted a few people who got in touch with a few more people who liked begonias, and one of these was Mrs. Nickolson of Miami Shores. We met at her home for the first time. She wrote the ABS about forming a branch and was told ten members were necessary to obtain a charter. Our group already met this requirement so the Miami Branch of the ABS was formed and approved by the ABS August 31, 1946." The following is quoted from *The Begonian*, September 1946:

One of our fondest hopes and dreams have come true. A new Branch Society in Miami, FL., was organized July 22, 1946, at the home of Mrs. Nina Nickolson. Mrs. Lucille Kendrick was appointed temporary chairman and Mrs. Nickolson as secretary. On August 20th they will conduct their second meeting, and at that time will mail us a list of their officers and a set of By-Laws and Constitution.

Mrs. Kendrick tells us that the members are very enthusiastic about this branch society. She reminds us that their climate and soil conditions are very different from our western states.

Francis recalls, "In the past I belonged to three Round Robins. One was an All-Florida Robin, the second had members all over the United States, the third was for



Begonia 'Withlacoochee,' plant grown by Patti Patterson, photo by Rick Patterson, 1984 Palm Beach Show red ribbon winner.

advanced growers and hybridizers. The last one had members from New Zealand, England, Australia and United States. I remember Carrie Karegeannes was Round Robin Director for some of the Robins."

In 1956 Francis made his first begonia cross, *B. dichotoma* x *B. epipsila*. Since then he has created many excellent hybrids and earned the reputation of a respected begonia hybridizer. Between 1971 and 1979 Francis registered seventeen cultivars. In addition, he created several other interesting begonias including one of my favorites, *B. 'Panasoffkee'*. This beauty is a seedling of an unidentified scandent type Brazilian species obtained from the ABS Seed Fund.

Favorite registered cultivars include *B. 'Tequesta'* (syn. 'Acicon') #766, (*B. acida* x

Unknown); *B. 'Fernan Vell'* #525, (*B. fernando costae* x *olsoniae*); and the beautiful *B. 'Withlacoohee'* #765, (*B. thelmae* : U049). This is an incorrect spelling for "Withlacoochee", a river in Florida. (I hope Francis will give the Nomenclature Department permission to correct this spelling error.)

While talked to Francis recently, I asked which were his favorite cultivars. Without hesitation he answered, "Withlacoochee and Panasoffkee." Both of these cultivars are eye-catching, trailing plants, showing off their beauty when hanging high. At times the trailing stems of *B. 'Panasoffkee'* measure six feet and stems of *B. 'Withlacoohee'* reach four feet. Most beautiful foliage is obtained by a shady position for *B. 'Panasoffkee'* while *B. 'Withlacoohee'* demands about 65% shade (quite bright light in Southern California) to obtain the lush red pubescence and dark leaf with light green veining inherited from *B. thelmae*. This latter begonia, a popular blue ribbon winner, is easy to grow. *B. 'Panasoffkee'* is "sassy," reminiscent of the growing habit of *B. thelmae*. In fact, everytime I look at my plant I wonder if *B. thelmae* "courted" an unidentified Brazilian species at some point in time.

We should all be grateful to Francis for his important contributions. He purchased unidentified seed from the ABS Seed Fund, raised plants and shared them, kept them in cultivation for many years, and used them in his hybridizing program for the enjoyment of many members. Several of the begonias in my research have led back to unidentified species in his collection. I hope these Begonia will be identified or named.

The "stars" I am looking forward to seeing at Biscayne Bay are the Michelsons. Francis and I planned a date at Kissimmee, Florida in 1981 and I was "stood up"—first time. I waited for one hour in front of the hotel and he never arrived. No desk messages. Later, I learned that Helen had been taken ill and the desk clerk told Francis no O'Reilly was registered.

Continued on page 45

SEED FUND/Variety of horticultural types available

Joy Porter, Clayton M. Kelly Seed Fund Director

- M-A 1—*B. polygonoides*: Trailing-scandent species from West Africa with small, dark green slender leaves and small white flowers. per pkt 1.00
- M-A 2—*B. carrieae* Ziesenhenné: Large, lobed, pale green leaves with rugose, hairy surface distinguish this rhizomatous species from Mexico. Petiole and leaf reverse are thickly covered with wide scalelike hairs of many shapes ending in many divisions. Large white flowers in spring. per pkt 1.00
- M-A 3—*B. U014*: Shrublike species from Argentina with 3-inch glossy, elongated-oval leaves. Stems are covered by large stipules which dry and remain. The 1-inch flowers are a glowing orange color. per pkt 1.00
- M-A 4—*B. carolineifolia*: Although large, this spectacular compound leaf species with upright rhizome is well worth its space in a collection. Small pink flowers in spring. per pkt 1.00
- M-A 5—*B. dichroa*: It is a thrill to at last offer this low canelike species from Brazil. Although it has been hybridized extensively, not a single offspring has inherited its true orange flowers. Summer flowering; it needs warmth and adequate humidity and light to attain its true beauty. per pkt 1.00
- M-A 6—*B. lubbersii*: This low-growing canelike species from Brazil is quite unique with peltate leaves which are pointed at each end and decorated with silver spots. In fall, the large fragrant white flowers are (depending on light) tinted with pink, salmon, or green. A huge, perfect specimen won the Orpha C. Fox Species Trophy at 1984 Begonia Round-Up convention. per pkt 1.00
- M-A 7—*B. sandtii*: (bulbils) Tuberous species from Mexico with small lobed hairy leaves and small bright orange flowers. Planted the same as seeds (not covered with mix) they will germinate in May and June, and bloom through November. In northern latitudes, plant out in full sun. (See my note in previous issue.) They grow to 2-2½ feet, and perhaps because of their hairs, are mildew-free. per pkt 1.00
- M-A 8—*B. bulbillifera*: Tuberous species from Mexico resembling *B. gracilis* var. *martiana*. Grows to 3 feet with 1½-inch pink flowers. Lower leaves are rounded while upper leaves are slightly lobed. Treat the same as M-A 7. Bulbils. per pkt 1.00
- M-A 9—*B. sutherlandii*: South African tuberous species with small green leaves, red stems and petioles, numerous small orange flowers. Lovely basket plant for summer, but practice preventive spraying for mildew. Bulbils. per pkt 1.00
If ordering 2 varieties of bulbils, I will include 2 *B. 'Torsa'* bulbils. *B. 'Torsa'* is a *B. grandis* ssp. *evansiana* cross with pink flowers.
- M-A 10—*B. s.c. 'Derby'*: Small, green-leaved semperflorens; white flowers with pink margins. per pkt .50
- M-A 11—Australian Tree-Fern spores collected by Mickey Meyer on the eastern coast of Australia. per pkt .50

Orders from U.S., Mexico, and Canada need 45¢ over seed price for postage (55¢ if over 12 packets). Overseas orders require \$1.40 for postage. Send checks or money orders in U.S. funds made payable to Clayton M. Kelly Seed Fund. Mail to Joy Porter, 9 Bayberry Lane, Framingham, MA 01701.

Self-pollinate species *Begonia* and send the seeds to the Seed Fund.

QUESTION BOX/*Tuberous begonias continue to raise questions.*

Mabel Corwin

QUESTION: A couple of my tuberous begonias have rotted at the main stem and fallen over. Should the whole stem be taken off? Is the tuber good anymore? Should it be left in the ground, or taken out? Will it sprout again?

ANSWER: Rot on tuberous begonias is usually caused by a fungus or bacteria. It most often occurs when there is high humidity. Too much water and poor drainage can also contribute to rot.

All rotted parts should be cut back to healthy tissue. Spray with a good fungicide and also drench the soil. Be sure the plants are not crowded together so they touch. Good air circulation is very important.

Your tuber may, or may not, sprout again. I would leave it in the ground and give it a chance to grow.

Tuberous begonias like cool nights. My friends in Florida tell me they cannot grow them because of warm nights and too much humidity.

QUESTION: I've been trying for three years to grow tuberous begonias. Each year I encounter the same problem. I need help!

This year I planted 290 tubers. The plants were beautiful and were about 18" tall. The blooms were the prettiest they have ever been. During the last 30 days the stems started to decay and the leaves developed brown spots about ¼" in diameter. At the present time I have 12 plants left which are as healthy as can be. I've checked the tubers of the plants that collapsed and they are firm and healthy. The root system is in good shape.

The same thing has happened each year. I would appreciate any help you can give me for next year. Also, any books that I might purchase that could help me. MISSOURI

ANSWER: I'm sorry you lost so many of your tuberous begonia plants. That really is discouraging.

Your problem is stem rot. I referred to my book *The Tuberous Begonia* by Brian Langdon. Mr. Langdon says stem rot is usually traceable to over feeding, especially with a high nitrogen fertilizer. This causes soft tissues that are more vulnerable to disease.

Overcrowding is also a cause of stem rot. Good air circulation is very important.

I wonder if the nights stay warm in your area. Tuberous begonias do best when the nights are cool. In fact, in some areas they are not grown at all because the nights don't cool down.

Mr. Langdon suggests cutting the stem back to healthy tissue and dusting with a fungicide such as karathane. Then you should water sparingly and do not fertilize any more. You may, or may not, save the tuber.

Antonelli Brothers suggest improving air circulation around the plants, keeping the foliage and stems dry after dark, and spraying with Truban fungicide.

A friend who grows beautiful tuberous begonias uses Rose Dust on top of the soil when potting. She also uses preventative spray for mildew.

For next year I would suggest you make sure your plants are not crowded. Anything you can do to increase air circulation would be helpful. Make sure your mix has good drainage. Cut back on fertilizer, especially nitrogen. Spraying or dusting with a fungicide as a preventative measure would be advisable.

The book *The Tuberous Begonia* by Brian Langdon was published in 1969 by Cassell and Company, Ltd. I believe it is no longer in print, although I'm not sure about this. Antonelli Brothers catalogue has some good culture information. Check their ad on the back cover. You may find *Growing Begonias* by Eric Catterall helpful, too. See Nov.—Dec. *Begonian*, page 120.

Send questions about begonia growing to Mabel Corwin, 1119 Loma Vista Way, Vista, CA 92083. Include a stamped, self-addressed envelope; you'll get a prompt reply.

ROUND ROBIN

Members of the **Tropical Plants** flight exchange ideas on the culture of many plants regarding potting medium, temperature, humidity, water, etc. All ideas are welcome and open for discussion.

Bob Moore, Florida, when putting down flat seeds of tropicals, sets them edgewise in the mix. Seeds with wings are planted with the wing uppermost or broken off. Some seed from temperate regions germinates best at cool temperatures (50°-65°), but tropical seeds need warmth to germinate, bottom heat is almost a must. Most tropicals need light to germinate, too. To start palm seeds, Bob suggests soaking the seed about a week, then planting in damp peat moss kept at 75°-85°. It will help to scrape off the outer covering of this seed first with a sharp knife.

Charline Franklin, Texas, comments that knowing the light requirements of tropicals can be of great help in starting seeds, as some do germinate only in darkness and others have no light requirement for germination. Seeds which require light can be treated to germinate in the dark if they are soaked in a solution of potassium nitrate (0.2%). Seeds of any kind will fail to germinate unless they are maintained at a suitable temperature and are able to absorb oxygen and some carbon dioxide together with the moisture.

These flight members are doing an experiment with foliar feeding using two plants of the same kind, planted in the same soil and type of pot. One will be foliar fed and the other not, then results will be reported upon.

Some tropicals grown by the members are *Malpighia coccigera*, *Osmanthus fragrans*, *Hoya lacunosa*, *Strelitzia reginae*, *Jacobinia*, *Punica granatum 'Nana'*, *Petrea volubilis*, *Piper ornatum*, *Heliconia*, *Acanthus*, and many others. Dael Jones, Texas, found two tomato wire cages joined together at the broad ends could be used to grow a nice specimen vine in a very compact space. Dael grows *Allamanda* and is seeking *Plectranthus ecklenii*, *Ipomoea horsfalliae* var. *Briggsii*, and *Disterigma*.

Members of the tuberous begonia flight are interested in plants which **produce bulbils** or bulbil-like growth in their leaf axils. Some of these are *B. grandis*, *B. sutherlandii*, *B. gracilis*, *B. princeae*, *B. sandtii*, *B. falciloba*, *B. biserrata*, *B. bulbifera*, *B. 'Martiana Grandiflora'*, *B. 'Torsa'*, *B. 'Lulandi'*, and *B. 'Ivy Ever'*. *B. socotrana* is bulbous and produces bulbils at the base of the bulb, rather than bulbils at its leaf axils. Jackie Davis, California, has used *B. dregei* in many crosses and seldom has seen tubers produced from a cross, unless the plant had been crossed with another tuberous.

Bob Ammerman, California, reports his *grandis* var. *martiana* tubers were not doing well in regular potting mix, so he switched them to sphagnum and they took off. Elaine Ayers, Ohio, found that *B. pearcei* seedlings liked high humidity, but did not like to be too wet. She grew seedlings under her greenhouse benches, on the benches in semi-shade kept moist, and on the benches in deep shade kept very moist.

Several tuberous species set multiple tubers. Some of these are *B. biserrata*, *B. boissieri*, *B. falciloba*, and *B. ignea*. Mabel Corwin, California, reported that *B. U103* sets an especially outside tuber.

Discussing **crested rhizomatous begonias**, Susan Johnston, Oklahoma, likes the crested types such as *B. 'Misty Meadows'*, which grows better for her at the window than under lights. *B. 'Munchkin'*, although supposed to be a slow grower, is growing well for her. She also has *B. 'Beryl'*, *B. 'Crestabruichii'*, and *B. 'Essie Hunt'*. An especially easy one for Susan which she thinks makes a nice specimen plant in a short time is *B. 'Ricky Minter'*. Sometimes it can be difficult to grow the crested varieties as the leaves are of such substance they are prone to split and break.

If you would like to join a robin—a packet of letters circulated among begonia lovers—write for details and a list of flight topics to Round Robin Director Joan Campbell, 814, NE Honey House Lane, Corvallis, MT 59828.

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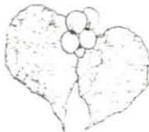
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The Year of the Cane

Continued from page 34

I really learned this lesson most fully after our move from southern California to the Sierra foothills. I had to cut off all of my canes to a few inches above the soil in order to pack them in boxes to move. What is worse, I had to do this in early September, the peak blooming time in southern California. What I packed were dozens of pots, with a few leafless canes sticking out of the soil. I feared severe loss due to such drastic pruning. Spring, however, even in a colder climate, brought new growth galore, which during that summer turned into the thickest, fullest, most beautiful canes I'd ever had! I only lost one or two during that first cold winter.

Major pruning out of the way, upend your plant and knock it out of the pot. If the soil is well filled with roots, move the plant on to the next size pot, loosening the root ball a bit and adding fresh soil. Setting the plant slightly deeper and adding a bit more soil on top will improve the stability and encourage even more basal growth. If the plant does not need transplanting, you will still want to add a bit of fresh soil to

Francis Michelson

Continued from page 40

Francis and Helen moved to Orange City, near Orlando, in 1981. After several setbacks, they are in full swing with their begonias again. He recently wrote "Last year I showed Helen how to cross begonias and she crossed an orange tuberous 'Non Stop' with *B. kellermannii*. I planted the seed, they germinated and grew four inches high. In December a freeze came and killed them. It was a disappointment, but we have had them before. We'll keep trying to get a fibrous-tuberous cross. Maybe—someday."

And that is the spirit behind the Miami Branch, the spirit that made it and keeps it one of the most successful branches.

Charles Jaros obtained background information and photographs from the Miami Branch's history book for this article.

the top. A well-balanced fertilizer should also be used at this time, to ensure that new growth is healthy and strong.

If you have been growing indoors or in a greenhouse for the winter, now is the time to move your canes outdoors, once danger of frost is past. Do not, however, make a sudden drastic change from low light to nearly full sun. Put them in filtered light, gradually moving them to higher light situations, depending on the variety.

Spring is the time, too, to propagate. Any good cuttings from your pruning spree, containing good growth nodes, should be put down right away, and *labeled*. By summer you will have virogous new plants, to grow yourself, to share with friends, to donate to plant sales.

If you would like to do some "homework" on canes, look at the *Begonian* issues for February 1980, pages 38 and 39 (for more about pruning) and March 1981. Also refer to commercial catalogs for descriptions.

In the future we will discuss soil mixes, summer care, some especially enjoyable varieties to grow, canes as show plants and in the garden, a bit of cane history, and fall and winter care. Meanwhile, grow and enjoy!

NEW BRANCH FORMATION

If you are interested in forming a branch, send me the names of neighboring towns and zip code numbers if you have them. I will send you all the names of members in your area along with suggestions on forming a successful branch. I will also include names of members who have recently dropped, for they may be interested in rejoining if there were a branch to attend.

I don't care whether you live in the United States or not. There are potentials all over. I assure you that I will give you my attention and assistance. The ABS can be a much larger, more active group if we all work together.

Charles Richardson
Branch Relations Director
696 Barsby Street
Vista, CA 92083

The board met at 1 pm at the home of Elda Regimbal. The Aims and Purposes were read by Secretary Arlene Davis. The minutes were approved as submitted. The treasurer reported a balance in the checking and savings accounts of \$34,727.11.

Mabel Corwin, awards committee chairman, said that the nominations were not coming in, and the deadline is February 23rd. The awards committee consists of Alice Gold, Dorothy Patrick, Juana Curtis, Dorothy Patrick, Berle Orchard, Kit Jeans, Carrie Karegeannes.

Pearl Benell reported 232 new members for November-December period. Other reports were received from Chuck Richardson, Marge Lee, Thelma O'Reilly, Gil Estrada, Muriel Perz, and Phyllis Bates.

Thelma O'Reilly is planning a meeting with a committee to discuss how to proceed with a branch for members-at-large. She will meet with members-at-large at Miami.

President Bob Ammerman wants opinions from members on the possible dues raise. In order to keep the Begonian at its present status, we will have to raise dues. It will be discussed at the next board meeting.

The Orange County Branch reported that they were unable to locate a suitable place to hold a regional show and annual meeting at the time required. Sacramento Branch indicated that they would be willing to host it at the time of the branch show.

Appointments approved by the board include Lorra Almstedt, library; Juana Curtis, circulation manager. Letters were read from Douglas Hahn and E. L. McKinley.

We welcome the Alamo Branch to the ABS.

The next board meeting is schedule for Saturday, March 23, 1985 at 1 pm at Quail Gardens in the Ecke Building. (Take freeway I-5 to Encinitas Blvd., go east about one mile, turn left; follow signs.)

Arlene Davis, secretary

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UPCOMING DATES

New York Flower Show, March 20-24, by the Horticultural Society of New York, 50th Street Hudson River Exhibition Pier. Begonia classes will be judged.

Riverside Flower Show, April 20-21, at Raincross Mall, Riverside Calif. Rubidoux Branch will have a display. Booth for sale of begonias.

IN MEMORIAM

Lola Price of Laurel Springs, NJ, was a charter member of the Elsa Fort Branch. She was instrumental in drafting the constitution and bylaws of the branch formed in 1960. Lola was the first elected secretary and remained in that position until 1982.

A graduate of the University of Pennsylvania in botany, she was a teacher until her retirement in 1952. Lola's avid interest in begonias made her a valuable member, and her knowledge, thoughtfulness and humor will be missed.

Master Gardener Maurice Kane, a founding member of the Monterey Branch, died on December 8, 1984. He supported the branch with enthusiasm and many plants through the years as co-chairman, chairman, and recently as honorary chairman. He gave the branch much good advice, particularly about tuberous begonias, which prompted Dr. Lockridge to name a special begonia for him—the one that appeared on the September 1984 *Begonian*.

Elsie Joyce was a member of the Glendale Branch for more than 25 years. She served as president of the branch in 1960, 1961, and 1969. She served as national representative for the branch for numerous years. She died December 12, 1984 at the age of 94 after a lengthy illness.



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- 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.

ABS SERVICES

These services are available to all ABS members. For names and address of department heads and other officers, see inside front cover. Include a self-addressed, stamped envelope when you write.

AT-LARGE MEMBERS—Services for members who don't belong to branches are handled by the members-at-large director. Contact her for details. If you are interested in finding a branch or starting one in your area, contact the branch relations director for help.

BEGONIAN BACK ISSUES — Individual copies of the *Begonian* more than a year old are available from the Bookstore for \$1, \$6/full year. Back issues less than a year old are ordered from the membership secretary for \$2 each.

BOOKSTORE—Books on begonias and related subjects can be purchased mail-order from the bookstore manager. Contact her for a list of books available. The bookstore also sells reproductions of antique begonia prints and other items.

JUDGING DEPARTMENT — The judging department offers a course by mail with which you can learn to become an accredited begonia show judge (\$10.) Also available are a booklet on point scoring (\$2.), the old (unofficial) classification booklet (\$2), information on fuchsia and fern judging, and other requirements to become a judge. Add \$1 for postage and handling to all orders and 6% tax for California residents.

LIBRARY—Books about begonias and gardening may be borrowed by mail from the lending library. Contact the librarian for a list of books and the procedure.

NOMENCLATURE—The nomenclature department monitors newly published findings on begonia names as well as handling official international registration of new begonia cultivars. Registrations are published in *The Begonian*.

QUESTION BOX—Send begonia-growing questions to Mabel Corwin, 1119 Loma Vista Way, Vista, CA 92083. You'll get a prompt answer and Mabel will use questions of general interest in her *Begonian* column.

RESEARCH—The research department conducts projects periodically. The department also has other activities, including the review of requests for ABS backing of outside projects. For details, contact the director.

ROUND ROBINS—Members exchange information about begonias and their culture through a packet of letters which circulates among a small group of growers. There are dozens of these packets—called flights—on many specialized subjects. To join one or more, contact the round robin director.

SEED FUND—The Clayton M. Kelly Seed Fund offers seeds of begonia species and cultivars by mail. New offerings are listed in the *Begonian*. Donations of seed are encouraged. Please contact the seed fund director.

SLIDE LIBRARY—A series of slide shows on begonias and begonia growing can be borrowed by mail for showing at meetings and seminars. New shows are under preparation. Contact the slide librarian for fee information.

SPEAKERS BUREAU—The speakers bureau maintains a directory of speakers on begonias and related subjects. Contact the director.

Growing Begonias, Eric Catterall, 1984. Hard Cover \$15.00

Begonias: 1980. Japanese text by H. Arakawa with 431 excellent color photos. \$23 paperback.

Begonias in Color. Text by Yuji Murotani, color photographs by Hideaki Tatsumi, with English translation \$12.50.

ABS Show & Convention Guide, compiled by Thelma O'Reilly \$2.50 incl. postage and handling.

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Les Begonia. Charles Chevalier's classic 1938 study of the begonia family translated by Alva Graham from the French in 1975. Illustrated. \$5 paperback.

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Begonia. Misono, 1974. Japanese text with 302 good color photos identified in English. \$30 hard cover. (English translation with no photos. \$5.50 paperback. Order both for \$34.)

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