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Bouquet of Smithianthas, grown and photographed by Vivian Liu, Taipei, Taiwan

Editor

Peter Shalit gesnerieditor@gmail.com

Editorial Staff and Contributing Editors

Judy Becker, Jeanne Katzenstein, Charlene Marietti, Dale Martens, Julie Mavity-Hudson, Paul Susi

Consulting Taxonomist

Dr. Laurence E. Skog

Taxonomy Reference Website

http://botany.si.edu/ gesneriaceae/checklist/

Botanical Review

Bob Stewart aeschynanthus@verizon.net

Graphic Design and Production

Adshead Graphics dd@adsheadgraphics.com

Business Manager Michael A. Riley riley2362@aol.com

Advertising Manager

Tom Bruning 31233 Beechnut Road, Treynor, IA 51575

advertising@gesneriadsociety.org

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The Gesneriad Society, Inc.

The objects of The Gesneriad Society are to afford a convenient and beneficial association of persons interested in gesneriads, to stimulate a widespread interest in, gather and publish reliable information about the identification, correct nomenclature, culture and propagation of gesneriads; and to encourage the origination and introduction of new cultivars.

The Gesneriad Society, Inc. is the International Registration Authority for the names and cultivars of gesneriads excepting the genus *Saintpaulia*. Any person desiring to register a cultivar should contact Judy Becker, 432 Undermountain Road, Salisbury, CT 06068 hybridregistrar@gesneriadsociety.org.

President's Message



IN THE LATE 1970s, THE LATE RENÉE WHITE, THEN the Editor of *The Gloxinian* (this journal's former name), needed to something to do in her "spare" time. Renée had worked with crewel embroidery and simple needlepoint samplers, but wanted to put her painterly creativity to develop original designs. Her inspiration was gesneriads.

In an article Renée published in the January/February 1986 issue of *The Gloxinian*, she discussed her growing challenges as well as those she faced in designing for needlework. She had set up a growing area in two rooms of her apartment, which was drenched with sun in the winter but needed good ventilation in the summer.

Into these rooms she brought plants from the New England Chapter's meetings as well as from her visits to Buell's and Kartuz's (when Mike Kartuz was still located in Massachusetts) that she considered potential subjects for her designs.

One of her main challenges was finding the right colors in yarn. For example, as with most plants, the leaves of gesneriads are not a uniform shade of green but rather a blending of shades, and often colors other than green, which is difficult to duplicate with standard yarn colors. Inspiration hit when Renée saw a design in which colors came alive. To reproduce this effect for her gesneriad subjects, she used different colored yarn that she blending together, much as one would blend different colors of paint. As a result, she was able to reproduce her subjects with more realistic colors, shapes and textures. Gone were the stiff, almost uniformly colored





Episcia 'Cleopatra' grown and photographed by Francis Sua

leaves and upright peduncles of her earlier attempts. She tackled *Smithiantha*, *Episcia*, *Streptocarpus*, *Achimenes*, *Chirita* (*Primulina*), *Nautilocalyx*, *Sinningia*, *Gloxinia* (*Gloxinella*), *Saintpaulia* and *Aeschynanthus* – producing a total of twelve needlepoints between 1977 and 1980. And then she stopped. The inspiration that kept Renée producing these wonderful designs for three years left her with an unfinished work of *Sinningia canescens* "sitting in a closet, half finished and unloved."

In the late 1980's, as Renée was preparing to move into a retirement home, she donated the needlepoints to the Smithsonian Institution. The Smithsonian accepted the gift but was not able to display them

and, aside from being reproduced in *The Gloxinian* issue in which her article appeared and being displayed at the 2009 Convention in Silver Spring, Maryland, they sat in the Society's archival storage until earlier this year. (The Smithsonian transferred ownership of the needlepoints to the Society in 2009).

Continued on page 47

From The Editor



I have included haikus written by our members THIS IS MY THIRD ISSUE AS EDITOR OF *GESNERIADS*. It's been a steep learning curve but it's been fun. Thanks to all who have given me feedback on the new format. This is your journal, so let me know what you'd like to see more of – or less of – in *Gesneriads*. What topics haven't appeared lately that you'd like to see? What genus hasn't been mentioned? What aspect of growing would you like to read about? Or write about? I'm always looking for articles and photos for the journal, so don't be shy!

This issue is being published right around the time of the Toronto convention in early July. Look for full coverage of the Convention activities, including the flower show, in the next issue of *Gesneriads*. The convention show is the largest gesneriad show of the calendar year, but springtime is show time for many local gesneriad clubs. This issue features photographs of some of the prizewinning gesneriads exhibited in some of the spring shows.

The Philadelphia Flower Show is more than just a local show each spring – it is the largest flower show in the USA and the largest indoor flower show in the world. And thanks to members

of the Liberty Bell Chapter, it has a strong showing of gesneriads. Bob and I had the privilege of judging the gesneriads in the Philly Show this past spring and it was an awesome experience – a day of "plant nerd nirvana." We saw some amazing gesneriad specimens and many very impressive non-gesneriads as well. It was our first time and we definitely plan to be back next year. Highly recommended. There are some photos of gesneriads at the Philly Show in this issue so you can see what I mean.

Elsewhere in this issue you'll find a couple of articles on Episcia culture, written by growers on opposite sides of the globe: Francis Sua, from Singapore, and Andrew Norris, from Maryland. To accompany some of the beautiful Episcia photographs, I have included haikus written by our members. Don't ask why that idea occurred to me, but it seemed like the right way to pay tribute to these beautiful plants.

Hobbyists and professional botanists alike will enjoy reading about how a Nautilocalyx proved to be a Drymonia, and the role of a unique type of fruit in the story. Although Jonathan Ertelt's article is botanically oriented, it should be of interest to all who enjoy the beauty of rare gesneriads.

If you attended the Seattle Convention in 2012, you will recall Vivian Liu's presentation on hybridizing gesneriads in Taiwan. I was so impressed by Vivian's Smithianthas that I asked her to write about them for our journal. She has provided an essay accompanied by beautiful photos of her plants.

Many of you have been waiting for Part Two of Dave Zaitlin's account of his trip to Brazil to hunt Sinningias ever since Part One appeared in the first quarter issue of 2013. You'll find Part Two in this issue. I'm grateful to Dave for documenting the habitats of this large genus and sharing his experiences "sinningia-hunting" with us.

Finally, Dale Martens has contributed another one of her very valuable "Basics" articles – this one on floral anatomy. The "Basics" series is directed at less-experienced growers, but all gesneriad growers will learn much from Dale's crisp writing and photography.

Enjoy Gesneriads,

<gesnerieditor@gmail.com>

Seed Fund



Did the plants do well or just enrich the compost pile? CONVENTION TIME IS HERE AGAIN. ANTICIPATION has been building for several months now as we plan for a hectic but wonderful week in Toronto.

It's always a pleasure to see old friends again and share our stories of triumph and tragedy. What new plants have we grown and under what conditions? Did the plants do well or just enrich the compost pile? Convention gives us a unique opportunity to exchange cultural information with other growers who have been more successful or to share our own secrets for success.

I've planted some seeds of a few species that I hope will be good enough to exhibit at convention time. It's inevitable that some won't grow rapidly enough and some so rapidly that they will flower and decline before it's time to leave for Canada. Spring came very late to the Northeast this year and it disrupted my carefully calculated growing timetable. If the plants aren't in great form for convention, at least they'll look good at our chapter Little Shows.

I'm looking forward to seeing and judging the wonderful entries that will be at the flower show. Since many of us will have

to cross international borders, the complexities of arranging for plant inspections and phytosanitary certificates will add to the trip preparations for some exhibitors. I have to admire the ingenuity and determination of exhibitors who can bring large show plants over long distances and maintain them in fine condition for convention shows.

I know that I won't be able to resist the temptation to purchase some new plants to try or plants to replace old favorites that have departed. There will also be rare and unusual items for auction, so I'm saving some money for those.

As usual, there will be knowledgeable speakers sharing their expertise and the results of recent scientific studies. I fear that we will be changing the names on even more labels and seed packets after hearing some of the presentations. Something is always happening in the wonderful world of gesneriads. We hope that we will see many of you in Toronto.

Contributions from the following are helping the Seed Fund grow: Kelly Ates, Marlene Beam, Michael Bull, Karyn Cichocki, Betsy Gottshall, Kenji Hirose, Huntington Library and Botanical Gardens, Nancy Kast, Leong Tuck Lock, Alcie Maxwell, Kenneth Moore, Christopher Nagy, Toshijiro Okuto, Carolyn Ripps, Mary Lou Robbins, Mary Schaeffer, Peter Shalit, and Bob and Dee Stewart

Carolyn Ripps Species Seed Fund, <rippscs@aol.com>

Seed Packets — \$2 each

Please • To pay by credit card, send your credit card number, expiration date, and signature, and indicate if the card is MasterCard or Visa (\$6 minimum)

Make checks payable to The Gesneriad Society in U.S. funds

• Provide a self-addressed, stamped envelope (non-U.S. orders will have the postage added to their credit card bill)

List alternate choices

• Include your membership number (first number on your mailing label)

Note

• There is a limit of one seed packet of a single variety per order

There is a limit of 25 seed packets per order

There is a household limit of 50 seed packets per calendar year

Mail orders for species seed to: Carolyn Ripps, 21 Sprain Road, Hartsdale, NY 10530

Seed Fund – Species

| 30001 0110 | - Species |
|----------------------------------------------|---------------------------------------|
| Achimenes (D) | crassifolia 'Cranberry' |
| admirabilis (B,F,L) | devosiana SEL1997-0120A |
| • candida | devosiana (hairy) |
| cettoana (B) | • devosiana (pink) |
| erecta (B) | • erubescens |
| erecta 'Tiny Red' (F,L) | • gibbosa (was sp. 'Santa Teresa') |
| • grandiflora (B,F,LM) | gracilis |
| • grandiflora 'Robert Dressler' (B) | • serrulata |
| longiflora (B) | • uleana |
| • misera | • venosa |
| • warszewicziana | Codonoboea (Henckelia) |
| Aeschynanthus (B) | • hispida (H) |
| • angustifolius | • malayana (H,M) |
| evrardii | sp. aff. <i>curtisii</i> |
| fecundus SEL1974-2907-A | • sp. #1 (white) |
| | • sp. #2 (small yellow) |
| fulgens (evrardii) gracilis 'Pagoda Roof' | • sp. #3 (white and purple) |
| • horsfieldii | |
| micranthus SEL1974-0260 | Columnea (B) |
| | • arguta |
| parviflorus SEL1974-2701 | brenneri GRE9833 |
| pulcher (parvifolius) | calotricha SEL2010-0138 |
| • pulcher (boschianus) | crassicaulis (Pentadenia) |
| radicans (lobbianus 'Radicans') | eburnea (Dalbergaria) |
| rhododendron (longicalyx) | fawcettii |
| Alloplectus | hirta |
| • sp. DN96-94243 | kienastiana (dodsonii) |
| Alsobia (B) | • linearis |
| dianthiflora | • linearis 'Purple Robe' |
| • punctata | • microphylla |
| Amalophyllon (D,H,L) | nervosa GRE12368 |
| • clarkii USBRG 96-336 | orientandina (Pentadenia) (LM) |
| divaricatum (Phinaea) | ornata (Dalbergaria) GRF2665 |
| • rupestre RM2006-1/Belize | polyantha (Dalbergaria) |
| Anodiscus (see Gloxinia) | purpureovittata |
| Besleria | purpusii |
| comosa GRE9931 (T) | • raymondii |
| • solanoides GRE10975 (G,T) | sanguinea (Dalbergaria) |
| sp. GRE12396 (T) | scandens var. fendleri |
| sp. GRE12500 | schiedeana |
| Boea | • schiedeana 'Huatusco' (yellow) |
| hemsleyana | schimpfii GRE12243 |
| hygroscopica | spathulata (Pentadenia zapotalana) |
| Chautemsia | SEL1975-0090 |
| | sp. 'Maquipucuna' ABG 97-0125 |
| • calcicola | sulfurea |
| Chirita (see Henckelia, Microchirita, and | • tandapiana |
| Primulina) | Corytoplectus |
| Chrysothemis (F,LM) | cutucuensis (L) |
| friedrichsthaliana | speciosus GRE9969 |
| pulchella | speciosus var. orbicularis GRE11721 |
| • pulchella (Ecuador) | Crantzia |
| pulchella (cv. villosa) | tigrina |
| Codonanthe (B) | Cyrtandra |
| calcarata 'Puyo' | samoensis |
| • caribaea | sp./Malaysia |
| crassifolia | • sp. (white)/Java (T) |
| | |

| Dalbergaria (see Columnea) | Gloxinia (D) |
|-----------------------------------------------------------|---------------------------------------------------------|
| Diastema (D,F,P) | erinoides 'Red Satin' |
| latiflorum GŔF9669A (F,H,L) | perennis (LM) |
| racemiferum GRE9824 | perennis 'Insignis' (L) |
| vexans | xanthophylla (Anodiscus) (M) |
| Didissandra | Gloxiniopsis (Gloxinia) (D) |
| frutescens | racemosa (L) |
| Didymocarpus | Haberlea (A,R) |
| • cordatus (G,T) | rhodopensis var. ferdinandi-coburgii |
| • sulfureus | rhodopensis |
| Drymonia | Hemiboea (D) |
| affinis GRF98109 | • strigosa |
| chiribogana | subcapitata (L) |
| coccinea GRE9980 (T) | Henckelia |
| coccinea var. fusco-maculatus | • anochoreta |
| • coriacea | ceratoscyphus (Chirita corniculata) |
| ecuadorensis GRE9769 | • pumila (Chirita) (F,L) |
| hoppii GRE9863 | speciosa Green Leaf' |
| macrophylla GRE12119 | <i>speciosa</i> 'Vietnam' |
| pendula SEL1998-0223 | Heppiella (D) |
| pulchra GRF98113 | ulmifolia GRF98172 |
| punctulata | Kohleria (D) |
| rhodoloma ABG90-0528 | allenii (Ť) |
| serrulata (B) | aff. amabilis 'Panama Pink' |
| strigosa (B) | grandiflora |
| sp. nova/Veracruz | hirsuta |
| sp. (<i>umecta</i> ined.) (B) | peruviana |
| teuscheri GRE12405 | Microchirita (Chirita) |
| Episcia (H,L,B,F) | caliginosa (LM) |
| • xantha | elphinstonia |
| • cupreata | • hamosa (AN,F,M) |
| Epithema | involucrata (F,L) |
| saxatile | • involucrata (dark blue) |
| sp./N. Perak (M) | lavandulacea (LM) |
| sp. (blue)/N. Perak (M) | micromusa_(AN,F,L) |
| Fieldia | sericea (L,R) |
| australis | • viola |
| Gasteranthus | • species (Thailand) |
| anomalus GRE12902 | species (blue) from Phuket |
| bilsaensis GRE12137 | Monophyllaea |
| villosus GRE12111 | hirticalyx (L,U) |
| Gesneria (H,F) | horsfieldii (U) |
| acaulis (M) | Monopyle |
| humilis var. celsiodes GRE12449 (H,M) | • sp. GRE12131 |
| christii (LM) | Moussonia |
| • cuneifolia (L) | • elegans |
| • cuneifolia 'Quebradillas' (L) | Napeanthus |
| cuneifolia 'Tom Talpey' (L) | • andinus (H) |
| • glandulosa (MT) | costaricensis |
| • heterochroa | Nautilocalyx |
| humilis | adenosiphon |
| • libanensis var. lopezii | mellitifolius |
| • shaferi (L) | Nematanthus |
| ventricosa (M) | albus (sp. "Santa Teresa") (B) |
| viridiflora | australis (B) |
| Glossoloma (Alloplectus) | australis (yellow) |
| ichthyoderma GRE9836 (T) | brasiliensis |
| scandens GRE11235 | fissus GRF9938 |
| cf. panamense GRE11118 | fluminensis |
| Gloxinella (Gloxinia) (D) | fornix |
| lindeniana (F,L) | • fritschii |

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| lanceolatus 'Carangola' | Saintpaulia (F,R) |
|-------------------------------------------|----------------------------------------------------------|
| • punctatus MP0052 | 3. shumensis |
| • sericeus (B) | 5a. cl. grandifolia No. 299 |
| wettsteinii (B) | • 5b. cl. <i>grotei</i> Protzen |
| wiehleri | • 5c2. cl. diplotricha Punter No. 7 |
| Neomortonia | 5c2. cl. Úppsala #3083 |
| • nummularia | 5cl. cl. tongwensis |
| Nomopyle (Gloxinia) | • 5f. cl. orbicularis |
| dodsonii GRE12110 | 6. brevipilosa |
| | • 8. rupicola |
| Opithandra (see Oreocharis) | • 8. <i>rupicola</i> cl. Cha Simba |
| Oreocharis (T | 'Kew' |
| • pankaiyuae (Tremacron aurantiacum) | Seemannia (Gloxinia) (D) |
| Ornithoboea | gymnostoma (LM) |
| • wildeana | nematanthodes |
| Paliavana (S,T) | nematanthodes 'Evita' (M) |
| gracilis (T) | • purpurascens/Bolivia |
| prasinata | sylvatica |
| plumerioides (Cabral) | |
| sericiflora (T) | Sinningia (D) |
| Paradrymonia | aggregata (M) |
| • ciliosa | aggregata 'Pendulina' |
| decurrens (L) | aghensis (T) |
| Pentadenia (see Columnea) | aghensis AC2356 |
| Petrocosmea | allagophylla (MT) |
| duclouxii | allagophylla (yellow) |
| sp. #2 | • amambayensis (L) |
| sp. #5 | • araneosa (F,L) |
| sp. 'Yumebutai' | • barbata |
| Phinaea (D,F,P) | brasiliensis (M) |
| ** ** | bulbosa (T) |
| albolineata multiflora 'Tracory' | bullata (was sp. "Florianopolis") |
| multiflora 'Tracery' | calcaria MP891 (F,L) |
| • pulchella (F,H,L) | canescens (D,LM) |
| Primulina (Chirita) | carangolensis (M) |
| • balansae | cardinalis (F,LM) |
| • drakei | cardinalis (compact) (F,LM) |
| • eburnea (F,R) | cardinalis (dark calyx) (LM) |
| • gemella | • cardinalis (orange) |
| • heterotricha | cardinalis peloric mix |
| lutea | <i>cardinalis</i> (pink) <i>cardinalis</i> 'Innocent' |
| • ophiopogoides | |
| • spadiciformis (L,R) | • cardinalis 'Skydiver' (LM) |
| • subrhomboidea | cochlearis |
| tamiana USBRG98-080 (F,R,P) | concinna (F,P) |
| Ramonda (A,R) | conspicua (F,L) |
| • myconi | conspicua GRF 9942 cooperi (LM) |
| • blue | cooperi AC1522 (M) |
| dark purple | |
| lavender | curtiflora (T) curtiflora GRF9927 |
| pink | |
| • pink/white | defoliata douglasii GRF91188 (LM) |
| white | douglasii (Pod) |
| • serbica (purple) | douglasii 'Red' elatior AC1409 (M) |
| Raphiocarpus | elatior GRF9963 |
| • petelotii | eumorpha/Saltao (L) |
| Rhytidophyllum (G,H,S,T) | aumorpha (lavender) (FI) |
| • exsertum | eumorpha (lavender) (F,L) |
| tomentosum | eumorpha (pink) |
| Rufodorsia (F,LM) | eumorpha (white) |
| • minor | gerdtiana (was sp. "Gertiana") |
| | gigantifolia glazioviana (L) |
| | globulosa (was sp. "Globulosa") |
| | giodinisa (was sp. Giobulosa) |

guttata (LM) · sp. "Pancas" harleyi MP 482 mixed species hatschbachii (L) Smithiantha (D,F,M)hatschbachii 'Iporanga' (D,LM) canarina GRF9105 helioana (was sp. "Santa Teresa") laui hirsuta (L) multiflora iarae (F,L) multiflora GRF9121 • incarnata (S,MT) incarnata 'Maranhao' multiflora GRF9122 zebrina GRF9104 incarnata/Costa Rica (T) Streptocarpus insularis (LM) buchananii (B) leopoldii (F,L) candidus (F,R) leucotricha (F,L) compressus leucotricha (pink) confusus (U) leucotricha cv. 'Max Dekking' (M) · confusus ssp. confusus/Swaziland leucotricha "English" cooperi (U) lineata (LM) cyanandrus (F,P) lineata (highly spotted) • cyaneus (blue) (R) macrophylla cyaneus (lilac) macropoda (M) cyaneus ssp. cyaneus albus macrostachya (LM) daviesii (F,U) magnifica (pink) (LM) denticulatus (U) magnifica GRF91134 (red) dunnii (U) mauroana (D,M) eylesii (U) micans MP891 (LM) fanniniae (R) muscicola (dark) [was sp. "Rio das Pedras" fasciatus (R) fasciatus/Krokodilpoort, muscicola (light) [was sp. "Rio das Pedras" E. Transvaal (R) (light) floribundus (R) nordestina formosus (R) piresiana (L) formosus/E. Cape, Transkei polyantha (formerly sp. "Waechter") galpinii (L,M)gardenii (F,L) pusilla (F,P) glandulosissimus pusilla 'Itaoca' (F,P) goetzei (U) pusilla 'White Sprite' (F,P) grandis (U) reitzii (M) grandis (blue form) reitzii 'New Zealand' grandis ssp. grandis haygarthii (F,U) richii haygarthii JT04-03D/Transkei Coast (F,U) richii 'Robson Lopes' sceptrum (T) sceptrum AC2406 (T) haygarthii JT04-051/Inchanga (U) schiffneri (red leaf) haygarthii/Mkambati, Transkei (U) sellovii (MT) johannis (F,R) sellovii GRF9919 johannis/Komga, E. Cape johannis/Weza, S. Natal (R) sellovii 'Purple Rain' speciosa 'Buzios' sp. aff. *johannis* (F,R) speciosa 'Carangola' speciosa 'Cardoso Moreira' (pink) (LM) kentaniensis kentaniensis (N. Kei River) speciosa 'Pedra Lisa' kirkii (F,L) speciosa 'Regina Domingos Martins' kunhardtii speciosa 'Sao Conrado' lilliputana • meyeri/SE Transvaal (R) sulcata (LM) tubiflora (S,MT) meyeri/NE Cape Province tuberosa modestus (R) warmingii (T) modestus/Magwa Falls, Transkei (R) warmingii GKF9921 molweniensis sp. aff. aggregata (yellow) (M) muscosus (L) sp. aff. aggregata/Ilhabella MP631 sp. aff. reitzii 'Black Hill' (M) nobilis (M) pallidiflorus (F,LM) sp. aff. reitzii GRF9914 (magenta) parviflorus (R) sp. aff. warmingii 'Esmeril' (L) parviflorus (mauve) sp. "Ibitioca" (LM) • parviflorus (white) (R)

parviflorus (white/mauve) parviflorus ssp. parviflorus/Limpopo Province pentherianus (F,L) pentherianus JT04-02c polyanthus subsp. comptonii polyanthus subsp. polyanthus polyanthus subsp. polyanthus/lg fl *polyanthus* subsp. *polyanthus*/Valley of 1000 Hills, Natal porphyrostachys (U) primulifolius (F,R) primulifolius/Valley of 1000 Hills prolixus (F,U) pumilus (F,P) pusillus rexii (white) rexii (pale blue/long corolla)

saxorum (B) sp. nov./Shiyalongubo Dam thompsonii (B,L) trabeculatus (U) vandeleurii (U) variabilis (F.R) wendlandii (U) wilmsii (U) wilmsii/Long Tom Pass (U) Mixed species

Titanotrichum

oldhamii (propagules) Trichantha (see Columnea) Vanhouttea (S,T)

- brueggeri fruticulosa (MT)
- pendula
- Limited quantities available. Packet may contain small amount of seed

Seed Fund Key

(A) Alpine or cool greenhouse

rexii (white/blue mix) rimicola (F,P)

roseoalbus (F,R)

saundersii (Ú)

- (AN) Annual, dies after flowering
- (B) Suitable for hanging basket
- (D) Has dormant period, forming tubers or rhizomes
- (F) Blooms readily in fluorescent light
- (G) Recommended for greenhouses; requires space
- (H) Requires humidity and warmth
- (L)Low growing; not more than 12"

- (LM) Low to medium height
- Medium height; 1 to 2 feet
- (MT) Medium to tall
- (P) Petite or miniature; under 6"
- (R) Rosette in form
- (S) Requires sun to bloom
- (T) Tall plants; generally over 3 feet
- (U) Unifoliate or single leaf
- (V) Leaves may be variegated

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Growing Episcias in Singapore

Francis Sua (Sua Keng Hui) ~ Singapore ~ linunz@yahoo.com

I LIVE IN SINGAPORE, AN ISLAND STATE ABOUT 137 KILOMETRES (around 85 miles) north of the equator, with high humidity (80%) throughout the year and 2500 mm (about 100 inches) of rainfall, November and December being wettest. The temperature is between 26 and 32 degrees Celsius. Episcias, their gesneriad relatives, and begonias thrive under these conditions.

Space is tight. Over three quarters of Singaporeans live in high-rise apartments, including myself. My private corridor at the end of the flat doubles up as my "garden."

My growing area is around 9 square meters, which is about 100 square feet. And all my plants are grown in pots that are placed on vertical and horizontal shelves to fully utilize and maximize the available space.

As the photographs show, my Episcias intermingle with begonias and relatives of *Episcia* like *Alsobia, Kohleria, Sinningia, Eucodonia, Niphaea*, etc. I have a small collection of about 30 varieties of Episcias. My corridor faces the west and gets the afternoon sun, which can be intense. To reduce the intensity of the sunlight, I grow sun-loving Dendrobium orchids to shade my gesneriads. As a bonus, the orchids bloom constantly with long-lasting flowers throughout the year.

Episcia haikus

From cupreata, reptans Moss Agate, Kee Wee, Ember Lace, Cleopatra

– Bob Clark

Jungle moisture rises Rainbows crown day Nature sates desire

- Ginny Heatter



I much prefer to use the secateurs to snip off infected plant parts. My growing medium is composed of equal parts perlite, vermiculite and imported potting mix. I water every other day with a dilute fertilizer mix. I like to alternate with low levels of fish emulsion, seaweed extract or water-soluble inorganic fertilizer each time I water thus abiding the principle of little but often. I also apply slow-release fertilizer once every two to three months. Insecticide and pesticide applications are minimal and only used when absolutely necessary due to close proximity to my living area. In my case, I much prefer to use the secateurs to snip off infected plant parts.

Even though the conditions in Singapore are favorable for Episcia growing, some varieties like *Episcia lilacina* 'Panama White' and some of the green-leaved varieties hybridized by Jim Bodnar can be a challenge.

To sum up, my little corridor garden brings joy to my life and I hope this article and the pictures bring inspiration to those wanting to start a corridor garden of their own or a growing space

in a small apartment. I always look forward to seeing my "friends" at home even when I am overseas.

In the soft green leaves
The colors begin to change
The flower is red

– Paul Susi

Bright bold blooms red
orange
Quick runners all round
then down
Two tone leaves or not

- Amy Larsen

Glowing tropical beauty Cascading freely Colors and textures abound.

- Thad Scaggs

Flame violets throw stolons Forest floor jewels Silver, green, brown, and orange.

- Bob Clark

Metallic jungle shimmer Obscured in shadow Creeping. Restless. Seeking love.

- Dariane Joshlin





Observations of a Back-Door Naturalist—Regarding Drymonia ovatifolia, formerly known as Nautilocalyx dressleri

Jonathan Ertelt ~ Nashville, TN, USA ~ <jonathan.ertelt@vanderbilt.edu>

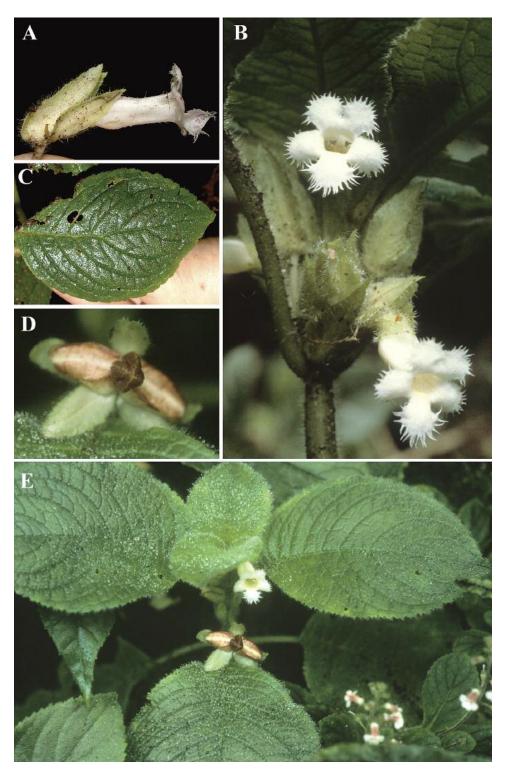


There's always an excuse for learning more, looking up additional information. SOMETIMES THE SIGNIFICANCE OF SOMETHING you see doesn't really register at the time. But that moment in time wherein you saw a particular item may revisit you later on. If you're paying attention it will, at the very least, remind you of the value of observations. If you're lucky and you were in a good space when the initial observations were made, the reminder will take you on an enjoyable ride through memories, maybe even temporarily transporting you back to some exotic time and place.

This happened recently as I was reading Botanical Review No. 41 (Stewart 2013) in Gesneriads. In this article I read about several plants that had been shifted from one genus to another (Clark et al. 2012). These name changes were based on more complete information about the species, in this case involving phylogenetic analyses. Having just been involved in a discussion on this topic I had to smile as I thought about the relative insignificance the change I noted would have for growers. As more is learned about various organisms and how they're related, much of it these days on a genetic or molecular level, these organisms – and in this case these plants – may get shifted, not very often from one family to another but certainly in some cases from one genus to another. Sometimes these changes do make sense when one looks at the morphological similarities, maybe (helping to look?) looking at the plants just a bit differently. Other times these changes can leave one shaking one's head and wondering when another change will shift them back. Especially when name changes affect plants that are popularly grown among hobbyists, the resulting clamor of discontent can be significant.

The plant in question pertains to *Nautilocalyx* and *Drymonia*, two genera that are not commonly grown, although both have their fan base. Though both genera include smaller herbaceous species, *Drymonia* species tend toward either rambling vines or more upright shrubby growers. In general they are not windowsill plants, and require more space than many in this family. Of the two, *Nautilocalyx* is the genus more often seen in horticultural collections. Some of the larger growing species of *Nautilocalyx* can be controlled with pruning, and several of the smaller growers have attractive patterning on the leaves. So even though they don't necessarily bloom often or with showy flowers, and are often a little harder to come by, they can be found in collections of growers, especially those enthralled with the family as a whole as well as those who work more with terraria.

Photo legend: Figure 1. Images of *Drymonia ovatifolia*. **A.** Lateral view of flower. **B.** Front view of flowers. **C.** Upper surface of leaf showing ovate shape. **D.** Fleshy display capsule. **E.** Habit showing mature fruit and flower. Images A & C from Alejandro Zuluaga during a 2013 expedition to Panama, Bocas Del Toro; image B from field collection James Folsom 8609 from Panama, El Copé; images D & E from Jonathan Ertelt of cultivated collection from Cheekwood.



The genus *Drymonia* is seen a bit less commonly than *Nautilocalyx*. Several of the most attractive plants can be impressively difficult to grow, and the majority that may grow a bit more easily are either large wandering vines (lianas in their native tropical rain forest habitat) or else shrubs potentially growing to a meter or more in height. These plants can also be pruned to keep them smaller, but generally with a bit less aesthetic success if the size is severely restricted. As a result, if they are in a collection, the grower will tend to have at least a large dedicated plant area if not a full sunroom or greenhouse.

The species under discussion here was originally described as *Nautilocalyx dressleri* (Wiehler 1977) and recently transferred to *Drymonia* (Clark et al. 2012). Wiehler's original description (Wiehler 1977) described it as endemic to Panama and only known from the cloud forests in the Provinces of Coclé and Veraguas. More recent research by Skog and Barrie for the Gesneriacaeae treatment for Flora Mesoamericana (in prep) has documented populations in four provinces of Panama and two provinces of Costa Rica. Still it is represented by 30+ museum collections, and so as far as I know is not in cultivation anywhere at this time. But at one time it was. I happened to be in the right place at the right time, and was the grower. That place is where I was taken back to as I read Botanical Review No. 41 (Stewart 2013).

In the late 1970s and early '80s the institution for which I was working (Cheekwood) was receiving a significant amount of collected material from a supporting colleague, James (Jim) Folsom, Ph.D., who was documenting plants in the various ecosystems of Panama. Now director of The Huntington Botanical Gardens in San Marino, California, Dr. Folsom was at that time working with the Missouri Botanical Garden on its large Flora of Panama project, traversing the country making collections, discovering additional new species, and clarifying existing information in the Gesneriaceae as well as other families. At that time the political relationship between Panama and the United States was such that a selection of these plants, typically with no soil, few roots and little foliage, occasionally came to us in mailing tubes or small boxes through the regular mail.

One of the plants received from Dr. Folsom had only recently been collected for the first time and identified as a new species. Named for another scientist doing a lot of research in Panama at the time, the piece that we received was described as Nautilocalyx dressleri by Hans Wiehler (1977). In the tropical growing house on the mist bench it rooted and sprouted new leaves, nicely rounded and covered with soft trichomes. Once it had attained some size and was growing well it was planted into the new greenhouse at Cheekwood. This greenhouse had been built, in part, to more successfully house and display the many interesting plants we were receiving from Panama, especially those from upper elevation rain forests, or cloud forests. There were many plants that we were growing well in this simulation that were virtually unknown in cultivation, members of the Gesneriad family as well as orchids, bromeliads and aroids. In the early 1980's doing large-scale ecosystem simulations was still fairly new as well. Cheekwood's presentation was not as large as those of some of the major botanical gardens. Still it was effective. Numerous plants arched out or hung down from branches overhead. Tall tree ferns to formed a light canopy. Many other plants either grew up or upon over a half dozen tree trunks or thrived in the ground. Overall it was a very impressive presentation.

Drymonia ovatifolia (known at the time as Nautilocalyx dressleri) responded to this effectiveness by flowering and even setting the occasional fruit. It was this fruiting that came forward in my head as the memories of this place flowed through. At that time I was just starting to grow in my understanding of some of the complexities of the Gesneriad family. The display fruit that I saw on Drymonia ovatifolia (= Nautilocaylx dressleri) I had seen before – the display fruit of Drymonia serrulata was similar only much more showy. What I didn't realize was that while the display fruit was the standard

Display Fruit

Display fruits, of the sort found in Drymonia ovatifolia and some other gesneriads, are a relative rarity in the plant kingdom. I am aware of only one other family and genus with a similar display fruit, the genus Hedychium, family Zingiberaceae. Commonly known as "hardy ginger lily," there are at least a couple of species of Hedychium that have impressively colored endocarps, revealed as the fruit opens and reflexes back. A mature fruit displays a mass of seeds wrapped with colorful arils, undoubtedly to help with distribution.

Within the classification of fruit types, the display fruit straddles several defining characters, making for a good extra credit question for my final botany lab quiz. The display fruit has some characteristics of a dry fruit (a capsule, splitting open at maturity) and other characteristics of a berry (fleshy rather than dry, and multi-seeded). Yet the outer skin (exocarp) of a berry does not split open at maturity. So is this fruit a berry or dry capsule? Tell me which type of fruit it is and explain your reasoning.

It should be noted of course that the display fruit is neither a modified basic capsule nor basic berry. To present a question of this sort is a wonderful way to allow the students to show me what they do know about fruit types and how they are classified – a fun exploration for writer and reader alike.

—J. Е.

fruit type for species of *Drymonia* as well as for several other genera in the tribe Episcieae, it was not supposed to exist in *Nautilocalyx*. Anyway, if I had known then that the standard fruit for *Nautilocalyx* was a bivalved semi-fleshy to dry capsule and not a fleshy display fruit, I might have called into question some 25 years ago the taxonomic understanding of this species, or at least looked at it much more closely. As it was, I just documented the flowering and fruiting on film, which was good fortune since apparently the fruit description has never been adequately studied. Wiehler's original description (Wiehler 1977) of the species was probably based on an immature fruit that he described as, "... a bivalved, oblong capsule ..." In the treatment of the *Flora of Panama* (Skog 1979) the fruit was described as, "Mature capsule not seen." Immature bivalved capsules and display capsules are very similar and one needs to see the mature fruit. What no one had known and what I had documented with images was the presence of display capsules. Thus, this rare and poorly documented species would have easily been classified in *Drymonia* by earlier taxonomists had they had access to my observational data and/or images.

Recent research based on a molecular phylogeny (Clark et al. 2006) strongly supported the placement of *Nautilocalyx dressleri* as a member of *Drymonia*. Based on these results, just over 25 years after its original description, the species originally named *Nautilocalyx dressleri* is now known as *Drymonia ovatifolia*. (There already being a species named *Drymonia dressleri*, another specific epithet had to be assigned.) This new combination in *Drymonia* was published by John L. Clark (Clark et al. 2012) and was based on phylogenetic analyses. As already suggested, had Wiehler (1977) or Skog

(1979) had access to my images of the fruit then surely they would have accurately placed it in *Drymonia*. Instead, the species was erroneously placed in *Nautilocalyx* where it remained for more than two decades.

Accurate observations can make so much difference, especially when combined with a good understanding of the knowledge base of the plants involved. There's always an excuse for learning more, looking up additional information. But one has to know that it's a good thing to do, and that takes both understanding and discipline, neither of which comes automatically or overnight.

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Sinningia 'Paper Moon' grown by Ben Paternoster. Runner up to Best in Show, Long Island Gesneriad Society Annual Show, April 2013. Photo: Paul Susi



Sinningia bullata grown by Ben Paternoster. Best in Show, Long Island Gesneriad Society Annual Show, April 2013. Photo: Paul Susi

Growing Episcias for Maximum Blooming

Andrew Norris ~ Baltimore, MD, USA ~ <blondeboi.an@gmail.com>



Lighting and temperature are, to me, the two things that are closely related and probably the most important factor in successful growing.

I AM NO EPISCIA EXPERT. IN FACT, I ONLY STARTED seriously trying to grow them in May of 2012. What I can share is how I grow them and what they seem to like in my growing situation. The *Episcia* 'Show Time' that I exhibited in our September regional show was a mere stolon that I had received a few months before from a friend's plant at my violet club show. Evidently, the Episcias are fond of my methods and what I have to say will bring you great success with your Episcias.

Lighting and temperature are, to me, the two things that are closely related and probably the most important factors in successful growing. My plants are grown about 6-8" below one T8 40 watt 3000K fluorescent bulb and one 40 watt T12 6500K bulb. My bulbs are a few years old and I have found that T8s are too intense for my plants and are better suited to the less light hungry plant's needs, after a year or more of burn in time. (I primarily grew African violets before our regional show.) In my experience, two 6200K bulbs are most effective.

"K", or Kelvin, is the standard unit of measurement for temperature and often used in the measure of the color temperature of light sources. For light bulbs, the higher the K rating, the more blue rays are emitted; the lower the K rating, the more red. 6,500K is the closest color range to sunlight, encompassing the colors in the proportions given off by the sun at the equator at noon. It is thought that red spectrums help with flowering and blue/green spectrums are best for foliage. Growers often strive to mimic the daylight spectrum by using one cool and one warm white bulb or by using the 6500K bulbs. I still have some 3000K bulbs in use, and don't plan to replace them until they are no longer adequate. My lights run 9-12 hours per day.

I grow my Episcias on the top shelf of my light stands. This is the warmest location, benefitting from the heat rising from the ballast below the shelf as well as the lights above. Temperatures range from about 76°-78°F, when the lights are running, to 65°F at the lowest when the bulbs are off. I run my lights at night to keep costs down and to have cooler daytime temperatures in the summer heat and warmer nighttime temperatures during winter's frosty nights. (This also helps me win the battle with powdery mildew, during mildew seasons.) Episcias like warm temperatures in general, but don't resent the low 60°s F, at night.

My plants also benefit from added humidity. An ultrasonic humidifier runs on low all year round. I don't measure the humidity, but with the humidifier and more than 300 plants, I have no static electricity build-up in my one bedroom apartment!

After light and temperature, the next most important item is the soil mix. I have struggled with my wicking mix for the four years I have been growing violets and other gesneriads. One sneaky problem for me is pH. I've found it hard to measure, hard to understand, and hard to evaluate its importance. Many gesneriads grow on limestone, but





still want a slightly acidic pH, while others seem to require a more alkaline growing substrate and need the addition of lime. I am currently using a simple probe from a Lowes Home Improvement Store to measure pH.

My basic mix is a base of a 10 quart bag of Burpee Eco-friendly Seed Starting Mix. To this coir-based product, I add 1 1/3 cup of Epsoma HollyTone and about 60% 1/4"-1/2" perlite. HollyTone lowers the pH and provides a biologically active mix. I try every plant in the mix, only adding a pinch of lime for Gesnerias and Chinese terrestrials, so far with great success. Since switching to this formulation, my violets have been superior and my other plants are better than ever before. It has been about a year since the switch and other than finding a less visible alternative to perlite, I am very pleased with my results. This mix tests to a very low pH of 5.5, but with my water's pH of 7.0 and using Miracid as a fertilizer, the mix stabilizes quickly to around 7.0 pH in a short time.

Water and fertilizer are next on the list. Once plants are established, watering in my collection is by wick. I collect my water from a mountain spring. The pH is 7.0. I fertilize with 1/16th a teaspoon of Miracid per gallon for every watering. (The azalea, camelia, rhododendron formulation by MiracleGrow is equivalent.) On occasion, I also add a few drops of SuperThrive. I wick on individual deli containers and wait until a newly potted plant needs its reservoir refilled before watering with this fertilizer mixture.

Finally is the artistry of show plants that requires diligent grooming, potting, and shaping a specimen that is not just well grown, but worthy of display.

I have found that many varieties slow or cease stolon production at flowering size so new plants are best started from non-flowering stolons in a 3" or 4" pot. They will quickly move up to a bigger pot, often in a few weeks or month. While the stolon grows, I remove all marred, dying, and unattractive leaves and stolons. I continue to remove stolons until the main plant is well established. At this time I allow up to three stolons to grow and establish a crown and remove any leaves that crowd or block light from the stolons. I place the stolons evenly inside the pot, rooting them in place and leaving them attached to the mother plant.

When there is no longer room to place the stolons or they are crowded, it is time to pot up to a 5" or 6" pan pot, at which time flowering should have begun. I continue to pinch off stolons until the pot is full of large, robust plants. I then allow a few to trail over until my sense of aesthetics is achieved. I continue to remove overlapping leaves and potting up to accommodate the larger crowns, eventually potting the plant into an 8"-10" pot. A maximum of five stolons will provide a full, uncrowded pot. One or two stolons from each established crown can trail over the side of the pot and gain some size. Too many stolons allowed to trail or root rob the plant of energy for flowering and may be detracting to the judges. Remove spent flowers, which are short-lived and can get messy, and leaves every few days.

I hope you find my methods helpful, and I hope to see some bloom-covered Episcias gracing our future show tables.



In Memoriam

Warren Weiner, long-time member and gesneriad grower, passed away on May 25, 2012.

Donna Kirkland of Glendale California, long-time grower of Saintpaulias and Streptocarpus, passed away August 9, 2012.

Munnie Skog, long-time member and mother of Dr. Larry Skog, passed away on January 1, 2013.

Kay Rotando, a long-time active member of the Long Island Gesneriad Society, passed away March 27, 2013.

Gesneriads Shine at the Philadelphia Flower Show

Mary S. Schaeffer



The decisions were tough; there were some fabulous plants entered.

BRILLIANT! WAS THE THEME OF THE 2013 PHILA-DELPHIA Flower Show. Six members of the Liberty Bell Chapter (LB) of The Gesneriad Society made sure the public saw some of the best examples of the family. With plants ranging from the tiny *Sinningia* 'Mighty Mouse' to a phenomenal sprawling flowering *Nematanthus* 'Othello,' visitors to the spectacle were treated to a "show fit for a king, a queen and everyone in between."

The official Pennsylvania Horticultural Society tally shows that the LB Gesneriad Society accrued more points for winning entries than any other organization except the Philadelphia Cactus & Succulent Society. And one member of LB is also a member of the Cactus group and accrues his points to that group instead of LB. If he had done the reverse, LB would have squeaked into the lead.

The show, which runs for more than a week, has three separate horticulture shows, with judging for each show. Some of the plants are the same, but some are removed and others entered depending on the performance of the individual plants, etc. The LB chapter awards special rosettes (two flowering and two foliage) for each of the three horticulture events.

The judging for those ribbons is done by Gesneriad Society judges. It is a real challenge to find all the gesneriads for not all are

entered in the gesneriad class. For example, there is a separate class for *Sinningia leucotricha*, for plants grown for foliage in different size pots, etc. So the judges for the special rosettes have to look through the entire show ferreting out all possible candidates for the rosettes. The accompanying chart shows the winners of the rosettes.

The decisions were tough; there were some fabulous plants entered. Some notable entries included a *Drymonia decora* grown by Charlene Marietti, which also won the 2nd best plant in show for the whole show on Tuesday, a *Nematanthus pyconophyllus* grown by Lynn Cook and Troy Ray grown in a piece of a tree stump, and the afore-mentioned



Overview of gesneriad class. Photo: Mary Schaeffer



Drymonia decora, grown by Charlene Marietti. Photo: Mary Schaeffer



Drymonia decora, flower closeup, grown by Charlene Marietti. Photo: Karyn Cichocki



Nematanthus pycnophyllus 'Rio das Pedras' grown by Lynn Cook and Troy Ray. Photo: Karyn Cichocki

Nematanthus 'Othello' also grown by Lynn and Troy. The Nematanthus pycnophyllus was not only in flower but also had huge orange berries. Numerous specimens of Sinningia leucotricha (although not as many as in prior years), as well as plants of the genera Streptocarpus, Aeschynanthus, Codonanthe, and others, all delighted gesneriad lovers.

It was also nice to see gesneriads get some recognition when *Sinningia* 'Prudence Risley' and *Streptocarpus* 'Jealous Heart' were chosen as challenge plants.

Congratulations to Liberty Bell Chapter members Lynn Cook, Troy Ray, Brandon Huber, Barry Bush, Russ Strover, Stephen Maciejewski, and Charlene Marietti for their spectacular entries and awards in the show.



Nematanthus 'Othello' grown by Lynn Cook and Troy Ray. Photo: Karyn Cichocki

Winners of The Gesneriad Society Liberty Bell Chapter Rosettes

First Friday - Flowering

Dymonia decora, grown by Charlene Marietti
Nematanthus pycnophyllus, grown by Lynn Cook and Troy Ray

First Friday - Foliage

Sinningia bulbosa, grown by Lynn Cook and Troy Ray Nautilocalyx pemphidius, grown by Lynn Cook and Troy Ray

Tuesday - Flowering

Sinningia leucotricha, grown by Diana S. Wister, Garden Club of Wilmington Nematanthus 'Othello', grown by Lynn Cook and Troy Ray

Tuesday - Foliage

Primulina dryas 'Hisako', grown by Brandon M. Huber Sinningia bulbosa, grown by Lynn Cook and Troy Ray

Second Friday - Flowering

Drymonia decora, grown by Charlene Marietti Sinningia leucotricha, grown by Lynn Cook and Troy Ray

Second Friday - Foliage

Nematanthus 'Othello', grown by Brandon Huber Aeschynanthus longicalyx, grown by Lynn Cook and Troy Ray

Berry of *Nematanthus pycnophyllus* 'Rio das Pedras' grown by Lynn Cook and Troy Ray. Photo: Karyn Cichocki



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Third Quarter 2013 25

Recent Gesneriad Registrations

Judy Becker, Registrar ~ Salisbury, CT, USA ~ <hybridregistrar@gesneriadsociety.org>

| 121192 | Streptocarpus 'Priceless' | S. 'Burgundy Ice' × unknown | Janet Price |
|--------|---------------------------------|-------------------------------------------------|--------------|
| 121193 | Streptocarpus 'Amelia' | S. 'Double Delight' × S. 'Franken Ziva' | Kim Williams |
| 121194 | Streptocarpus 'Aries' | S. 'Penelope' × S. 'Inky Fingers' | Kim Williams |
| 121195 | Streptocarpus 'Burgundy Lace' | S. unnamed hybrid × S. 'Ronduls Kristin' | Kim Williams |
| 121196 | Streptocarpus 'Lavender Daze' | S. 'Double Delight' × S. 'Franken Ziva' | Kim Williams |
| 121197 | Streptocarpus 'Little Lottie' | S. 'Summer Skies' × S. 'Ronduls Brigette' | Kim Williams |
| 121198 | Streptocarpus 'Moon River' | S. 'Summer Skies' × S. 'Ronduls Brigette' | Kim Williams |
| 121199 | Streptocarpus 'Pink Champagne' | S. 'Double Delight' × S. 'Franken Ziva' | Kim Williams |
| 121200 | Streptocarpus 'Pink Ink' | S. 'Penelope' × S. 'Inky Fingers' | Kim Williams |
| 121201 | Streptocarpus 'Plum Lady' | S. unnamed hybrid × S. 'Ronduls Kristin' | Kim Williams |
| 121202 | Streptocarpus 'Purple Lace' | S. unnamed hybrid × S. 'Ronduls Kristin' | Kim Williams |
| 121203 | Streptocarpus 'Raspberry Ice' | S. 'Double Delight' × S. 'Franken Ziva' | Kim Williams |
| 121204 | Streptocarpus 'Romance' | S. 'Double Delight' × S. 'Franken Ziva' | Kim Williams |
| 121205 | Streptocarpus 'Southern Beauty' | S. 'Penelope' × S. 'Inky Fingers' | Kim Williams |
| 121206 | Streptocarpus 'Sugar Candy' | S. 'Double Delight' × S. 'Franken Ziva' | Kim Williams |
| 131207 | Streptocarpus 'Franken Dotty' | S. 'Franken White Wings' × S. 'Franken | |
| | | Mulberry Lady' selfed, seedling #13 | Frank Davies |
| 131208 | Streptocarpus 'Franken Lyndee' | S. 'Katie' × S. 'Franken Mulberry Lady' selfed, | |
| | | seedling #2 | Frank Davies |
| 131209 | Streptocarpus 'Franken Mary Jo' | S. 'Franken Lilac Lace' × S. Red seedling #6 | Frank Davies |
| 131210 | Streptocarpus 'Franken Skye' | S. 'Annabell' × S. 'Franken Mulberry Lady' | |
| | | selfed, seedling #8 | Frank Davies |
| 131211 | Streptocarpus 'Franken Ziva' | S. 'Franken Lilac Lace' × S. Red seedling #6 | Frank Davies |
| | | | |



Streptocarpus 'Amelia'

Streptocarpus 'Priceless', 2012, IR121192, Janet Price, UK. ('Burgundy Ice' × unknown). Cross made 2009, first flowered 2010. Fertile but reproducible only vegetatively. Robust rosette. Leaves dark green, 20 cm long × 13 cm wide, ovate with crenate margin and acute tip. Peduncle 20 cm tall with up to 10 flowers. Corolla salverform, 6 cm long × 7 cm wide, bright white with dark purple veins extending from throat onto lower lobes, only one purple vein on each of upper two lobes. Differs from other varieties as it has long erect stems and is very floriferous.

Streptocarpus 'Amelia', 2012, IR121193, Kim Williams, UK. (S. 'Double Delight' × S. 'Franken Ziva'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 9 in. long × 4 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 9 in. tall with 4 flowers. Corolla salverform, 2.5 in. long × 2.5 in. wide, white background and throat, all segments heavily veined pink, throat white.







Streptocarpus 'Burgundy Lace'

Streptocarpus 'Aries', 2012, IR121194, Kim Williams, UK. (*S.* 'Penelope' × *S.* 'Inky Fingers'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 8 in. long × 4 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 9.5 in. tall with up to 6 flowers. Corolla salverform, 1.5 in. long × 1.5 in. wide, pinkish purple with white lines coming from the white throat onto all lobes.

Streptocarpus 'Burgundy Lace', 2012, IR121195, Kim Williams, UK. (*S.* unnamed hybrid × *S.* 'Ronduls Kristin'). Cross made and planted 2011, first flowered 2012.



Streptocarpus 'Lavender Daze'

Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 8 in. long \times 3.5 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 7 in. tall with up to 5 flowers. Corolla salverform, 2 in. long \times 2 in. wide, white background with heavy burgundy lacing, darkening with age, a dark burgundy "necklace" on the lower lobes.

Streptocarpus 'Lavender Daze', 2012, IR121196 Kim Williams, UK. (S. 'Double Delight' × S. 'Franken Ziva'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 9 in. long × 5 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 10 in. tall, with 5 flowers. Corolla salverform, 2.5 in. long × 2.5 in. wide, white background with bluepurple veining on all lobes.

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Streptocarpus 'Little Lottie', 2012, IR121197, Kim Williams, UK. (S. 'Summer Skies' × S. 'Ronduls Brigette'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Small sized rosette. Leaves medium green, 8 in. long \times 2.5 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 7 in. tall with up to 6 flowers. Corolla salverform, 1.5 in. long \times 1.5 in. wide, purple with white suffusion in throat.



Streptocarpus 'Little Lottie'



Streptocarpus 'Moon River'

Streptocarpus 'Moon River', 2012, IR121198, Kim Williams, UK. (S. 'Summer Skies' × S. 'Ronduls Brigette'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Small sized rosette. Leaves medium green, 6 in. long \times 2.5 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx split, green. 7 in. peduncle with 2 flowers. Corolla salverform, 1.5 in. long × 1.5 in. wide, white with light purple-blue markings on the 3 lower lobes, 2 white lines in throat.

Streptocarpus 'Pink Champagne', 2012, IR121199, Kim Williams, UK. (S. 'Double Delight' × S. 'Franken Ziva'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 10 in. long × 4 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 9 in. tall with 2 flowers. Corolla salverform, 2.5 in. long × 2.5 in. wide, bright pink with darker veining over the whole flower.

Streptocarpus 'Pink Ink', 2012, IR121200, Kim Williams, UK. (S. 'Penelope' × S. 'Inky Fingers'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 8 in. long × 3 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 9 in. tall with 4 flowers. Corolla salverform, 2 in. long × 2.5 in. wide, light pink upper lobes, lower lobes darker pink with dark lines extending from throat, a pink version of 'Inky Fingers'.

Streptocarpus 'Plum Lady', 2012, IR121201, Kim Williams, UK. (*S.* unnamed hybrid × *S.* 'Ronduls Kristin'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 8 in. long × 3.5 in.



Streptocarpus 'Pink Ink'

wide, lanceolate, with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 7 in. tall with 4 flowers. Corolla salverform, 2 in. long \times 2 in. wide, pale purple becoming deeper with age, heavily veined and marked darker purple with intense markings near base of lower petals, white throat with purple veins.



Streptocarpus 'Pink Champagne'

Streptocarpus 'Purple Lace', 2012, IR121202, Kim Williams, UK. (S. unnamed hybrid × S. 'Ronduls Kristin'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 8 in. long \times 4 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 8 in. tall with 4 flowers. Corolla salverform, 2.25 in. long \times 2.25 in. wide, white background, with pale mauve veins and marking, intensifying with age to purple, dark purple picotee on all segments, distinctive v-shaped lighter areas from throat onto lower lobes.





Streptocarpus 'Purple Lace'

Streptocarpus 'Plum Lady'

Streptocarpus 'Raspberry Ice', 2012, IR121203, Kim Williams, UK. (S. 'Double Delight' × S. 'Franken Ziva'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 8 in. long × 3.5 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 7.5 in. tall with 3 flowers. Corolla salverform 2.5 in. long × 2.5 in. wide, white with raspberry spots and veins over whole flower, white throat with raspberry veins extending onto all lobes.

Streptocarpus 'Romance', 2012, IR121204, Kim Williams, UK. (S. 'Double Delight' \times S. 'Franken Ziva'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 6 in. long \times 3 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 6.5 in. tall with 2 flowers. Corolla salverform, 2 in. long \times 2.25 in. wide, pink with darker pink veins, white throat.

Streptocarpus 'Southern Charm', 2012, IR121205, Kim Williams, UK. (*S.* 'Penelope' × *S.* 'Inky Fingers'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 6.5 in. long × 2.5 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 10 in. tall with 8 flowers. Corolla salverform, 1.5 in. long × 1.25 in. wide, pink with darker veins, white markings from throat onto lower lobes.

Streptocarpus 'Sugar Candy', 2012, IR121206, Kim Williams, UK. (S. 'Double Delight' × S. 'Franken Ziva'). Cross made and planted 2011, first flowered 2012. Reproducible only vegetatively. Medium sized rosette. Leaves medium green, 9 in. long × 5 in. wide, lanceolate with serrate margin, acute tip and cuneate base. Calyx green, split. Peduncle 12 in. tall with up to 9 flowers. Corolla salverform, 2.5 in. long × 2.5 in. wide, pink fading to paler pink with age, darker pink veins on lower lobes.



Streptocarpus 'Raspberry Ice'



Streptocarpus 'Romance'



Streptocarpus 'Southern Charm'



Streptocarpus 'Sugar Candy'

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Streptocarpus 'Franken Dotty', 2013, IR131207, Frank Davies, UK. (S. 'Franken White Wings' × S. 'Franken Mulberry Lady' selfed, seedling #13). Cross made 2008, planted and first flowered 2009. Fertile but reproducible only vegetatively. Medium growing rosette. Leaves medium to light green, up to 10 in. long × 4 in. wide, oblong with serrate margin, acute tip and cordate base. Calyx green, split, 0.25 in. long. Peduncle 8 in. tall with 10 flowers. Corolla salverform, 1 in. long × 2.25 in. wide, white with brownish dots and splashes, dark veins in throat.

Streptocarpus 'Franken Lyndee', 2013, IR131208, Frank Davies, UK. (S. 'Katie' × S. 'Franken Mulberry Lady' selfed, seedling #2). Cross made 2008, planted and first flowered 2009. Fertile but reproducible only vegetatively. Rosette. Leaves dark green, to 9 in. long × 3 in. wide, oblong with crenate margin, acute tip and cuneate base. Calyx green, split, 0.25 in. long. Peduncle to 10 in. tall with 6 to 10 flowers. Corolla salverform, 1 in. long × 1.5 in. wide, outer surface white, 3 lower lobes claret red with dark veins, upper petals white, veined claret, darker at tips.

Streptocarpus 'Franken Mary Jo', 2013, IR131209, Frank Davies, UK. (S. 'Franken Lilac Lace' × S. Red seedling #6). Cross made 2008, planted and first flowered 2009. Fertile but reproducible only vegetatively. Medium growing rosette with strong flower stems. Leaves medium to dark green, to 10 in. long × 5 in. wide, oblong with crenate margin, acute tip and cuneate base. Calyx green, split, 0.25 in. long. Peduncle to 12 in. tall with 6 to 8 flowers. Corolla salverform, 1.5 in. long × 2 in. wide, pale salmon pink, deepening with age, yellow throat with dark veins.

Streptocarpus 'Franken Skye', 2013, IR131210, Frank Davies, UK. (S. Annabell' × S. 'Franken Mulberry Lady' selfed, seedling #8), Cross made 2008, planted and first flowered 2009. Fertile but reproducible only vegetatively. Medium growing rosette. Leaves light to dark green with age, to 8 in. long × 3 in. wide, oblong with crenate margin, acute tip and cordate base. Calyx green, split, 0.25 in. long. Peduncle 9 in. tall with 10 to 14 flowers. Corolla salverform, 1 in. long × 2.25 in. wide, outer tube white, face white, heavily overlaid blue-purple, almost solid on base of lower lobes, narrow white margin.

Streptocarpus 'Franken Ziva', 2013, IR131211, Frank Davies, UK. (S. 'Franken Lilac Lace' × S. Red seedling #6). Cross made 2008, planted and first flowered 2009. Fertile but reproducible only vegetatively. Medium growing rosette with strong flower stems. Leaves medium to dark green, to 10 in. long × 4 in. wide, elliptic with crenate margin, acute tip and cordate base. Calyx green, split, 0.25 in. long. Peduncle 10 in. tall with 8 to 10 flowers. Corolla salverform, 1.25 in. long × 1.25 in. wide, light red with stripes in yellow and white throat.

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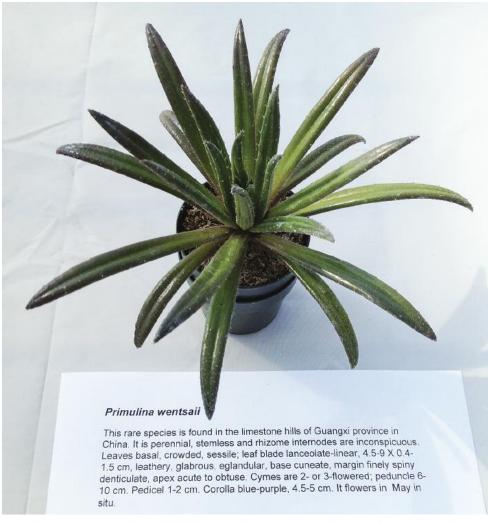
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Primulina wentsaii, grown by Bob Clark. Best in Show, Puget Sound Gesneriad Society Annual Show. March 2013. Photo: Peter Shalit

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Coming Events

Mary Schaeffer ~ Newark, DE, USA ~ <schaeffermary@yahoo.com>

July 2-6 – Toronto, Canada 57th Annual Gesneriad Society International Convention, Hyatt Regency Hotel, 370 King Street West,

King Street West, Toronto, Ontario, M5V 1J9. Flower Show and Plant Sales open to the public July 5 and 6. Additional information: www.torontogesneriadsociety.org or www.gesneriadsociety.org or call Doris Brownlie 905-270-6776.

July 20 – Denton, Texas First African Violet Society of Denton, Texas. Annual Summer Workshop, First Presbyterian Church- Irwin Hall, 1114 W. University Drive, Denton, Texas 76201. 9 a.m. - 3 p.m. Contact: Michi Harper 940-591-8369.

September 14 & 15 – Sacramento, California Delta Gesneriad & AVS Annual Judged Show and Sale, Sacramento Garden & Arts Center, 3330 McKinley Blvd., Sacramento, CA. Free parking; Free admission September 14 1 – 4 p.m.; September 15 11 a.m. – 3 p.m. Info: Lynn Lombard (530) 637–9000, lynn_lombard@att.net www.sacviolets.org.

September 21 – San Francisco, California San Francisco Gesneriad Society Judged Flower Show and Plant Sale, Golden Gate Park, San Francisco County Fair Building, 9th Avenue and Lincoln Way, San Francisco, CA 94122; 10 a.m. – 3 p.m. Additional Information: Paulo Castello da Costa sfgs2013@outlook.com; www.sfgesneriads.org.

September 21 & 22 – Nashville, Tennessee The Tennessee Gesneriad Society Flower Show and Sale, Cheekwood's Botanic Hall, 1200 Forrest Park Drive, Nashville, TN 37205. September 21 9:30 a.m. - 4:30 p.m.; September 22 11 a.m. - 4:30 p.m. Additional information: Carol Ann Bonner 615-293-5470 or cabonner@gmail.com

September 21 & 22 – Boylston, Massachusetts The Gesneriad Society and Buxton Branch, American Begonia Society Annual Combined Plant Societies' Judged Show and Sale, Tower Hill Botanic Garden, 11 French Drive, Boylston, MA, September 21 10 a.m. - 5 p.m. and September 22 10 a.m. - 4 p.m. Admission: \$12 adults, \$9 seniors and \$7 youths (6-18) Contact: 617-479-3680 or meribush@aol.com.

September 27 & 28 – Kansas City, Missouri Heart of America Chapter Flower Show and Sale, Loose Park Garden Center Building, Loose Park, 5200 Pennsylvania Avenue, Kansas City, MO. Phone for Building: 816-784-5300; September 27 Plant Sale only open to Public during judging 12 p.m. – 4 p.m., September 28 9 a.m. – 4 p.m. Flower Show and Plant Sale open to Public. Additional information: Susan Grose sagrose@gmail.com.

October 6 – Morristown, New Jersey Frelinghuysen Arboretum Gesneriad Society Annual Show & Plant Sale, Frelinghuysen Arboretum, 353 E Hanover Avenue, Morristown, NJ 07960; 11 a.m. -3 p.m. Additional Information: Karyn Cichocki 973-579-7914 or kdc05@ptd.net.

October 12 & 13 – Madison, Wisconsin The Wisconsin Council of African Violet Clubs Show and Sale, Olbrich Botanical Gardens, 3330 Atwood Avenue, Madison WI; October 12 12 p.m. - 5 p.m. and October 13 10 a.m. - 3 p.m. Free admission and parking.

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Colorful Smithiantha Forest in Taiwan

Vivian Liu (Ying Hua Liu) ~ Taipei, Taiwan ~ vivian3302@gmail.com

MY SMITHIANTHAS WERE IGNORED FOR ABOUT TWO YEARS AND seemed very unhappy with pale yellow foliage, short inflorescences, and few flowers. All these signs told me I should do something to get them back on track.

Since 3-inch pots were too small for most of my Smithianthas, I repotted them to 4-inch pots during the dormancy months (February to May in Taiwan). I settled all of the pots onto pot holders. This helps the plants avoid typhoon damage and allows me to monitor them for cutworms.

July to September is the main typhoon period in Taiwan. When the weather forecast predicts that a typhoon may attack Taipei, I move my Smithianthas indoors. Of course, I then need to move them back outside after the typhoon has passed through. Although my arms are strong, I felt they were crying after I heard the typhoon was on its way.

Cutworm is the main pest for my gesneriads that grow outside. They eat plants at night and can cause big losses in a short time. Just imagine a show quality plant that has lost almost all leaves and flowers in one night, then you may understand why an insect lover like me turns into a worm killer. When I find new cuts that are typical of the damage caused by the worm, I move the pot holder and check the bottom of the pots in order to hunt the cutworms, which are sensitive to light and hide in the shade.



Young Smithiantha plants and other gesneriads



All my Smithianthas grow outside at my office rooftop garden. I use sun shade net to protect my plants from sunburn during the summer months and take off the shade net around September. My Smithianthas receive the release-controlled fertilizer Nutricote 14-14-14 100 Type every three months. When the weather becomes pleasant for people (late September in Taiwan), Smithianthas also prosper. At that time, I start to feed them water-soluble fertilizer 20-20-20 or 10-30-20 every two to three weeks until they bloom. Another important tip for growing Smithianthas is to take off

those lower yellow leaves frequently as they will block the water when you water and obstruct air movement. I also found that removing those old leaves promotes new shoots, which sprout from the leaf axils.

My Smithianthas bloom from November to January with the peak blooming period around Christmas. In my view, those colorful flower spikes look like Christmas trees. Bees enjoy and fly around my Smithiantha forest every day and I wish I could spend all day watching bees and the Smithianthas, but my boss wouldn't be happy if I disappeared from the office all day long.

Compared with other rhizomatous gesneriads, Smithianthas need more space to grow and require more time from sprout to bloom. If you ask me are they worth to wait? Yes! You won't regret growing them for their dramatic foliage and beautiful flowers!



Next stage of growth. All photos by the author



WHERE THE SINNINGIAS ARE Part 2

Dave Zaitlin ~ Lexington, Kentucky, USA ~ <dzaitlin@gmail.com>

MY TRAVELS WITH MAURO RESUMED AFTER WE BID FAREWELL TO Idimá and the Pousada Bem Star and left Cardoso Moreira on the morning of November 30, 2011. It was day six in Brazil. Our travels that day took us back to the main road, BR101, as we headed northeast toward Jaguaré in the state of Espírito Santo. Cardoso Moreira straddles the Rio Muriaé, a tributary of the Rio Paraíba do Sul, which flows into the South Atlantic Ocean at São João da Barra east of Campos dos Goytacazes. There had been a lot of rain prior to and during my visit, and the Rio Muriaé was running very high. One month later, Mauro forwarded me photos from Idimá showing that half of Cardoso Moreira was partially underwater.

Soon after we crossed the border from Rio de Janeiro state into Espírito Santo Mauro's car—a Renault Scénic—started to act up. It was running very roughly with a noticeable lack of power, a good indication that it wasn't firing on all four cylinders. A fuel additive didn't solve the problem, so we kept going as best we could. Not long after we passed a famous rock formation known as the "Priest and the Nun," all traffic on BR101 came to an abrupt halt. We were directly behind a large bus, and had nearly five hours to wander around, talk to the bus passengers, etc.

It was late afternoon by the time we were able to resume our trip, and given that the car was still running poorly, it was obvious that we were not going to reach our planned destination that evening. We stayed the night in the small town of Fundão, which is about 50 km north of the city of Vitoria and 150 km from Jaguaré.

Above: The Rio Muriaé just outside Cardoso Moreira, one month before the great flood of 2012.

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After we returned to Jaguaré we were told that a local journalist had heard about the "famous botanists" and was eager to see the rare plants that grew so close to town.

Dave Zaitlin

We left Fundão the next morning for the two-hour drive to Jaguaré. On this leg of the trip we passed a large tissue culture facility that clonally propagated several commercial crops, one of which was the fast-growing, perfectly straight eucalyptus hybrid that is widely grown in Brazil and is used primarily for wood pulp and charcoal production. BR101 also passes through the Sooretama Biological Reserve, which is only about 45 km south of Jaguaré. This area of 24,000 hectares (about 60,000 acres) consists of protected natural forest and wetlands and is a mecca for birdwatchers. Reserves such as this are administered by IBAMA (Brazilian Institute of the Environment and Renewable Natural Resources) and require a permit for entry, so we did not stop.

In Jaguaré we met up with Mauro's friend, Robson Lopes, who teaches science at a local school. If you have grown the yellow-flowered form of *Sinningia richii*, which was introduced into cultivation in 2009, you may recognize his name as he discovered it and it is named after him. Robson, who is known to his friends as Robinho, had located a reputable garage where we could take the car for repairs, but first he guided us to Lixão where *S. richii* grows. We drove out of town through the countryside to a patch of natural forest where we encountered small plants of *S. richii* just inside the dense, wooded area, no more than a few meters from the road. The plants were scattered around the forest floor and some were even found growing on a decaying log. Robinho indicated that these plants had white flowers, although none were in bloom at the time.

The process of fixing the car consisted of conversation and waiting until after lunch. The problem was of an electrical nature and parts had to be ordered from Vitoria. Fortunately, Robinho's friend, Lucio Zani, drove a taxi and also liked plants. He agreed to



A shed corolla of *Sinningia aghensis* resting on a sprig of *Selaginella* at the base of the wet granite rock.



Sinningia aggregata growing with bromeliads on a rock above the beach at Indaiá, SP.

take us on a botanical excursion for 40 reis (about \$20), which seemed like a bargain to me. Lucio took us to a place called Jirau, where the forest was quite dense. There were open areas within the forest, and it was here that *Sinningia richii* grew in great profusion. There were so many plants that in some spots they were like a ground cover. Most were not in flower, but we managed to find several with buds and were able to confirm that the population had yellow flowers.

The next morning, Lucio drove us to the Cachoeira do Berreco waterfall. We walked a short distance to another habitat of the white-flowered form of *Sinningia richii*, some of which were in flower, although they were not nearly as numerous as were the yellow-flowered plants at Jirau. This particular habitat was different from the forest at Lixão. For one thing, it was very wet, due to water draining down from a granite slope. Also, *S. richii* grew here with *S. brasiliensis*, a widespread species that we would see again.

After we returned to Jaguaré we were told that a local journalist had heard about the "famous botanists" and was eager to see the rare plants that grew so close to town. We returned to Jirau with the lady, whose name is Patricia Uzelin, and her photographer. Although the journalist was wearing the most dainty, fashionable sandals imaginable and designer jeans, she seemed to enjoy the experience and appeared to be unaffected by the bugs, heat and humidity. Our expectations for coverage were low, so I was most surprised months later to find that she had published a long article in the local newspaper, *Tribuna do Cricaré*, with the headline "Jaguaré Researcher Discovers a New Begonia." There was even a photograph of Robinho, Mauro and myself, as well as a picture of *Sinningia richii* with the caption "The new species of begonia received the name of the discoverer: Robson Lopes." She obviously made a mistake in calling the plant a begonia, but in the article she did get the scientific name correct—*Sinningia richii* cv. 'Robson Lopes'. Robinho told me that her naming error was understandable, because he had also discovered a new species of begonia in the area that apparently will be published as *Begonia jaguarensis*.

Jaguaré was as far north as we went in Brazil. The next morning, December 3, we drove 175 km southwest to Santa Teresa. There are at least 25 villages, cities and other

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locations with this name in Brazil, but this Santa Teresa is in the mountains of Espírito Santo state (700 meters altitude), and was originally settled by Italian immigrants in 1875. It is a charming small town that is popular with tourists. We had come to see Mauro's friend and colleague Josi Rossini, who lives in the town and is very interested in Sinningias. Josi first took us to a *Sinningia aghensis* habitat, which was a very large and steep granite hill north of Santa Teresa on the road to Colatina, directly across from a stand of eucalyptus. Walking along the base of this hill in a drainage culvert to look for the plants, we saw, as with *S. bulbosa*, that *S. aghensis* was growing on the vertical face of the wet rock, sometimes with tubers clinging precariously to a small ledge or crack in the granite. Some of the plants were so high up that they could not be seen from ground level – only their shed corollas gave them away. Also growing on the rock face with *S. aghensis* were bromeliads, cacti, and *S. brasiliensis*, a few plants of which were in flower.

Our next stop was a habitat for *Sinningia speciosa* that Josi and Mauro had visited before. After a local farmer gave us permission to enter his land, we climbed straight up through a coffee plantation, which was on a terraced hill, and then walked along a ridge to reach the plants. We found them growing near the top of the hill, above a granite slope, under shrubs and large terrestrial bromeliads. The Sinningia tubers were embedded in soil beneath a cover of dried leaves and other plant debris. The plants were a form of *S. speciosa* with dark leaves and silver veins, similar to the familiar cultivar 'Regina'. None of the plants were flowering, although some of the larger ones had buds emerging. Spikemosses, ferns, and the almost-ubiquitous *S. brasiliensis* were also growing here.

After departing Santa Teresa, we drove 730 km (450 miles) to Resende in Rio de Janeiro state, going back over the Niteroi Bridge and through Rio on the main highway.



Robinho caught in the act of photographing his namesake, *Sinningia richii* cv. 'Robson Lopes' at Jirau.



Tree with epiphytes by the side of the road from Taubate to Ubatuba, SP. There is a large Nematanthus growing on this tree – see if you can spot its red flowers (there are at least three).

We stayed at the Cegil Hotel Boulevard, as we had on the outbound part of the journey a week before.

We left Resende on December 5 for the final leg of the trip. Our route took us 145 km on the main highway (Rodovia Presidente Dutra) into São Paulo state to Taubaté, where we exited and took a winding road 95 km southeast through the coastal hills to the town of Ubatuba. We stopped a couple of times, mainly to see several species of *Begonia* growing on the banks by the side of the road. One tree in particular that was heavily burdened with epiphytes supported a very large Nematanthus with a few red flowers. At Ubatuba, we followed the coastal road southwest, passing through the Caraguatatuba area. Stopping near a beach just outside São Sebastião, we found *Sinningia iarae* growing on the rocky hillside near the entrance to a small cave. Roadside embankments in this area also supported populations of *S. mauroana* and *S. schiffneri*. The final stop for Sinningias before we turned north towards Mogi das Cruzes was the beach at Indaiá, where *S. aggregata* grows on the rocks alongside bromeliads.

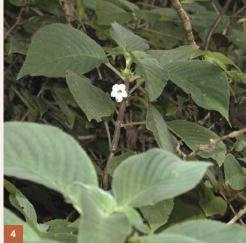
We arrived back at Mauro's sítio that afternoon, but the next day we took a short day trip to a hill known as Pedra do Garrafão. Much of this drive was over really execrable roads. Along the way we stopped at a meadow where *Sinningia elatior* was growing and flowering in the company of terrestrial orchids. Pedra do Garrafão is the type locality for *S. mauroana* and is where one of the first collections was made in 1987. We saw quite a few plants of this species on the short hike through the forest, although none were in flower. This area is also home to *Codonanthe gracilis* and the rare *Nematanthus teixeiranus*.

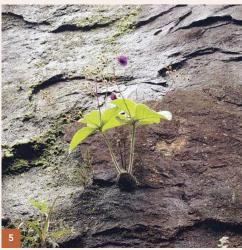
My final full day in Brazil was December 7, 2011. We drove north to see Mauro's friend, Harri Lorenzi, at the Instituto Plantarum in Nova Odessa, near Campinas. Harri











- The Priest and the Nun, a granite rock formation in Espírito Santo state. Can you guess who is who?
- One of the few plants of Sinningia richii cv. 'Robson Lopes' in bud that we found at Jirau.
- Plants of *Sinningia richii* growing in leaf litter in the forest at Lixão, near Jaguaré.
- 4 Sinningia schiffnerii in flower on an embankment by the side of the road near São Sebastião, SP.
- Sinningia aghensis growing on a vertical granite wall with the tuber fully exposed.











- 6 Several plants of *S. speciosa* growing in leaf litter at the habitat near Santa Teresa, ES. Note the flower buds on the large plant.
- Sinningia richii flowering in habitat near Cachoeira do Berreco, Espírito Santo. This is the white-flowered form known as cv. 'Jaguaré'.
- 8 Sinningia mauroana in the forest on the way up Pedra do Garrafão.
- A large plant of Sinningia araneosa, growing in the greenhouse at Instituto Plantarum, Nova Odessa, SP. This is the most 'araneose' ('full of cobwebs') plant of this species I have ever seen.
- 10 Mauro on the street in Santa Teresa, ES.
- Several plants of *Sinningia iarae* growing on a steep slope at the entrance to a small cave near São Sebastião in São Paulo state. The plant at the top of the picture is in flower.



has done an excellent job assembling a living collection of native Brazilian plants in his botanical garden. His main interest is palms, specifically native dwarf palm species, many of which are critically endangered in habitat due to agriculture. Sinningias were well represented, many of them had been originally collected by Mauro. We then accompanied Harri to an incredible commercial cactus and succulent nursery (Olsthoorn Cactus e Succulentas) where we were given free access to the property. After this, we ate lunch at a churrascaria, where grilled meat is the main attraction. Passadores (meat waiters) come to your table to offer assorted cuts of beef, pork, sausage, chicken, and even chicken hearts. The food was *fantastico*, and one price for all you can eat. It is not for vegetarians.

I left Brazil late the next night for the ten-hour flight back to the US, flying from São Paulo direct to Detroit. My trip to Brazil was an adventure in plant heaven. Two weeks was a few days too long for me as a first-timer, but Mauro provided me with a life-changing experience. He is a great host and and outstanding guide, showing me a side of Brazil that many native Brazilians never see. The countryside is beautiful, the people in the small towns were friendly and generally outgoing, and never once did I feel insecure. Brazil is a very special place to me, and I plan on travelling there as often as possible. Who knows? Maybe one day I will actually get a chance to visit Christ the Redeemer, Ipanema beach, and some of the other tourist attractions that Rio de Janeiro is internationally famous for!

Postscript

I have managed to keep in contact with many of the people I met on my first trip to Brazil, mostly by email and Facebook. I was recently in Brazil again, and Mauro, Bill Price and I spent four days hunting Sinningias with Idimá. Mauro is doing well, and he

Guans, Guardos, and Gesneriads

Margaret Waguespack, Harahan, Louisiana

DID YOU EVER watch someone replant a toadstool? This botanical "first" took place in Sooretama Forest Preserve, Brazil, with a baker's dozen bird-watchers, their leaders, and the local Guardo Florestal standing by.

Our guard and protector at the Forest Preserve came equipped with uniform, gun, and machete. Privately, I was sure that he was along to protect the forest from us. That miffed me a little. After all, we were hardly depredators. The tour guide had been emphatic. His admonition, "Don't touch anything!" was a bit melodramatic but effective.

It had taken our Guardo a little while to recover from the sight of some of the older lady birders. In Brazil, at least in the rural areas, women of a grandmotherly age do not don jeans and boots and roam the countryside. Once he got over his shock and subsequent amusement, he was kind and eager to be helpful.

The toadstool grew red and beautiful among the dead leaves along the forest trail. It would have been perfect for Alice's caterpillar. When he saw me on hands and knees admiring the rings on its stalk, Senhor Jóia pulled up the plant and handed to me. I sat there, holding it gingerly, aware of the horror on the face of our guide and half expecting my hand to fall off. Still a bit pale, Christoph held the plant while I photographed it. Then he dug a hole in the humus with a forefinger and carefully replanted my toadstool.

After that, I suppressed anything other than a casual interest in the flora, a deception that ended abruptly when we came upon scattered plants with a familiar look.

Sinningias!

Moments later, having made sure that Senhor Jóia was following the birders down the trail, I was flat on my stomach, photographing the plants.

recently put an addition onto his greenhouse. Idimá still lives in Cardoso Moreira, but now he has relocated his plants from the front porch to a small greenhouse that he built in the back yard. The Pousada Bem Star looks much the same as it did 16 months ago, but it now sports a sign proclaiming that it is a 100% family-friendly place that doesn't rent by the hour. Robson Lopes still teaches science and continues exploring for plants. But Lucio Zani no longer drives a taxi; from his Facebook page, I gather that he now works as a deckhand for a Brazilian oil company in the Cape Verde Islands (a country where Portuguese is spoken) off the west coast of Africa. Josi Rossini is planning on entering graduate school in early 2014 at a university in São Paulo state, where I hope she will work on evolution and population genetics of *Sinningia speciosa*.

The day after I returned home from Brazil, Mauro sent me an email message with an old article attached. Somehow he remembered that a woman named Margaret Waguespack, from Harahan, Louisiana, had visited the Sooretama Biological Reserve over 30 years ago on a birding trip. Margaret was also a gesneriad enthusiast (some of us remember her), and was a member of the society for many years (AGGS in those days). Admission to Sooretama is tightly controlled today, but it was much more accessible to the public in 1981. Margaret wrote a short article for *The Gloxinian* (Vol. 31, No. 3, May/June 1981) in which she described a Sinningia that she saw there. She assumed that she had found a wild form of *Sinningia speciosa*, but from her description of the plants (hairy, "fresh green" leaves; tubers with underground stolons; plants growing in patches in the forest in leaf litter over well-drained soil), she had almost certainly stumbled upon *Sinningia richii*. Margaret mentions that a few plants had small flower buds showing, but that "there was no hint of color – a disappointment", so we don't know whether she had rediscovered the plant we know today as cv. 'Robson Lopes.' Imagine how different the story of *S. richii* would have been had she visited Sooretama when the plants were in flower.

There were no blooms. Evidently the plants had but recently emerged from dormancy. Most were small with only two leaves and none had more than four. The foliage, which rested just atop the accumulation of fallen leaves, was softly hairy and a fresh green. The largest leaf was about 5 inches long. A few flower buds were barely showing. There was no hint of color — a disappointment.

I had, of course, never seen a plant of the original *Sinningia speciosa* species, but these Sinningias resembled some of the cultivated ones.

I was curious about the tuber. Glancing over my shoulder, I made sure that the group was intent upon something in a distant tree-top before poking a finger into the soft earth. Some four inches down I found a large tuber. To my surprise, I discovered underground stolons, as I think they are called, leading to smaller tubers, some as much as 15 inches away from the mother plant.

In the wild, does Sinningia speciosa produce these underground runners?

Any further ponderings and any ideas I might have had of pilfering were cut short by a sudden stab of pain. Two flies with nasty green bodies the size of bumblebees had attacked. I flailed and capered, and departed in a hurry.

Later on, I saw several other patches of Sinningia species. The area was about 50 ft. in elevation. The plants were growing mostly in dappled sunlight in an almost flat roadbed but the drainage appeared to be good. I was surprised to find the tuber so far down, but then the soil was very light and covered with leaves from over-hanging trees.

Sooretama is roughly a hundred miles north of Rio. I was beginning to understand why I had seen so few flowering gesneriads farther south.

That far "down under," it was still spring and their blooming season had not yet begun. After all, I reminded myself, these are actually Brazilian wild flowers!

☐

Reprinted from The Gloxinian, Vol. 31, No. 3, May/June 1981

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Changes to Hybrid Seed List 2Q13

Additions:

Aeschynanthus 'Thai Pink' x self
Columnea 'Fujiyama' x self
Columnea 'Malissa' x self
Sinningia 'Apricot Bouquet' hybrid
'Flamenco' x self
Sinningia 'Butterfly Kiss' x self
Sinningia 'Butterfly Kiss' x self
Sinningia 'Fuzzy Bear' x self
Sinningia 'Little Redhead' x self
Sinningia 'Scarlet O'Hara' x self
Sinningia speciosa 'Regina' hybrid
Smithiantha 'Big Dots Rule' x 'Vivian's
Gift'
Smithiantha 'Vivian's Gift' x self

Deletions:

Columnea hybrid (red)
Episcia 'Jim's Porcelain Doll' × self
Sinningia 'Pink Ice' × self
Smithiantha mixed hybrids
Streptocarpus 'Iced Amethyst Showoff' ×
'Bristol's Bluebird'
Streptocarpus ('Iced T' × 'Twilight') ×
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GESNERIAD PORTRAIT



Sinningia speciosa 'Carangola' is a wild form of S. speciosa introduced to cultivation by Mauro Peixoto. Its beauty and ease of cultivation rival that of the fancy S. speciosa hybrids ("Florist Gloxinias"). Grown and photographed by Bill Price

President's Message

Continued from page 1

When the decision was made to close the storage facility, there was a lot of discussion regarding the disposition of the needlepoints. Doris Brownlie of the Toronto Gesneriad Society offered to find a suitable home for them. Doris first contacted the Textile Museum of Canada in Toronto, which was not interested. But the Toronto Botanical Garden was. The Society donated the twelve needlepoints to the Garden February 12, 2013 and shipped them to Toronto at the end of the same month. They have been framed to protect them from the elements and the adverse effects of light and are now on display at the Toronto Botanical Garden in the Weston Family Library. It is our hope that these needlepoints will be appreciated by both growers and artists alike for the labor of love that went into designing and producing them.

The Society owes a debt of gratitude for everyone involved in this project: Sayeh Beheshti, Doris Brownlie, Paul Kroll, and Lee Stradley. I hope that you take time to visit the Toronto Botanical Garden and the Renée White needlepoints the next time you are in Toronto.

Paul Susi

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Gesneriad Flower Parts

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This overview applies to most, not all gesneriads.

GESNERIAD FLOWERS COME IN QUITE A VARIETY of shapes, patterns, colors, and sizes. Usually gesneriads have a zygomorphic (bilaterally symmetrical) corolla. Most have two upper lobes and three lower lobes that are fused to form a single tube called the **corolla**. Often the upper lobes are a different color and/or have different designs than the lower petals. The Gesneriad Society's form for International Registration of new hybrids has diagrams of the main gesneriad flower, calyx, and leaf shapes. (The form is available as a PDF at: http://www.gesneriadsociety.org/ir_ges/registration_form.pdf) The flower shapes include campanulate (bell-shaped); infundibuliform (funnel-shaped); salverform (tube with a flat expanded limb); ventricose (swelling in the middle); rotate (wheel-shaped); and hooded (upper two lobes are fused). There are also odd ones such as the bubble-shaped

flowers of *Pearcea hypocyrtiflora*. This overview applies to most, not all gesneriads.

The **calyx** surrounding the corolla usually consists of five greenish sepals at

the base area of a flower. Most common gesneriad calyx types are split, leafy, and fused (forms a tube). With most gesneriads the whole flower "drops" when the flower is spent. The calyx then becomes more visible. Among the gesneriads that produce nectar for pollinators, tiny nectaries are visible with a magnifying glass. (Risking allergic reactions, I've tasted a variety of gesneriad nectars and all are very sweet.)



Columnea 'Julia': hooded flower, bilobed stigma, colorful filaments

Diastema latiflorum 9669: splash-cup fruit with seeds and 3 black nectaries

The **peduncles**, which are commonly called "flower stems," usually emerge from leaf nodes. See Alan LaVergne's website for excellent definitions and diagrams concerning flowers at: http://www.burwur.net/sinns/3inflor.htm.

Gesneriad flowers have both male and female sexual parts. The male part of the flower consists of one or more **stamens**, which consist of filaments and the pollen-containing anthers. Filaments are thin and attach the paired anthers to the flower. When gesneriad flowers open, the pollen is mature enough for pollination. (I often tell people that the male part of Streptocarpus reminds me of a Thanksgiving turkey's wishbone.) When the filaments are pulled apart, the anthers separate and the air receives a puff of

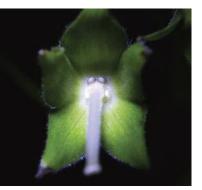
"zillions" of pollen grains. Many gesneriads can selfpollinate, but others, such as Streptocarpus, Petrocosmeas, and Primulinas, protect themselves by having closed anthers. Male anthers are often below the female pistil and prevent pollen falling onto the



Calyx double above without a calyx; petal double on the bottom with a calyx



Aeschynanthus lobbianus: infundibuliform flower, fused calyx, stigma extends beyond lobes, fused upper corolla lobes



Sinningia hybrid calyx and nectaries: top two nectaries are silvery; others are white

stigma. The filaments on anthers can show diversity in that some have extra hairs and some are brightly colored or even striped.



Pollination: placing pollen on the stigma

The **pistil** is the female part of the flower and consists of an ovary at the base, then a long style that ends with a stigma. Often the style is very short when the flower first opens and the stigma is not receptive but as the style lengthens over days, the stigma changes in appearance and becomes receptive to pollen. This usually occurs after the flower has been open a couple of days. Some gesneriads produce long styles so that the stigmas extend far beyond the corolla tube.

All gesneriad **stigmas** are not alike. When Kohleria flowers are receptive, the stigma is bilobed. For receptive Sinningias, their round stigma has a fuzzy-looking surface with a clear opening in the center. It is important to study various gesneriad genera as their flowers open and the pistils mature to know when the flower is at its most receptive for successful pollination.

The **ovary** has numerous ovules. When a grain of pollen touches the stigma, pollen tubes develop within the style that go down to the ovary. Sexual fertilization takes place in the ovary and the ovary becomes the seed capsule/fruit and the ovules become seeds.

Pollination is the simple action of placing pollen on the stigma. In nature this can be done by the wind shaking the flower or by insects such as thrips, butterflies, moths, and bees, or by small animals such as bats. Selfing is pollination that has occurred when a plant's own pollen—either from the same flower or another flower on that same plant—touches the stigma and fertilizes the ovary. Cross-pollination occurs when pollen from a different plant—hybrid or species—is placed on a stigma. Often hybridizers cross-pollinate in order to create new hybrids.

Gesneriads' rounded or elongated fruit can be a dry or fleshy capsule or berry. Among those genera producing dry capsules are *Sinningia*, *Kohleria*, and *Smithiantha*. *Streptocarpus* has long, dry fruit that is twisted and when seeds are ripe, the fruit untwists. It's



Peloric Sinningia speciosa: multiple anthers and deformed stigma



Seemannia gymnostoma: green stigma, waxy looking anthers with white pollen

Then there are Streptocarpus and Sinningias bred for extra petals in the centers of flowers where anthers have mutated into extra petals. That usually means they are missing pollen and can only be used as seed parents.

Next time when you are watering your plants, look closely at the flowers and study the pistils at their various stages of maturation. If you have flowers with extra petals, see if the sex organs are "normal." Cut open a larger flower and see if you can find nectaries using a magnifying glass.

common to see dried capsules split on both sides from the apex to the base. Some of the quickest gesneriads to ripen capsules are the microminiature Sinningias like *S. pusilla*. I've harvested seeds in as few as 27 days. Most Sinningias, however, take around 30 to 45 days to ripen, and some species take nearly 60 days. Streptocarpus need around 8 to 12 weeks. Most gesneriads with scaly rhizomes need 45 to 60 days to ripen fruit.

The gesneriads with fleshy fruit/berries such as *Diastema*, *Columnea*, and *Episcia* and generally need around 60 days to ripen. I have *Diastema latiflorum* GRF 9669 ripening now and that took 45 days in a terrarium environment. It forms a splash-cup fruit that splits open on the topside so that raindrops can disperse the seeds.

There are many gesneriads that are best classed as oddities. One is Sinningia speciosa, which is more commonly known as the Florist Gloxinia. These plants have been bred for peloric flowers, which means that all the lobes are symmetrical and identical in shape, size, and in design/patterns. Also of interest are hybrids bred to have calvces that mutate into petals. Sometimes the calyx petals surround the main corolla but are split. Others are more tubular. When those calyx-double flowers die, the flower must be cut for removal because it will not be released by the peduncle. Calyx-double flowers cannot be used as seed parents because although they usually have normal anthers and pollen, the pistils are usually deformed and may have more than one stigma attached to the style.



Drymonia macrantha: salverform with colorful, leafy calyces

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Newsletters — Leslie Milde, 373 Main St., (P.O. Box 14), Fremont, NH 03044 <merlibush@aol.com>

Nominating — Susan Grose, 4201 W. 99th St., Overland Park, KS 66207 <sagrose@mac.com>
Photography — Julie Mavity-Hudson, 1015 Park Lane, Joelton, TN 37080 <Julie.Mavity-Hudson@vanderbilt.edu>

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Gesneriphiles Internet Discussion Group — Visit the website for instructions about joining the list: http://lists.ibiblio.org/mailman/listinfo/gesneriphiles

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Colorado Gloxinia Gesneriad Growers — Larry Boyer, http://www.gloxiniagesneriadgrowers.org/

Delaware AV & Gesneriad Society — Gary Hunter, 1610 Fern Glen Dr., Drumore, PA

17518

Florida Bloomin' Violets & Gesneriads of Palm Beach (Affiliate) — Martha Spyridon, 3548

Ensign Circle, Delray Beach, FL 33483

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FL 33184

Suncoast — Melissa McDowell, 1502 Eastbrook Dr., Sarasota, FL 34231 Tampa Bay — Jay Sespico, 515 Summer Sails Drive, Valrico, FL 33594

Georgia Atlanta Gesneriad Interest Group (Affiliate) — Kathy Spissman, 4086 Brownlee Dr.,

Tucker, GA 30084

Illinois Northern Illinois — Sherry Burtchett, 55677 60th Avenue, Lawrence, MI 49064-9716

Kansas/Missouri Heart of America — Susan Grose, 4201 West 99th St., Overland Park, KS 66207

Massachusetts New England — Leslie Milde, PO Box 14, Fremont, NH 03044

Michigan Southeastern Michigan — Richard Holzman, 3836 Jennings, Troy, MI 48083

Minnesota Twin Cities Area — Jinean Schofield, 4665 Morris Lane, Bloomington, MN 55437

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New Hampshire Granite State AV & Gesneriad Society — Lisa DiMambro, 182 Old Chester Turnpike,

Chester, NH 03036

New Jersey Frelinghuysen Arboretum — Karyn Cichocki, 79 Beaver Run Road, Lafayette, NJ

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East Amherst, NY 14051

Greater New York — Bruce Boyd, 165 West End Ave. 2B, New York, NY 10023

Long Island — Sylvia Svitak, 85-51 169th St., Jamaica, NY 11432

Vestal AV & Gesneriad Society — Lee Stradley, 1923 Cole Place, Vestal, NY 13850 North Coast — Linda Neumann, 11620 Mapleridge Dr., North Royalton, OH 44133

Ohio North Coast — Linda Neumann, 11620 Mapleridge Dr., North Royalton, OH 44:
Oregon Mt. Hood — Hal Shrauger, 18707 NE Deer Haven Dr., Newberg, OR 97132

Pennsylvania Liberty Bell — Stephen Maciejewski, 2030 Fitzwater St., Philadelphia, PA 19146

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Washington Puget Sound — MJ Tyler, PO Box 425, Indianola, WA 98342

Washington, DC National Capital Area — Corey Wickliffe, 318 I Street NE, Washington, DC 20002
Canada Carefree — Elaine Stutt President. Contact Gloria Martin, 298 Michener Dr., Regina,
SK, Canada S4V 0J4

Edmonton — Doreen Dragon, 14 Gareth Pl., St. Albert, AB Canada T8N3K5

Toronto — Suzie Larouche, 82 Wayland Avenue, Toronto, ON M4E 3C9 Canada
Vancouver AV & Gesneriad Society — Arleen Dewell, #311-2366 Wall St., Vancouver, BC, Canada V5L 4Y1

Gesneriasts of Sweden — Margareta Edquist, Syrengatan 19, 571 39 Nässjö, Sweden

Go to www.gesneriadsociety.org for chapter email contacts.

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Chapters: Report changes of chapter presidents to the Chapters and Affiliates Chair and the Editor.

Sweden

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