

August 1981

The BEGONIAN

The BEGONIAN

Publication of the American Begonia Society

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AMERICAN BEGONIA SOCIETY

Founded January 1932 by Herbert P. Dyckman

Aims and purposes

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

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

TO standardize the nomenclature of begonias.

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

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

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

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See inside back cover

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THE COVER: A perfect roseform tuberous begonia flower in vibrant orange was photographed close up by Reyer Jansen of Agricultural University at Wageningen, The Netherlands. See story on tuberous begonias for the eastern United States on page 176.

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NOTES/ From the editors

You'll find a surprise on page 179.

This rare occurrence was made possible by a fortuitous combination of happenings covering the past three years.

In 1978, Past President Wallace Wagner found eight old begonia prints from 19th century *Curtis's Botanical Magazines*. He offered to lend them to ABS to reproduce in *The Begonian*.

The society asked branches and individuals for contributions to cover the extra cost of full-color printing. Twelve branches and 15 individuals give \$836.

This money was paid to the then-printer of *The Begonian*, who printed the color pages all at once for reasons of economy, leaving blank pages for later addition of the type.

While the printed pages were still stored by the printer, two of the eight were published in October 1978 and January 1979. Then the current *Begonian* co-editors were appointed and, on their request, ABS directors switched printers.

A dispute ensued, because the for-

mer printer argued ABS owed him additional payments for the color printing. ABS believed the pages were fully paid for. The printer refused to relinquish the pages.

A series of negotiations was unsuccessful, and the whole matter lay in limbo until President Gil Estrada reopened the talks some months ago. He persuaded the printer to reduce the amount he insisted upon, then advised the ABS board.

Board members, while willing to compromise, felt the amount still was too high.

At about this time, member Martin Johnson of Redwood City, Calif., turned over to *The Begonian* nearly \$600, proceeds from sale at the ABS convention of his species from the Philippines.

Another round of talks the resulted in an agreement to pay \$400 for the disputed pages, and the money would come from Martin's donation.

This is the first of the remaining six. You'll enjoy the others soon.

—C.A. & K.B.

BEGONIA BRIEFS/ A clarification on *B. listada*

An editing error caused the wrong country of origin to be published with the description of *B. listada* in the July *Begonian*. On page 157, the paragraph

following the Latin description should be changed to read:

Type: Argentina: Cultivated, 1980-81, *Thelma O'Reilly* s.n. (U.S.).

Tuberous begonias for eastern climates

H. Gilbert Harlow

The growing of tuberous begonias on a commercial scale is confined mostly to the fog belt of California. There the climate permits year-round outside growing conditions, and tuber production is greatly simplified.

For nearly 40 years I have been working with begonias on the opposite side of the country in upstate New York. Here the growing season outside is only about half as long, and most of the activity is carried on in greenhouses. Although the energy crunch has posed problems it has certainly not stopped us; in fact, each year we have expanded our production.

Our primary concern is with the sale of seedling plants which we wholesale and retail in from 3-inch to 7-inch pots. Unlike tubers, which start when they get around to it, the seedlings can be started to bloom at any date they are wanted. Our season is nearly over before the first tuber-grown plants come into bloom.

Frank Reinelt, generally recognized as the foremost breeder of tuberous begonias, was a tremendous help and a source of great encouragement throughout my early years.

One of his oft-repeated phrases was: "This year's advances are so great that all previous selections are obsolete." This was the reason he never made a practice of building up a stock of named varieties and offering them for

H. Gilbert Harlow suspects he is the only civil engineer around who has a ladies' garden club named in his honor. He is a professor of civil engineering at Union College of Schenectady, N.Y. and for 29 years was chairman of the civil engineering department. For information, write to him at his Koral Gardens, Main Street, Route 55, Pattersonville, NY 12137.

sale as is done by Blackmore & Langdon in England. His point was that in the 10 years or more that it took to prepare a thousand plants or tubers from cuttings, much better plants would be available from the advances in breeding.

When Reinelt retired from begonia hybridizing, I was able to purchase a portion of his breeding stock. By combining this with my own strain, plus plants imported from England, Scotland, and New Zealand, I am now able to appreciate fully his enthusiasm for the latest advances in breeding. I never have seen plants that compare with our present crop.

Growing in greenhouses presents problems other than the cost of fuel. In summer the temperature goes close to 100 degrees most days. This is far from ideal, but our experience has been that as long as the temperature drops down to the 60s or low 70s at night little harm is done.

Plants require watering every day in sunny weather. The natural umbrella formed by tuberous begonia leaves makes it difficult to direct the water into every pot. This is solved by adopting a capillary watering system. Our benches are lined with plastic over which we spread fiberglass matting. An inch or two of sand completes the surface.

Once the pot has been saturated, it will continue to draw up moisture from the mat as long as it is moist. The pots are never overwatered because the capillary action works both ways and draws water down out of the pot when it is too wet.

In summer I water with one hand and select plants with the other. The

superior plants are segregated to determine their suitability as breeding stock. A number on the bottom of the pot identifies the cross so that it can be repeated if warranted and so that the most successful parents can be recognized.

It takes superior plants to grow well in our climate. Many begonias that performed well in England, Scotland, or on the West Coast did not adapt to our climate and have been culled from the collection. I rarely import plants now because the imports, in general, cannot compete with those selected from our own strain.

The growing medium I use is about 70 percent peat moss, 20 percent ground styrofoam (available from a local factory), and 10 percent vermiculite. This makes a light mix which works well with capillary watering.

One big advantage of the loose mix is the extraordinary tuber formation which it promotes. For many years I maintained that it was not feasible to produce tubers commercially in this climate. Recently I have changed my mind. By keeping my largest greenhouse just above freezing on cold nights in early winter, I have discovered that excellent tubers can be formed even in pots as small as 4 inches in diameter.

Our choice selections we grow in 6- to 8-inch pots. We are far enough north to start tuber formation in early September; by letting them develop until January 1 we produce thick, meaty tubers that come through the storage period in excellent condition.

Happily, the cost of fuel is moderate because we can get by with such low temperatures. Charles A. Lewis (now at Morton Arboretum in West Chicago) discovered during his graduate days at Cornell that tuber formation

was improved at lower temperatures and our experience bears this out.

We actually have a 16-month year since we start seeds as early as September 1 and harvest tubers the following January. Our principal business, the production of growing plants, has benefitted from fast delivery offered by United Parcel Service. Previous attempts to ship by parcel post were unsuccessful.

Packing the plants for shipment is time-consuming, and we prefer to have customers come to the greenhouse if they can, but UPS usually transports them within a day and our losses have been nil. Our location is only about 100 yards from the New York State Thruway, so many regular customers plan their trips to include a stop at the greenhouses. Schenectady exit 26 and Amsterdam exit 27 are equally convenient.

Sales of growing plants start in March and continue on into August, the month of peak bloom. Unfortunately, we rarely have any plants in bloom in the greenhouse until mid-June because most of them are carried away in bud. The time to see the breeding stock and other plants in bloom is from July 1 through September.

The greenhouse is always open during daylight. We ship tubers during January to April, taking advantage of warm breaks in the weather. By May any unsold tubers are replanted.

Visitors to our greenhouses have an opportunity to see many named varieties from England and Scotland and to compare them with those superior plants from our own hybridizing efforts.

We have a 35mm color slide collection available to ABS branches for showing at meetings.

“*Begonia dayi*”: Is it *B. nigro-venia*?

Rudolf Ziesenhenn

Begonia hobbyists as well as botanists have tended to add to the confusion concerning the proper name of what is commonly known to Pacific Coast members of ABS as *Begonia* ‘Dayi’. This is a four-part discussion of the nomenclature of the plant which I believe should be known as *Begonia-nigro-venia* hort. Linden ex Hooker. It has also been identified as *Begonia hidalgensis* Smith & Schubert and *Begonia nigrovenia* Regal.

Under No. 3 is discussed a confusing situation in which Dr. William J. Hooker presents a drawing with a Latin as well as an English description of a *Begonia* he knows as *Begonia nigro-venia* hort. Linden and captions it *Begonia glandulosa* A. DC. He says he believes it looks like the herbarium specimen bearing the name *Begonia glandulosa* A. DC. He then says he believes the herbarium specimen *Begonia glandulosa* A. DC. is probably *Begonia multinervia* Liebm., an entirely different plant unrelated to the plant he pictures.

Under No. 4 we look into the statement that *Begonia nigro-venia* hort. Linden ex Hooker is really *Begonia pinetorum* A. DC.

1. *Begonia dayi* hort. Ziesenh. vs. *Begonia hidalgensis* Smith & Schubert

Sometime before 1947, Lambert Day, then research director of ABS, gave me a start of a rhizomatous *Begonia* with dark markings on the

nerves. I believed it to be a new *Begonia* species and intended to name it *Begonia dayi* for him. Not being quite sure of myself as a beginner, I wrote to Dr. Lyman Smith at the Smithsonian Institution in Washington D.C. explaining my understanding about this plant.

He replied that he believed it was a new *Begonia* species. He had already studied it and had written up the botanical description to be published as *B. hidalgensis* Smith & Schubert. It was published in the *Journal of the Washington Academy of Sciences* Volume 40, No. 8 (August 15, 1950) on page 241 and pictured in figure 1 on page 243.

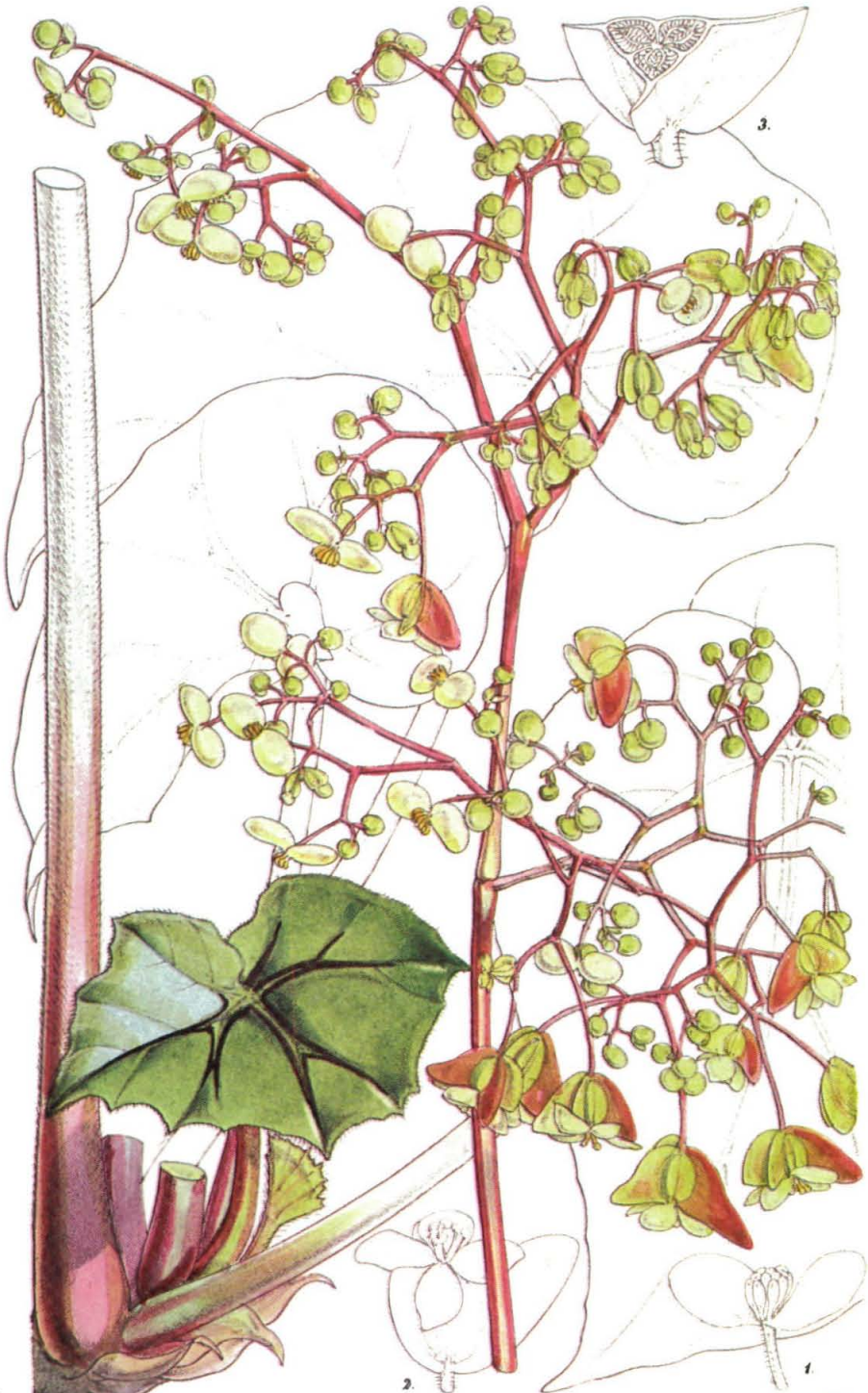
Since in botanical taxonomy each plant may have only one name, I did not attempt to publish the name *B. dayi*. The name *Begonia dayi* is therefore not a legal botanical name. *Begonia dayi* hort. actually becomes a synonym for *B. hidalgensis* Smith & Schubert but is the name preferred by many *Begonia* hobbyists, it having been so designated in my advertisement in *The Begonian*, vol. 14, p. 178, September 1947.

The description for *Begonia hidalgensis* Smith & Schubert translated loosely from the Latin is: leaves unsymmetrical, transverse elliptical; scape tall, inflorescence unequal, cymose, many flowered; tepals in the male flower 2, orbicular; stamens free, anthers inverted egg-shaped; tepals female 5, elliptical, coming quickly to a point; capsule unequally three-winged.

The English description of the plant

This plate, captioned *Begonia glandulosa* in Curtis's *Botanical Magazine* in 1861, is believed by the author to be an illustration of *B. nigro-venia* Linden ex Hooker.

Rudolf Ziesenhenn of 1130 Milpas St., Santa Barbara, CA 93103 operates a *Begonia* nursery, studies *Begonia* species, and is a past ABS nomenclature director. Many know him as “Mr. *Begonia*.”



W. Fitch, del. et lith.

W. C. Brooks, hrip

Begonia glandulosa (from original text)
Reproduction from Curt's Botanical Magazine, London, 1861
By the American Begonia Society, 1978

is essentially: Stem short and creeping with the flower stem and leaves borne at its tip, 1 cm thick, internodes very short, leaves palmately 7-nerved, transversely elliptical with an oblique gradually tapering tip and often with short teeth at the ends of the principal nerves, 7-12 cm long, bare above, dark-hairiness beneath, especially on the reddish nerves, petioles suberect, slender, to 17 cm long, densely brown-hairy, stipules remaining, overlapping, less than triangular, 15 mm long, margin even, gradually running out to a stiff point from a strong midnerve, dark brown; peduncles much longer than the leaves, up to 55 cm long, fine hairy when young; cymes many-flowered, irregular with one side distinctly longer, densely fine hairy; bracts quickly falling, small, elliptical, margin even, thin; male flower tepals 2, roundish, 5 mm long, margin even, minutely fine hairy, yellowish white; stamens few, free, anthers inverted egg-shaped, notched at the tip, slightly shorter than filaments; female flower tepals 5, elliptical, sharp pointed, 2.5 mm long, margin even, minutely fine hairy; ovary 3-celled, placenta two divided, styles two divided; capsule suberect, egg-shaped, wings unequal egg-shaped, rising at least the largest very sharp, 5-10 mm wide.

2. *Begonia nigrovenia* Regel vs. *Begonia hidalgensis* Smith & Schubert

I have searched the botanical literature to learn if anyone else had knowledge of this plant with reddish or brownish nerves on the leaves. I found in *Index Kewensis* a reference to *Begonia nigrovenia* Regel. This plant was described and pictured in *Gartenflora* in 1867 on pages 163-164 and pictured on Table 546. Through the kindness of Marga Ensemeyer, a stu-

dent at Freie University, Berlin, and her professor, Dr. L. Langhammer, I have a copy of this article after many years of searching.

B. nigrovenia Regel is described approximately as follows: *Begonia nigrovenia*: rhizome creeping, fleshy, leaf arising from the ground; leaves oblique heart-roundish, palmately 5-7 nerved, deeply heart-shaped, scarcely wavy-angular or less than even, above bare, brightly green, shining, veins red marked, below pimpled and minutely hairy on the nerves, margins minutely reddish-hairy, tip coming shortly to a point; stipules thin, papery, bare, coming to a point; leaf petioles longer than the leaves, minutely hairy, reddish, terminating in a many-flowered cyme; bracts small egg-shaped falling quickly; male flowers two-petaled, petals inverted egg-shaped, about 1/6 inch long, filaments shortly connected at the base, anthers oblong-elliptical, a little shorter than the filaments; female flowers 5 petals, styles 3, stigma moon-shaped, petals inverted egg-shaped, oblong, unequal, placenta equally 2 divided; capsule wings unequal, smaller rounded, largest delta-shaped.

Begonia nigrovenia Regel appears to be the same plant as *Begonia hidalgensis* Smith & Schubert and therefore has priority over it. The name *B. hidalgensis* thus becomes a synonym of *B. nigrovenia* Regel.

3. *Begonia glandulosa* Hook. vs. *Begonia nigrovenia* hort. Linden ex Hooker

Searching through *Curtis Botanical Magazine* of 1861 I came upon Plate 5256 with the title *Begonia glandulosa* with a plant pictured that resembles *Begonia nigrovenia* Regel. The author of the article, Dr. William Jackson Hooker, writes: "This plant was re-

ceived from Mr. Linden seven years ago under the name of *Begonia nigro-venia*. It is certainly identical with a plant called in our herbarium *B. glandulosa* A.DC. by De Candolle himself when preparing the *Begonias* for publication in the forthcoming volume of the *Prodromus*, and which was gathered by Seeman at Varagas (see Ann. Sc. Nat. ser. IV. Vol. ii. page 148). This plant, however agrees with Liebmann's description of *Begonia multinervia* from Costa Rica so closely that it is not improbable that they may be the same."

From Dr. Hooker's statement above, I have gained the impression that the following positive elements establish the plant's identity as *B. nigro-venia* as he initially stated: the drawing, the Latin description, the English description; the rest of the article is purely suppositional, including the *B. glandulosa* A.DC. caption. This is the first description I can find for this plant and as it is in Latin and English as well as with a botanical illustration, this establishes the name botanically. The name thus becomes *Begonia nigro-venia* hort. Linden ex Hooker.

Dr. Hooker then questions the relationship of this plant with the herbarium specimen having the name *B. glandulosa* A. DC., which had not been published. He concludes by saying: "This plant (*B. glandulosa* A. DC.), however, agrees with Liebmann's description of *B. multinervia*, from Costa Rica, so closely that it is not impossible that they may be the same plant." In this he was correct.

Dr. Hooker then proceeds to give a description of the plant he received as *B. nigro-venia* from Linden: "Rhizome stout, prostrate, ascending, covered with stipular scales. Petioles a span long and upwards, cylindrical, bright-

red, rather hairy. Leaf four to six inches broad, of a fleshy texture, obliquely broadly egg-shaped or heart-shaped or almost round, with an open or closed deep sinus, and obscurely sinuate-toothed margins, glabrous, or very slightly hairy, shining on both sides but most so below, deep-green above, the veins painted with broad black or reddish bands, paler beneath, painted red and cuticle covered with minute pustules. Flower stem slender, cylindrical, very tall, bearing a profusely branched cyme, with deep-red branches and pedicels. Flowers very numerous and rather small, pale-green or whitish; males smaller with two broadly ovate, blunt sepals and six to eight stamens; females with four oblong sepals, and capitate stamens. Large wing of fruit triangular, blunt."

This description of *Begonia nigro-venia* hort. Linden ex Hooker makes me believe this plant is the same as *B. nigro-venia* Regel, *B. hidalgensis* Smith & Schubert, and *B. dayi* hort., so all these names are synonyms for *Begonia nigro-venia* hort. Linden ex Hooker.

The only major difference between the Hooker description and those of the other plants is that Hooker's plant has four tepals in the female flower while the other plants have five tepals. It has been my experience in growing *B. hidalgensis* Smith & Schubert that during the flowering season the inflorescence carries female flowers with both four and five tepals. At other times there are only five-tepaled flowers in the early inflorescence and later in the season only four-tepaled flowers.

As to the plant De Candolle named *B. glandulosa*, this is an entirely different species having two tepals in the male flower and two tepals in the female flower and is not rhizomatous

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Mary Harbaugh

Our seed growers and hybridizers are full of interesting and helpful ideas.

Joy Porter of Massachusetts tells us her method for germinating seeds. She uses the small cream cups that come with coffee and pokes two drainage holes in the bottom, fills them with vermiculite, sets the cups in a dish, and pours boiling distilled water through them.

They are allowed to sit in the water until they are cool. She then drains them and rolls 2 seeds off a small piece of slick white paper into each cup, spacing them apart. She then labels them, fills out her file card, and places the pots in a plastic sweater box with an inch of damp vermiculite in the bottom, covers the box and places it 10-12 inches under fluorescent lights.

She usually examines them once a day, which gives them a few minutes of fresh air. Ten days after they germinate, she starts misting them with half-strength foliar fertilizer. She has had much better results misting them than setting them in pans of water.

She also found algae growth on the seed pans to be a problem. A black-green oily algae would start to grow on the surface after two or more weeks of being under fluorescent lights. She has stopped using a peat-lite mixture and is now trying fine vermiculite. It is taking much longer for the algae to form—long enough for the seedlings to germinate and get strong and healthy.

On her last planting, she tried putting a bottom layer of peat-lite mixture on the bottom and one-third of an inch of the vermiculite on top. There is a little fertilizer in the peat-lite mixtures, and she thinks it might be the interaction between the fertilizer and light that causes the algae to grow.

For starting his seedlings, Ben Yar-

Information about joining a robin—a packet of letters circulated among begonia lovers—is available from Mary Harbaugh, round robin director. Write to her at W2899 Homewood Ave., Shawano, WI 54166.

brough of Georgia uses a plastic butter or peanut butter dish with the center of the top cut away, leaving a ring that will fit down over the dish. He cuts or drills holes in the bottom of the dish.

He plants the seed, leaving one or two inches of space at the top. Then he places clear plastic wrap over the top and presses the ring down to hold it in place.

When Elda Haring of North Carolina is lifting her seedlings for transplanting, she uses the top of a demitasse spoon so that all of the seedling mix clings to the roots. She rarely has any losses.

Betty Davenport of Washington uses two saucers of water when transplanting her seedlings. She puts a group of seedlings in the first saucer and then moves them to the second one where she takes a toothpick and lifts each by the leaves. She finds that with this method they separate easily.

Mabel Corwin of California advises growers not to harden their seedlings off too soon: "That is a mistake so many people make. They get them up and then take them out of the boxes too soon and they dry up. The longer you can keep them in plastic boxes, the less work they are."

How to hybridize

Interested in hybridizing but not quite sure how to go about it? Elda Haring tells us her method: "Begonias have both separate male and female flowers on each plant. The male flower is plain but the female has a three-cornered appendage behind its petals—this is the potential seed pod.

"I remove a male flower and brush the female flower. The male flowers should have been opened several days. Usually the pollen is ready when the petals turn back slightly. The female flower is ready about three days after opening. If possible, I like to repeat the pollination process the next day.

"If pollination was successful, the petals of the female flower will drop and if the ovary stays on it will finally get a little

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Carrie Karegeannes and Thelma O'Reilly, nomenclature co-directors

In the citations of cultivar parents, the female (seed) parent is listed first.

Begonia 'Dido'

No. 828—*Begonia suffruticosa* x unnamed dwarf *rex* cv. 'Dido'

Rex *Cultorum* group; rhizomatous. Small, 2" x 1½" leaves are rose in the center with cream band, deep rose edge, and 6 black veins. Borne on very dwarf, upright plants, the leaves are nearly glabrous, ovate-acuminate to slightly lanceolate, and dentate-margined. Petioles are 2½" long; stipules, papery and persistent. Medium-dark rose-pink, ½" flowers with 4 male and 5 female tepals are borne in few-flowered cymes just above the foliage, carried on 3" peduncles intermittently in winter and spring. Originated by Patrick J. Worley, 1408 Sunset Drive, Vista, CA 92083, in 1978; first bloomed in 1979; first distributed in 1980. First published in Kartuz Greenhouses catalog, 1980. Registered Sept. 9, 1980.

Begonia 'White Strike'

No. 829—*Begonia* 'Tom Ment x *coccinea* 'White Strike'

Cane-like, 3'. Smooth green, narrowly ovate, acuminate-tipped leaf blades up to 6"-8" x 2½", only rarely whitish-silver spotted above, are variably reddish-tinged underneath—the red graduating to a wide, pale-green margin faintly edged in red—and have 13-17 green to reddish pinnate veins. The leaves are almost straight and are slightly and unequally cordate at the base. Petioles are ½"-2" long, green, smooth; stipules are acute, green, up to 1" long, and deciduous. White flowers

with white ovaries on the females are profuse most of the year in southern Florida, borne on 4", whitish-green to pale pink peduncles in hanging, dichotomously branched clusters carrying 7-15 flowers of one sex. Male flowers are 1¼"-1½" across with 4 tepals, 2 of them large and rounded, 2 very narrow. Females are 1"-1¼" across with 5 tepals, 2 of them large, 2 medium (sometimes not fully separated), and 1 narrow; with 3 bifid, doubly spiraled styles; and with 3-winged ovaries, with 1 of the wings not quite equal to the other 2. *B.* 'White Strike' differs from its parents principally in having white flowers and from *B.* 'White Surprise' of the reverse cross in having more nearly pure white flowers, doubly-spiraled styles, pale peduncles, and green leaves tinged red underneath. Originated by Frank Williams, 11791 S.W. 72 Place, Miami, FL 33156, in 1977; first bloomed in 1979; first distributed in 1980. Tested by ABS Miami Branch. Registered June 10, 1981.

Begonia 'White Surprise'

No. 830—*Begonia coccinea* x 'Tom Ment' 'White Surprise'

Cane-like, 3'. Smooth, light-green, 6"-8" x 2¼" leaf blades are similar in shape to those of *B.* 'White Strike' above. They are slightly darker green above than below, mottled with whitish-silver spots above (on older foliage) as in *B.* 'Tom Ment', with faintly reddish margin and 12-17 green pinnate veins. Petioles are 1"-2" long, green, smooth; stipules are acute, green, up to 1¼" long, and deciduous. White flowers with pale lavender tinge and deeper lavender on the ovaries, are profuse most of the year in southern Florida, borne on 4"-6" red peduncles in hanging, dichotomously branched clusters carrying 7-21 flowers of one sex. Male flowers are 1¼"-1½" across with 4 tepals, 2 of them large, rounded, and 2 very narrow. Female flowers are 1¼"-1½" across with 5 tepals, 2 of them large and

Applications to register Begonia cultivars may be obtained from Thelma O'Reilly, 10942 Sunray Place, La Mesa, CA 92041. Each must be typed or printed in ink.

A \$2 check or money order payable to the American Begonia Society must accompany each completed application. Photos, drawings, and/or dried specimens to accompany applications are encouraged. ABS is the International Registration Authority for Begonia cultivar names.

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SEED FUND/ *Mysterious species from Brazil, plus seven more*

Joy Porter, director, Clayton M. Kelly Seed Fund

- AG 1 — *B. kenworthyae*: Mexican species with erect rhizome and cleft, ivy-shaped leaves with large white flowers in winter. Should be kept on the dry side in winter. Description by Rudolf Ziesenhenné in July 1950
Begonian per pkt 1.00
- AG 2 — *B. goegoensis*: Rhizomatous species from Sumatra with large (more than 6 inches) rounded, peltate, olive-green leaves; veins indented, giving a quilted appearance; red underneath. Bright pink flowers in spring, males with four petals and females with five. Choice. per pkt 1.00
- AG 3 — *B. rotundifolia*: Small, bright green, round-leaved species from West Indies with rose-pink petioles and white (pink in bright light) flowers in fall. Perhaps the first rhizomatous begonia introduced to cultivation. per pkt 1.00
- AG 4 — *B. foliosa*: Shrub-like species from Colombia with bare, small leaves, giving a fern-like appearance. Makes a graceful basket plant with tiny white flowers appearing intermittently. Needs humidity. per pkt 1.00
- AG 5 — *B. macrocarpa* hort: Believed to be an unidentified species from Brazil, this begonia has been grown under this name for many years. The real *macrocarpa* is from Africa. Shrub-like with small bare, dark green leaves flushed red below, this makes a good basket subject, and the white flowers in late spring contrast beautifully with the dark leaves. Ovaries of female flowers have red wings. per pkt 1.00
- AG 6 — *B. bartonea*: Shrub-like with 1- by 2-inch dark green leaves, red netted-veined below with pink petioles and rose-pink flowers in clusters on 2-inch stems. Plant is ideal size for terrariums, and grows best there because it cannot tolerate drafts and sudden temperature changes. per pkt 1.00
- AG 7 — *B. ulmifolia*: Thick-stemmed species from Venezuela with bright-green, rough-hairy, medium-size leaves and medium-size white flowers in clusters from terminal axils in spring. Makes a large specimen quickly. per pkt 1.00
- AG 8 — *B. solananthera*: Trailing-scandent species from Brazil with small, pea-green heart-shaped leaves and white flowers with red-purple blotch at base of the petals in late winter and spring. Sweet-scented. . per pkt 1.00

Send orders to Joy Porter, 9 Bayberry Lane, Framingham, MA 01701. Include self-addressed, stamped envelope or add 40 cents for padded, hand-cancelled package. Massachusetts residents add 5% sales tax. Checks and money orders should be made payable to: Clayton M. Kelly Seed Fund. Foreign orders: U.S. funds only and add \$1.20 for postage.

GROWING FROM SEED/ *Tracking down misgermination*

Joy Porter

Quotes from my mail:

"I find *no* difference in germination since the padded packages have been in

Seed grower Joy Porter of 9 Bayberry Lane, Framingham, MA 01701, is director of Clayton M. Kelly Seed Fund. Write to her about your seed growing experiences.

use. Some still do not germinate, but it is due to poor seed and not the mailing process."

"The packet of seeds arrived last week in good condition, apparently. It appears to me that this is probably the best packaging used to date."

"Considering the success (lack of) which I have had with ABS seed in the past

several months, I decided to take the route of trying to rebuild my collection by the use of cuttings and leaves."

"Why don't you prevail upon the 'many customers' who report good germination to divulge their growing secrets, and perhaps a whole multitude in ABS could thereby benefit."

"Received four seed packets in regular, unpadded envelope—On May 9, sowed over peat moss moistened with boiling water; put in a covered, clear plastic box, placed under lights at approx. 70 degrees F. May 30—all four have germinated well by this date, at least as well as seeds sent in padded packages."

"I attribute my increased germination to your use of the bubble-lined packs."

Since my mail has been somewhat contradictory concerning the benefits of the bubble-packs (more for than against) I

More Round robins

From page 182

brown and dry. If you wait too long the seed pod opens and you lose the seed. When you gather seed pods, put them in a dry paper envelope; write down the name of the cross or the species, if it was selfed."

If you are troubled with plants on which the male and female blossoms do not open at the same time, you probably will be interested in the comments of Dan Haseltine of Illinois.

When collecting pollen on male flowers, he waits until it is ripe and then flicks it off onto lightweight waxed paper. He folds it carefully and puts it into some small glass bottles with covers. These he labels and puts into the coolest spot of the refrigerator (where they will not freeze).

He likes to use waxed paper as it does not have a tendency to mold and the pollen doesn't stick to the paper. The pollen itself will mildew if it is too fresh or green.

In response to a question on what plants to use in hybridizing, Mabel Corwin says: "I think most of the good hybridizers usually use a species and a hybrid for crossing. Two species will give plants that are very similar. If you cross a species with a hybrid, you get a wide variety of

want to remind you: It is your choice whether to include 40 cents with your order for bubble-pack, or a stamped, self-addressed envelope (27 cents if you want any packing around seed).

If seed germinates well for me, I have to conclude that something has altered its viability in the mailing process, either pressure or excessive heat, if customers get no germination. My objective remains "satisfied customers," and I welcome suggestions. But the statement "my seeds didn't germinate" is too vague to be of help. When writing, please state names of varieties which did not germinate, and whether they were sent in envelope or bubble-pack, so I may replace or substitute.

I wish to thank you who are already sending germination reports, as I think eventually they will aid in solving some of the problems.

plants because of the hybrid parent.

"Select a parent with a good feature such as beautiful blossoms, sturdy growth, or a nice leaf shape." She further comments that seedlings from a cross will continue to change for a long time, especially with rexes. "I never make a final decision about a plant until it is 2 years old."

A new topic?

A member suggests a new flight on how to distinguish between similar begonias and how to identify unnamed varieties. Interested? Please write with ideas on how we might handle the subject.

More New cultivars

From page 183

rounded, 2 medium and rounded (and not always separated completely), and 1 narrow; with 3 bifid, single-spiraled styles; and with 1 ovary wing not quite equal to the other 2. 'White Surprise' differs from its parents in having white flowers and from *B.* 'White Strike' of the reverse cross in having lavender-tinged flowers, single-spiraled styles, red peduncles, and spotted leaves. Originated by Frank Williams (address above) in 1977; first bloomed in 1979; first distributed in 1980. Tested by ABS Miami Branch. Registered June 10, 1981.

More "B. dayi"

From page 181

but has thin erect woody stems. This plant had already been named *B. multinervia* Liebmann.

4. *Begonia nigro-venia* hort. Linden ex Hooker vs. *B. pinetorum* A. DC.

In the botanical world each is free to state his opinion and no one is forced to accept his views. In this vein I do not accept the view of the authors in *Begonias of Guatemala* that *Begonia glandulosa* A. DC. ex Hook. (which I believe should be called *B. nigro-venia* hort. Linden ex Hook.) is the same plant as *Begonia pinetorum* A. DC. This claim is made on page 178 of *Fieldiana, Botany* vol. 24 part vii, Number 1, 1961.

I have grown *B. pinetorum* A. DC. since 1950 when Thomas MacDougall collected it in Mexico and I have been

growing *B. nigro-venia* hort. Linden ex Hooker as *B. dayi* hort. since before 1946, so I know the plant thoroughly.

It is quite clear in the photo of the type herbarium specimen of *Begonia pinetorum* A. DC. that the plant is covered entirely with a fine tomentum, the leaves are rather thin textured, the margin on the outer side is angular-undulate, and the inflorescence is not widely spreading. The plant in cultivation has thin leaves which may be rolled up because they are so thin, the upper side is shiny, the inflorescence bears both four- and five-tepaled flowers. The entire plant has the fine yellow tomentum but the underside of the unfolding leaves as well as the adjoining petiole are covered with purple tomentum.

Begonia nigro-venia hort. Linden ex Hooker has thick fleshy leaves which are easily cracked if bent and the margins are entire with a distinct tooth at the outer side where the nerves reach the edge of the leaf.

It is clear to me that here we have two distinct species, *Begonia nigro-venia* hort. Linden ex Hooker, and *Begonia pinetorum* A. DC., that agree with the original descriptions under these names.

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

THE BEGONIAN—The monthly journal of the society publishes how-to articles, scientific information, and ABS news. Articles on a member's personal experiences with begonias are welcomed, as are black-and-white photos of begonias and color slides suitable for use on the cover. Contact the editors.

BEGONIAN BACK ISSUES—Individual copies of The Begonian more than a year old are available from the back issue sales chairman (75 cents). A full year is \$6.50 for any year in the 1940s. \$5 for any year from 1950 through 1979. Back issues less than a year old are ordered from the membership secretary for \$1 each.

BOOKSTORE—Books on begonias and related subjects can be purchased mail-order from the bookstore manager. Contact him for a list of books available. Include a stamped, self-addressed envelope. The bookstore also sells reproductions of antique begonia prints.

JUDGING DEPARTMENT—The judging department offers a course by mail with which you can learn to become an accredited begonia show judge (\$8). Also available are a booklet on point scoring (\$1.25), information on fuchsia and fern judging, and other requirements to become a judge. Add \$1 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. Con-

tact the librarian for a list of books and the procedure. Include a stamped self-addressed No. 10 envelope.

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 veteran collector Elda Haring, P.O. Box 236, Flat Rock, NC 28731. You'll get a prompt answer and Elda will use questions of general interest in her Begonian column.

RESEARCH—The research department conducts a Grow and Study project in which members experiment with various begonias and compile their findings. 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.

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