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Views expressed in this magazine are not necessarily those of the Editors, the Society or its officers.

THE HERBERT P. DYCKMAN AWARD

In the November *Begonia* an attempt was made to report as fully as possible the events of both the National and Eastern Conventions. The staff also wanted to include as many photos as possible in this issue. After publication it was realized that one photo that should have been included was inadvertently omitted. That one was the photo of our Treasurer, Walter Barnett, receiving the Herbert P. Dyckman Award from Walter Pease. We are therefore including this picture in this issue.

This is also an ideal time to report the sequel of events that occurred

after presentation of this award. Before Walter Pease could leave the podium, John Provine took over the microphone and announced that, in appreciation of his many years of service to the A.B.S. in managing, installing, and taking down the National Flower Shows, the Show Committee was awarding Walter Pease a Special Award, in the form of a plaque.

There was no question that the audience approved and concurred, because there was then a standing ovation which lasted several minutes.

COVER PICTURE

Begonia 'Aphrodite' pictured on the cover belongs to one strain of the registered Rieger begonias. The other strain is the Rieger B. 'Schwabenland'. Of softer growth, the B. 'Aphrodite' strain is useful in hanging baskets and is available in pinks and reds.

If sparingly fed, these plants do well in the house, where they are usually free of disease, mildew, and insect pests. One should remove any old flowers and leaves to keep the plants healthy. It is easiest and best to purchase the plants in full bloom and enjoy their long flowering period.

Photo by Gene Daniels



Show Awards Chairman, Walter Pease, presents the Herbert P. Dyckman Award to Walter Barnett.

AIMS AND PURPOSES OF THE AMERICAN BEGONIA SOCIETY, INC.

The purpose of this Society shall be:

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; and

TO bring into friendly contact all who love and grow *Begonias*.

ELEGANT ELATIOR BEGONIAS

By Thelma O'Reilly

The first time I saw Rieger elatior begonias I realized they must be an improved form of *Begonia x hiemalis*. I was amazed to be told that they were fibrous-rooted lacking in tuberous parentage, continuous bloomers and mildew resistant.

During the many years I have collected begonias, the winter-flowering group known as *Begonia x hiemalis* has often been included in my collection. They are rather small bushy plants with fibrous roots often slightly swollen into tubers because of their tuberous parentage. They are usually sterile plants with flowers in various colors which range from white through pink and apricot to crimson and scarlet. The flowers can be single, semi-double, or double. They have one blooming period and are very susceptible to mildew.

Winter-flowering begonias are considered difficult to grow. Great caution must be used when the plant finishes flowering and starts into its resting period. One must attempt to keep some of the foliage in good condition until the appearance of new shoots in the leaf axils or at the soil level. If the plant dies completely back before new growth starts, it is usually fatal.

After adding several of the Rieger elatior begonias to my collection last summer, I decided to research them thoroughly and share the information so that growers and collectors would have more knowledge about their origin and culture.

The history of the *B. socotrana* hybrids, of which the Riegers are re-

cent representatives, is discussed in the article 'Breeding Elatior Begonias', which appears in this issue.

Referred to as "winter-flowering begonia hybrids" in British literature, they are called elatior begonias in continental Western Europe. Since 1933, when Karl Albert Fotsch included all forms of this group under the name *Begonia x hiemalis* (winter-flowering), they have been known in the United States as hiemalis begonias.

Everyone who has one of the beautiful improved elatior begonias in his collection is anxious to learn how he can keep it well and happy. As a result of excellent cooperation from several knowledgeable persons



Blossom of *Begonia* 'Aphrodite Pink'

combined with the results of my own experiences, I have some important information to share about their culture.

A well drained mix that retains moisture is essential and at least 25% peat moss is suggested. A coarse, loose mix of equal parts of leaf mold (or your own special soil mix), peat moss and perlite or vermiculite should be suitable.

Rieger begonias may be grown in clay or plastic pots. The hanging varieties grow well in moss-lined baskets. When commercial growers release plants, they are usually in five or six-inch pots. If the plant is pot-bound, shift it to the next size and feed with a slow release fertilizer. This should be sufficient repotting for your first full bloom cycle.

The commercial grower keeps the plants between 65 and 70 degrees for vegetative growth and flower bud initiation. Then the temperatures can be reduced to 60 degrees. For the begonia collectors in southern California who grow in outdoor lath-houses, the nights may be a little cool and the days a little on the warm side, but the plants will respond sufficiently to give satisfactory results. The past winter was extremely wet and cold (twenty-three nights below freezing in my garden). Only two out of ten eliator begonias succumbed. So, they can take it!

Never expose these begonias to direct sunlight. They must have enough shade from summer sun to prevent flower scalding and leaf marginal burning. Eliator begonias demand good ventilation and low relative humidity. They must be watered thoroughly to prevent salt build-up.



B. 'Bernstein's Gelbe'

Testing has shown that severe leaf burn occurs when Cygon sprays or drenches and malathion or parathion sprays are applied to plants. To prevent nematodes and bacterial leaf spot, keep the foliage dry and pick off and destroy any infected foliage which has blister-like, water-soaked appearing spots on the leaves. Mildew can be prevented by providing a low relative humidity. Doo spray has proven an effective mildew control on my plants. Others have used Polytrap with success.

Eliator begonias are not heavy feeders. A tablespoon of 14-14-14 Osmocote to a five inch pot is sufficient. Osmocote is a new slow release fertilizer that has become very popular with commercial growers. It is highly recommended. For those who prefer to liquid feed, one ounce of 20-20-20 fertilizer per three gallons of water once a week should be satisfactory.

When your eliator begonia appears to be reaching the end of its flowering cycle, keep a constant check for new bottom growth. When

it appears, the plant is ready for a "haircut." With a strong heart and steady hand, prune all growth back to about four inches. Sprinkle Osmocote on soil and wait for your begonia to start a new growth cycle. If your plant reaches this point in the early spring, I suggest removing some of the soil and repotting in a smaller container, gradually moving it up to the six-inch pot. Propagation is easy from leaf or tip cuttings. Leaves inserted in peat moss or the recommended potting mix make the fullest plants.

A well grown eliator begonia draws much admiration in a display and is a top blue ribbon and trophy contender in a judged show. If you plan to exhibit an eliator begonia there are some extra grooming "tips" to consider. It is often necessary to remove some of the large lush leaves in order to allow immature bloom stems to reach the light. Remove any of the aging bloom stems showing dried colorless stipules with a cluster or two of blooms at the tip. This type of stem detracts from the beauty of the fresh flowering stems. At its blooming peak your plant will be full and heavy. Due to its suc-

culent nature the stem can easily snap off. It is wise to stake the heavy stems for support with a thin green wooden stake inserted between the container rim and first stem joint. A tie is usually not necessary. The heavy foliage hides any needed props. If you have grown one of the cascading *B. 'Aphrodite'* varieties in a standard pot it will need special handling when placed in a display or show. Do not put this burden on the placement committee. The exhibitor should supply a pedestal of appropriate size and color to enhance the plant.

Eliator begonias should be entered in the division for tuberous begonias such as *B. x cheimantha*, *B. x hiemalis* and *B. socotrana* types. The judges allow 25 points each for cultural perfection, foliage, quantity of flowers and quality of flowers. Besides a clean, full, well-shaped mature plant, the judges will pay close attention to the flowering qualities. The presence of flowers in this division is a must. If your plant is not blooming, leave it home. Floriferousness is one of the outstanding

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BREEDING ELATIOR BEGONIAS (*B. x HIEMALIS* FOTSCH)

By J. Doorenbos

Laboratory of Horticulture, Agricultural University,
Wageningen, The Netherlands

SUMMARY

To obtain new types of *Begonia x hiemalis* Fotsch, 48 cultivars of the tuberous *Begonia* were pollinated with *B. socotrana* Hook. f. From 9 diploid cultivars, only one seedling was obtained. Triploid ones set no seed. Of the 36 tetraploid cultivars used, 14 set seed, but in one case the seedlings were not viable. The best type of plant was found among the hybrids with the cultivars *B. 'Leuchtfeuer'* and *B. 'Sonnenschein'*, both of the *B. 'Bertinii compacta'* type.

The F_1 's were very heterogenous and average plant quality was too low for commercial use. The very best plants, however, seemed well worth developing into clonal varieties. Although seed set, F_1 plant quality and homogeneity could be markedly improved by selection among the parent plants. The production of F_1 hybrid seed for commercial purposes is not yet feasible. Yellow and white flower colours are recessive but can arise in certain F_1 's by spontaneous or induced mutations.

INTRODUCTION

In Western Europe, especially in England, The Netherlands, Germany and the Scandinavian countries, winterflowering begonias are widely grown as potted plants. Two groups are of commercial importance: the Christmas Begonia (*B. x cheimantha* Everett) and the elatior begonias (*B. x hiemalis* Fotsch). This article deals with the latter group.

The origin of *B. x hiemalis* goes back to 1883 when *B. socotrana* was crossed with *B. 'Viscountess Done-raile'*, one of the very early hybrid tuberous begonias (*B. x tuberhybrida* Voss). The new hybrid had the compact growth habit and the bright flower colour of the tuberous parent, but it did not form a tuber, nor did it become dormant in autumn. As this seemed a promising type of plant, the firm of Messrs. J. Veitch and Sons at Chelsea, where this first hybrid was produced, made many similar crosses with subsequent tuberous cultivars. Later the firm of Messrs. W. Clibran and Sons at Al-trincham also entered this field.

The last English hybrids were introduced in the thirties. By then, Aalsmeer growers were also introducing novelties, but these had arisen as bud sports from English cultivars and were not the results of hybridization. A new era in the evolution of the group began with the introduction in 1955 of the first hybrid of O. Rieger at Nürtingen in Germany.

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Nowadays, the cultivar Reiger's *B.* 'Schwabenland' has eclipsed the older varieties, at least in Holland. Its strongest assets are absence of bud drop, resistance to mildew and the fact that it can be propagated by leaf cuttings.

The present project to breed better winterflowering begonias was started when the Reiger begonias had not yet been introduced in Holland. It was continued after they had begun their triumphal advance because (a) only Reiger's *B.* 'Schwabenland' has gained a secure foothold, and more variety, especially in flower colour, is urgently needed, (b) even Reiger's *B.* 'Schwabenland' is not perfect, its weak point being a tendency to elongate too strongly and susceptibility to bacterial diseases, (c) it was decided to try to develop a method of propagation by hybrid seed analogous to the one developed for *B. x cheimanthia* (Doorenbos and Legro, 1968).

MATERIAL AND METHODS

Three types of material were collected (1) *B. socotrana*, (2) as many varieties of *B. x tuberhybrida* as could be found, (3) all varieties of *B. x hiemalis* still in cultivation.

All material of *B. socotrana* came from botanic gardens and showed very little variation. This was found to be due to the fact that this species is usually propagated asexually from bulbils. When propagated from seed, the variation is considerable. By selection, shape and size of the flowers could be improved and the difficulties of slow and uneven germination of the seed could, to some extent, be overcome. These selected plants were used as pollen parents in the crosses.

The collection of *Begonia x tuberhybrida* eventually comprised 67 varieties, which were examined cytologically by Legro and Haegeman (1971). They found that 16 were diploid with 27 or 28 chromosomes, 10 were triploid with 41 or 42 chromosomes and 41 were tetraploid with 52 to 56 chromosomes.

Twenty three varieties of *B. x hiemalis* were described and examined cytologically by Arends (1970). He found that 21 were triploid, having 26, 27 or 28 long chromosomes of the tuberous parent and 14 short chromosomes of *B. socotrana*. One variety was pentaploid with 52 long and 14 short chromosomes, and one had an odd number of chromosomes (56 long and 7 short ones).

Of the 67 tuberous cultivars, 48 were hybridized with *B. socotrana*. The others were not used for two reasons. In the first place, often only one plant of a cultivar was available which did not always have female flowers when *B. socotrana* pollen was ripe. In the second place, it soon became evident that crosses with large-flowered tuberous cultivars yielded hybrids of no practical promise. Therefore, a number of cultivars of this group were ignored.

The tuberous cultivars have arisen from hybrids between a number of widely diverging wild species. All diploid and triploid varieties used in the present experiments are propagated asexually. The tetraploid ones used are propagated by seed, but although they are less heterozygous than the clonal varieties, their genetic heterogeneity is still considerable. In the second phase of the project, large sowings were made of certain tetraploid tuberous cultivars,

and the best plants were selected to serve as parents for crosses with *B. socotrana*.

When the hybrids showed that the right parent plants had been picked, the latter were crossed among each other to produce special strains to be used in further crosses.

RESULTS

Five diploid cultivars of the *B. Multiflora*-type: *B. 'Ami Jean Bart'*, *B. 'Gents Juweeltje'*, *B. 'Helene Harms'*, *B. 'Petit Henri'* and *B. 'Richard Galle'* were unfertile with *B. socotrana*. Although in all cases dozens of flowers were pollinated, no seed was produced. Particular efforts were made to use *B. 'Helene Harms'* as a seed parent because its flowers are yellow, a colour rare in *B. x hiemalis*. The hybridizations were not successful, however, until

a tetraploid plant of *B. 'Helene Harms'* had been obtained after colchicine treatment (see below).

Four diploid cultivars of the *B. 'Pendula'*-type were pollinated with *B. socotrana*. The white, orange and salmon cultivars set no seed, but the scarlet one gave a seedling which grew up into an adult plant with attractive red flowers, but of no particular value. This is the only diploid hybrid obtained. Nine triploid cultivars of the *B. 'Multiflora'*-type and a medium-flowered one (*B. 'Tasso'*) were pollinated with *B. socotrana*, but without success.

Among the tetraploid tuberous begonias the large flowered ones are the most spectacular plants. They do not give the best hybrids, however. The F_1 's of these cultivars and

(Continued on Page 290)

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Dc 4 — *B. laciniata*:

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Dc 5 — *B. leptotricha* (wooly bear):

This is related to *B. schmidtiana*. The plant, especially the underside of the leaves is covered by appressed brown hairs. Blooms profusely all year, beginning when plant is small. Leaves have a tendency to turn upwards on edges. Per pkt. \$.50

Dc 6 — *B. mannii*:

A form collected near Nkong-samba in Cameroun. Rose-leafed. Medium, stems erect, branches long and arching; leaves are shiny and ovate-pointed, glossy green, paler beneath; irregularly toothed. Flowers are pale orange-red. A most handsome species. Per pkt. \$1.00

Dc 7 — *B. sanguiana*:

Brazil. Medium smooth, many reddish stems arising from the base, loosely branched. Leaves broad-ovate, leathery, glossy olive green above, glossy scarlet beneath. Flowers small, white in long, loose inflorescence. A most satisfactory basket plant. Per pkt. \$.50

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Dc 8 — *B. schmidtiana*:

Brazil species, 1879. One foot tall, self-branching. Leaves are small, slightly ruffled and velvety, olive green on top and red beneath. Sprays of flowers are pinkish. Easy to grow. Grows well in most any location, but needs lots of light to bloom.

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Dc. 9 — Species from Frankfurt Botanic Garden.

A nice compact plant with white flowers. This was offered before. Picture on page 84 of April 1973 Begonian.

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Dc 10 — Unidentified, and probably undescribed, species of the section Squamibegonia.

About two feet high, leaves broadly oval, inflorescences surrounded by two large fleshy bracts; flowers large, white with crimson blotch, fruits round, one inch across, white fleshy. If the plant were more compact it would be very ornamental.

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Dc 11 — An unidentified species from New Guinea.

About three feet high; smooth, light green foliage and pale pink flowers.

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Dc 12 — From Sumatra.

An unidentified species of the Riechenheimia section. Rhizomatous and compact, with round peltate leaves and white flowers. An easy, floriferous terrarium plant.

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CORRECTIONS TO THE NOVEMBER BEGONIAN

Mr. Frank Reinelt was the banquet speaker at the ABS National Convention. We incorrectly identified him as Fred Reinelt in the picture accompanying the show article.

Also, we published a picture of Mrs. Evelyn Cronin accepting the Eva Kenworthy Gray Award, but failed to say that she was accepting it for Dr. Fred Barkley, pictured below, who could not attend the convention.

We apologize to these two gentlemen for these errors.



Dr. Fred Barkley, winner of the Eva Kenworthy Gray Award presented at the 1973 ABS Convention Banquet. The award was accepted in his behalf by Mrs. Evelyn Cronin.

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ROUND ROBIN NOTES

Many of the flights are beginning to swap and compare data of their own experiences with various seeds, cuttings, soil mixes, environment or specific begonias. Belonging to the Robins is so rewarding, bringing lasting friendships, plus the chance to share and compare information and plants.

"Have you tried micro-tipping for cuttings?" asked Connie Holcombe of Virginia. She read about it for geraniums and tried it on several begonias. So far it seems fabulously good and simple and a space saver. Also, she can use a mini-prop box (plastic icebox keeper from dime store) and do up to six cuttings in a 3" x 5" space. Basically, you take the smallest tip you can that includes the terminal bud—no more than 1/2" long, 1/4" on small leaved types—dip it in rooting powder and insert gently in a fine, light medium. She's used half peat and half fine vermiculite. The theory is that the preponderance of growth hormones is found at this point along with the greatest resistance to disease. Thus, this is genetically the best part of the plant. British fanciers are apparently using this for faster breeding and change. The article said to grow cuttings on to flower, select the best and strongest shoot for micro-cutting and get rid of the older plant. A Rieger begonia cutting handled this way is the best little plant of that type she's had yet.

Pam Braun of Tennessee has been selling little Rex plants for terrariums because they give such a good touch of color, even if they eventually grow too large. She chopped

up a plant of *B. r.c.* 'It' and, in order to get the maximum number of small plants in the shortest time, she sliced up each rhizome in the following way: she left a section of the stem (rhizome) on each leaf. She cut away most of the leaf, saving room in the prop box and using them for wedge cuttings. She finds it saves time and plant material. The bud in every leaf axil will develop a plant. She finds it twice as fast as using just a leaf. Three days after setting cuttings, she peeked in her prop-box and was surprised to see new leaves already coming up.

Casey Carsten, Texas, used the plastic drink glasses instead of pots for rooting leaves and cuttings. Using half perlite and half vermiculite, she puts baggies over the tops of some but leaves others open. She finds some such as *B.* 'Gaystar', *B. serratiflora* and *B. masoniana* ('Iron Cross') do best uncovered for her.

In Florida, Lois Covey had a *B. foliosa* hanging in a bright, rather hot spot under fiberglass roof and doing fine with lots of water. Suddenly it began to shed, leaves looked dry and upright stems lopped over, even though the soil was very wet. She moved it to a shadier spot, misting daily, and it soon looked better. She has found this one, when pieces fall on a moist propagation bed, will root of itself. Same is true of *B. bartonea*. She was told this one could also be rooted in DRY perlite inside a closed plastic shoe box. She didn't believe it until she tried it and it worked for her.

(Continued on Page 285)

CONSTITUTION

of the American Begonia Society

ARTICLE I. NAME

Section 1. This organization shall be known as the American Begonia Society and shall be conducted on a non-profit basis. The main office of this Society shall be within the County of Los Angeles, California.

ARTICLE II. PURPOSE

Section 1. The purpose of this Society shall be:
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; and
To bring into friendly contact all who love and grow begonias.

ARTICLE III. MEMBERSHIP

Section 1. All persons who are interested in begonias shall be eligible to membership, subject to the approval of the Board of Directors. The Board of Directors may revoke the membership of any member for just cause.

Section 2. There shall be three classes of membership in this Society, known as Annual, Life, and Honorary.

Annual Members. Annual members shall have all the usual privileges of membership, and shall pay dues of an amount stated in the Bylaws. Annual Membership shall be for one year from date dues are paid.

Life Members. Life members shall have all the usual privileges of membership. The payment of fifty dollars (\$50.00) shall entitle any person to Life Membership and Life members shall be exempt from any further payment of dues. Life Memberships shall not be subject to cancellation or refund of any part of dues for any reason.

Honorary Members. Any person whom this Society shall deem worthy of the honor may at any Annual Meeting be elected an Honorary Member by a two-thirds vote of the members present; and such election shall specify whether such Honorary Membership is Annual, terminating at the next Annual Meeting, or for life. For each person elected an Honorary Life Member, fifty dollars (\$50.00) shall be transferred from the current funds of the Society to the Life Membership Fund. Honorary Members shall have all the usual privileges of membership and shall be exempt from the payment of dues.

Section 3. Each Annual, Life or Honorary Member shall be entitled to one vote on all matters brought before the Society. Membership shall cover the immediate family, except that only one member of the family shall receive the official publication and exercise the right to vote, unless additional dues are paid.

ARTICLE IV. OFFICERS

Section 1. The officers of this Society shall be: President Emeritus, President, Past President, three Vice Presidents, Treasurer, Secretary and one Director from each Branch Society.

Section 2. The President Emeritus shall be Herbert P. Dyckman, Founder and First President of this Society.

Section 3. All officers listed in Section 1 shall be elected biennially in August by ballot, each member of the Society being entitled to one vote. They shall all serve for two years and be installed at the appropriate Annual Meeting. The incumbent President Elect shall be deemed elected for the two-year term as President commencing August, 1974.

Section 4. A Director shall be elected biennially by each Branch Society and shall serve two years.

Section 5. All remaining officers shall be Directors to serve as heads of departments, and shall be appointed biennially by the President, subject to the approval by a majority vote of the Elective Members of the Board of Directors.

Section 6. Any appointed officer may be relieved of his office for just cause, and/or for the good of the Society, by a majority vote of the Elective Members of the Board of Directors.

ARTICLE V. BOARD OF DIRECTORS

Section 1. The Board of Directors shall consist of the President Emeritus, the seven officers elected by the entire membership of the Society, the Branch Directors — one elected by each Branch Society — and the Department heads appointed by the President.

ARTICLE VI. MEETINGS

Section 1. There shall be an annual meeting of the Society at a time and place to be designated annually by the Board of Directors.

ARTICLE VII. BRANCH SOCIETIES

Section 1. Any group of seven or more members of this Society who wish to affiliate themselves to forward the work and purposes of the Society may be organized into a Branch Society, and upon approval of the Board of Directors shall be issued a Charter.

Section 2. The Charter of any Branch, upon approval of the majority of the Board of Directors, may be suspended, and after due hearing before said Board, upon action of a majority of the Board, may be withdrawn.

ARTICLE VIII. FUNDS

Section 1. The current funds of the Society shall be expended only upon order of the Board of Directors.

Section 2. Neither the Board of Directors, nor anyone delegated by them, nor any of the officers, shall incur any debt or liability in the name of the Society beyond the available or maturing funds in the hands of the Treasurer, excluding money and securities held for a specific purpose.

Section 3. All monies received for Life Memberships shall be invested by the Treasurer as may be directed by the Board of Directors, and only the interest accrued therefrom shall be used for the current expenses of the Society.

Section 4. The fiscal year shall start on September first.

ARTICLE IX. AMENDMENTS

Section 1. Amendments to this Constitution may be initiated by a two-thirds vote of the members present at any Annual Meeting. Such amendments shall then be submitted by mail to the membership in accordance with Section 2 of this Article.

Section 2. The Membership Secretary shall mail a ballot covering the proposed Amendment to each member of the Society within thirty (30) days after the Annual Meeting at which the Amendment was initiated, with the request that the member vote, upon said Amendment and mail his ballot to reach the Secretary within sixty (60) days after the Annual Meeting at which the Amendment was initiated. If two-thirds of the votes cast are in favor of its adoption, the Amendment shall be declared adopted at the next meeting of the Board of Directors, when published in the official publications of the Society.

ARTICLE X. RULES OF ORDER

Section 1. Robert's Rules of Order shall govern the conduct of all meetings, and the decision of all questions not specifically covered by this Constitution and Bylaws.

ARTICLE XI. ADOPTION OF CONSTITUTION AND BYLAWS

Section 1. This Constitution and Bylaws shall be subject to the same rules of adoption laid down in Article IX concerning Amendments, and upon adoption shall go into effect, superseding all former Constitutions and Bylaws, when published in the official publications of the Society.

BYLAWS ARTICLE I DUTIES OF ELECTED OFFICERS

Section 1. The President shall preside at all meetings of the Society and of the Board of Directors; shall appoint the heads of the various Departments with the exception of the Editor; and shall have general supervision of the affairs of the Society. The President shall be an ex-officio member of all committees.

Section 2. The President Elect or First Vice President shall perform the duties of the President in the absence of the latter, or whenever the President is unable to perform the duties of his office, and such other duties as are assigned to him by the President.

Section 3. The Past President shall be the Chairman of the Finance Committee. This committee shall consist of the Past President, Treasurer, and Business Manager, and shall submit an annual budget for the approval of the Board of Directors at the first meeting of the Board of Directors following the Annual Meeting of the Society. Any proposed expenditure in excess of \$50.00 shall be submitted to the Finance Committee for recommendation before being voted upon by the Board of Directors.

Section 4. The Vice Presidents, in the order of their seniority, shall perform the duties of the President in the absence of, or the disability of the President and the President Elect. The Vice Presidents may be assigned by the President the duties of one of the appointed officers outlined under Article II of these Bylaws.

Section 5. The Directors elected by each Branch shall attend the meetings of the Board of Directors of the American Begonia Society when possible, shall make such reports and recommendations as will further the interests of the Society, and shall file an annual written report of the Branch activities with the Secretary of the American Begonia Society at the last regular meeting of the Board of Directors prior to the Annual Meeting.

Section 6. The Treasurer shall receive and account for all monies of the Society and shall pay out the monies under the directions of the Board of Directors. He shall file bond in such surety company and in such sum as the Board of Directors may determine. He shall make, to the Board of Directors monthly, and to the Society annually, a report of all receipts and disbursements. The annual report made by the Treasurer shall be presented at the Annual Meeting of the Society and shall be accompanied by a report of audits made by an audit committee of two members appointed by the President.

Section 7. The Secretary shall keep the records of the proceedings of the Society and of the Board of Directors, shall conduct necessary correspondence, and shall have charge of the records of the Society, except such basic records as are necessary for the proper functioning of the various departments and offices. The Secretary shall condense the minutes of the regular Board meetings, and shall transmit them to the Editor for publication in *The Begonian*, not later than the first day of the month following the regular meeting of the Board of Directors.

ARTICLE II. APPOINTED OFFICERS AND THEIR DUTIES

Section 1. The officers to be appointed by the President as Directors to serve as heads of Departments shall be as follows: Business Manager, Membership Secretary, Research Director, the Clayton M. Kelly Seed Fund Director, Nomenclature Director, Public Relations Director, Librarian, Chairman of Speakers Bureau and Slide Library, Chairman of

Flower Show Committee, Historian, Chairman of the Committee on Awards, Chairman of the School for Judges, Parliamentarian, Circulation Manager, and such other heads of Departments as shall hereafter be established by the Board of Directors.

The Editor shall be selected by an editorial board consisting of the President who shall act as chairman; the President Elect or First Vice President, the Past President; and two others chosen by the President.

Section 2. The Editor shall have charge of the Publications Department and shall, under the direction of the Board of Directors, prepare and issue such publications as the Board of Directors and Society shall authorize and shall perform such other duties as the Board of Directors shall require of him. The Board of Directors shall determine his allowable expenses.

Section 3. The Business Manager shall act as business agent for the Board of Directors and for the Publications Department; shall act as advertising manager for the official publication and shall perform such other duties as the Board of Directors may require of him. The Board of Directors shall determine his allowable expenses, if any.

Section 4. The Membership Secretary shall receive all dues, which shall be deposited immediately with the Treasurer; keep an accurate roster of the membership of the Society; and have charge of the mailing and selling of back numbers of the official publication, less than one year old; and of the sale and distribution of all other special bulletins and directories. The Board of Directors shall determine his allowable expenses.

Section 5. The Research Director shall have charge of the Research Department; of arranging for the testing of begonias in test gardens in different locations throughout the country; and of collecting information relative to the culture, propagation and housing of begonias and companion plants.

Section 6. The Clayton M. Kelly Seed Fund Director shall have charge of the importation of seed of new begonias and companion plants, and the distribution of the same to the membership. The Board of Directors shall determine his allowable expenses.

Section 7. The Nomenclature Director shall have charge of determining and establishing correct names of species and established varieties of begonias; of approving and registering all newly developed horticultural varieties of begonias; and shall cooperate with the Editor in the publication of the results of his work.

Section 8. The Public Relations Director shall have charge of the Public Relations Department; of contacting prospective members; promoting and assisting in the formation of new Branch Societies; and seeing that the affairs of the Society receive the fullest publicity.

Section 9. The Librarian shall establish and maintain a circulating library for the use of the officers and members of the Society; shall preserve three copies of all publications of the Society and shall have charge of the mailing and selling of all issues of the official monthly publications over 12 months old. The Board of Directors shall determine his allowable expenses.

Section 10. The Chairman of the Speakers Bureau and Slide Library shall provide lists of speakers and a slide library for the use of the Branches.

Section 11. The Chairman of the Flower Show Committee shall prepare show schedules and encourage begonia shows and the use of begonias in flower shows, and maintain a register of the American Begonia Society Trophies.

Section 12. The Historian shall maintain a complete history of the Society.

Section 13. The Chairman of the Committee of Awards shall be the representative of this Committee on the Board of Directors. The duties of this committee are outlined in Article V of these Bylaws.

Section 14. The Chairman of the School for Judges shall have charge of the instruction and examination of potential Begonia Judges, and will accredit those qualifying, the names of whom shall be submitted to the Board of Directors with his regular monthly report.

Section 15. The Parliamentarian shall see that all proceedings of the meetings of the Society and the

Board of Directors are conducted according to the Constitution and Bylaws of the Society and where a question is not specifically covered there, Robert's Rules of Order is to be cited by him.

ARTICLE III. BOARD OF DIRECTORS

Section 1. The Board of Directors shall be the administrative and executive body of this Society; shall transact all business of the Society between Annual Meetings; arrange for Annual Meetings and any special meetings; establish and appoint such special committees as may be necessary to promote the objectives of the Society; approve the establishment of Branch Societies and issue charters to them; and make such regulations as may be necessary for the good of this Society.

Section 2. The Board of Directors shall meet at least four times a year and/or monthly on call of the President, or in his absence by the President Elect or First Vice President, the time and place to be published in the official publication.

ARTICLE IV.

DEPARTMENTS AND COMMITTEES

Section 1. The activities of the Society shall be divided into Departments and Committees under the charge of officers elected or appointed for such department or committee.

Section 2. The Department Directors may recommend the appointment of such special officers, assistants, or specialists as may be necessary to properly conduct the affairs of their departments.

Section 3. Each Department Director shall make a report at the annual meeting and such other reports as may be required by the Board of Directors.

ARTICLE V. COMMITTEE OF AWARDS

Section 1. The Committee of Awards shall consist of six members and the Nomenclature Director. Two members will be appointed yearly for a three year term by the President, subject to the approval of the Board of Directors. In the event of a vacancy it shall be filled by appointment by the President, subject to approval of the Board of Directors, for the balance of the unexpired term. The President shall appoint the Chairman of the Committee of Awards.

Section 2. The Committee of Awards shall study each year the system of ratings and awards and make its recommendations of general policy to the Board of Directors.

Section 3. The Committee of Awards shall receive and study carefully the reports of the judges and on the basis of this study shall make its recommendations to the Board of Directors.

Section 4. The Committee of Awards shall grant the awards of the American Begonia Society, including the Alfred D. Robinson Memorial Medal, the Eva Kenworthy Gray Award, and such other special awards as may be established and approved by the Board of Directors, subject to such regulations as the Board of Directors may adopt.

ARTICLE VI. ANNUAL DUES

Section 1. The dues of annual members shall be determined by the Board of Directors of this organization at necessary intervals of not less than one year through a majority vote of the Board of Directors including proxy votes of branch representatives not present at the initiating meeting. Members in arrears thirty days shall be dropped from the rolls of the Society and their names removed from the mailing list of the official publication until the arrearage has been paid.

ARTICLE VII. ELECTIONS

Section 1. The President shall appoint, not later than 150 days before the Annual Meeting, a nominating committee of three, who shall be Presidents or Past Presidents of Branch Societies. This Committee, not later than 90 days before the Annual Meeting, shall report to the Board of Directors at least two nominations for each elective office to be filled at the Annual Meeting.

Section 2. Additional nominations may be made by a petition signed by at least fourteen members of the Society, if made and delivered to the Sec-

retary at least 80 days before the Annual Meeting.

Section 3. An official ballot containing the names of all nominees shall be mailed to each eligible voter at least 30 days prior to the Annual Meeting.

Section 4. Eligible voters shall mail their ballots to the Secretary of the Society not later than 14 days prior to the Annual Meeting. Only ballots received seven days prior to the Annual Meeting shall be counted.

Section 5. The Secretary shall deliver the ballots on the seventh day preceding the Annual Meeting to a committee of three members appointed by the President. This committee shall count the ballots and make an immediate report in writing to the Secretary of the results of the election, together with the ballots cast, after which all candidates shall be notified of the results of the election immediately by the Secretary.

Section 6. Vacancies in office, either elective or appointive, shall be filled by appointment by the President, subject to approval by a majority vote of the Elected Members of the Board of Directors.

ARTICLE VIII. QUORUM

Section 1. Fifty members shall constitute a quorum for the Annual Meeting or any special meeting.

Section 2. Fifteen members of the Board of Directors shall constitute a quorum for any Board Meeting.

ARTICLE IX. BRANCH SOCIETIES

Section 1. Any member of this Society may affiliate with any Branch Society provided he meets the requirements for membership in that Branch.

Section 2. Each Branch Society shall have a Constitution and Bylaws, both of which shall be approved by the Board of Directors of the American Begonia Society; it shall require that one member of each family maintain membership in the American Begonia Society; it must include among its officers a President, a Secretary, and a National Director, each being a different person; it may determine its own officers, other than those specified above; it may make additional qualifications for membership; it may determine the manner in which its local activities shall be financed; and it may determine its own activities and meetings provided that those activities and requirements in no way conflict with the National Constitution and/or Bylaws.

Section 3. Each Branch Society shall file with the Secretary of the American Begonia Society a copy of its Constitution and Bylaws and all subsequent amendments.

Section 4. Each Branch Society shall file with the Membership Secretary of the American Begonia Society the names and addresses of all new members, together with their dues, as received.

Section 5. Each Branch Society shall furnish the Secretary of the American Begonia Society with the names and addresses of all officers of the Branch immediately following elections.

ARTICLE X. PROPERTIES

Section 1. All properties and physical assets of the Society are under the control of the Board of Directors.

Section 2. Approval must be obtained from the National Board before the disposal of any property of the Society. This shall apply to material going to individuals as well as institutions.

Section 3. Each officer, whether elected or appointed, shall be responsible for a complete accounting of Society properties through equipment lists, book lists or inventory of other Society properties to the President Elect at the time accounting for the year is closed, prior to the Annual Meeting.

ARTICLE XI. AMENDMENTS

Section 1. Amendments to the Bylaws may be initiated by a majority vote of the members present at any Annual Meeting or special meeting called for this purpose, or by a two-thirds vote of the Board of Directors. Such amendment shall then be submitted by mail to the membership in accordance with Section 2 of this Article.

Section 2. The Membership Secretary shall mail a ballot covering the proposed amendment to each member of the Society within thirty (30) days after

the amendment is initiated, with the request that the member vote upon said amendment and mail his ballot to reach the Secretary within sixty (60) days after the meeting at which the amendment was initiated. If two-thirds of the votes cast are in favor of its adoption, the amendment shall be declared adopted at the next meeting of the Board of Directors when published in the next issue of the official publication of the Society.

STANDING RULES FOR FUTURE NATIONAL CONVENTIONS

National Board Duties

1. Appoint a Convention Advisory Committee of five members, that have had Convention experience, to be replaced upon expiration of term. Committee will outline a system that will take care of all the minor details that are so essential to the success of a National Convention.

a. Two to serve 3 years; two to serve 2 years; and one to serve 1 year.

b. Chairman of this committee to be the President of the A. B. S. each year.

2. Establish Headquarters at the Convention and arrange conferences for our various working divisions. Keep a register of all officers, delegates and A. B. S. members. (Convention addresses and phone numbers.) Provide a bulletin board for contacts among our officers and delegates. Hold Open-House at Headquarters the evening preceding the Annual meeting, having our Founder and Mrs. Dyckman, our President and other Board officers as hosts.

a. Arrange for at least two National Officers to be on duty at all times.

3. Have supervision of Competitive Show as per subdivisions:

a. Prepare Show Schedule for Host Branch.

b. Provide clerks and judges and standard material with which to work. Judges should not be charged registration and should be given programs. Also be allowed travel expenses and transportation to show from where judges are housed, if necessary.

c. Make Competitive Show Awards, Trophies, certificates of award and Robinson Memorial Medals.

4. Collaborate with Host Branch on Brochure. Have A. B. S. Flower Show Schedule printed herein for benefit of Show visitors.

5. National Board officers to provide material for the Nomenclature Begonia Study show in which every possible known begonia might be presented. This exhibit to be in the same room with educational displays. Glass show cases for rare plants could be provided. This Show to be open and free to all members of the A. B. S. during the period of the Convention and to have space for Round Table discussions with two members, qualified to assist visitors with their problems, in attendance at all times.

6. Saturday Afternoon Meeting; Time, 2:30 p.m. which will provide more time for delegates to return to hotels and dress for the evening.

a. Require all National Officers to submit written Annual Reports at the Board meeting preceding the National Convention (eliminating these reports at Convention.)

b. Recognize each National Director present who will report the number of Branch members present.

c. Prepare a constructive program.

d. Confine business meeting to acceptance of bids for the next Convention; change in the Constitution and By-Laws or those matters requiring the vote of the entire membership, report on ballots and result of election. Allow limited period for discussion of suggestions pertaining to the expansion and improving of the American Begonia Society.

7. Saturday Evening Meeting.

a. Select the installing officer, allowing President Elect the courtesy of choice if desired. Plan a uniform installation to be used at each Con-

vention, with some latitude given to the installing officer to use in his or her opening and closing remarks.

b. Installation would include recognition of Past President and National Directors.

c. National Show Chairman presents the Award for the Competitive Show.

Convention Host Branch Pre-Convention Activities.

Any branch wishing to Host the Annual Convention should so state at the previous Convention.

Host Branch should set a date for a Convention as close to the Labor Day weekend as possible, subject to approval by the National Board.

Any and all information regarding buildings, finances, date of convention, banquet arrangements, housing facilities shall be included in a formal letter to the National Board as soon as possible.

1. Provide suitable quarters for competitive show and have complete charge of setting up show for judging, and provide entry blanks; also make cash awards.

2. Provide suitable quarters for afternoon and evening Convention meetings.

3. Have full charge of Saturday evening banquet. During the banquet reserve the meal-time for chatter and visiting. Mix the delegates and members. (We meet with our own Branch members twelve months of the year.) Have the period of introductions and entertainment follow the dinner.

4. Have full charge of housing delegates.

5. Have full charge of local flower show. Make awards (if any) for this show.

a. Sell tickets to the general public only.

b. Collect Registration Fee from delegates and A. B. S. members.

c. Provide suitable badges.

6. Plan Sunday Garden Tour.

7. Provide suitable quarters for the National Board to use as Headquarters and Conference room at the site of Convention. Provide nomenclature room for Educational displays and round table discussion. Space may also be needed for Seed Fund, Library and Research Departments.

8. Host Branch to select speaker, submitting name of speaker and subject for approval of the National Board; care for his entertainment, accommodations and transportation during the Convention.

9. Any and all monies raised through the A. B. S. by approval of the National Board must be accounted for to the Board.

10. Provide Public Liability Insurance and First-Aid.

STANDING RULES

1. The President shall employ on an hourly basis such clerical or typing assistance not obtainable on a voluntary basis necessary to keep the correspondence current, the necessary equipment to be supplied through rental or purchase, by the Society.

2. All correspondence involving complaints shall be referred to the head of the department concerned for preparation of a reply to be returned to the president for approval, typing and signature. Letters of an abusive nature shall be referred to the President who will confer with his Public Relations Director and the Society's attorney, if necessary for appropriate action.

3. The President Elect or 1st Vice President shall be included in planning and policy making during his years of service as a method of training.

4. The Treasurer shall be responsible for the preparation of all reports required under Federal, State and local laws pertaining to financial matters and employment taxes. The Finance Committee shall assist the Treasurer in this task.

5. All heads of departments other than Library and Show Funds, shall transmit to the Treasurer at least once a month, not later than the 18th, any funds. A uniform form or forms shall be issued by the Society to the department heads to record the transactions. A negative report monthly from the department head will indicate no receipts or disbursements.

Elda Haring of North Carolina joined the Robins, experimenting with propagation of leaves. She reported that she now has in plastic shoe and sweater boxes any number of trimmed leaves and bits and pieces of them. *B. serratipetala* cut up into pieces produces plants on each little section, as does *B. 'Maxwelton'*, *B. wollnyi* and the *B. pustulata* types. She uses equal parts vermiculite, perlite and milled sphagnum for all her seedlings and cuttings of all kinds of plants and even grows a lot of plants in it with regular feeding.

Connie has come to the conclusion that the Rieger begonias will do best with greater humidity (say 40-50%), very light soil and azalea-type pots — she finds clay best for her — and a few hours of sun in summer and all you can find in winter. These observations are based on only two years experience. As for watering, they seem to prefer to be treated like Angel Wings: thorough soaking and then let dry out until topsoil is really dry to the touch. Overwatering contributes to a rot that starts at the line where soil and stem meet and then marches up the stem at an alarming rate. If a stem starts this, however, take a cutting from its tip which is the last part to be affected. One of her two grandmother plants recently began losing three stems at the soil line, with rot moving toward tips. She was frantic until she looked low and saw new stems coming up. The plant had bloomed and grown without pause for over eighteen months and now seems to be starting over again. Yvonne Wells of Texas roots and grows hers in long sphagnum moss mixed with perlite.

Arline Peck of Rhode Island said she has heard people say it is not fair to exhibit a plant grown under lights with those grown in greenhouse or on windowsills. When she goes to a show, she picks her plants from window-grown, light-grown and greenhouse-grown. She feels if a plant has right conditions, it will perform for you no matter where it is grown. She likes all three ways of growing, even has some of her bowls in the greenhouse but down low so as not to burn plant from hot sun.

Geraldine Daly, Rhode Island, has a huge, very wide apple tree which gives her plants summer shade. She has a large soil-filled bench under it and anything set in it grows like mad. The soil is mostly leafmold and cow manure, very soft. Each fall after potting the plants which have been growing there, she adds a bushel of cow manure and works it in so it will be in good condition the following spring. She adds more leaf mold in the spring when needed.

Lena Bussard of Kansas uses plastic bowls food products come in to make hanging baskets for those plants that like to hang under the lights. She uses old TV dinner trays full of sand to set pots in — this really helps with the humidity.

With 70 Round Robin Flights now making the rounds, this is just a small sample of all the good information you can learn about begonias. Why don't YOU join some of the Robins and learn more about how other A.B.S. members grow their plants? To join, just write me.

Mrs. Mae Blanton
Round Robin Director
118 Wildoak Drive
Lake Dallas, Texas 75065

BEGONIA BOWERAE FAMILY

Part II

By Rudolf Ziesenhenné

Although *Begonia bowerae*'s technical description appeared in *The Begonian* in April 1950, pp. 76-78, the descriptions of the varieties of this species have never been published. I will do so in this article.

Begonia bowerae variety *nigra-marga* Ziesenh., new variety. It differs from the species in its having each main vein bordered on each side by a black band; (in the illustration the black area has become greatly expanded until only a small amount of green is present due to the plant's having been grown under artificial light) the leaf margin has more and sharper teeth; the eyelash-like hairs on the margin are longer-growing, up to 4 mm. in length; the leaf tip runs out to a longer, narrower point.

The type herbarium specimen is that of Thomas MacDougall, numbered C.177, and was collected between Cerro Atravesado and Cerro Azul, Sierra Madre, at 4000' elevation north of Niltepec, Oaxaca, Mexico, November 19, 1955; the plant was re-collected November 29, 1965.

This variety will show slight variations in the leaf pattern under varying cultural practices. I have grown many seedlings of this variety and have not found any distinct deviations. Therefore I contend that the names used with *Begonia bowerae* such as *niga-marga*, *nigra-media* and *nigra-venia* are all one and the same plant and these names are to be construed to be synonyms of *Begonia bowerae* variety *nigramarga* Ziesenh.

Begonia bowerae variety *major*

Ziesenh., new variety. It differs from the species in being a much larger plant with leaves attaining a size twice as large as the type, $4\frac{1}{2} \times 2\frac{1}{4}$ inches, entirely spinach green and lacking the dark triangular markings on the margin or they appear only faintly; at the terminations of the main veins large teeth appear, between which occur very much flattened smaller teeth. Mr. MacDougall's type specimen carries his collection number C.62a. It was collected at the north end of Cerro Atravesado at an elevation of 4000', Cerro Azul, Sierra Madre, Oaxaca, Mexico, March 14, 1948.

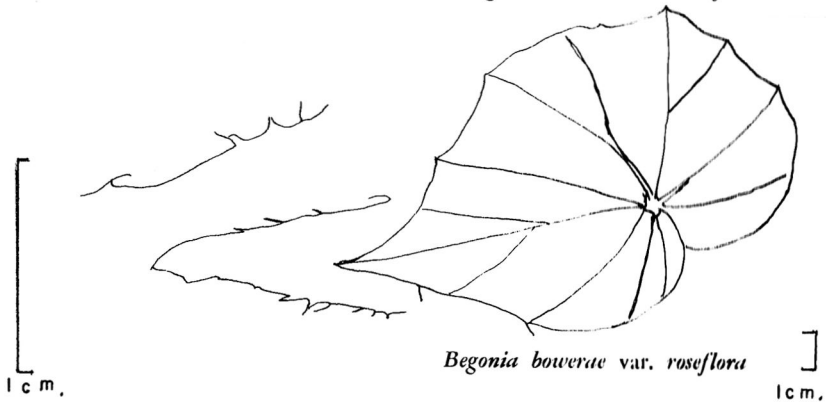
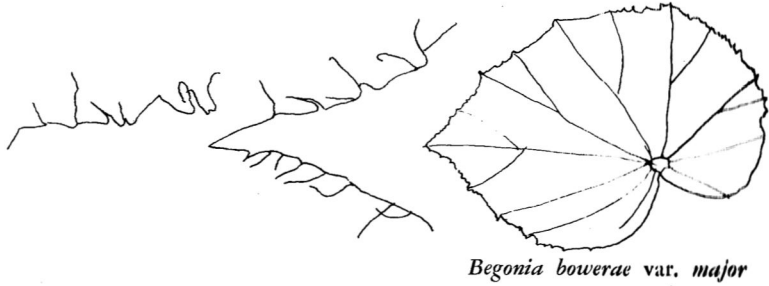
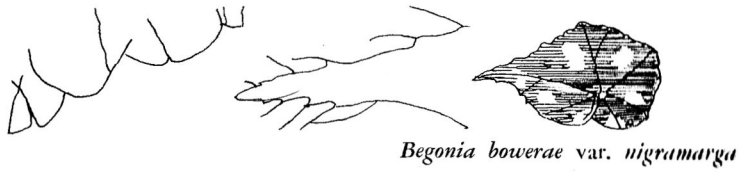
In growing *Begonia bowerae* variety *major* from seed, I selected a plant which I have sold for a number of years which I wish to name *Begonia bowerae* variety *major* cultivar 'Anapamu.' This plant differs from the variety *major* in its having leaves which bow downward, the margin being very undulating, and it flowers more abundantly. Anapamu, a street in Santa Barbara, was the name of a Chumash Indian Chief; the Chumash Indians lived in the Santa Barbara area before the Spanish occupation.

Mr. MacDougall occasionally sent me seeds of previously collected begonias with no additional information. It was in this manner that I received seed of a *Begonia bowerae* in 1961. This seed, planted, produced 300 plants no two of which were exactly alike and they resembled many of the named *B. bowerae* hybrids. These seeds were obviously

Enlarged section of leaf margin starting 13 mm. from the tip, upper leaf margin, and extending for 1 cm. True scale in lower left-hand corner.

A 1 cm. length of leaf tip. True scale in lower left-hand corner.

Leaves all drawn on same scale. True scale in lower right hand corner.



Begonia bowerae Family

from a wild hybrid plant since no plants looked like *B. bowerae* or its varieties. One of the plants has leaves which appear to be covered with black velvet with contrasting white eyelashes on the margin. There are somewhat similar plants on the market and I hesitate to introduce it. Another different-looking plant had deeply lobed leaves with tall, wiry flower stems which I named *B. 'Chumash'* after the native Santa Barbara Indians. This plant received the American Begonia Society Registration No. 267 in 1970.

On July 28, 1967, I planted a packet of seed, under my planting number 3477, of *Begonia bowerae* sent to me by Mr. MacDougall during this 1966-67 collecting trip without any collection data or number. The seed germinated and I grew 108 plants which were all alike. This plant was never released and I name it now:

Begonia bowerae variety *roseflora* Ziesenh., new variety. This plant differs from the above relatives in its having pink flowers, thicker upright rhizomes which have reddish markings, the hairs on the petioles springing from red spots, the leaves being larger (5" x 3") the shape

being more angular extending out to prominent teeth at the end of each nerve, the eyelashes being only 2 mm. long, the margin becoming reddish with age, and the tip running out to a much longer point than *B. bowerae* variety *major*.

Latin Diagnosis

Begonia bowerae variety *nigra-marga* Ziesenh. var. nov., differt folius nervis marginatis nigeris, dentibus plus acutis, ciliatis ad 4 mm., spice longiora acuminato plus anguste.

The type Mr. T. MacDougall No. C.177 collected between Cerro Atravesado and Cerro Azul, Sierra Madre, at 4000' elevation north of Niltepec, Oaxaca, Mexico, November 19, 1955.

Begonia bowerae variety *major* Ziesenh. var. nov., differt foliis magnis (11.5 x 6.4 cm.), omnino viridis spinaciae, apice acutis, dentibus grandibus inter dentibus complantis.

Type M. T. MacDougall No. C.62a. North of Niltepec at the north end of Cerro Atravesado, Cerro Azul, Sierra Made, at 4000' elevation, Oaxaca, Mexico, March 14, 1948.

Begonia bowerae variety *roseflora* Ziesenh., var. nov. differt floribus roseis, rhizomate erecta rubra, foliis viridis spinaciae magnis 12.8 x 7.7 cm. plus angulata ciliis 2 mm. longis, apice longa acuminata. Collected by Mr. T. MacDougall in Mexico during the winter 1966-1967. A type specimen has been established for this plant.

The type specimens for the above plants are in the herbarium of Rudolf Ziesenhenné, 1130 N. Milpas St., Santa Barbara, Calif. 93103.

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Mr. Walter Barnett
1213 South Mullender Avenue
West Covina, California 91790

Mrs. Irene Grannell
1431 Coronado Terrace
Los Angeles, California 90026

Mrs. Katharine Alberti
3322 Troy Drive
Hollywood, California 90069

CALENDAR

December 12—Long Island Branch—7:30 P.M.—at Planting Fields Arboretum in Oyster Bay, Long Island, New York. Holiday Festivities will begin with "Down Memory Lane," a slide program presented by Bill Donnelly. Jim Wyrzen will feature slides on California! The Begonia of the Month will be *B. 'Merry Christmas'* by Rosemary Marfurt. The Holiday Boutique will be hosted by Anita Baldwin. Refreshments will be served.

January 9—Long Island Branch—7:30 P.M.—at Planting Fields Arboretum in Oyster Bay, Long Island, New York. Plant and Supplies Sales, Question Box, Plant Raffles, Slide and Book Libraries precede meeting which begins at 8:00 P.M. Annette Boree will speak on Dwarf Begonias. There will also be a mini-show on Dwarf and Small growing Begonias. The Begonia of the Month will be *B. johnstonii* by Gene Moglia. Refreshments will be served.

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BREEDING ELATIOR BEGONIAS

(Continued from Page 277)

B. socotrana were too tall and too leafy to be attractive as potted plants. The flowers were 3.4 cm across, much smaller than those of the tuberous parents. Of the singles, the yellow, orange, salmon and copper coloured cultivars were used, but only the yellow set seed. The flowers of the hybrid were pink, shot with salmon, and not very attractive. Of the four frilled cultivars, only *B. 'Crispa marginata'* gave one weak seedling.

The double forms also showed a variable response to pollination with *B. socotrana*. 'White', 'Scarlet' and 'Dark red' set no seed. 'Scarlet fimbriata' gave one seedling. 'Yellow' and 'Pink' gave a large number of healthy plants, and so did 'Orange fimbriata', but the seedlings of the latter were very susceptible to mildew. 'Orange double' produced seed which germinated readily, but the seedlings had a low vitality and died at an early age.

A much better type of hybrid than with the large-flowered group was obtained with tuberous cultivars of the medium-flowered group. Crosses with yellow, salmon, deep pink, dark red and copper coloured *B. 'Maxima'* forms and with *B. 'Schweizerland'* were unsuccessful. Many good plants were obtained, however, from the cross *B. 'Maxima white'* x *B. socotrana*. The flowers were about 3 cm across, double, pink to rose-red, the plants were compact with a good balance between leaves and flowers. They were just too weak, however, to offer practical prospects. *B. 'Maxima orange'* gave attractive hybrids

too, with bright red flowers, but very susceptible to mildew.

The best results were obtained with another medium-flowered group, that of *B. 'Bertinii compacta'*. Three cultivars were used, *B. 'Leuchtfeuer'*, brilliant red, *B. 'Sonnenschein'*, yellow, and *B. 'Christrose'*, white shaded with pink. The latter gave no hybrid seed. Among the hybrids with the other two cultivars, plants were found with a compact habit and well shaped leaves. The flower colour was red in both cases, but in the F_1 with *B. 'Leuchtfeuer'* it was bright red, sometimes with an orange glow, while in the F_1 with *B. 'Sonnenschein'* it was mostly a softer red, or salmon red. Both F_1 's were heterogeneous.

In 1971 about a thousand plants were grown. All but a few had to be discarded, mainly because of one or more of the following unfavourable characteristics: bud drop, susceptibility to mildew, too long flower stems or too long a vegetative period (probably due to a pronounced short-day requirement).

B. 'Leuchtfeuer' was used for three consecutive years and it was found that by rigorous selection among the mother plants, the percentage of good seedlings could be raised and the incidence of worthless plants could be markedly reduced.

Of the tetraploid small-flowered cultivars, three gave hybrids: *B. 'Fréne Eysser'*, *B. 'Victor Boret'* and *B. 'Rambouillet'*. These hybrids were attractive plants, but too weak for commercial purposes.

Seedlings of the diploid *B. 'Helene Harms'* were treated with colchicine according to a method de-

scribed earlier (Doorenbos and Legro, 1968). The tetraploid seedlings could be crossed readily with *B. socotrana*. The hybrids were attractive plants with pink flowers, but not of outstanding merit.

DISCUSSION

Many cultivars of *B. x tuberhybrida* set no seed when pollinated with *B. socotrana*. This does not prove that these particular crosses are impossible, but it points to the existence of strong differences in compatibility. The genetic causes may be attributed to one of the parent species of the tuberous begonias. In experiments with some of these species (Doorenbos, unpublished) it was found that *B. socotrana* could be crossed with *B. boliviensis* A. DC., *B. cinnabarina* Hooker, *B. davisii* Veitch and *B. pearcei* Hook. f., but not with *B. veitchii* Hook. f. One could venture the suggestion that the latter is the source of the genes for incompatibility, but it should be kept in mind that the original parent material of the tuberous begonia has disappeared from cultivation and is imperfectly known.

In most cases incompatibility prevented seed set, but in one case neither seed set nor seed germination were impaired, but the seedlings were not viable. This is not uncommon in interspecific begonia crosses. The writer found it in several other cases, e.g. *B. dregei* Otto & Dietr. x *B. grandis* Dry. (unpublished).

Initially, all crosses set very little seed. By selection among the tuberous parent plants as well as those of *B. socotrana*, seed set could be improved. For F_1 seed production on a commercial scale, however, considerable further improvement would

be necessary. Meanwhile, the quality and homogeneity of the F_1 's would have to be ameliorated. In view of the amount of work involved it does not seem very probable that hybrid seed production can be introduced into practice in the near future. For the moment, all one can expect is that a few individual hybrid plants can be propagated into clones which are an improvement on the existing ones.

From the results with various types of *B. x tuberhybrida* it can be concluded that most of the existing cultivars of *B. x hiemalis* are hybrids of medium-flowered, tetraploid tuberous begonias and *B. socotrana*. In fact, it seems fairly certain that the tuberous parent of Rieger's *B. 'Schwabenland'* was *B. 'Bertinii compacta Leuchtfuehr'*, as very similar types were found among the present hybrids of the latter.

The yellow and the white flower colour were found to be recessive. In the F_1 -plants occasional bud mutations were found from red to yellow or from red to white. This points the way to obtain yellow or white clones: irradiation of leaf cuttings of the best F_1 -plants followed by selection among the plants from the adventitious buds. Preliminary experiments have already shown that this method is perfectly feasible.

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- Arends, J.C., 1970. Somatic Chromosome number in 'Elatior'-Begonias. Meded. Landbouwhoges. Wageningen 70 (20):1-18.
- Doorenbos, J., and Legro, R. A. H., 1968. Breeding 'Gloire de Lorraine' Begonias. Meded. Landbouwhoges. Wageningen 68 (19):1-18.



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be yours at *
Christmastime
and throughout the
New Year.

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To your happiness at this
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And may the New Year be one
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A Happy New Year"



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wishes for the New Year to our
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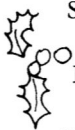


San Francisco Branch



*"May Peace and Joy Be Yours
At Christmas Time and
Throughout the New Year."*

ORANGE COUNTY BRANCH



SEASON'S GREETINGS
and
BEST WISHES FOR A
HAPPY NEW YEAR
EAST BAY BRANCH

**CONDENSED MINUTES OF THE
ANNUAL MEETING OF THE
BOARD OF DIRECTORS AND
MEMBERS OF THE
AMERICAN BEGONIA SOCIETY
October 22, 1973**

The regular meeting of the Board of Directors was held on October 22, 1973, in the South Gate Auditorium, Wally Wagner, President, presiding; a quorum was present. After opening ceremonies and approval of the minutes, the Board members dispersed into Preview Committees to screen the business of the meeting. When reconvened, the following reports were made:

FINANCE: The Treasurer's report indicated an income of \$730.64 with disbursements of \$1,769.18, leaving a balance on hand of \$3,707.81. Two recommendations were made: a resolution carried to facilitate transfer of funds from the 1972-73 seed fund account; a motion carried facilitating the purchase of a typewriter for the circulation manager, the cost of which will be reimbursed to the association by the end of seven months. \$15.00 was donated to the City of Hope in memory of Mrs. Ruby Budd.

EDUCATION AND RESEARCH: Distributions of seed from the new seed fund donated by Mr. and Mrs. Paul Lee, Mr. and Mrs. Rudy Zieshenne and Sylvia Leatherman are under way, according to Pearl Bennell, Fund chairman. Discussion was held regarding the needed funding of the Research Committee. The various projects of Professor Barkley in Central America and Rutgers University were outlined in Carleton L'Hommedieu's report; Mr. L'Hommedieu will write to branches of the ABS to interest them in contributing to the fund through plant table sales as recommended and approved by the Board.

LITERATURE AND PUBLICATIONS: The committee discussed the size and expense of *The Begonian*, indicating the need for new advertising rate structure or other means of increasing income. A motion carried increasing the next issue of *The Begonian* by four pages. Announcement was made that the Cultural Bulletin will be ready for printing as soon as the photographs are received.

MEMBERSHIP AND PUBLIC RELATIONS: Doug Frost received a charter on behalf of the newly formed Garden Grove (California) branch of the ABS; 30 members signed the charter. The new parliamentarian was announced: Mrs. Rigmor Clarke. A motion passed, as recommended by the committee, that future new ABS members will receive certificates entitling them to a seed packet instead of receiving the actual seed. It was the consensus

that this will save on seed in those instances where new members are disinclined to show in Santa Barbara, Cal.

The meeting was adjourned to 4:00 Sunday, October 28, at which time the ballot committee reported the count of the amendment voting; a quorum was present. A resolution was read to correct the word "bi-annually" in amendments to Article IV, Sections 3, 4, and 5 of the constitution to read instead "biennially" so that there could be no mistake in the meaning. A motion carried accepting the resolution.

The motion to approve the report of the ballot committee as presented by chairman John Provine carried unanimously; Total ballots received were 571, two being deemed invalid. Members were reminded that a two-third majority of votes cast on each item was necessary to carry it.

All but two amendments carried, extending terms for officers to two years, eliminating office of president elect and establishing an editorial board for the selection of the editor of *The Begonian*. The two amendments which did not pass concerned proxy votes and notices regarding Board meeting agendas and minutes.

The meeting adjourned.

Respectfully submitted,
Margaret Ireton, Secretary
interested in seed propagation, but will not penalize those wanting to start begonias from seed as a privilege of joining. Total members, October, 2,927.

SHOWS AND CONVENTIONS: Invitations have gone out to branches for the

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HOLIDAY SEASON
and
THROUGHOUT THE NEW YEAR
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ELEGANT ELATIOR BEGONIAS

(Continued from Page 274)

qualities of the Rieger elatior begonias so the judges will expect more blooms of larger size (except *B.* 'Bernstein's Gelbe' which normally has smaller leaves and flowers).

Rieger elatior begonias are patented plants. One firm located in Ohio is the sole distributor in the United States and Canada.

Hanging basket varieties include: *B.* 'Aphrodite Pink', *B.* 'Aphrodite Rose', *B.* 'Aphrodite Cherry Red' and *B.* 'Aphrodite Amoena'. Upright growing varieties *B.* 'Schwabenland Red', *B.* 'Schwabenland Orange', *B.* 'Schwabenland Pink', *B.* 'Bernstein's Gelbe' (lime-yellow), *B.* 'Goldlachs' (cut-leaf, light orange flowers), *B.* 'Kerfeld Orange' (bronze foliage) and *B.* 'Crispa' (large red flowers). The distributor of these begonias has informed me that several exciting new varieties will be available by early 1974. Elegant Rieger begonias are available at your favorite nursery or florist (also, see the 'Begonias and Exotic Plants' ad in this issue. Ed.) Any of the above varieties will make a wonderful addition to your indoor or outdoor garden.

IN MEMORIAM

The Missouri Branch of the American Begonia Society is very sad at the passing of one of our members. Mrs. Grace Lucas, 80, of 1000 E. 33rd St., Kansas City, passed away Sept. 13, 1973, of a heart attack.

No greater loss has man than that of a friend. We must regretfully announce such a loss with the passing of Roy A. Price, longtime nurseryman, member, supporter and friend of the American Begonia Society. His contribution to the beautiful world of plants has long been enjoyed by many at his nursery and home, 'Patio Plants', in Venice, Cal. Roy passed away October 31, 1973. We extend our heartfelt sympathy to his lovely wife, Virginia, and family.

Merry Christmas

and a

Happy New Year

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