

# C R WORDS S S

## The Gesneriad Hybridizers Association

### NEWSLETTER

Volume VII, Issue 1, 1983

#### Editors' Message:

We would like to thank those members who sent in their comments (some of which appear on Page 12 of this issue) concerning the annual GHA Hybrid Award. On the basis of those comments, we have decided to make some changes to the nominating process this year.

New gesneriad hybrids usually take several years to become widely available. For this reason, nominations for the 1983 GHA Hybrid Award should include hybrids introduced during the past 5 years, instead of only the previous year. We feel this is enough time to allow for commercial distribution of new hybrids among growers. And, hopefully, this will address the most common complaint among GHA members concerning the award, namely, that it is difficult to nominate a hybrid that so few people have seen.

We are trying to keep the nominating process as informal as possible, but it has become apparent that some guidelines were needed. There will be further discussion of this topic at the annual GHA meeting in Nashville on Friday, July 1 from 9:30 a.m. to 10:30 a.m.

This year's ballot is printed on page 15 of this issue. Please, take the time to fill it out and return it to Anne Crowley as soon as possible. As many of you recall, there was no hybrid award given out last year, because only one nomination was received. Let's not let this happen again this year. The ballots will be tabulated, and the winner will be selected at the GHA meeting. We hope to see many of you there.

— Anne Crowley and Al Wojcik

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## **Diastema Vexans . . . Variegated!**

**By Norma Ward  
Delray Beach, Florida**

Seeds of *Diastema vexans* were purchased from the A.G.G.S. Seed Fund in February, 1981. They were sown in late July, 1981, in a "throw-away" aluminum cake pan with holes punched in the bottom and filled (about 2" deep) with a prepared seed starting mix.

Since this was my first growing experience with gesneriad seeds, too many were sown too close together. When the plants were about ½" high they were removed in clumps (too crowded to separate) into 2¼" pots of Fast-Gro mix with a little bone meal added in the bottom of each pot. The pots were placed in self-watering trays. These trays hold about 20 pots and have a series of canals in the bottom with each pot having an individual space. A diluted mix of Peters 20-20-20 was poured into the tray until the water was about ¼ to ½" up the side of the pots.

A few of the little plants matured more quickly than others and they were moved into their own pots, but still put in the same type of watering tray. These trays were placed about a foot below the 40 watt lights. By October one of them was in bloom and was entered in the Tropical Chapter Show and won a red ribbon.

By this time we had quite a few nice size plants and we decided to cull out the rest. As we were dumping the pots, we noticed one small plant hiding under the others. Each of its leaves had about three shades of green in it. We thought at first it might be diseased, but potted it up to see how it would develop. When we checked it in a couple of weeks, we were surprised to find that it had produced two suckers of identical size — but they were green and white. The green pattern in the center was very similar to *Episcia* 'Cleopatra.' These were removed and potted separately and were now fed Peters Variegated African Violet food in the same type of watering system and under the same lighting conditions.

They are very slow growers and by the first of May, 1982, were only about 4" high with a few blossoms. The blossoms were like the regular *D. vexans*, white with purple dots on each lobe. However, the calyces were pink.

One of these was entered in the Broward Chapter show in May and won a blue ribbon. By A.G.G.S. Convention time in July, another one had developed and was shown there. It had not matured enough to flower and the judge's comment was "we would like to see blossoms."

The plants seem to last about 4 to 6 months, sometimes blooming, but they never go completely dormant. As the old plant is turning brown, new little plants are developing. There have been several plants develop with pink stalks and pink and green foliage, but these have never grown on to maturity.

To date, I have not been able to set seed. But my husband Claude started some by scaling some of the rhizomes. They develop many rhizomes, some white and some green. So far, only the white rhizomes produce the variegates. We have about 40 plants of various ages and sizes and quite a few rhizomes saved. We have never grown any of these plants in a protected environment. We have even grown some on our screen patio. The summer heat did not make them lose their variegation, but the white was not as white and the green was not as green. I have been giving them Mir-Acid about every other watering now and their color has come back brighter.

I have sent for an application to register it and the name I have chosen is 'Miracle' since to me that is what it was — I had nothing to do with it. 🌱

## **A Search for Seed Ripening Info**

**By Isla Montgomery  
Denver, Colorado**

What I need is a list of all genera and how long it takes a seed pod to ripen. Saintpaulia takes 6 to 8 months and if it dies off earlier, that's a bad sign. Could we find someone with the answers?

**Editors' Comment: This really would be helpful information. If you have kept careful records and/or have had experience with certain genera, please send us your timetable for seed ripening. We will compile a list that will be published in a future "CrossWords." Here is your chance to participate . . . 🌱**

## **Some Pointers on Gesneriad Breeding**

**By William R. Saylor  
Brewster, Massachusetts**

Reprinted from Les Florales internationales de Montreal, Colloques Scientifiques, No. 18 "Gesneriacees." (1981)

Gesneriad hybridizing can easily become a fascinating and absorbing hobby to the plant grower who is looking for new worlds to conquer. It may not have the romantic allure associated with plant collecting in the wild, but it certainly is much less expensive and can be engaged in right at home with very little specialized equipment and only a small number of gesneriads, if they are carefully chosen. I don't think there is another thrill quite to be compared with that experienced when you finally bring your first hybrid to bloom. You know you have only helped nature along but still you feel the pride and triumph associated with having been instrumental in bringing about the creation of a new plant never known to the world before.

Now to work! First hybridizing attempts should preferably be made using gesneriads which have wide open corollas as is true of Columneas. Just about all gesneriad flowers characteristically mature their male organs and pollen before their female organs become receptive. By the time the stigma is ready to accept pollen and stimulate it into germination the anthers of that particular flower have passed their usefulness and the filaments have collapsed. This is presumably one of nature's methods of avoiding self-pollination and encouraging cross-pollination. If you study your Columnea flowers carefully you will see individual blossoms in different stages of development. Select a flower of the projected seed parent with a properly expanded and receptive stigma. Similarly choose a freshly opened blossom of the pollen parent as evidenced by the fluffy pollen in the anther sacs and the undeveloped condition of that flower's stigma. Actual pollination is accomplished by transferring this ripe pollen to the slightly sticky receptive stigma.

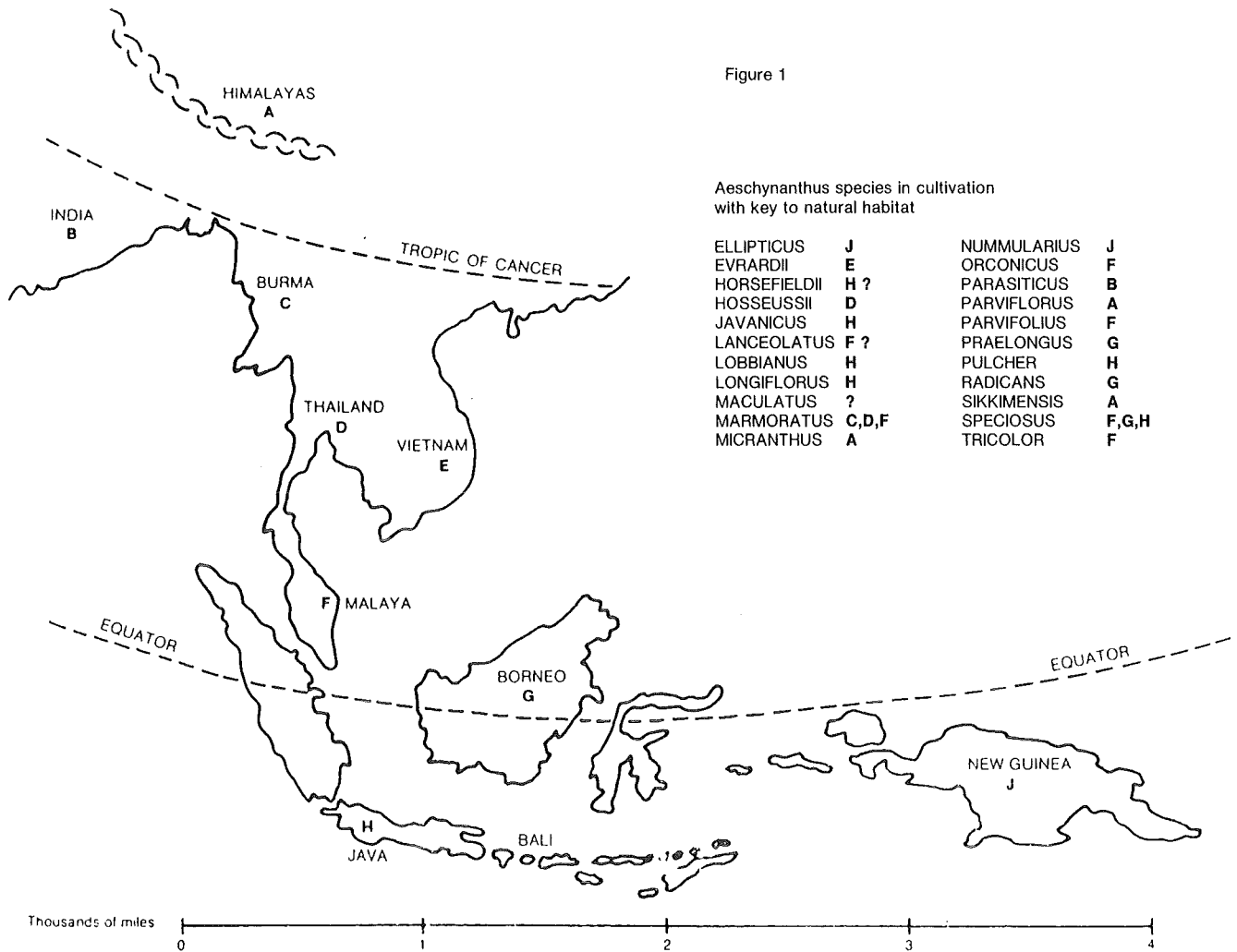
A few precautions are in order at this point. First, to avoid inadvertent contamination by pollen from the flower chosen as seed parent the careful hybridizer removes the anthers from that flower before the stigma has expanded and become ready. Second, although genetically it does not generally matter which parent is selected to provide the pollen and which to produce the seed, a wise procedure (if there is any choice) is to select the flower with the shorter style as seed or pod parent. This makes sense because for perpetuation of a species its pollen after germination must be capable of producing a pollen tube at least as long as necessary to traverse the length of the style and reach the egg in the ovary. Thus a species with a two-inch style should have no trouble in fertilizing the ovum of a species with a one-inch style, but the reciprocal might be impossible. Third, care should be taken to record the cross complete with date in your "stud" book and tag the flower which has been pollinated. I simply attach a tag with the name or identifying number of the pollen parent.

What tools are needed? Well, I consider my 3-power jewelers' loupe an absolute necessity. This is fastened with a clip to my eyeglasses and pivots into position or out of the way, leaving both hands free for other work at all times. Other desirable tools are a good small pair of pointed scissors, a pair of tweezers and toothpicks or a needle of some sort. Some people like to use a fine watercolor brush for applying pollen. My preference is a toothpick or needle.

Once your Columnea cross has been made it will take only a few days to see if a fruit has set. If so, the pedicel and calyx will remain fresh and green (or turgid) and the lobes of the calyx will generally enclose the ovary rather tightly allowing it to grow unseen. As maturity approaches, the growing berry gradually turns white or lavender or pink and the calyx opens, putting the fruit on display. In the wild, birds and other creatures are presumably attracted and proceed to eat the berry and spread the seed in their droppings. At home you will want to harvest your berry very soon after it ripens and goes on display. If it is left on the plant too long, say several weeks, the seeds may germinate in the berry, creating an awkward situation.

Columnea is one of the New World genera native to the West Indies, and Central and South America. Its primarily epiphytic species are among the showiest of all the gesneriads, so it is not surprising that many hybrids are currently commercially available. Among my own introductions, ones that I particularly like include 'Christmas Carol,' a good large-flowered true red winter bloomer with bright green foliage, 'El Dorado,' a compact canary yellow everbloomer, and 'Fanfare,' another everbloomer with tiny leaves and red and yellow striped trumpet-like flowers. Another more difficult cultivar 'Sunny' has upright yellow flowers with chestnut marks on the galea (the "hood" or upper lip of the corolla) and a decorative feathery red calyx from one parent, *Columnea (Trichantha) teuscheri*.

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### Native Habitat of Aeschynanthus

Figure 1 is a rough outline of SE Asia and Indonesia which encompasses pretty much the entire native habitat of the genus *Aeschynanthus*. I am showing this primarily for two reasons: First to impress upon you the importance of geography in helping to predict the closeness of interrelationships within a genus or a group of genera, and second, to stress the wide climatic variations and enormous distances that may be involved in consideration of an overall habitat. In the case of *Aeschynanthus*, note as an example that the equatorial New Guinea species are native to an area approximately 5000 miles away from the Himalayan species which grow happily north of the Tropic of Cancer. Relatively large distances (many over water) separate the homes of different species and tribes or sections fostering evolution in differing directions and in the long run making it even quite conceivable that certain species might mutate into polyploid forms while others might not.

The *Aeschynanthus* species I have encountered all lend themselves to self or cross-pollination by man just as readily as do those of *Columnnea* halfway round the world. There are some marked differences though. The fruit are elongated bean-like pods which turn brown and dehisce when they are mature releasing seeds with hairy appendages which are dropped to the ground or wafted by the slightest breeze to some new location. Whereas *Columnneas* have a basic chromosome number  $n=9$ , *Aeschynanthus* have been found to have a haploid count of  $n=15, 16, 32$  and in at least one instance 48. Furthermore, contrary to the usual experience with other gesneriads, the species interbreed readily in many instances even though the partners may have unlike chromosome numbers.

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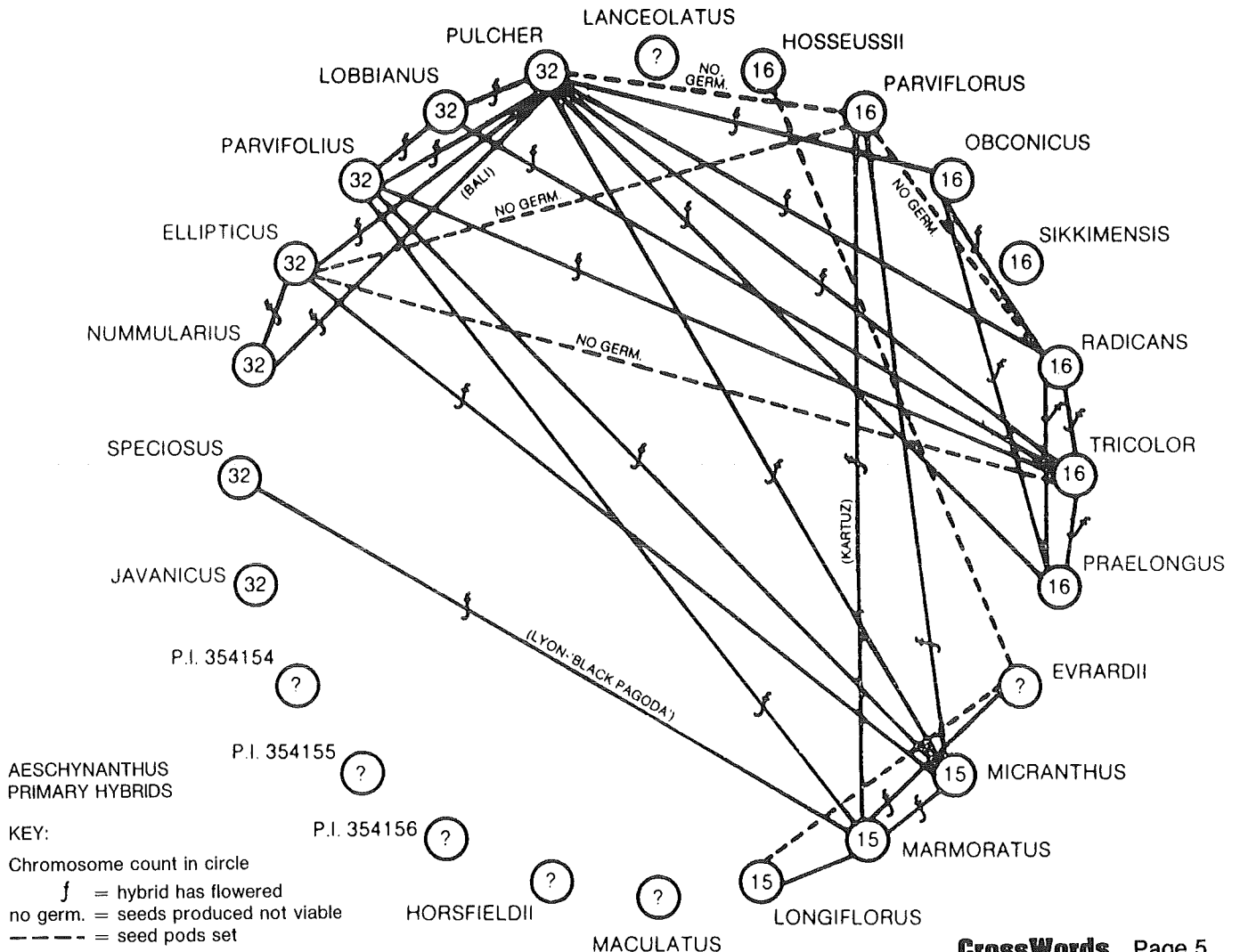
**Some Pointers on Gesneriad Breeding (Continued)**

A breeding chart showing the primary interspecific crosses I had produced up to about five years ago is shown in Figure 2. In a chart of this type you can represent the species you are working with (or potentially might plan on using) as labelled small circles arranged in a circle of larger diameter. Then when a cross is successful you connect the two species involved with a straight line. I further find it convenient to put the haploid chromosome number of each species, when it is known, in the appropriate labelled circle. Also when the hybrid flowers, this is noted as shown in the figure. Unfortunately this type of chart does not lend itself to graphic recording of F2 and succeeding generations which frequently uncover valuable new gene combinations.

Among the interesting hybrids produced in the genus, an early and good one is 'Red Cascade' which combines the axillary flowering habit of one parent *A. micranthus* with the large flowered characteristics of *A. pulcher* to produce an exceedingly floriferous and attractive new cultivar. Other intriguing primary hybrids include 'Greensleeves' (*A. tricolor* X *A. radicans*), 'Bali' (*A. pulcher* X *A. nummularius*) and 'Mandalay' (*A. longicaulis* X *A. evrardii*). The last named hybrid showed attractively marked leaves and had good large flowers but failed to show the large terminal clusters of flowers I had hoped would come from *A. evrardii*. In this instance a back-cross of 'Mandalay' to *A. evrardii* was indicated. That second generation has now bloomed and promises to be a real improvement. I would like to mention one more cross still being evaluated. This is a single seedling obtained from that fine old Lyndon Lyon hybrid 'Black Pagoda' and *A. evrardii*. The Lyon hybrid came from *A. speciosus* ( $n=32$ ) and *A. longicaulis* ( $n=15$ ) which probably explains the difficulty in obtaining viable offspring. This interesting seedling has bloomed once but must be grown on to see if it is worthy of naming.

(Continued)

Figure 2



**Nematanthus + Codonanthe = xCodonatanthus**

Nematanthus, now including ten species under cultivation in the United States, was until 1973 classified as two genera (Nematanthus and Hypocyrtia). Much of my early hybridizing work in the 1960s was I believe instrumental in bringing about the merging of these closely related groups of plants. Note particularly that they belonged to the same tribe, Columneae (Episciae). They also had a haploid chromosome number  $n = 8$  along with some species in the genus Codonanthe. Finally they came from a relatively circumscribed area in the highlands of southeastern Brazil.

A Nematanthus breeding chart appears as Figure 3. It should be self-explanatory with the comments that *N. maculatus* is a newly collected species distributed by Dr. Wiehler of the Selby Botanical Garden and *N. radicans* is being grown on from seed recently received from Brazil by Dr. Skog of the Smithsonian Institution. *Alloplectus* (now *Neomortonia*) *nummularia* is shown also because it was earlier thought to be a Hypocyrtia and was successfully crossed with *N. nervosus*.

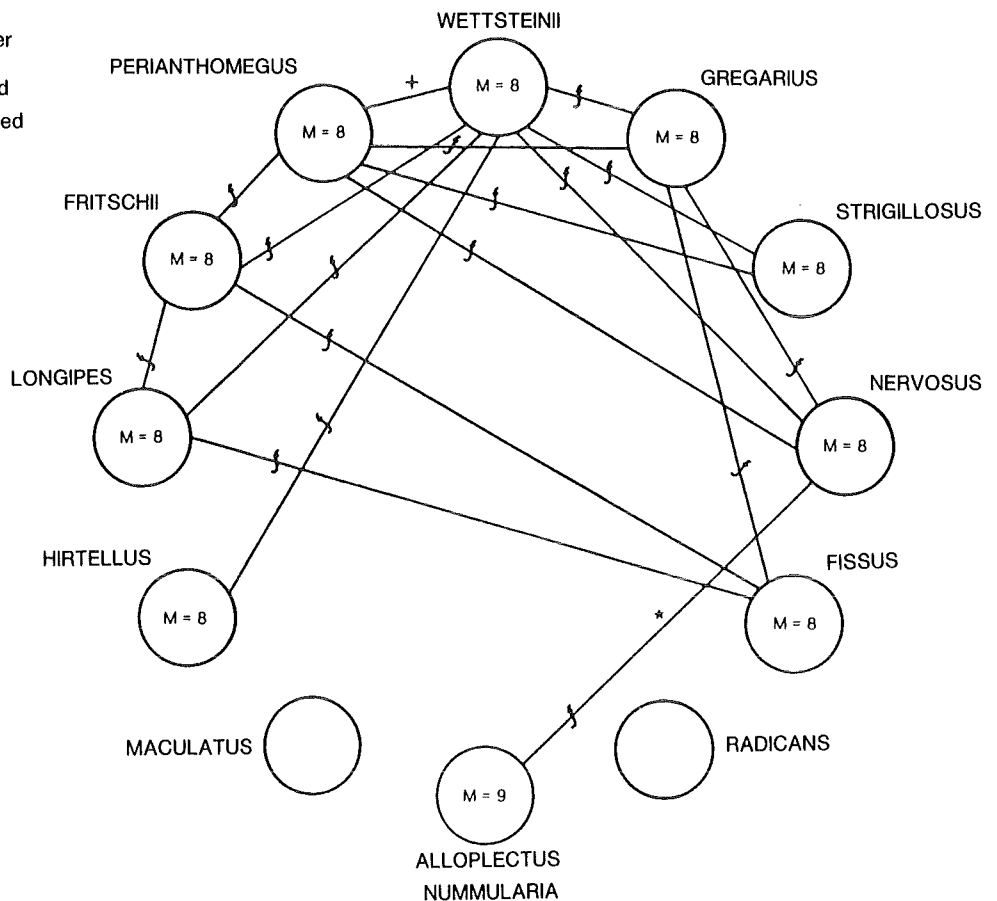
The crossing of Nematanthus is essentially just about as easy as that of the genera treated earlier. The only complication comes from the fact that the throat of the flower is relatively very constricted and the stamens and pistil cannot readily be reached without cutting away parts of the corolla. I make one cut to remove the ventral part of the corolla without disturbing the sexual elements. Then, if necessary, I cut carefully around the stamens and pistil leaving them projected beyond what remains of the emasculated flower tube. From then on the procedure is the same as in Columnea.

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**NEMATANTHUS  
PRIMARY HYBRIDS**

- f = flowered
- M = haploid chromosome number
- + = crossed both ways but young seedlings always died
- \* = One seedling, much branched and weak. Did not survive after sparse bloom

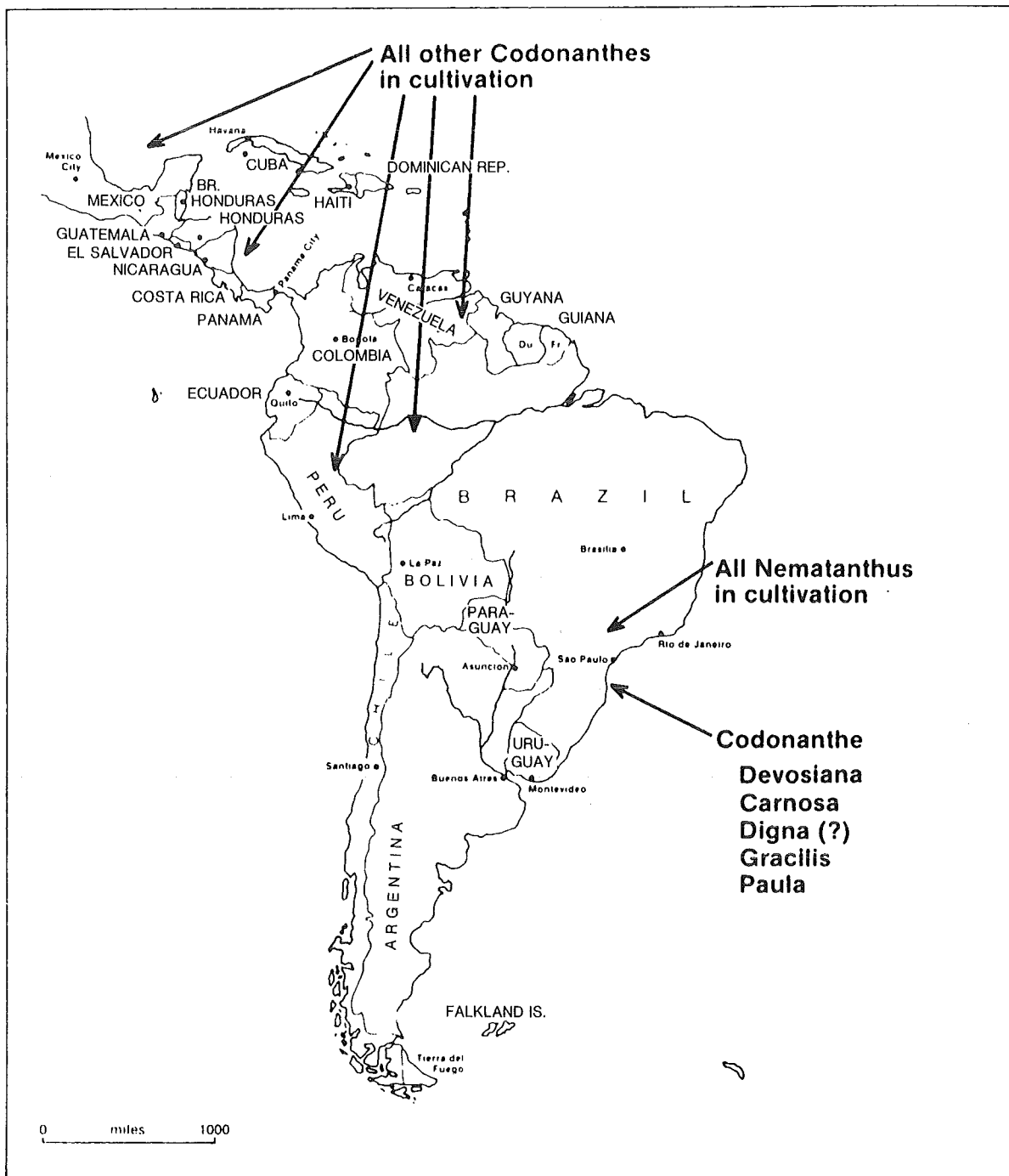
Figure 3



**Some Pointers on Gesneriad Breeding (Continued)**

Among the goals that were set in the *Nematanthus* breeding program were the production of hybrids with larger brighter flowers, with more compact habit and smaller leaves, with everblooming characteristics, and with good clear yellow blooms. Most of the objectives have been realized to a greater or lesser degree through several generations of breeding. The desire for a compact yellow bloomer was stimulated when *N. hirtellus*, a sparsely flowering large-leaved rangy plant with hairy yellow corolla and maroon calyx was distributed. One approach that was followed was to cross this with *N. wettsteinii* to combine the latter's many desirable characteristics with the former's genes for clear yellow. The F<sub>1</sub> selection showed no yellow except in the limb, but the important thing was that this seedling carried a single dose of all the genes of both parents. A sibling of 'Jungle Light' with good small dark foliage and free blooming habit, when pollinated by this first generation hybrid, gave

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## Some Pointers on Gesneriad Breeding (Continued)

a seedling that had such good color and flower characteristics that it was named 'Lucky Strike' even though it left much to be desired in its other attributes. Further breeding will be necessary here.

My most recent work with *Codonanthe* and *Nematanthus* shows that, while you oughtn't to waste time trying way out crosses that have no likelihood of success, you should not hesitate if logic leads you to what may at first seem an extreme situation. In looking over the tribal relationships, one day I was struck by the fact that of all the Columneae the only genus listed with  $n=8$  without exception was *Nematanthus*. All other genera had  $n=9$  with the single exception of *Codonanthe* which included diploid species with  $n=8$  and tetraploid species with  $n=16$ . Of course *Nematanthus* flowers were all red, orange or yellow while those of *Codonanthe* were almost exclusively white. The anthers were very different and the fruits were similar in only rather remote ways. Habitat considerations began to make things look more interesting though. Reference to the map in Figure 4 shows that all the *Nematanthus* and five of the diploid *Codonanthe* species are endemic to the highlands of southeastern Brazil. Why then should these not be expected to interbreed? The first attempt using a colorful but unnamed *Nematanthus* seedling as pod parent and *Codonanthe gracilis* for pollen was successful, yielding a colorful selection with green leaves splotched red underneath and flowers with red tubes and pale creamy limbs. This was named *xCodonatanthus* 'Fiesta.' Of perhaps greatest importance was the fact that the 'Fiesta' pollen proved to be about 50% stainable, implying that it might be useful in further breeding.

Checking the stainability of pollen is useful to the breeder and very simply done. In a few words you must get a little aceto-carmine or aniline blue dye (from a biological supply house or a school biology laboratory) and have access to a (preferably color-corrected) low-power microscope capable of about a 50X magnification. A drop or two of dye is placed on a slide, a little pollen transferred to the dye, and a cover plate placed on top. Good viable pollen takes up the dye and shows as a colored circle whereas infertile pollen remains relatively colorless and usually misshapen. You determine the percentage stainability by counting the approximate number of good pollen grains as a percentage of the total (good and bad) in the field.

As a final commentary on the *xCodonatanthus* story it is intriguing to note that at least five other  $F_1$  crosses involving the diploid Brazilian *Codonanthes* have been made yielding named cultivars such as *xC.* 'Antique Gold,' *xC.* 'Rosy Dawn,' *xC.* 'Tambourine' and *xC.* 'Aurora.' In addition 'Fiesta's' fertility has been borne out in a cross *Codonanthe digna* 'Moonlight' X *xC.* 'Fiesta' which produced a dainty trailer with red splotches on the backs of the leaves and numerous pairs of rosy red *Codonanthe*-like flowers with flaring white limbs. This has been named *xC.* 'Springtime.' One surprise was a sibling of 'Springtime' with dark leaves and pure white flowers. Even the usual dark splotches in the throats of many of these Brazilian *Codonanthes* were missing. This is the kind of surprise you can thrill to as your breeding work progresses.

Now, in closing, I want to urge all of you who contemplate trying your hands at gesneriad breeding to think seriously about the registering of your creations that you believe are worthy of a name. The procedure is a simple one and the benefits to you and to the plant-growing public are substantial. There is an article in the May 1980 issue of *HORTICULTURE* published by the Massachusetts Horticultural Society titled "Cultivar Registration" that pleads the case for registration very well and contains an up-to-date list of International Registration Authorities and Registrars complete with addresses. The American Gloxinia and Gesneriad Society is the IRA for Gesneriaceae excluding *Saintpaulia* and Mr. Patrick Worley is the Registrar. 🐦

### BACK ISSUES

Back issues of *CrossWords* may be obtained from Zelda Mines, 2206 East 66th St., Brooklyn, New York 11234.

Volumes I and II      \$5.00 each

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Individual issues of the current volume may be obtained for \$1.50 each.



# Back to Basics

## Sinningia Hybridizing for Beginners

By Al Wojcik  
Detroit, Mich.

We have all read about the numerous methods used to hybridize Sinningias. Some of the techniques may have worked, others didn't. This article is based on the procedures that have worked best for me. Hopefully, they will also work well for you.

Sinningias offer an excellent opportunity for the amateur hybridizer to create their own hybrids. These popular members of the gesneriad family are easy to grow, and most will cross readily with each other.

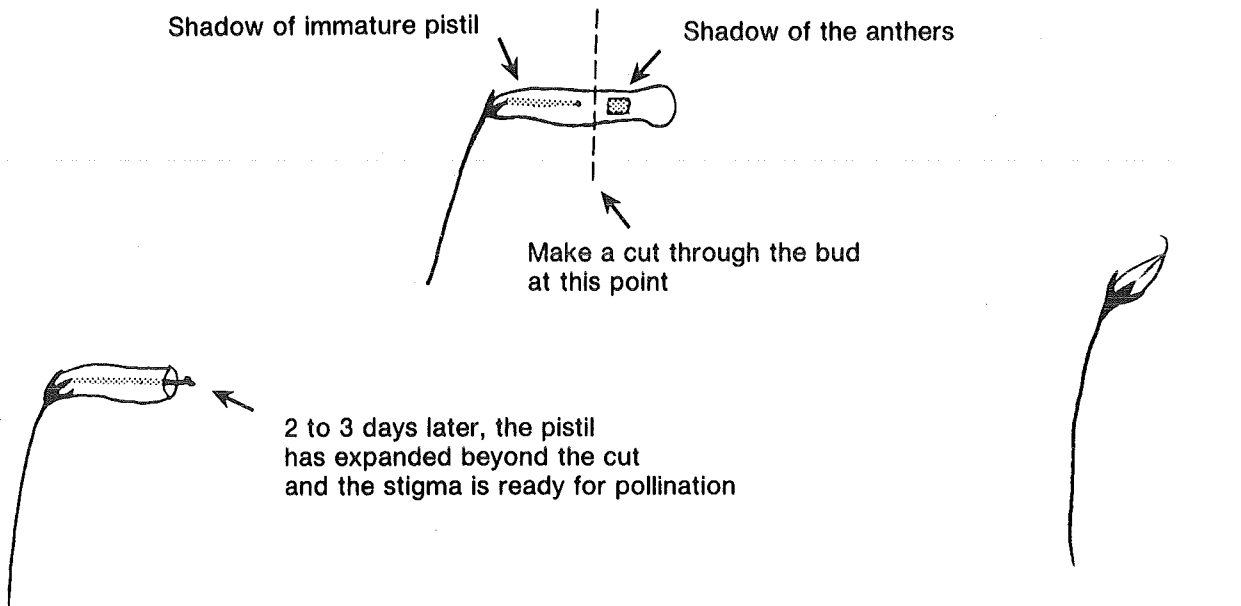
Success with hybridizing Sinningias begins with careful observation of how Sinningia flowers develop. Flower buds form rather slowly at first, then begin developing rapidly, attaining full color and expanding their lobes. Timing is very important in Sinningia hybridizing, particularly when it comes to preparing the pod parent to receive the pollen. Generally, Sinningia pollen matures before the stigma is ready to accept pollen. The pistil, or female part of the flower, will usually have a receptive stigma 3 to 4 days after the pollen has matured.

Before you actually try cross-pollination, familiarize yourself with the internal anatomy of Sinningia blossoms. Take a flower bud which has developed full color, yet still has tightly closed lobes, and make two incisions on each side. Spreading the two cut halves apart, notice that the anthers (pollen sacs) have not fully matured. They are plump and the pollen inside is slightly wet. A little farther down the bud, closer to the base of the flower, the immature style and stigma can be seen. Your best chance of successful cross-pollination involves using a flower that is at this stage of development. If the flower has opened fully, the pollen will be dry and fluffy and your chances of accidental self-pollination will increase.

The first step in hybridizing Sinningias is to prevent the pod parent from self-pollinating. This technique is called emasculation and involves the removal of the anthers, or pollen-bearing part of the flower. When you are

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Flower bud should look like this: Lobes still tightly closed



Mature seed pod, 4 weeks after pollination

## Sinningia Hybridizing for Beginners (Continued)

ready to try cross-pollination, pick up a plant with an appropriate almost-opened flower and hold the bud directly in front of a bright light (your fluorescent lights or near a bright window) in such a way that there is strong light directly behind it. You will notice a dark shadow approximately  $\frac{1}{4}$ " behind the front of the unopened bud. In most cases, with the exception of very dark-colored hybrids like *Sinningia* 'Silhouette', you can also see the shadow of the pistil near the top of the bud, about two-thirds of the way back from the front of the flower. Using a pair of small cuticle scissors, make a cut all the way through the bud directly behind the pollen sacs, being careful to stay well clear of the shadow of the developing pistil.

If you are hesitant about using this technique (or are using a dark-colored bloom as the pod parent), try making two small incisions on each side of the unopened bud, and gently pry the two halves apart until the anthers are easy to get to. Simply snip them off, and trim the rest of the bud so that the stigma and style will have room to expand forward.

It is now necessary to wait for about two to three more days while the stigma matures. During this time, you will notice that the style, formerly hidden inside the cut end of the bud, begins growing outward beyond the cut. When the stigma is ready for pollination, it begins to expand sideways, and takes on a fuzzy appearance. Since this emasculation technique leaves the lower portion of the flower in place, it is easy to tell if you have accidentally self-pollinated the bud: If the remains of the flower drop during this period, you'll have to try it again with a different bloom. It takes time to perfect the technique, but once you have the hang of it, accidental self-pollination becomes a rare occurrence.

Now you are ready for step 2. Choose the pollen parent carefully. Have some idea in mind of exactly what you are aiming for in your new hybrid. Would you like to intensify the colors of an existing hybrid? Would you like bigger flowers on a smaller plant? Or would you like to try for a completely different color? This is why it is important to have a good reference for *Sinningia* hybrid parentage. The A.G.G.S. *Sinningia Register* (1975) is a good source. Also be sure to check out the *Miniature Sinningia Stud List* published in the last issue of "Cross-Words." And remember, just because someone else has already done a particular cross, don't hesitate to try it again yourself. You may get entirely different results. Keep in mind that purple is a strongly dominant color in *Sinningias*. Crossing a purple with any other color will usually produce a lot of purple in the first generation. You'll have to grow on to the second generation (F<sub>2</sub>) in order for the recessive colors to show themselves.

Once you have chosen the pollen parent, wait until a few days after the flower of the pollen parent has fully opened and remove it from the plant. Using a small pocket mirror (for better visibility) cut or tear the blossom open carefully. Working directly over the mirror (to catch falling pollen), snip off the pollen sacs. Using the point of a small knife, or a toothpick, scrape off the pollen onto the mirror. Don't be discouraged if there is very little pollen there. It doesn't take much for successful pollination. If you are not sure you have enough pollen, you can gather some from several flowers over a period of days or weeks. Keep the mirror in the refrigerator until you have gathered enough pollen. Now you are ready for step 3.

Holding the pod parent plant in one hand, and the mirror with the pollen on it in the other, poke the stigma into the collected pollen. You will notice that the stigma readily gathers the pollen up, due to its slight stickiness. Continue loading the pollen onto the stigma until it will hold no more.

The importance of labeling your crosses cannot be emphasized enough. Small jewelry tags obtained from a stationery store work fine. On the back of the tag, mark the date of the pollination. I usually write the date as, for example, "2-28-83." This way, the date can be used as the temporary name of the cross, and is a much simpler name to use when you have to mark 100 or so labels later. On the front of the tag, mark the names of the parents. The pod parent should always go first, then an "X", followed by the name of the pollen parent.

Return the plant to your growing area, and continue to watch it for the next few days. A sure sign of successful pollination is the darkening and withering of the tip of the pistil within 48 hours of pollination. Then, a day or two later, the remains of the corolla will fall off. Carefully remove it (it sometimes gets hung up on the dried style) and you'll see that the calyx, or immature seed pod at the base of the bloom, has begun to swell. Congratulations. You're on your way!

*Sinningias* usually take 4 weeks to develop a mature seed pod. The signal that the pod is ready for harvest is a change in color from bright green to a dull brown. Again, it is important to watch for these changes, because

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if you wait too long, the capsule will dry out and split down the sides, spilling your seeds all over. When the pod has just begun to change to brown and the sides begin to split, cut it from the plant and lay it on a piece of white paper for another day or two. When it is completely dried out, open the two halves of the pod with a knife point or toothpick and allow the seeds to spill out onto the paper.

If, in spite of all your hard work, the pod appears empty, take heart. You're not alone! There isn't one hybridizer today who hasn't been tricked by *Sinningias* into thinking they've got a good take. But, fortunately, most of the time you will have success.

Using your favorite potting soil (with a sprinkling of fine milled sphagnum moss on the surface) sow your seeds thinly. Keep the container covered. If all goes well, you will be rewarded with tiny green sprouts in a few weeks.

Most importantly, once you have grown your plants to maturity, remember to write an article for "CrossWords," and tell others of your successes or failures. 🌱

### **Hybridizing Efforts Finally Pay Off**

**By Georgie Bull  
White Rock, B.C., Canada**

Finally, some of my own hybridizing efforts have proven to be worth all the reading, trying and endless failures.

This article will introduce *Sinningia* 'Carefree's Regina' (tentative name). The pod parent was a tip cutting of *S. concinna* which had mutated slightly. The original tuber had been sold to a friend as *S. 'Wood Nymph.'* I tried to self the plant three times, without success. Finally I attempted to cross this plant with *S. canescens* and after two attempts, I finally got a nice fat seed pod with about 20 good, plump seeds.

Germination of the seeds was not good until I sowed the last batch from the packet. Six germinated and I now have two tubers surviving. Tuber "A" produced a plant with dark green leaves, a fair growth habit and a few pretty flowers which lasted only a short time. The tuber then went completely dormant. Tuber "B" produced a plant that is a beauty! The veined leaves are deep green. The overall growth is flat and tidy. The flowers are large, reddish-purple (#71-A, Fan 2), and held well above the foliage. Heavy spots of reddish purple in the throat and out onto white areas of the lower petals. Color is full on the top petals and at least two-thirds of each lower petal. It presents a striking look and attracts everyone who sees it. Blooms are numerous and steadily produced. The plant has been selfed and needs just a light pinching to self. The first two pods were quite different: Pod #1 was formed on a young plant. It contained a few seeds, which finally produced one seedling. Pod #2 was full of plump seeds - well over 100 - with some twisted. They have not been planted yet.

As Vic is a professional photographer, we have slides of the blooms of both parents, *S. concinna* and *S. canescens*, as well as their offspring, *S. "Carefree's Regina."*

Not bad for a not-so-green-anymore amateur! 🌱

#### **ANNUAL GESNERIAD HYBRIDIZERS ASSOCIATION MEETING**

Nashville Hyatt Regency  
623 Union Street  
Nashville, Tennessee 37219

**Friday, July 1, 1983 — 9:30-10:30 a.m.**

## **More GHA Award Comments**

**By Margaret Waguespack  
Harahan, Louisiana**

I'm writing to comment on Gloria Kahle's article which appeared in Vol. VI, Issue 3 of "CrossWords." To me, her suggestion that someone—or some club—in different sections of the country be sent starts of new material to evaluate in advance of the nominations for awards for newly introduced plants makes a heap of sense. Her statement, "It is hard to put to a vote a plant that so few have seen," is very true.

Bayou members, for example, unless they are lucky enough to attend a convention where the plant is displayed, may not see it until it makes its way into a commercial grower's catalog. How, then, could we know what it looks like, much less how it would perform in our area? Although our conditions are certainly not the same as northern growers, neither are they like those in southern Florida.

Most important, however, is having all or as many members of G.H.A. as possible see the plant before the voting takes place.

I and/or a couple of members of Bayou who are judges and who have grown a large number of different gesneriads, would gladly pay for a start of the plants and grow them on for evaluation of performance *in our area*. This would be strictly a controlled program with no "Lookee what I've got" attitude. 🌿

## **And Still More Comments . . .**

**By Ron Myhr  
Claremont, Ontario, Canada**

Discussions about this award have been going on for some time now, and we do seem to be getting closer to a final conclusion. Some problems remain, though. Gloria Kähle's comments in the last issue of "CrossWords" address what seems to be the biggest one. If we only allow into the competition those plants introduced in the last year, most of us will never get a chance to grow, much less grow to maturity, the candidates for the award. We will certainly not get the chance to evaluate the plant for longer term factors like vigor and adaptability.

Why not use the award to reward excellent cultivars introduced relatively recently, but allow enough time to ensure adequate distribution? I would suggest that cultivars introduced within the previous five years be eligible for nomination, and that members be asked to vote only for those plants with which they have had direct experience or have otherwise become familiar.

A nomination might well be made in the first year of distribution, by someone lucky enough to have acquired a plant quickly. The fact of its nomination would likely create greater interest in the plant. Even though it didn't win the first year, enough people might be growing (and liking) it in subsequent years for further nomination and possible awarding.

The "New Introduction" competitions at A.G.G.S. annual shows are the best vehicle for a preliminary evaluation of a new cultivar's horticultural merit. What they can't do is provide an evaluation of a plant based on the actual experience of growing it. I think we should avoid duplicating this kind of competition, and seek to provide a more broadly based assessment of the new introductions. 🌿

# New Sinningia and Streptocarpus Introductions

By Ron Myhr  
Claremont, Ontario, Canada

For about four or five years now I've been involved in gesneriad hybridizing, essentially for fun. It's only in the last year or so that I have gotten beyond the fiddling stage and to the point of believing that I had created plants worthy of distribution. As a prelude to that distribution, it seems appropriate to describe the plants in fairly precise terms, and to outline the steps I've taken to produce these cultivars.

Almost since I began growing gesneriads I have found *Sinningia eumorpha* singularly fascinating. It is among the most showy and easily grown *Sinningia* species, well adapted to the light garden, and quite variable—ranging from pure white to lavender, with or without purple striping. Although more similar in appearance to the *S. speciosa* group, it is most closely allied to those species in the *S. cardinalis* group, and will cross with the microminiatures *S. pusilla* and *S. concinna*. It is a parent of those most popular of miniature *Sinningias*, 'Cindy' and 'Dollbaby.'

A number of growers have offered a pink version of *eumorpha*, sometimes labelled a cultivar (*S. 'Pink Eumorpha'*) and sometimes a variant of the species (*S. eumorpha* [pink]). This is a true-breeding variant or cultivar, and it differs slightly in various ways from the typical species, aside from the flower color. Leaves are bright green rather than the bronzy-green of the conventional plant, and the flower is generally a bit smaller. It also seems to have a somewhat more upright habit. It is fully interfertile with conventional *eumorphas*, and the F<sub>1</sub> and F<sub>2</sub> generations of this cross are also fertile.

It struck me that forms intermediate between this pink cultivar and the standard varieties might be interesting and worthwhile. I crossed it to white, lavender and striped selections, and raised a number of these seedling plants. Those resulting from the cross to the white form proved the most interesting, and two of these were crossed. One seedling from this cross proved to be worthwhile to my eye, and I have preserved and propagated it. I've named it *Sinningia* 'Pale Beauty.' \*

*S. 'Pale Beauty'* is similar in plant and leaf structure to the standard form of *S. eumorpha*. Leaves are bronzy green, with the bronziness not quite so pronounced as on the white ancestor. Flowers are larger than on the pink form, and are approximately 5 cm in length (peduncle to most forward part of the limb), 3.5 cm across the limb horizontally and 3 cm across the limb vertically. The exterior of the corolla is a pale pink (RHS 56D), the interior and face color white. Flowers are produced freely on a young and vigorous plant, but as with all *eumorphas*, flower production tapers off as the tuber gets larger. It is best to propagate plants from suckers every year or two.

It has not been easy to propagate *S. 'Pale Beauty'* on a large scale. A limited number of tubers have been created from leaf sections, but their resprouting characteristics have not been determined. I hope enough will survive to ensure reasonable distribution. Tissue culture and related techniques should prove helpful.

In a sense, my work with *Sinningias* has been secondary to my principle interest, which lies with the genus *Streptocarpus*. I've grown many cultivars of *Streptocarpus* at various times, both named forms and those grown from seed mixtures. Variation within the hybrid lines of this genus is very great, and there are many exquisite cultivars. I've been particularly impressed with the results I've had from two hybrid lines, those produced by Gary Hunter of Drumore, Pennsylvania and those from the John Innes Institute in England. The Innes series is the result of first and second generation crosses involving large flowered forms and the species *S. johannis*. A number of named cultivars have resulted. Gary Hunter has focussed on the production of relatively compact and easy to grow forms, and several of his named cultivars have proven quite successful in home culture. My own favorite is *S. 'Wintermint'*, a very pale pink with maroon markings. This is a stately and rugged plant, attributes passed on to its offspring. Among the Innes hybrids, I find 'Paula' to be particularly pleasing. I consequently crossed this reddish purple cultivar with 'Wintermint' and raised twelve seedlings.

The quality of these seedlings was, on the average, quite high. I grew two to maturity, one a dusty pink and another which was a warm lavender. The pink seedling proved to grow too large, and was otherwise difficult to

(Continued)

\* In the event that the pink ancestor is determined to be simply a variant of the species, this cultivar might best be labelled *S. eumorpha* 'Pale Beauty.'

manage. The lavender, however, was reasonably compact, free flowering and vigorous, with much of the refinement of 'Wintermint.' I have propagated this plant for distribution and named it *Streptocarpus* 'Cabaret.'

*S.* 'Cabaret' is a lovely and delicate shade of warm, almost purplish, lavender (RHS 88C at the margins, slightly lighter towards the center), with seven purple stripes running into a throat tinted with yellow. There is shading and spotting between the stripes and the flowers are daintily ruffled along the margin. They are not large, as far as the flowers of *Streptocarpus* hybrids go, about 7 cm long, and 6 cm horizontally and vertically across the limb. Peduncles typically bear two or three flowers, with a great many of the flower stalks being produced on a vigorous plant. Flower stalks are sturdy, and flowers are appropriate for cutting. 'Cabaret' is a relatively compact cultivar, with leaves seldom exceeding 25 cm in length. It is an attractive and modest plant, well suited to the light garden. While not as spectacular or as garish as some of the other modern hybrids, it will provide considerable reward to the discerning grower.

Some time ago I set out to produce a line of *Streptocarpus* hybrids with many small flowers in a variety of colors. The idea was to provide an analogue to floribunda roses. A number of hybridizers have been attempting to reduce the plant size of *Streptocarpus* hybrids, and flower size has fallen correspondingly. However, flower quantity and cultivar vigor are often reduced. I am more interested in maintaining the vigor and size of the more compact standard cultivars, while reducing the flower size and increasing flower production dramatically. A survey of available genetic material led me to the conclusion that the possibilities inherent in the species *S. johannis* had not been exhausted. The value of this small flowered vigorous species has been established through years of work leading to many of our most popular hybrids. I chose to use it as the basis for the production of my small flowered hybrid line.

The first step was a cross between *S.* 'Wintermint' and *S. johannis*, with the latter as the seed parent. A large number of seedlings were grown, with two selected for propagation and growth to maturity. One of these proved to be superior, and was selected as the parent plant for the next stage of the hybridizing process. At first, I had not intended to distribute this plant as its characteristics did not seem to distinguish it greatly from other cultivars, especially those of the Nymph type. However, reaction to it when it was exhibited at shows of the Toronto Gesneriad Society, and my own subsequent experience with it, have led me to the conclusion that others may wish to grow it. I've named this cultivar *Streptocarpus* 'Carnival.'

*S.* 'Carnival' has mid-blue flowers (RHS 91B), lighter in shade and slightly more "purplish" than 'Constant Nymph.' Flowers are uniformly colored, save for a single purple line from the throat through the center of the lower lobe. Six other lines may appear faintly, radiating from the throat to the lower lobes, usually under conditions of heavy fertilization. The flowers are well shaped, with the characteristic *S. johannis* shape, and are very freely produced. Five or more flowers per peduncle is not uncommon and flower stalks are produced in great profusion on a well-grown plant. Flowers are approximately 6 cm long, and 5 cm across the face horizontally and vertically. The plant itself does not have quite the compactness of the 'Wintermint' parent, but it is certainly more manageable than many of the Nymph-type hybrids. Leaf length does not often exceed 30 cm, and the plant responds well to judicious shaping and pruning. A specimen of this cultivar in full bloom is spectacular, and it has been exhibited successfully.

There were two possibilities for the next step—selfing 'Carnival' or crossing it back to its *S. johannis* parent. I did both, and grew about twenty seedlings of each cross (crowding was rapidly becoming a serious problem). The plants from the backcross to *S. johannis* proved the most interesting and vigorous, and four were grown to maturity. One of these proved to have the characteristics I had set out to create—small flowers in great profusion, substantial vigor and reasonably compact and manageable habit.

*Streptocarpus* 'Festival' has pale blue flowers (RHS 91C) which fade slightly over the life of the flower to RHS 91D. They are about 4 cm long and 3.5 cm across the face. These flowers are heavily textured, after the fashion of the *S. johannis* parent, and are extremely long-lasting. They seldom drop, and generally turn brown while still on the plant. This characteristic distinguishes 'Festival' from most other small-flowered hybrids, which tend to drop their flowers with great ease, resulting in a forest of bare peduncles. The other principle consequence of this stick-tightness is that the plant appears dramatically floriferous. Many flower stalks are

(Continued)

## New Sinningia and Streptocarpus Introductions (Continued)

produced, and each stalk may have as many as ten flowers. They last and last, and I've had as many as 75 flowers on a moderately sized plant.

*S. 'Festival'* produces a manageable plant, with leaves to 30 cm. It responds well to trimming and pruning and propagates easily. I have found it easy to grow and adaptable to the various micro-climates in my growing areas. A significant amount of hybrid vigor seems to have resulted from the use of the species parent.

With luck, '*Festival*' will be the first of a series of small-flowered hybrids. While its color is pretty and delicate, one could not call it striking or dramatic. It will be considerably more difficult to create similar plants in other, stronger colors. Crosses with *S. johannis* tend toward the mid to light blues, and most color breaks are found in the F<sub>2</sub> generation from a cross to a strong-colored hybrid. Plants with a combination of good vigor and strong color are relatively rare, and most successes result from the growth of hundreds of seedlings in order to select one introduction. A grower with limited facilities must devise alternative strategies, and probably be content with less spectacular success. However, it strikes me that the odds in favor of reasonable success can be raised with judicious planning.

Almost from the time I began this breeding program, I have been trying to produce prospective parent plants with stabilized color characteristics. I've grown a number of seedlings of a selfing of *S. 'Frisled Purple,'* and have selfed some of these to determine stability of the velvety purple color. One of these seems to be homozygous for the purple color, and I am going to use it in the next round of hybridizing. Perhaps in two or three years I'll have a purple frilled version of *S. 'Festival.'* Stay tuned.

In the meantime, leaf sections of the *Streptocarpus* hybrids described here, along with a few others, are being distributed in limited quantity. Write to me at Box 245, Claremont, Ontario, Canada L0H 1E0 for a listing. Please enclose a self-addressed envelope and 25¢ in coin to help cover the cost of postage. (No stamps please, unless they're Canadian stamps).

### 1983 G.H.A. HYBRID AWARD NOMINATION BALLOT

Nominations for meritorious hybrid will be voted on at the annual GHA meeting at the AGGS Convention in Nashville, Tenn., on July 1, 1983.

If you are unable to attend, please submit your recommendation for best new hybrid to Anne Crowley, 232 Austin St., Hyde Park, Mass. 02136 before June 15, 1983.

Hybrid: \_\_\_\_\_

Hybridizer: \_\_\_\_\_

Year of Introduction (if known): \_\_\_\_\_

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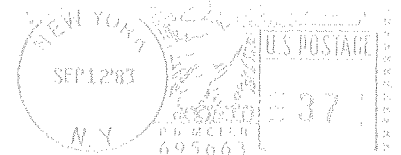
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