CROSSWORDS

THE GESNERIAD HYBRIDIZERS ASSOCIATION

NEWSLETTER

Volume 3, Issue 4, Winter 1979

Thanks to those who heard our pleas for material and sent in articles, comments and questions. We are still on hand to cajole, nag and do a little friendly arm-twisting, but we would much prefer to stop our yammering and produce a fat, informative newsletter. Your help is desired.

This issue hints at the enormous amount of gesneriad hybridizing possibilities at hand. Color breakthroughs, intergeneric crosses and better plants are not impossible dreams. In fact, they are being achieved frequently by experts and amateurs alike.

Don't forget to contact David Zaitlin about seed you may have available for distribution to interested GHA members or which you would like to obtain. At press time he had received no offers of seed. Perhaps you might consider duplicating your next cross on an adjoining blossom and saving the 'extra' seed for your cohorts in hybridizing.

Don't forget that this is your last issue of *CrossWords* unless you send in your $5.00 renewal to Meg Stephenson. And please note that effective with the summer issue, our copy deadline and publication date will be moved back one month (to April 1 and June 1 respectively, for that issue), in order that our Volume year correspond to the calendar year.

It has now been a year since your current publication committee took over *CrossWords*. We are pleased we are still here and pleased that your interest still holds. Our thanks from us to you, and may you have a happy and fruitful New Year!

Anne Crowley
Ron Myhr

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CLASSIFICATION OF THE FAMILY GESNERIACEAE

Hans Wiehler
Sarasota, FL.

The summary is based on the schemes of Burtt (1963, 1977, 1978) and Wiehler (1979). The Gesneriaceae now contain 10 tribes, about 126 genera, and over 2850 species.

(Base chromosome number at left of each genus: number of species in each genus at right)

I. SUBFAMILY GESNERIOIDEAE

5 tribes, 54 genera, over 1300 species
Distribution: Neotropics

1. TRIBE GLOXINIEAE Fritsch

13	*Gloxinia* L'Heritier	15	13	*Sinningia* Nees	60+
13	*Monopyle* Bentham	23+		*Lietzia* Regel	1
13	*Kohleria* Regel	20+		*Lembocarpus* Leeuwenberg	1
13	*Anodiscus* Bentham	1		*Goyazia* Taubert	2
13	*Koellikeria* Regel	1	13	*Bellonia* Linnaeus	2
13	*Pearcea* Regel	1	13	*Phinaea* Bentham	10
13	*Parakohleria* Wiehler	20+	11	*Niphaea* Lindley	4
13	*Heppiella* Regel	15+	12	*Smithiantha* Kuntze	4
13	*Diastema* Bentham	21+	12	*Eucodonia* Hanstein	2
13	*Capanea* Planchon	11	11	*Achimenes* Persoon	21
	Vanhouttea Lemaire	6	11	*Moussonia* Regel	11
13	*Paliavana* Vandelli	7	10	*Solenophora* Bentham	20+

2. TRIBE EPISCIEAE Endlicher

9	*Episcia* Martius	6	9	*Rufodorsia* Wiehler	4
9	*Nautilocalyx* Hanstein	50+		*Oerstedina* Wiehler	3
9	*Chrysothemis* Decaisne	7	9	*Pentadenia* (Planchon) Hanstein	30+
9	*Corytoplectus* Oersted	10+	9	*Dalbergaria* Tussac	65+
9	*Alloplectus* Martius	65	9	*Trichantha* Hooker	70+
9	*Cobananthus* Wiehler	1	9	*Bucinella* Wiehler	2
	Rhoogeton Leeuwenberg	3	9	*Columnea* Linnaeus	75+
9	*Drymonia* Martius	110+	9	*Codonanthopsis* Mansfeld	4
9	*Paradrymonia* Hanstein	40+	8	*Codonanthe* (Martius) Hanstein	20+
9	*Alsobia* Hanstein	2	8	*Nematanthus* Schrader	26
9	*Neomortonia* Wiehler	3			

3. TRIBE BESLERIEAE Bartling & Wendland

16	*Besleria* Linnaeus	200+		*Resia* H.E. Moore	2
	Gasteranthus Bentham	40+		*Tylopsacas* Leeuwenberg	1
	Cremosperma Bentham	25+		*Anetanthus* Bentham	1
	Reldia Wiehler	2			

4. TRIBE NAPEANTHEAE Wiehler

	Napeanthus Gardner	30+

5. TRIBE GESNERIEAE

14	*Gesneria* Linnaeus	69

II. SUBFAMILY CORONANTHEROIDEAE Wiehler

1 tribe, 9 genera, 20 species
Distribution: southern Chile, South Pacific Islands, Australia

6. TRIBE CORONANTHEREAE Fritsch

±37	*Mitraria* Cavanilles	1
±37	*Sarmienta* Ruiz & Pavon	1
	Asteranthera Hanstein	1
±40	*Fieldia* Cunningham	1
	Lenbrassia G.W. Gillett	1
	Coronanthera Vieill. ex C.B. Clarke	11
±45	*Negria* F. Mueller	1
±37	*Rhabdothamnus* Cunningham	1
	Depanthus S. Moore	2

III. SUBFAMILY CYRTANDROIDEAE Endlicher

4 tribes, 63 genera, over 1550 species
Distribution: Old World, chiefly in tropics, but 1 species in Neotropics

(Information provided by Burtt, August 1979)

7. TRIBE CYRTANDREAE C.B. Clarke

17	*Cyrtandra* J.R. & G. Forster	600+
10	*Rhynchotechum* Blume	12
	Sepikaea Schlechter	1

8. TRIBE TRICHOSPOREAE Fritsch

	Micraeschynanthus Ridley	1
	Oxychlamys Schlechter	1
15,16	*Aeschynanthus* Jack	80+
	Agalmyla Blume	50+
	Lysionotus G. Don	13
	Loxostigma C.B. Clarke	4

9. TRIBE KLUGIEAE Fritsch

10,21,27	*Rhynchoglossum* Blume	12
	Epithema Blume	4
10	*Monophyllaea* R. Brown	32
	Whytockia W.W. Smith	2
	Loxonia Jack	3
	Stauranthera Bentham	4

10. TRIBE DIDYMOCARPEAE Endlicher

10	*Conandron* Siebold & & Zuccarini	1
	Tengia Chun	1
20,36	*Ramonda* L.C. Richard	3
	Bournea Oliver	1
	Jankaea Boissier	1
	Oreocharis Bentham	25+
	Dasydesmus Craib	1
	Tremacron Craib	5
17	*Briggsia* Craib	14
10	*Corallodiscus* Batalin	17
17	*Beccarinda* Kuntze	7
22	*Haberlea* Frivaldszky	2
	Cathayanthe Chun	1
	Isometrum Craib	6
17	*Ancylostemon* Craib	8
20	*Platystemma* Wallich	1
	Didissandra C.B. Clarke	30
17	*Hexatheca* C.B. Clarke	2
	Boeica C.B. Clarke	9
	Leptoboea Bentham	2
	Championia Gardner	1
	Anna Pellegrin	2
	Raphiocarpus Chun	1
17	*Opithandra* B.L. Burtt	5
	Petrocosmea Oliver	17
	Orchadocarpa Ridley	1
15	*Saintpaulia* H. Wendland	20
18	*Hemiboea* C.B. Clarke	8
4,7,9, 10,14,17,18	*Chirita* D. Don	77
	Acanthonema Hooker	1
	Trachystigma C.B. Clarke	1
17	*Petrocodon* Hance	2
9,11, 12,14,16,18,19	*Didymocarpus* Wallich	190+
	Schizoboea (Fritsch) B.L. Burtt	1
	Primulina Hance	1
18	*Trisepalum* C.B. Clarke	14
	Tetraphyllum C.B. Clarke	2
	Phylloboea Bentham	1
9	*Loxocarpus* R. Brown	15
	Linnaeopsis Engler	4
9,16 17,18	*Paraboea* (C.B. Clarke) Ridley	55+
	Codonoboea Ridley	3
ca. 16	*Ornithoboea* C.B. Clarke	10
	Rhabdothamnopsis Hemsley	1
8,16,18	*Boea* Lamarck	17
15,16	*Streptocarpus* Lindley	132
	Platyadenia B.L. Burtt	1

UNAFFILIATED GENUS

20 *Titanotrichum* Solereder 1

SINNINGIA EUMORPHA X *S.* 'PINK EUMORPHA': AN EASY AND INTRIGUING CROSS

Ron Myhr
Claremont, Ontario

Sinningia eumorpha is one of the sinningia species used most frequently in hybridizing. It has been the parent of such outstanding hybrids as *S.* 'Cindy' (with *S. concinna*) and *S.* 'Dollbaby' (with *S. pusilla*), and has been used in the development of seedlines such as *S.* 'Rex'. There are several good reasons why *S. eumorpha* has been popular as a breeding subject, among them its attractive appearance, compact habit, ease of culture and the readiness with which it lends itself to the hybridizing process; the flower is fairly large and open, and the sexual parts are readily accessible. It is this latter factor which renders *S. eumorpha* one of the very best of the sinningias for the neophyte hybridizer.

Fortunately, the hybridizing possibilities with this species are far from exhausted. It is a highly variable plant, and flower color ranges from pure white to predominantly lavender. In addition, purple striping or spotting may occur in the corolla, yellow coloring may be evident in the throat and the flower size is somewhat variable. Little attempt has yet been made to capitalize on this variability to produce striking and/or useful selections.

S. 'Pink Eumorpha' is often thought of as another color variant of the species. However, Frances Batcheller and Michael Kartuz have both suggested to me that it is likely a hybrid of *S. eumorpha* with a red sinningia of the old *Rechsteineria* group, perhaps of *S. cardinalis*. I have been unable to locate any information about the origin of this hybrid, and would appreciate hearing from anyone who can provide me with some clue as to its background.

Whatever its source, 'Pink Eumorpha' is an interesting plant. The flowers are similar in shape to those of the species, although they are generally somewhat smaller, and of a clear pale pink color. This color is not a function of short red hairs on the corolla exterior, as reported in the *Sinningia Register* (1975) but is the actual color of the corolla itself. The pink flowers make a beautiful contrast with the leaves, which are wider and a lighter and brighter shade of green than those of the standard species. 'Pink Eumorpha' tends to grow somewhat larger than *S. eumorpha*, and is not as floriferous under my conditions.

Clear pink is a rare color in the gesneriads. Many 'pinks' seem to my eye to have either a lavender or a salmon cast. *S.* 'Pink Eumorpha' is therefore to be cherished, and, hopefully, its characteristics passed on to ever-improved hybrid cultivars.

In addition to being a lovely and interesting plant, 'Pink Eumorpha' is a curious cultivar. It selfs easily, sometimes spontaneously, and comes completely true from seed. The fact that it comes true suggests that it is either an inbred seedline, a fertile tetraploid or a species in its own right, although there may be other possibilities of which I am ignorant. If it is indeed a hybrid of *S. eumorpha* and a former rechsteineria, tetraploidy seems likely, although other factors such as the ease with which it crosses with the diploid eumorphas suggest otherwise. I would appreciate a clarification of the genetics of this situation.

S. eumorpha X *S.* 'Pink Eumorpha' is a cross that is easily accomplished by the most inexperienced hybridizer, and one that yields interesting and straightforward results. Care must be taken to emasculate (remove the anthers before the pollen is ripe or the stigma receptive) the flower of the plant chosen as the seed parent. Pollen can then be transferred from the pollen parent to the ripe stigma of the seed parent. Receptivity of the stigma is indicated by its full expansion and a glossy sticky-looking appearance. The fat seed-pods should ripen within two months of pollination.

I have performed this cross and have been much taken with the pastel shades produced. I chose *S.* 'Pink Eumorpha' as the pod parent and crossed it with a lavender and white flowered purple striped *S. eumorpha.* This latter was chosen for no better reason than that it happened to be next to the 'Pink Eumorpha' at the time I decided to do the cross. The cross took readily, the seeds germinated quickly and the resultant plants were vigorous and quick to flower. All produced flowers somewhat larger than those of 'Pink Eumorpha'. These were pink lightly shaded lavender on the exterior of the corolla with a pinkish lavender face. There were various combinations of purple lines and spots on the face, as well as some variation in the extent of lavender coloration throughout. These variations are attributable to the instability of the species parent. Leaf shape and color lean more toward the species, although the green is of a somewhat brighter shade. These plants have given me much pleasure. Their unusual pastel coloration provides a pleasing contrast to the other stronger colors of neighboring flowers. The plants are vigorous and floriferous and are more compact than those of 'Pink Eumorpha'.

I had some difficulty getting these plants to self. After several unsuccessful attempts I now have two ripening seed pods. If the seed is viable, the resulting plants should show characteristics along a continuum from one of the original parents to the other. I hope to produce a pure pink (the color of 'Pink Eumorpha') with flower size and plant habit as in the species. It will be interesting as well to attempt crosses between 'Pink Eumorpha' and pure white forms of *S. eumorpha.* These should not have the lavender shadings of my original cross. I hope to have a white *eumorpha* blooming the next time 'Pink Eumorpha' is fertile, and will perform this cross then.

This type of hybridizing is not likely to produce spectacular new cultivars, but is perfect for providing pleasant and undemanding rewards for the beginner or for anyone able to enjoy the quiet beauty of pastel colors. If you would like to experiment but haven't the plants, seed of *S.* 'Pink Eumorpha', *S. eumorpha* and *S. eumorpha* (white form) are available from the AGGS seed fund.

FOR YOUR INFORMATION

Patrick Worley reports that his new address is 1408 Sunset Drive, Vista, CA 92083. This is also the new address for Michael Kartuz and Kartuz Greenhouses, Inc.

RON GETS AN ANSWER

Patrick D. Worley
Vista, CA

In the last issue Ron Myhr asked if anyone had been working with *Eucodonia*. Well, for the past year and a half I have made every cross that I could think of and the crosses are just now beginning to pay off.

Many years ago, Michael Kartuz crossed *E. verticillata* var *ehrenbergii* with one of the Cornell hybrid smithianthas to get two beautiful Smithicodonias, X *Smithicodonia* 'Arundel' and X *Smithicodonia* 'Tintagel'. I have worked mostly with my own miniature smithiantha hybrids and crossed them with *E. vert.* var *ehrenbergii, E. verticillata, E. andrieuxii* 'Naomi', Tintacoma' and the regular form.

These plants have been blooming over a period of months now and I am sometimes happy and sometimes disappointed with the results. Some of the crosses never bloomed and started into dormancy too soon. These, of course, will be started again in the spring.

The crosses using *E. verticillata* have been varied but not spectacular. I will be naming two and distributing them next year. The flowers are a reddish-purple with spotted purple throats. The flowers are held well above the foliage. The flower shape is an interesting combination much like smithiantha. The *ehrenbergii* crosses are much better. The flowers are larger and more showy and the colors more vivid. The smithiantha parent blooms were yellow to orange to red and the hybrids are many shades of deep purple to light pink. I will be testing further to see how well they will bloom.

I have also crossed each form of *Eucodonia* with the other forms and species and some of these have turned out well. *E. verticillata* x *E. 'Naomi'* is very lovely and I will probably name it. All of the F1 are, of course, similar and I am working on the F2 for next year.

Also to be named are a number of *Gloxinia* x *Eucodonia* hybrids. *XGlocodonias* (these at least) are compact and are now starting into bloom. I have crossed *G. lindeniana* with each of the eucodonias and *G.* 'Yellow Bird' with *E. verticillata* and *E. vert.* var *ehrenbergii*. They are well budded and should be flowering soon. The *G. sylvatica* and the *G.* 'Medusa' F2 hybrids that I have crossed with *Eucodonia* are rather larger growing and I see no buds as yet. The *G. perennis* x *E. verticillata* and *E. vert.* var *ehrenbergii* are quite small and may suffer due to a planned move but there are rhizomes so I am very hopeful that they will make it.

Last year, I also did some *XAchicodonia* crosses, most of which I had no room to plant. I did manage to bloom one this summer and I am very proud of it. It is low growing with a large flower and a nice leaf texture. I will be naming this one also.

So, in answer to your question, Ron: Yes, I have been working a bit on the eucodonias and I hope to be doing a lot more in the future. They are a fun group to work with and I hope that others will become more interested in *Eucodonia*.

STREPTOCARPELLA HYBRIDIZING

Roger Strickland
Valley Center, CA

The first streptocarpella hybridizing (*S. stomandrus* x *S. saxorum*) appears to have been done nearly simultaneously by Bartley Schwarz and Bill Saylor working independently in 1976. Apparently only Saylor described his work (see "*Streptocarpus* 'Good Hope' " in *CrossWords*, Vol. 1, No. 2, 1977). Presumably both *S.* 'Good Hope' (Saylor) and *S.* 'Concord Blue' (Schwarz) are similar plants. We obtained our *S.* 'Concord Blue' from Bartley Schwarz in March 1977.

S. 'Concord Blue' has proven to be a remarkable house and patio plant for the Southern California area due to its tolerance of our dry air and its amazing floriferousness. When grown as a houseplant *S.* 'Concord Blue' requires some direct sunlight to bloom well (see "Growing *Streptocarpus* 'Concord Blue' as a Houseplant in Southern California" by Roger and Carolyn Strickland, to appear in THE GLOXINIAN, possibly November 1979). In my home with natural lighting, *S.* 'Concord Blue' is consistently more floriferous than any other gesneriad I have tried, including african violets, sinningias, columneas, nematanthus, and rosette streptocarpus. Presently we market *S.* 'Concord Blue' our best-selling plant, in 6-inch baskets to nurseries along the Southern California coast. Apparently, these plants are bought mostly for growing on patios; but some are also used as houseplants.

Although *S.* 'Concord Blue' is a remarkable plant for a first hybrid, I hope that certain of its characteristics can be modified without losing its exceptional growing vigor, floriferousness, and pleasing foliage. Thus I have undertaken a breeding program with the following objectives: (1) to obtain more compact plants, (2) to reduce the foliage's susceptibility to bruising, (3) to obtain stronger stems for more upright growth, (4) to lower the light required for blooming, and (5) to obtain a wider range of colors without sacrificing flower size. I am concentrating on breeding houseplant types, but I do not automatically discard large hanging plants if their flowers are unique. I have used *S.* 'Concord Blue', *S. stomandrus*, *S. kirkii*, and the vigorous *S. saxorum* for breeding. My attempts to cross *S.* 'Concord Blue' pollen onto *S. holstii* and *S. muscosus* failed, possibly because the pistils may have been damaged during emasculation. Hopefully other hybridizers will be more skilful at emasculating these flowers and will succeed with these crosses.

I grew about 300 seedlings of *S.* 'Concord Blue' to the flowering stage in 2-inch pots (about 4 to 6 months). Their flower colors included bluish purple, purple, fuchsia pink, lavender, and reddish purple in various intensities. From these F_2 plants, I selected about 30 for a detailed evaluation in 6-inch pots.

Most *S.* 'Concord Blue' seedlings were clearly not improvements. The following characteristics usually resulted in seedlings being discarded: (1) small flower size, (2) flower's face curved backward, (3) loss of lines in flower's throat, (4) flowers spontaneously self pollinating (seed pods), (5) flower color not pleasing, (6) leggy growth, (7) unsightly foliage, and (8) lacking growth vigor. None of these seedlings grow quite as rapidly from cuttings as does *S.* 'Concord Blue'. Several seedlings, however, do grow rapidly enough to have commercial potential. In some cases, the F_2 plants are more compact and thus require less pruning and less growing space to produce a salable plant. From a statistical viewpoint, I found only about a 1 in 50 chance of getting a useful seedling from *S.* 'Concord Blue'.

In the cross of *S. stomandrus* with *S.* 'Concord Blue', I grew about 50 seedlings to blooming (4 to 6 months). The flower colors included various shades of bluish purple, fuchsia pink, and a pinker color like that of the *stomandrus* flower. These seedlings often had 8 or more flowers on each peduncle. Unfortunately, the flowers tended to be small; the leaves tended to be large; and the growth tended to be too slow. About 10 of these seedlings were grown to full size. I still retain 4 of them, including a vigorous grower with many blue-purple flowers on each peduncle.

To introduce the *S. kirkii* genes, I chose to cross initially with *S. saxorum*, expecting that these hybrids would be vigorous growers. *S. kirkii* x *S. saxorum* did indeed give vigorous seedlings, which bloomed in 3½ to 5 months. As expected in the F_1 generation, all seedlings appeared quite similar. Thus only several of the most vigorous seedlings were grown to maturity. The flowers are 27 x 33 mm and a pale, bluish purple with a white throat. Under some cultural conditions, two faint lines occur in the throat. The flower's face is somewhat cupped, but not nearly as much as in the case of *S. kirkii*. Many flowers occur on each peduncle. The leaves are elliptical (6 x 4 cm) with a pleasing green color and are not so easily bruised. The stems are strong and will support relatively upright growth, if pruned properly. Nevertheless, these plants are best suited for hanging, because all the peduncles eventually droop after several flowers have opened. We named our most vigorous seedling 'Frosty'.

As a novice plant breeder, I was surprised to discover that final selections of hybrids could not be made strictly from the growing characteristics of the seedlings. Under my growing conditions, I found that plants grown from cuttings tended to have larger leaves and to be less compact than the mother seedlings. Also some vigorously growing seedlings were not so easily propagated from cuttings; others were.

In the fall of 1979, we began selling several new hybrids to local nurseries. These plants are well suited for 6-inch pots. Their folliar appearance is determined primarily by the size of the new growth, because the older leaves are usually hidden. Surprisingly, the size of the older leaves does not necessarily correlate with the size of the new growth. Thus I prefer to give a subjective impression of the foliage, as well as a measurement of the mature leaves. In considering the flowers, one should keep in mind that cultural conditions influence somewhat their color and size. All these plants have flowers with lines in their throats.

Incidentally, we have chosen to market these plants under the subgenus name *Streptocarpella*.

Clone descriptions:

Streptocarpella 'Ballerina' (*S. stomandrus* x *S.* 'Concord Blue'). Very floriferous hanging plant with many fuchsia-pink flowers (27 x 27 mm) on each peduncle. I counted 22 flowers on one peduncle: new growth has medium-sized leaves; mature leaves, up to 7 x 5 cm.

S. 'Boysenberry Cascade' (seedling of 'Concord Blue'). Large fuchsia-pink flowers (30 x 33 mm) on a trailing plant with large-sized leaves (up to 7 x 5 cm). Many flowers on each peduncle. Lines in flower's throat are unusually sharp.

S. 'Boysenberry Delight' (*S. stomandrus* x *S.* 'Concord Blue'). Many fuchsia-pink flowers (23 x 27 mm) on each peduncle. Semi-upright grower with medium-sized leaves (up to 8 x 5 cm at maturity).

S. 'Butterfly' (seedling of *S.* 'Concord Blue'). Large, dark blue-purple flowers with unusually full face (37 x 32 mm); 2, 3, or 4 flowers on each peduncle. Compact plant with medium-sized leaves (up to 5½ x 4½ cm at maturity).

S. 'Sassy' (seedling of *S.* 'Concord Blue'). Semi-upright, compact grower with 4 or 6 dark blue-purple flowers (33 x 30 mm) on each peduncle. Medium-sized leaves (up to 5½ x 3 cm).

S. 'Sparkle' (seedling of *S.* 'Concord Blue'). Purple flowers (33 x 31 mm) on a compact, semi-trailing plant with medium-sized leaves (up to 5½ x 3½ cm). Usually 4 flowers on each peduncle.

S. 'Twinkle' (seedling of *S.* 'Concord Blue'). Dark blue-purple flowers (32 x 30 mm), usually 3 on each peduncle. Unusually compact grower with small leaves (up to 5 x 3 cm at maturity). Somewhat slow grower.

Editors' Note

Please note that usual taxonomic practice would have all *Streptocarpus* species and hybrids referred to as *Streptocarpus*, regardless of membership in one or the other subgenus. Mr. Strickland's practice of referring to his hybrids as *Streptocarpella* is due to his personal preference or to commercial convenience. We have no particular objection to this practice, but we do draw your attention to its deviance from standard botanical taxonomy.

In general, our policy is to print articles as they are received. No comment will be made on taxonomic variations which are the current subjects of dispute. Where the possibility of confusion exists, any comments will be directed towards clarifying the situation.

QUESTION

Dee Stewart
Stow, MA

Have there been any attempts to use *Streptocarpus candidus* in a hybridizing program? Its lovely scent and non-dropping blossoms would seem most attractive qualities.

SAINTPAULIA 'SOMETHING SPECIAL'

Ronn Nadeau
St. Louis, MO

On February 22, 1978, I planted some African violet seeds from a cross that I had made: *S.* 'Starship Trooper' X *S.* 'Pink Lemonade'. The genetics of this cross will be discussed later in this article. As the seedlings developed one of them clearly stood out from the rest, as a big bright red 'Delicious' would stand out amongst an array of small green apples. One could not have guessed that No. L-2277 (8 inches across) was from the same planting with siblings which were still 4 inches across. Not only was it large but it was beautiful even before its first bloom.

No. L-2277 developed into a cultivar which has turned on virtually everyone who has seen it and which has changed my attitude toward hybridizing. I will describe it only briefly because words could not do it justice. No. L-2277 is a large plant at maturity, 18-24 inches in diameter. Its growth rate is about twice that of any other variety I have grown. Although it is a fast grower it is not soft and floppy, rather vigorous and strong. Mature leaves are the size of my hand and are a lustrous dark green, almost black. Undersides of the leaves are red. Flowers are brilliant dark blue, semi-double, longlasting, 15-20 per stem, and go very nicely with the foliage.

I have named and introduced 60 varieties during the last five years. Too many, I now realize. When it came to naming No. L-2277, I took my time, wanting the name to fit the plant. One day it came in a flash: 'Something Special'.

Now to discuss the parents and siblings of 'Something Special'. 'Starship Trooper' (pod parent) is a variety of mine which was named but not released. Bloom is single, purple, star shaped. 'Pink Lemonade' (pollen) has semi-double, hot pink, violet shaped bloom. In saintpaulia genetics the dominence/recessive picture for the above traits is as follows:

RECESSIVE	DOMINANT
single	semi-double
pink	purple
star shape	violet shape

Unfortunately, I lost the parentage records of 'Starship Trooper'.

However, from the fact that siblings from this cross included singles, pinks, and star shaped, as well as purples and violet shaped blooms, we can deduce that 'Starship Trooper' possesses two recessive genes for single, one recessive gene for pink, and two recessive genes for star. 'Pink Lemonade' must have one recessive gene for single, two recessive genes for pink, and a recessive gene for star. The parents of 'Pink Lemonade', hydbridized by Gene Thiel of Collinsville, IL, are 'Rhapsodie Claudia' (pod) X 'Miriam Steel' (pollen). 'Rhapsodie Claudia' has pink, semi-double, violet shaped bloom, and 'Miriam Steel' has white, semi-double, star shaped bloom.

In June of 1979 I participated in the African Violet Society of America Convention Show in Denver, having a display table with 25 plants, one of which was the 'Something Special' seedling and two of which were plantlets. 'Something Special' won a Special Award and everyone wanted leaves. At the end of the Convention I sold leaves at $2.00 each and a limit of two per customer. I sold

over 100 leaves, and asked each customer to leave their address.

Earlier, as soon as the seedling had first begun to bloom, I applied its pollen to many other cultivars, including variegates, thereby eventually producing much 'Something Special' parentage seed. (My main activity with African violets is production of seeds for retail and wholesale sale). Feeling a kind of cameraderie with all the people who had gotten its leaves, I this summer mailed to all of them packets of these seeds. I am ahead of these people, however, having planted seeds in May, 1979.

I hope I am not placing too many eggs in one basket, for now my hybridizing is strongly focussed on 'Something Special'. Some of the progeny are near bloom at this writing, November 23, 1979, and some may be on display as seedlings at the AVSA Convention in New Orleans, late April, 1980.

SOME DOINGS WITH *AESCHYNANTHUS*

Bill Saylor
Brewster, MA

Among the more satisfying performers I have encountered in *Aeschynanthus* is a primary hybrid I have grown ever since 1971. The pod parent *A. micranthus* is a species well-known to most gesneriad fanciers and particularly useful in breeding for flowers up and down the stem. Many of the other species are almost exclusively terminal bloomers. An example of what can be done with *A. micranthus* in this vein is *A.* 'Red Cascade' (*A. pulcher* x *A. micranthus*) which produces a profusion of good-sized flowers in most leaf axils when well grown.

But back to the seedling first mentioned. The pollen parent was a plant that came to me from Mike Kartuz under an obviously incorrect name "*A. hosseana*". I sent cuttings to Edinburgh to the Royal Botanic Garden for proper identification, but meanwhile found its terminal clusters of rather small bright orange flowers intriguing and shouting to be used in breeding. The cross with *A. micranthus* produced many viable seeds and a good population was soon on its way. First bloom appeared in the fall of 1973 with seedlings just about identical. Meanwhile Patrick Woods, the aeschynanthus authority at Edinburgh, reported that the cuttings had grown and bloomed and had been positively identified as *A. parviflorus* (please note not *A. parvifolius*. These two names are unfortunately often confused).

One seedling was grown on for several years and was finally named 'Firecracker' in nostalgic memory of the little clusters of Chinese firecrackers we used to fire on the Fourth many years ago. The plant is a fall and winter bloomer with clusters of bright red 2½ cm flowers in very nearly every leaf axil. The leaves are narrowly elliptical acuminate to a maximum length of about 7 cm. Habit is generally graceful and trailing.

A few other details should be interesting. Both parents come from the Himalayas in Asia, from high altitudes but latitudes comparable to those of Florida and Baja California. *A. micranthus* has a haploid chromosome number n = 15 while *A. parviflorus* is n = 16. In spite of this the hybrid seed germinated very well.

Also 'Firecracker' and some of its siblings have proved their fertility by crossing readily with widely differing species such as *A. sikkimensis*, *A. parvifolius*, *A. longicaulis*, and *A. evrardii*. This ability to surmount chromosomal and sectional and habitat barriers seems to be characteristic of pretty much the whole genus.

One other hybrid has been named recently, *A.* 'Little Tiger'. This is a complex hybrid, being a cross between 'Bali' (*A. pulcher* x *A. nummularius*) and a seedling from *A. tricolor* x *A. praelongus*. Stems are slim and trailing, although strong and wiry with tiny cordate green leaves (about 2 cm long) which are lighter green beneath and outlined crisply by a dark red edge. Flowers appear for the most part in terminal clusters. The body of the corolla is a bright red and there are yellow and black stripes in and around the throat. It has been fun to analyze the characteristics of this aeschynanthus in an attempt to trace them to the four progenitors. Thus the small leaves come directly from *A. nummularius*, the wiry stems and strong leaf substance from *A. praelongus*, the flower size at least partially from *A. pulcher*, and the flower colors mainly from *A. tricolor*.

There is a unique aeschynanthus from Kew in the collection at the Bailey Hortorium identified by the Cornell acquisition number G-1481. It has come to be known among growers as 'Kew Pink' because of the true real pink color of its flowers. Its foliage is also most unusual being very slimly elliptical or lanceolate about 6 cm long by 1 cm wide. One other rare and exciting characteristic is the tendency for flowers to form in new leaf axils as growth progresses, making the plant substantially an everbloomer. Barr Ticknor, while a student at Cornell a few years ago, did some hybridizing with this aeschynanthus but I do not know if he had any successes. At any rate I have tried using it as pollen parent with *A. micranthus* and *A. hosseussii* among other things. In both of these crosses the resulting seedlings looked so much like the pod parent that I suspected contamination with self pollen. However two flowers appeared at last during the summer on a seedling from the *A. hosseussii* cross and, happy to relate, they were the same true pink as those of G-1481 and somewhat larger. *A. hosseussii* has large orange flowers with carmine and black markings at the throat and a partially fused decorative calyx. It looks from the one glimpse I have had as if the exciting pink of G-1481 may be coming through as a dominant character. Confirmation on this will come only as the months and years go by.

INTERGENERIC ATTEMPTS

Penny Shampaigne
Burke, VA

Your plea for participation got me moving to write this long-intended letter. I would appreciate it if you could print the request below in the next issue of *CrossWords*.

As a graduate student at George Mason University in Fairfax, Virginia, I have the pleasure of working with Larry Skog of the Smithsonian Institution in Washington, D.C. He has a very large collection of Gesneriaceae which he has allowed me to use for my master's research. I am attempting to cross species of *Saintpaulia* and *Streptocarpus* in order to develop an intergeneric cross. So far,

I have watched many seed pods develop only to see the peduncle wither before the pod was ripe. I intend to do some anatomical studies in hope of discovering why this happens and to devise a method for avoiding this premature senescence. I have most of the *Streptocarpella* species (the caulescent subgenus of *Streptocarpus* which contains the same number of chromosomes as Saintpaulia) but still lack three. If anyone has some seeds or cuttings they could send me I would certainly appreciate it. I need:

Streptocarpus glandulosissimus
Streptocarpus oliganthus
Streptocarpus thompsonii

Any information or experience that you might have would also be useful. Don't be shy because I need all the help I can get. Even stories of failures would be interesting to me. Since most authors are reluctant to write about failures, very little has been written about attempted crosses between these two genera and their results.

TRUE BEARING SEEDLINES

Peter Shalit
Seattle, WA.

In the first 1978 issue of *CrossWords* (Vol. 2, No. 1, p. 11), Bob Stewart asked this question: "Hybridizers frequently talk about the necessity of breeding a hybrid until the seed produces identical plants. Is it done only to make commercial propagation easier, or is there another reason?" Here are my thoughts on the subject.

There is no need to develop a true-breeding seedline unless you want your hybrid to be propagated by seed. In most cases, gesneriads are propagated easily and quickly by vegetative means, and no one would even bother growing the plants from seed. For instance, a satisfactory *Saintpaulia* hybrid need only come true from leaves. (The requirement that registered *Saintpaulia* hybrids come true for three generations of leaf cuttings has led to the misunderstanding that this means they must "breed true." Not so. They simply must be vegetatively stable.) Since cuttings reproduce the parent plant exactly, there is no need to breed the hybrid to come true from seed. And no one does. If you self-pollinated a named *Columnea* or *Achimenes* or *Streptocarpus* or *Episcia* or *Nematanthus* or *Saintpaulia* hybrid, you would find that it certainly has *not* been bred to come true from seed.

Certain gesneriads are more difficult to propagate vegetatively. The genus *Gesneria* is notorious. And it is much faster to propagate miniature *Sinningias* in quantity from seed than from cuttings. Sterile hybrids (e.g., *S.* 'Coral Baby') are expensive to buy, because the grower has to propagate them from crowns or leaves, and the process is quite slow. So the goal of people who are hybridizing such plants is to produce a fertile strain that comes true from seed. Such strains can be propagated cheaply and quickly. This will be necessary with hybrids in the genus *Gesneria*, as well. However, the advent of tissue culture propagation may reduce the need to develop seed strains even in these genera.

There are also other alternatives to true-breeding lines. One is to devise a cross that will produce uniform F1 seed of the desired type. For instance, triploid or "mule" marigold seed is produced by making hand pollinations between two standard parent strains. The offspring are uniform but sterile. The cross is repeated every time more seed is needed. Hybrid corn is also produced this way. If you find that crossing a certain two gesneriads produces a good quantity of seed, all of which grows up to make a uniform array of desirable but sterile plants, you might want to use this method of propagation. Simply maintain the parents and repeat the cross as often as you want seed.

In other cases, a grower does not exactly care that his seedline is true-breeding. The seed is sold as a mixture, 'So-and-so Hybrids', and the grower carefully maintains parental stocks to insure that the seed produced will meet specifications. Some examples in the gesneriads are *Streptocarpus* 'Wiesmoor Hybrids', *Sinningia speciosa* 'Buell Giant Trumpet Mixed', and *Smithiantha* 'Little One'. Many showy plants come from a packet of such seed, and they are all different, which makes it fun.

If you really want to make a true-breeding strain out of a hybrid that produces much variation when selfed, the only way is to self a plant for many generations, selecting each time for fertility, uniformity, and resemblance to the parent. However, the many generations of inbreeding which are required to get a strain to breed true, often cause a reduction of vigor. By releasing a variable mixed hybrid strain, you bypass the problem of loss of vigor.

CrossWords is published quarterly by the Gesneriad Hybridizers Association, a non-profit organization established to facilitate the sharing of information about the hybridizing of gesneriads and to further the appreciation of the results of that hybridizing. Subscription is by membership. Membership fees are $5.00 and applications, along with cheques, should be sent to Meg Stephenson at the address below, as should address changes and other subscription correspondence. Editorial correspondence may be sent to either of the editors. Editorial deadlines are February 1, May 1, August 1, and November 1 for publication two months later.

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