

the

GLOXINIAN

The Journal for Gesneriad Growers

Vol. 49, No. 3

Third Quarter 1999



Streptocarpus

American Gloxinia and Gesneriad Society, Inc.

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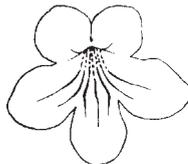
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Streptocarpus rexii

COVER

Streptocarpus dununii
and other streps
grown and photographed
by Chris Kunhardt.

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President's Message

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In my last column I wrote about my first experiences with growing gesneriads, that being *Sinningia speciosa*, the "florist gloxinia". At about the same time I discovered my first "other gesneriad", a species I thought so exotic and bizarre I had no idea was actually another sinningia. At the same university greenhouse where I was growing my little crop of speciosas, there was a wonderful old collection of tropical plants, dating back to the 1920's. Being administered by the Landscape Architecture Department, the greenhouse and the collection were available for the use of the department. So, a student brought a plant back to grow by his drafting desk in the studio where we did our projects. It was an old plant with the old name of *Reichsteineria cardinalis*. In a clay pot, its tuber was large enough to emerge above the soil line, sporting a perfect growth with many large red flowers. I was so intrigued, I visited the plant every day, and wrote down its name. The student who was growing the plant eventually managed to kill this fine old specimen and I forgot about it.

Then, several years later I was visiting a small nursery devoted to succulent plants. There sitting among the fat-leaved pastel echeverias, sinister spiny euphorbias, and other exotics was a plant looking strangely out of place. It was my sinningia, almost unrecognizable; but I knew it when I saw its tag. Of course it came home with me, and I began the process of learning how to grow this new succulent.

So, from the beginning I grew sinningias with tubers exposed. At about this time from a photo in a book on succulents, I discovered another species of sinningia—with even more decorative silvery leaves—then called



Some of Jon's sinningias growing with their tubers exposed.

Rechsteineria leucotricha. And, as luck would have it, a short time later my mother surprised me with a birthday present. In the mail came Singer's Growing Things "Special Caudiciform Collection". It was a very strange assortment of thick-stemmed somewhat woody tropical succulent plants. There was a jatropha, a boojum tree, an "elephant foot", a bulbous pelargonium, various vines growing from knobby swollen woody bases, and a little seedling of *Rechsteineria leucotricha*.

By now I had learned how to grow its cousin and was able to avoid the mistakes most succulent growers make trying to grow sinningias. It thrived in the cool humid coastal Northern California climate, basking in the sun of the east-facing bay window of my apartment. Its small growths came, matured, and died back until after a few years it sprouted a much different growth. Instead of the weak thin stems I was used to seeing, it sent up a thick and wonderfully white furry stem. The books hadn't shown what a mature plant could look like. I was more than flabbergasted. It even bloomed. I knew then that these were special plants that deserved the best site in the window. In my quest to learn more, I discovered and joined the local San Francisco Gesneriad Society.

I still have my first two sinningias. The *S. leucotricha* has gone on to become a large round ball of a tuber filling a ten-inch pot, while the older *S. cardinalis* is much smaller, a tall round tuber about four inches in diameter. But, it still isn't as large as the plant I first saw in 1973.

Jon

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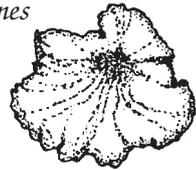
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Seed Fund

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With this seed list I begin my 11th year as Seed Fund Chairperson. The Fund has grown enormously over the past 10 years. In 1989 the Fund was comprised of 20 genera represented by 96 species and hybrids. Ten years later we have a Fund of 64 genera encompassing 696 species and hybrids.

This accomplishment was made possible by the generosity, dedication, work, caring, perseverance, and diligence of members who want to share their plants with others. The seed list in this issue contains 55 additions, the most additions we've ever made to the list. To everyone who has contributed seed in the past ten years, "THANK YOU!!". I close this message with the same words I used in my first message in 1989, "Contributing to the Seed Fund is a great way to share your gesneriads with your fellow members".

We extend thanks for recent contributions to Clay Anderson, Libby Behnke, Norma Chenkin, Barbara Elkin, Rebecca Gmucs, Dan Harris, Laura Johnson, Leong Tuck Lock, Alan LaVergne, Carolyn Rippes, Carol Schreck, and the Gesneriad Research Foundation. Special thanks go to Marlene Beam and Jon Dixon for making multiple contributions.

PLEASE NOTE: 1) *Hemiboea henryi* is now *H. subcapitata*; 2) *Paradrymonia (costaricensis)* has been identified as *P. lurida*

Seed Packets — \$1.50 each

Please

- Make checks payable to the AGGS Seed Fund in U.S. funds
- To pay by credit card, send your credit card number, expiration date, and signature, and indicate if the card is Mastercard or Visa (\$6.00 minimum)
- Remember to enclose a self-addressed, stamped envelope
- List alternate choices
- Include your membership number (first number on your mailing label)

Achimenes (D)

admirabilis (B)
chettoana (B)
dulcis (B)
erecta (B)
erecta 'Tiny Red' (F, L)
grandiflora 'Robert Dressler' (B)
longiflora (B)
longiflora alba (B)
skinneri W1897 (L)
warczewicziana USBRG88-039 (B)
'Carmencita' (L)
Park's Breeder Mix (B, L)
hybrid mix (B, L)

Aeschynanthus (B)

albidus
angustifolius
boschianus
buxifolius 913296
chrysanthus
cordifolius

evrardii

fecundus
garrettii
gracilis
hartleyi
hildebrandii USBRG94-214
hildebrandii USBRG94-254
horsfieldii
hosseusii
lanceolatus
longicaulis
longiflorus
maculatus
micranthus
mimetes
obconicus
parasiticus
parvifolius
parvifolius 'Bali Beauty'
pulcher
radicans

- sikkimensis*
tricolor
 sp. (Vietnam) 921622
 sp. MSBG87-162
 hybrid, lg orange/red
- Alloplectus**
bolivianus USBRG95-140 (M)
cristatus
dodsonii (yellow) GRF98184 (M)
panamensis GRF9517 (M)
tetragonoides GRF98153
 sp. aff. *schultzii* GRF97103
 sp. aff. *panamensis* GRF9781
 (orange)
 sp. GRF9776 (yellow)
 sp. GRF9788 (pinkish/yellow above)
 sp. GRF97153 (peach/orange)
 sp. GRF97166
 sp. GRF98151 (yellow)
 sp. USBRG 98-030
 sp. nov. (*plicatissimus* ined.)
 (salmon calyx) GRF9521
 sp. nov. (*plicatissimus* ined.)
 (green calyx) GRF9556
 sp. nov. (*prunifer* ined.) GRF98174
- Alsobia** (B)
dianthiflora
dianthiflora 'Costa Rica'
punctata
- Anodiscus**
xanthophyllus (M)
xanthophyllus (Ecuador) GRF97109
- Besleria**
barclayi USBRG95-164
formicaria LS7560 (M)
laxifolia GRF9675 (M)
princeps GRF9479 (LM)
triflora GRF9432 (LM)
 sp. GRF9558 (LM)
 sp. GRF9783 (orange w/yellow base)
 sp. GRF97108 (orange)
 sp. GRF97141 (orange)
 sp. GRF9853 (yellow)
 sp. GRF98139 (orange)
 sp. USBRG 95-143
- Boea** (F, R)
 • *hemsleyana*
hygroscoptica
- Briggsia** (A, R)
aurantiaca
musciola
- Capanea**
grandiflora GRF9480 (M)
- Chirita**
caliginosa (LM)
elphinstonia (F,L)
fimbrisekala (R)
fimbrisekala #2
 • *fimbrisekala* #3
 • *fimbrisekala* #4
 • *fimbrisekala* #12
 • (*fimbrisekala* × *fimbrisekala* #2) × self
flavimaculata USBRG94-085 (R)
- heterotricha* USBRG94-088 (F, R)
involutrata (F, L)
lavandulacea (LM)
 • *linearifolia* (F, LM)
longgangensis USBRG94-081 (R)
micromusa (F, L)
 • *moonii* (F, LM)
pumila (F, L)
sericea (F, LM)
sinensis latifolia (F, R)
sinensis latifolia (dwarf) (F, R)
 • *spadiciformis* USBRG94-087 (R)
subrhomboida (F, R)
tribracteata (R)
walkerae (F, LM)
 sp. (Thailand)
 sp. 'New York' USBRG85-022 (R)
 • 'Hisako' × self (F, R)
- Chrysothemis** (F, LM)
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crassifolia
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glicensteinii
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gloriosa 'Superba'
hirta
hirta GRF9493

- hirta* 'Dark Prince'
hispida
lepidocaula GRF9468
- *linearis*
linearis 'Purple Robe'
maculata
nicaraguensis CR92F16
nicaraguensis GRF94105
oerstediana GRF9423
oxyphylla
proctori W3573
purpusii
querceti (L)
raymondii (LM)
scandens var. *tulae* (yellow)
schiedeana
sulfurea G3770
tomentulosa
urbanii (L)
verecunda MBG2204-60 (L)
zebranella GRF1595
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congestus GRF93259 (L)
cutucuensis (L)
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eburnea
medicinalis GRF9507
ornata GRF2665
perpulchra
polyantha
sanguinea
sanguinea 'Orange King' GRF9492
 sp. GRF93191
 - sp. GRF9797 (yellow)
 sp. GRF97160
 - sp. GRF9852
- Diastema** (D, F, P)
latiflorum GRF9668 (green leaf)
latiflorum GRF9669A (white veins)
racemiferum
racemiferum GRF9757 (wine reverse)
vexans
- Didissandra**
frutescens (M)
- Drymonia**
affinis GRF98109
alloplectoides USBRG96-347 (B)
brochidodroma USBRG95-156 (B)
coccinea
coccinea GRF9851
coccinea GRF9873
- coccinea* GRF98150
conchocalyx (B)
conchocalyx 'Silver Lance' × self (M)
doratostyla GRF9674 (B)
ecuadorensis 'Red Elegance' (LM)
hoppii GRF98103
macrophylla (M)
pulchra GRF9889
pulchra GRF98113
rhodoloma (B)
semicordata G2191
serrulata (B)
serrulata GRF9752
strigosa (B)
strigosa GRF1912
turrialvae GRF9419 (LM)
urceolata GRF93146 (LM)
urceolata GRF97124 (red)
urceolata GRF98154 (red w/yellow)
 sp. nov. (*umecta* ined.) (B)
- Episcia** (H, L, B, F)
lilacina 'Panama White'
xantha
cupreata hybrids mix
 hybrid mix
- Epithema**
 saxatile (F, L)
- Eucodonia** (D, F, P)
andrieuxii
- *verticillata*
verticillata 'Ehrenberg'
 hybrid mix
- Fieldia**
- *australis*
- Gasteranthus** (H)
corallinus GRF95120 (LM)
crispus USBRG98-033
giganteus
lateralis
wendlandianus GRF97154 (LM)
wendlandianus GRF97163
wendlandianus GRF98166
 (w/red spots)
- sp. GRF97118
- Gesneria** (H, F, L)
christii
cuneifolia
cuneifolia 'Esperanza'
cuneifolia 'Quebradillas'
cuneifolia 'Tom Talpey'
humilis
pumila
reticulata
reticulata 'El Yunque'
ventricosa (M)
 'Flashdance'
- Gloxinia** (D)
gymnostoma (LM)
lindeniana (F, L)
nematanthodes (F, L)
perennis (LM)
perennis 'Insignis' (L)
purpurascens GRF9670 (F,L)

- racemosa* (L)
sylvatica (F, L)
sylvatica (Bolivia) USBRG94-002
 'Medea' × self (F, L)
 'Medusa' × self (F, L)
- Haberlea** (A, R)
ferdinandi-coburgii
rhodopensis
- Hemiboea** (D)
subcapitata (L)
- Heppiella** (D)
ulmifolia GRF95141 (L)
ulmifolia GRF98172
- Jancaea**
 - *heldreichii* (A, R)
- Koellikeria** (D, F, P)
erinoides
 - *erinoides* 'Polo Polo'
 - *erinoides* 'Red Satin'
- Kohleria** (D)
hirsuta (LM)
hirsuta USBRG96-163 (F, L)
hondensis (LM)
rugata (LM)
spicata (M)
 'Bermuda Red' × self (L)
 - *eriantha* × 'Bermuda Red' (L)
 hybrid mix
- Lysionotus** (LM)
pauciflorus var. *ikedae*
pauciflorus var. *pauciflorus*
serratus
 species
- Mitraria**
coccinea (B, LM)
- Monophyllaea** (H, LM)
elongata
horsfieldii
- Monopyle**
 - *flava* (F, LM)
 - *macrocarpa* GRF98117 (F, LM)
 - *macrocarpa* GRF94123
- Moussonina**
deppeana (M)
elegans (M)
elegans GRF9407
septentrionalis G1201 (F)
- Napeanthus** (H)
costaricensis (F, P)
jelskii USBRG94-511 (F, P)
 - *macrostoma* (F, P)
 - *robustus* GRF9765 (L)
- Nautilocalyx**
adenosiphon (B, L)
colonensis (LM)
melittifolius (F, LM)
- Nematanthus**
australis (B)
brasiliensis (M)
corticola (B)
crassifolius (B)
fissus (L)
fluminensis (B)
- fornix* (B)
fritschii (B)
gregarius (B)
hirtellus (B)
jolyanus (Sao Paulo) (B)
 cf. *lanceolatus* AC2010
maculatus (B)
monanthos AC1622 (B)
serpens (B)
strigillosus AC1434 (B)
wettsteinii (B)
 sp. 'Santa Teresa' (B)
 sp. aff. 'Santa Teresa' (lgr fls)
 USBRG89-019
 sp. MP50
- Neomortonia** (B)
nummularia
- Opithandra** (A, R)
primuloides
- Ornithoboea**
wildeana (LM)
- Paliavana** (S, T)
prasinata
prasinata GRF732
prasinata GRF91126
 - *prasinata* × *S. macropoda* MP944
 - *prasinata* × *S. reitzii* MP949*tenuiflora*
- Paraboea**
 sp. (Malaysia)
- Paradrymonia**
cilosa (L)
decurrens (L)
flava (F, L)
fuquaiana USBRG94-220
lurida
- Parakohleria**
sprucei GRF95137
 sp. GRF9780 (yellow)
 sp. GRF88105 (red) (L)
 sp. GRF98144 (rose pink)
- Pearcea**
abunda (L)
hypocyrtiflora (F, P)
- Pentadenia**
angustata (B)
byrsina (B, L)
crassicaulis (B)
manabiana (B)
microsepala GRF1837 (B)
orientandina (LM)
rileyi GRF86243 (LM)
spathulata GRF9503 (LM)
strigosa GRF95154 (B)
strigosa GRF9777
zapotalana (B)
- Petrocosmea** (R)
 - *duclouxii* (F, P)
 - *flaccida* (F, P)
 - *formosa*
 - *parryorum* (F, P)
- Phinaea** (D, F, P)
albolineata

- divaricata*
ecuadorana GRF8852
- *macrophylla* GRF8748
 - multiflora*
 - multiflora* 'Tracey'
- Ramonda** (A, R)
- myconi* —
 - white
 - lavender
 - purple
 - pink
 - clone G
 - myconi* (upright rosette)
 - nathaliae*
 - serbica*
- Rhabdothamnus**
- solandri*
- Rhynchosoglossum** (H, L)
- gardneri*
 - obliquum*
- Rhytidophyllum** (G, H, S, T)
- auriculatum*
 - leucomallon*
 - tomentosum*
 - villosulum*
- Saintpaulia** (F, R)
- *difficilis* #2
 - grandifolia*
 - intermedia*
 - ionantha*
 - pendula kizarae*
 - shumensis*
 - *shumensis* EE
 - *teitensis*
 - hybrid mix
- Sinningia** (D)
- aggregata* (M)
 - aggregata* AC1461
 - aggregata* 'Pendulina' (B, L)
 - aff. *aggregata* (yellow) (M)
 - aghensis* (T)
 - allagophylla* (MT)
 - brasiliensis* (M)
 - brasiliensis* 'Verde'
 - brasiliensis* AC1314
 - bulbosa* (T)
 - calcaria* MP891 (F, L)
 - canescens* (F, L)
 - carangolensis* (M)
 - cardinalis* (F, LM)
 - cardinalis* (compact) (F, L)
 - cardinalis* 'Innocent'
 - cardinalis* (pink)
 - *cochlearis* AC2005 (LM)
 - conspicua* (F, L)
 - conspicua* (fragrant selection)
 - cooperi* (LM)
 - cooperi* AC1522
 - curtiflora* (T)
 - defoliata* (L)
 - douglasii* GRF91188 (LM)
 - douglasii* (pink form) (M)
 - elatio* AC1409 (M)
 - eumorpha* (lavender) (F, L)
 - eumorpha* (pink)
 - eumorpha* (white)
 - *gigantifolia* (LM)
 - glazioviana* (L)
 - harleyi* MP482 (F, L)
 - hatschbachii* (L)
 - hirsuta* (F, L)
 - iarae* (F, L)
 - insularis* (LM)
 - leopoldii* (F, L)
 - leucotricha* (F, L)
 - lindleyi* AC1501 (L)
 - lineata* (LM)
 - lineata* (highly spotted)
 - macropoda* (M)
 - *macropoda* (dwarf form) (L)
 - macrorrhiza* (T)
 - macrostachya* (LM)
 - macrostachya* MP262
 - magnifica* GRF91121 (pink) (LM)
 - magnifica* MP627 (pink)
 - magnifica* GRF91134 (red)
 - mauroana* (LM)
 - micans* MP892 (LM)
 - nivalis* AC1460 (L)
 - pusilla* (F, P)
 - pusilla* 'White Sprite' (F, P)
 - reitzii* (M)
 - rupicola* AC1511 (F, L)
 - sceptrum* (T)
 - schiffneri* (LM)
 - sellovii* (MT)
 - sellovii* 'Bolivia' USBRG96-003
 - sellovii* 'Purple Rain'
 - speciosa* 'Cabo Frio' MP178 (F, L)
 - speciosa* 'Lavender Queen'
 - speciosa* 'Regina'
 - speciosa* 'Regina' AC1562
 - speciosa* (Chiltern Seed Co)
 - speciosa* AC1503
 - sulcata* (LM)
 - tuberosa* (F, L)
 - tubiflora* (S, MT)
 - valsuganensis* MP619 (LM)
 - villosa* (F, L)
 - warmingii* (T)
 - sp. aff. *warmingii* from
 - Ilhabela MP631
 - sp. 'Lanata' MP622 (L)
 - sp. 'Waechter' (LM)
 - cardinalis* 'Innocent' × *iarae* (LM)
 - glazioviana* × *leopoldii* F2 (LM)
 - iarae* × 'Bewitched' (F, L)
 - speciosa* AC1503 × *speciosa* 'Regina' (R)
 - eumorpha* hybrids mix (F, R)
 - 'Anna W.' × self (F, P)
 - 'Anne Crowley' (F, L)
 - 'Apricot Bouquet' × self (LM)
 - 'Apricot Down' × self (L)
 - 'April Starr' × self (F, P)
 - 'Bewitched' × self (F, L)

- 'Diego' (red) (F, L)
- 'Diego' (pink)
- 'Diego' (purple)
- 'Dollbaby' (F, P)
- 'Good Pink' × self (F, L)
- 'High Voltage' × self (F, P)
- 'Jubilee' × self (F, L)
- 'Krezdorn Yellow' × self (L)
- 'Krishna' × self (F, P)
- 'Leo B.' × self (F, P)
- 'Little Imp' (F, P)
- 'Mark Twain' × self (F, P)
- 'Mother of Pearl' × self (F, P)
- 'Mothers Day' × self (F, L)
- 'Pale Beauty' × self (L)
- 'Patty Ann' × self (F, P)
- 'Peaches' × self (F, P)
- 'Pink Ice' (F, P)
- 'Pink Imp' (F, P)
- 'Pure Pink' × self (F, P)
- 'Purple Beauty' × self (F, P)
- 'Purple Crest' × self (F, P)
- 'Rosebells' × self (F, L)
- 'Ruby Red' × self (F, P)
- 'Saylor's Snowcap' × self (F, P)
- 'Scarlet Red' × self (F, P)
- 'Scarlet Sunset' (F, P)
- 'Silhouette' × self (F, P)
- 'Star Eyes' (F, P)
- 'Sun Blaze' × self (L)
- 'Super Orange' (F, P)
- 'Super Red' × self (F, P)
- 'Susan S.'
- 'Tampa Bay Beauty' × self (L)
- 'Virgil' × self (LM)
- 'Whimsey' × self (F, P)
- 'Angora Love' × 'Margaret' (L)
- 'Cherry Chips' hybrids mix (F, P)
- 'Georgia Sunset' hybrids mix (F, P)
- Marcia Belisle miniature hybrid mix
- Al Wojcik miniature hybrid mix (F, P)
- hybrid miniature mix (F, P)
- pink hybrid miniature mix (F, P)

***Sinningia speciosa* hybrids (F, R)**

- blue mix
- mini lavender
 - pink
 - purple
 - rose
 - white
- orchid/purple mix
- pink mix
- pink/white mix
- purple w/spots
- red mix
- red w/spots
- white w/red spots
- Charles Lawn hybrid mix
- Double Brocade mix
- Early Giant mix
- hybrid mix
- blue slipper
- lavender slipper

- pink slipper
- purple slipper
- mixed slipper
- pink dwarf
- red and white dwarf
- Small's dwarf mix
- white dwarf slipper

***Smithiantha* (D)**

- aurantiaca* (F, L)
- canarina* GRF9105 (F, LM)
- lauri* GRF9117 (F, L)
- multiflora* GRF9121 (F, LM)
- multiflora* GRF9122 (F, LM)
- zebrina* GRF9104 (M)
- 'Abbey' × self (F, LM)
- 'Little One' (F, L)
- 'Sunset' × self (F, L)
- hybrid (yellow) (F, L)
- hybrid mix (F, L)

Streptocarpus

- baudertii* (F, R)
- bolusii* (U)
- buchananii* (B)
- caeruleus* (R)
- candidus* (F, R)
- candidus*/Ngome, Natal
- caulescens* (F, LM)
- compressus* (U)
- confusus* (U)
- confusus* ssp. *confusus* (U)
- cooksonii* (U)
- cooksonii* (dark purple)
- cooperi* (U)
- cyanandrus* (F, P)
- cyaneus* (blue) (R)
- cyaneus* (blue/long corolla)
- cyaneus* (blue/short corolla)
- cyaneus* (lilac)
- daviesii* (F, U)
- denticulatus* (U)
- dunnii* (U)
- eylesii* (U)
- fanninae* (R)
- fasciatus* (R)
- fenestra-dei* (R)
- floribundus* (R)
- formosus* (R)
- formosus*/E. Cape, Transkei
- gardenii* (F, L)
- *gardenii*/Weza, S. Natal
- glandulosissimus* (B)
- goetzei* (U)
- grandis* (U)
- grandis* (blue form)
- haygarthii* (F, U)
- haygarthii*/Mkambati, Transkei
- holstii* (B, L)
- johannis* (F, R)
- johannis*/Komga, E. Cape
- sp. aff. *johannis* (F, R)
- kentaniensis* (R)
- kentaniensis* (N. Kei River)
- kentaniensis* (S. Kei River)

- kirkii* (F, L)
meyeri (F, R)
meyeri/NE Cape Province
michelmorei (U)
modestus (R)
molweniensis (U)
molweniensis subsp. *eschowicus*
muscosus (L)
nobilis (M)
pallidiflorus (F, LM)
parviflorus (R)
parviflorus (mauve)
parviflorus (white)
parviflorus (white/mauve)
pentherianus (F, L)
pole-evansii (R)
polyanthus (F, L)
polyanthus subsp. *comptonii*
polyanthus subsp. *polyanthus*
polyanthus subsp. *polyanthus*/lg fl
polyanthus subsp. *polyanthus*/Valley
of 1000 Hills, Natal
polyanthus subsp. *verecundus*
porphyrostachys (U)
primulifolius (F, R)
primulifolius (dark blue)
Port St. John, Transkei
• *primulifolius* /Mt. Sullivan, Transkei
• *primulifolius* /Bullolo Rvr, Transkei
primulifolius /Valley of 1000 Hills
prolixus (F, U)
pumilus (F, P)
rexii (F, L, R)
rexii (blue)
• *rexii* (blue) Transkei
rexii (white)
rexii (pale blue/long corolla)
rexii (white/blue mix)
rimicola (F, P)
roseoalbus (F, R)
saundersii (U)
saxorum (B)
sylvaticus (R)
stomandrus (F, L)
thompsonii (B, L)
thysanotus (B, L)
trabeculatus (U)
vandeleurii (U)
variabilis (F, R)
wendlandii (U)
wilmsii (U)
• *wilmsii*/Graskop
wilmsii/Long Tom Pass
• 'Amethyst' × self (R)
'Athena' × self (R)
'Bethan' × self (R)
'Black Panther' × self (R)
'Blue Angel' (B)
'Blue Lemon' × self (R) (B)
'Amethyst' × self (R)
'Cape Beauties' (F, P)
'Georgette' × self (R)
'Gloria' × self (R)
'Karen' × self (R)
'Kitten Face' × self (R)
'Midnight Flame' × self (R)
• 'Network' × self (R)
'Pegasus' × self (R)
'Royal' (red) (R)
'Royal' (white/pink stripes) (R)
'Sandra' × self (R)
'Strawberry Crush' × self (R)
'Suzie' × self (R)
'Thalia' × self (R)
• 'Ulysses' × self (R)
'Wild Grape' × self (R)
'Black Panther' hybrid mix (R)
Martin Kunhardt hybrid mix (R)
New Zealand hybrid mix (F, R)
rexii hybrids (F, R)
Wiesmoor hybrids (F, R)
hybrid mix (F, R)
hybrid, lt blue/dk blue lines (R)
hybrid, lg burgundy (R)
hybrid, lg purple (R)
hybrid, lg white
streptocarpella hybrids (B)
- Titanotrichum***
oldhamii (propagules)
- Trichantha***
ambigua (B)
brenneri (LM)
citrina (B)
dodsonii GRF90158 (LM)
kucyniakii GRF93166 (MT)
minutiflora GRF9552 (LM)
purpureovittata (B, L)
sp. nov. (*molinae* ined.) GRF98159
- Vanhouttea*** (S, T)
calcarata GRF3026
lanata
- Mixed gesneriads**
• denotes LIMITED quantities

(A)	Alpine or cool greenhouse.	(LM)	Low to medium height.
(B)	Suitable for hanging basket.	(M)	Medium height; 1 to 2 feet.
(D)	Has dormant period, forming tubers or rhizomes.	(MT)	Medium to tall.
(F)	Blooms readily in fluorescent light.	(P)	Petite or miniature; not more than 6 inches tall.
(G)	Recommended for greenhouses; requires space.	(R)	Rosette in form.
(H)	Requires humidity and warmth.	(S)	Requires sun to bloom.
(L)	Low growing; not more than 12".	(T)	Tall plants; generally over 3 feet.
		(U)	Unifoliate or single leaf.

Growings On . . .

Once again we are pleased to be able to publish a special issue of THE GLOXINIAN, this time focusing on the genus *Streptocarpus*. In the July/August 1957 issue of TG, Elvin McDonald wrote an article introducing *Streptocarpus* to our readers. At that time there were about 60 known species. Forty-two years later, the number of species has more than doubled, and many of these are now available for enjoyment by growers around the world through the AGGS Seed Fund. We have been able to include a limited number of strep photos in this special issue, but be sure to visit the AGGS web site <<http://www.aggs.org/>> to see 73 new photos of strep species contributed by Toshijiro Okuto.

This special issue of TG was made possible with the help of the many people who wrote articles and contributed pictures, as well as by the support of individuals and chapters who sponsored the many color photos — our thanks to all of you. We received more articles than would fit in one issue, so the next issue of TG will feature even more information on growing and hybridizing streps. The new 1999 *Streptocarpus* Register and the soon-to-be-released new slide library programs on *Streptocarpus* species and hybrids will further enhance our appreciation of this genus.

To quote the inside cover of the book *Streptocarpus, An African Plant Study* by Hilliard and Burt: "*Streptocarpus* contains some of the most fascinating of African plants. It is a genus of contrasts: the largest flower could hold the whole plant of the smallest species, yet the large flower may be one of a hundred on a plant with only a single leaf, while the small plant may have several leaves." We hope you enjoy these special issues of TG celebrating the genus *Streptocarpus*.

J.K.



Streps large and small: *S. grandis*
and *S. cyanandrus*
(photo by Chris Kunhardt)



Bill Burt with *Streptocarpus grandis*
in Natal in December 1964.
(photographer unknown)

Letter. . . from Bill Burt

Please read this letter as an impromptu chat rather than a carefully argued paper. Recently my thoughts have been with the 500-or-more-strong *Cyrtandra* and other Asiatics rather than *Streptocarpus*, but going back to my first favourite I find that while many of our basic views (expressed in Hilliard & Burt 1971¹ — hereinafter H&B) remain unchanged, or have just shown a little natural growth, what really has developed is my appreciation of the complexity of the genus. But let's start with its position in the family. It is commonly accepted now that genera with twisted fruits (e.g., *Streptocarpus*, *Boea*, *Paraboea*, *Ornithoboea*, *Rhabdothamnopsis*) are not, just for that reason, closely related to one another. There is also some agreement that most of the African/Madagascan Gesneriaceae form an inter-related group. Nevertheless, in the lists given by Burt & Wiehler² the genera of Didymocarpeae were left in alphabetical order: that, at least, does not perpetuate old false ideas nor engender new errors. Molecular studies do not yet give enough coverage to do more than make some minor suggestions.

As to classification within the genus, I'd like to clarify H&B's 1971 position. Since K. Fritsch's³ studies on Gesneriaceae seedlings, *Streptocarpus* has been divided into two subgenera: subgen. *Streptocarpus* and subgen. *Streptocarpella*. The former consists of the two sections *Rosulati* and *Unifoliati* while *Streptocarpella* consisted of the section *Caulescentes*, the names of the sections being their best definitions. At that time the Madagascan species were scarcely known. It was, in fact, not until the publication by H. Humbert in 1967 of twenty new species that the richness in *Streptocarpus* of the Madagascan flora became apparent. Professor Humbert died in the same year, and in due course I was asked to edit his MSS for the Flore de Madagascar⁴. There was still a lot of work to be done and only a floristic account was possible: no sections of subgenera were used. But it then had to be prepared straight away for incorporation into the general account of the genus, where the two subgenera played an important part. Caulescent and Unifoliate species fell easily enough into the subgenera *Streptocarpella* and *Streptocarpus* respectively; it was the plants with leaves in rosettes that were the trouble. There were, in fact, two groups of them: one group had leaves with rounded leaf bases and well-developed petioles, the other had *alternate* leaf bases and no petioles. The former, except for their twisted fruit-valves, had a strong resemblance to species of *Saintpaulia* and we knew that *Saintpaulia*, like subgen. *Streptocarpella* had 15 haploid chromosomes. They were therefore allotted to that subgenus. For the other group we had one species, *S. variabilis*, in cultivation and this yielded a diploid number of 96 chromosomes, which could be a hexaploid based on a diploid 32, the number for subgenus *Streptocarpus*. This allocation seems to be working quite well at present, but the morphological range covered by each of the subgenera has been increased substantially and simple division of the genus into two is likely to need some modification. Molecular work on the Madagascan species (by Dr. M. Möller) is continuing at Edinburgh and should eventually permit a revision of the major groupings in the genus.

One correction to the placement of an East African species has become necessary. *S. schliebenii* was assigned to subgen. *Streptocarpella*, for its flowering stems are a foot or more high and it was only known from the

type specimen. However, it was re-collected by David Mabberley who sent seeds to Edinburgh. As soon as these germinated it was clear that the species was not a normal member of *Streptocarpella*: the macrocotyledon, the one that enlarged, did not develop a petiole (as is usual in *Streptocarpella*) but elongated with numerous widespreading lateral veins. It was much more like a seedling of subgen. *Streptocarpus*. In due course chromosomes were counted and proved to be typical of subgen. *Streptocarpus*, $2n = 32$. The count was published⁵, but nothing else. *S. schliebenii* is thus another member of subgen. *Streptocarpus* which, like *S. fanniniae* has a well developed stem. Those who use H&B will remember that much shorter stems were also illustrated for *S. davyi*. Unfortunately the plants of *S. schliebenii* at Edinburgh died after flowering and there has been no chance to test their ability to form an abscission layer.

The original species of *Streptocarpus* was *S. rexii*, which was given the English name of "Cape Primrose", on account of its primrose-like leaves. This English name can reasonably, if required, be extended to other members of the *S. rexii* group in its widest sense, all having rather similar leaves. But Cape Primrose should not be used for the genus as a whole. It is ridiculous to refer to *S. dunnii*, *S. caulescens*, or *S. saxorum* as a Cape Primrose.

Probably because they are neater plants than the unifoliate, these rosulate *Streptocarpus* are very popular in cultivation, and innumerable hybrids and cultivars have been raised: breeding is still going on, but others know far more about that than I do. The wild forms, however, have attracted taxonomic attention. H&B gave an outline account of the immense variation that is found in the *rexii/primulifolius/cyaneus* complex. Although we had separately or together visited a large number of localities where such plants grow, from the Zoutpansberg and Blaauwberg in the northern Transvaal to the Eastern Cape Province in the south, we concluded that much critical field-work was still needed. There were big tracts of country that we had scarcely touched; tracts where new populations matching or linking those we had found might well exist, or where further variants await recognition.

That is still the case. What has been done is that many of the local variants that we mentioned have been re-visited and been given scientific names, some as distinct-species, others as subspecies (Edwards⁶, Weigend & Edwards⁷). These local forms are certainly recognizable when alive. Years ago a continental nurseryman came into my office in Edinburgh with a tray full of them. He had obtained them from an undisclosed source in South Africa and was anxious to know if he could register them for proprietary varietal status. I had to tell him that they could not be registered because they were all wild forms, and I went through them one by one telling him where they came from, for luckily they were all forms I knew in the wild. Because he could not claim proprietary rights, they were never named. This was a pity because, from the horticultural viewpoint, they were all different and merited cultivar names which could easily have been taken from their native localities. However, they have now turned up with scientific names. The plant from the once-lovely God's Window on the edge of the eastern escarpment in the Transvaal (where you look out over the low-velde acacias 3000 ft. below) has achieved specific rank as *S. fenestra-dei*, while instead of having *S. cyaneus* CV. 'Long Tom' on your window-ledge, you can have *S. cyaneus* subsp. *longi-tomii* (one fears the gun that gave Long Tom Pass its name may explode spontaneously). Weigend & Edwards⁷ have given a full key making considerable use of corolla length, colour and markings. Names are now available and should be used where appropriate; but strings of names do not

make the biological relationships in the group any better understood. One new species, *S. fasciatus* had been described earlier⁸ and this does seem to merit specific distinction.

Streptocarpus caeruleus is the one species where a real advance of knowledge has been made. This is a species of the mountains of the northern Transvaal. From its first collection (by Drs. Dyer & Codd from Pretoria in 1955), two forms have been known, one short-flowered and one long-flowered. Now Edwards has grown both forms side by side in the greenhouses at Natal University, Pietermaritzburg. He found that the short-flowered plant set seed freely in the greenhouse, whereas the long-flowered one set scarcely any. Examination showed that the short-flowered plant was adapted for self-pollination. "There is little spatial separation between the anthers and the stigma. Often the two fused fertile anthers split apart in the bud, thus achieving pollination before anthesis" (Edwards et al.⁶), while in the long-flowered form "the stigma extends about 3mm above the anthers and seed is seldom set on cultivated plants". H&B had placed these two forms as subspecies: Edwards, emphasizing the breeding differences and the apparent absence of hybrids in the field (intermediate hybrids can easily be raised artificially) treats them as separate species, *S. caeruleus* (with short flowers) and *S. longiflorus*. I think this is the wrong interpretation, and by chance an almost exact parallel turned up in the literature about the same time. This was in the North American genus *Clarkia*: Harlan Lewis & Raven⁹ have reduced *Clarkia parviflora* Eastwood to a subspecies of *C. xantiana* of which it is a self-pollinating form distinguished by its smaller flowers and "the position and time of maturation of the stigma": in normal *C. xantiana* the stigma projects 3mm beyond the anthers. I agree, and therefore think that the two forms of *Streptocarpus caeruleus* can also well be kept as subspecies. It seems that such autogamous forms are known in several other species of *Clarkia*.

I have tried to focus on some items of general strep interest, without attempting to mention every new species that has been described since 1971 or to mention all the interesting work that is going on. The Old World Gesneriaceae in general and *Streptocarpus* in particular are flourishing — but I do wish someone could get seed of those four errant Asiatic "Streps"!

Bill Burt

Notes:

- ¹ Hilliard, O.M., & Burt, B.L., 1971, *STREPTOCARPUS*: an African Plant Study, Univ. Natal Press.
- ² Burt, B.L., & Wiehler, H., 1995, Classification of the family Gesneriaceae, *Gesneriana* 1:1-3.
- ³ Fritsch, K., 1904, Die Keimpflanzen der Gesneriaceen, Jena: G. Fischer
- ⁴ Humbert, H., 1967, Espèces nouvelles de *Streptocarpus* (Gesneriaceae) à Madagascar, *Adansonia*, Ser. 2, 7: 275-294.
- ⁵ Milne, C., 1975, Chromosome numbers in the Gesneriaceae, V, *Notes Roy. Bot. Gard. Edinb.* 33:523-525.
- ⁶ Edwards, T.J., Kunhardt, C., & Venter, S., 1992, Notes on the genus *Streptocarpus*, *Bothalia* 22:192-194.
- ⁷ Weigend, M., & Edwards, T.J., 1994, Notes on *Streptocarpus primulifolius* (Gesneriaceae), *S. Afr. J. Bot.* 60:168-169.
- ⁸ Weigend, M., & Edwards, T.J., 1994, Notes on *Streptocarpus cyaneus* and *S. parviflorus*. *Sendtnera* 2:365-376.
- ⁹ Lewis, Harlan, & Raven, P.H., 1992, New Combinations in the Genus *Clarkia* (Onagraceae), *Macroño* 39:163-169.

Streptocarpus Species ... after 1971

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S*STREPTOCARPUS: An African Plant Study* by O.M. Hilliard and B.L. Burtt was published in 1971. It was the first such major work at the time, and probably the most extensive since, dealing with a single genus in the family Gesneriaceae. It is unique, not only in the extensiveness with which the taxonomy of this genus is examined, but also the perspective given within the family relative to other Old World genera. However, as the authors propose — they "are saying the first words, not the last" in their study of this large genus, and change will lend an even deeper understanding of the complexities therein. Several species of *Streptocarpus* have been published since 1971 and following is a brief abstract of the information describing those species:

Streptocarpus tchenzema Gilli, published in 1973 from material collected in the Uluguru Mountains, Tchenzema, Tanzania. This caulescent species is apparently related to *S. glandulosissimus* and *S. bambuseti*. It is an erect herb to 50 cm with blue-purple flowers 12-14 mm long.

Streptocarpus thysanotus Hilliard & Burtt, published in 1985, seed collected in Tanzania in 1971 in the Kimboza Forest Reserve, distinguished itself from *S. kimbozanus*, B.L. Burtt 1958 and proved to be part of a small group of four species in the subgenus *Streptocarpella* thought to provide a link between the species of east and west Africa. A strong-growing species with sappy stems and long-pedunculate axillary inflorescences, attaining a height of 75 cm and characterized by light purple flowers. The specific epithet refers to the conspicuous fringe of hairs around the mouth of the corolla-tube. Respectfully considered a "charming weed" by some in cultivation because it self-seeds prolifically.



Streptocarpus thysanotus
(photo by Jeanne Katzenstein)



Streptocarpus pallidiflorus
(photo by Toshijiro Okuto)

Streptocarpus arcuatus Hilliard & Burt, published in 1986, previously considered to be part of *S.* aggregate species *monophyllus* and distinguished from other members of that group such as *S. eylesii*, *S. wittei* and *S. vandeleurii* by geographical distribution. Now elevated to a fully independent species, this monocarpic unifoliate from Malawi, has a flowering leaf which is always withered at the top, where the terminal part has abscinded during the unfavorable season. The leaf measures 20 cm broad with the length somewhat longer than that. The color of the corolla is light purple, and *S. arcuatus* probably possesses a fragrance similar to that of its three relatives.

Streptocarpus dolichanthus Hilliard & Burt, published in 1986, collected in 1983 in the Mulanje Mountains of Malawi, this plant was recorded to be growing on vertical rock faces in moss, at the edges of and in the middle of a perennial stream in the deep shade of Montane Evergreen Forest. Mr. Johnston Stewart reported that even a small flood would cause the plants to be temporarily covered by water. The corolla form resembles *S. rexii* and is 8 cm long. The species blooms from April to June on Mt. Mulanje, later than other indigenous *Streptocarpus*. Of unusual taxonomic interest in that it forms a pair with *S. milanjanus* showing a very close affinity through many similar characteristics, but with quite divergent corolla shapes. There are other such pairs in the genus with interesting theories of divergent evolution.

Streptocarpus eylesii S. Moore subsp. *silvicola* Hillard & Burt, published in 1986, previously considered to be a white-flowered variant of *S. eylesii* subsp. *brevistylus*, it is now distinguished at the subspecies level with the epithet denoting its ecological habitat as being of the *Brachystegia* woodland where it is found on or among rocks and occasionally on tree trunks. This change was made following subsequent additional collections in similar habitats, but different geographical locations.

Streptocarpus pallidiflorus C.B. Clarke, published in 1986, when writing *STREPTOCARPUS: An African Plant Study*, Hilliard and Burt, 1971, the authors felt they had known living plants of *S. caulescens* var. *pallescens* too briefly for a full appreciation of the characters marking it off from *S. caulescens* var. *caulescens*. They now feel that it deserves to be ranked as an independent species and reverts to the name *S. pallidiflorus* bestowed on it by C.B. Clarke. This species distinctly dwarfer, less straggling habit, and a swollen basal part of the stem are distinguishing characteristics. The corolla is smaller, paler, with dark veins and has a characteristic swelling underneath that is not found in *S. caulescens*.

Streptocarpus bindseili E. Fischer, published in 1988, this small unifoliate species from Rwanda has a leaf 15 cm long and 7 cm wide with crenate margins. The inflorescence bears multiple small white flowers.

Streptocarpus montis-bingae Hilliard & Burt, published in 1990, a new rosulate species from the Mozambique-Zimbabwe border. The leaves on this species are 8-13 cm long by 3.25-6 cm wide, they are hairy on both surfaces and the margins are serrate. The inflorescence bears about six small flowers which are light purple with darker spots on the palate and in the throat.

Streptocarpus burtianus Pócs, published in 1991, from Tanzania in the Nguru Mountains. This species is somewhat isolated geographically and grows on the shady gneiss cliffs in montane rainforest at 1900 m. The leaf habit is one senescent and one small, young leaf although the larger leaf sometimes reaches 1 meter in length and are reportedly quite attractive hanging down in large, shiny masses from the shady cliffs. The flowers are white

with yellow marks in the throat and 7-10 mm long. The species is dedicated to the monographer of African Gesneriaceae, Dr. B.L. Burt.

Streptocarpus fasciatus T. Edwards & C. Kunhardt, published in 1992, from the eastern Transvaal of South Africa, the species falls within the aggregate including *S. rexii*, *S. primulifolius*, *S. cyaneus* and *S. parviflorus*. This robust rosulate perennial has oblong leaves, 290 x 100 mm with crenate margins. The inflorescence has up to 12 pale blue flowers with a medial violet streak in each lobe, 7 on the lower limb and 2 on the upper limb. The epithet *fasciatus* refers to the well-defined longitudinal stripes which mark each lobe. The habitat is woodland growing in association with *S. pole-evansii* under the protection of granite boulders. The main flowering period is spring to summer and the species is considered relatively drought tolerant to other members of the *cyaneus* group.

Streptocarpus longiflorus (Hilliard & Burt) T. Edwards, published in 1992, following recent new collections of populations of this species, the former classification of *S. caeruleus* subsp. *longiflorus* was elevated to specific status of *S. longiflorus*. Distinct populations were observed of *S. longiflorus* which is endemic to the Blaauwberg where plants are found in more exposed habitats than *S. caeruleus* which frequently grows well above the tree line in the shade of rocks. *S. longiflorus* resembles *S. cyaneus* which is considered its closest ally. It is a rosulate perennial with 5-10 oblong leaves, 300 x 70 mm. The inflorescence has 5-15 flowers which are blue with a Y-shaped yellow bar on the floor of the tube, corolla length exceeds 50 mm.

Streptocarpus makabengensis Hilliard, published in 1992, this species is known only from north-western Transvaal found in 1961 growing under rock outcrops. It is allied to *S. rimicola* with only one or two leaves, but with "beet-root-red" coloration below, a trait which is maintained in cultivation although the tops of the leaves seldom develop a red flush. Distinguished by short glandular hairs which occur even on the upper surface of the leaf. The white flowers are similar to *S. rimicola*.

Streptocarpus occultus Hilliard, published in 1992, known only from one site in the south-eastern Transvaal growing in the shelter of rock outcrops. Unlike its two allies, *S. rimicola* and *S. makabengensis*, this species is perennial. The corolla tube has longer glandular hairs outside and no beard on the roof of the corolla tube compared to *S. rimicola*.

Streptocarpus cyaneus subsp. *longi-tomii* Weigend & T.J. Edwards, published in 1994, from Long Tom Pass, Lydenburg is common in forested gullies. The long strap-shaped, suberect leaves are 400 x 50 mm. The long narrow corolla is deep purple outside, white inside with a bold yellow stripe on the floor of the tube extending onto the limb. The limb is violet-purple with 7-9-11 deep purple lines. The subspecies is centered on the escarpment around Lydenburg in moist afro-montane forest, usually in seepage zones of forested krantzes.

Streptocarpus cyaneus subsp. *polackii* (B.L. Burt) Weigend & T.J. Edwards, originally published in 1946 (as *S. polackii*), this taxon was published in 1994 as a subspecies of *S. cyaneus*, closely allied to subsp. *longi-tomii*. It is distinguished by an intermediate corolla length, shorter than *S. cyaneus* subsp. *longi-tomii* and longer than *S. cyaneus* subsp. *nigridentis*. The ground color of the corolla is skyblue, rather than purple, with 7 penciled lines always present. The subspecies is common in montane forest patches around Pilgrim's Rest. Both *S. cyaneus* subsp. *longi-tomii* and *S. cy-*

neus subsp. *polackii* prefer cool and moist kloofs in grasslands at higher altitudes versus the lower altitudes.

Streptocarpus cyaneus subsp. *nigridens* Weigend & T.J. Edwards, published in 1994, from the Klaserie Waterfall, Mariepskop Forest Reserve, Transvaal. The leaves are suberect, up to 250 x 50 mm. The corolla 25-35 mm long has a pale yellow stripe inside with very pale blue, rarely skyblue or pale lilac outside, lower lip with 7 fine dark lines. The filaments are blackish blue.

Streptocarpus parviflorus subsp. *soutpansbergensis* Weigend & T.J. Edwards, published in 1994, from Mountain Inn to Bluegumspoort, Soutpansberge, this taxon is readily distinguished from the other two subspecies of *S. parviflorus* by its soft pink flowers with a distinctly spreading limb marked with bold and often forked lines. The dark blackish blue filaments also occur in *S. cyaneus* subsp. *nigridens* and sometimes in *S. parviflorus* subsp. *parviflorus* (but usually white).

Streptocarpus roseoalbus Weigend & T.J. Edwards, published in 1994, this rosulate perennial species is closely related to, but distinguished from *S. cyaneus* by its pink to pale pink flowers with short, white tubes and one to two-flowered inflorescences. Flowering time is December to March and the species occurs from 1000 to 1500 meters often in lowveld vegetation and much drier habitats, in contrast to *S. cyaneus*, *S. fenestra-dei* and *S. parviflorus* which are restricted to an afro-montane distribution. The epithet refers to the flower color.

Streptocarpus fenestra-dei Weigend & T.J. Edwards, published in 1994, from Pilgrim's Rest, God's Window, South Africa, in forested gullies. Large white flowers with yellow stripe and faint or stippled lines on floor of corolla, 30-35 mm long and densely pilose leaves characterize this subspecies which is geographically isolated from *S. parviflorus*. It grows lithophytically and on earth banks. The species is narrowly endemic and the specific epithet refers to the locality. Flowering time is December to January.

Streptocarpus floribundus Weigend & T.J. Edwards, published in 1994. This species was collected by Hilliard in 1929 in Dundee, Natal. It was previously considered an intermediate form between *S. cyaneus* S. Moore and *S. primulifolius* Gand. It is now given recognition as a new species. The rosulate perennial species is distinguished by its dark purple stigma and its glandular pubescence on the peduncle and lower leaf lamina. The many-flowered inflorescence bears white corollas with pale mauve lobes and yellow in the lower third of the tube. The lower three lobes with 7 bold lines extending just onto the limb. Plants are very localized and grow on doleritic cliffs overlooking the Tugela Valley. Flowering time is November to December.

Streptocarpus formosus (Hilliard & Burt, originally published in 1968 as *S. primulifolius* Gand. ssp. *formosus*, was published and described in 1994 as *S. formosus* T.J. Edwards, elevated to species rank. This rosulate perennial with a stout horizontal rhizome is distinguished from *S. primulifolius* by its pale violet corolla and the usual occurrence of yellow pigmentation on the floor of the corolla tube stippled with purple. Inflorescences are two-flowered. It was felt that the limitation of *S. formosus* to the area of Natal/Pondoland sandstone regions in southern Natal and northern Transkei, an area with a high degree of endemism, and its phenotypic distinction from *S. primulifolius* deserved recognition in specific status. This species is in

wide cultivation and has been used extensively in hybridizing for its large flower size.

Whereas this list may not be complete, it is indicative of the evolving understanding of this complex and fascinating genus.



Streptocarpus fasciatus
(photo by Toshijiro Okuto)

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Streptocarpus floribundus
(photo by Toshijiro Okuto)



Streptocarpus roseoalbus
(photo by Toshijiro Okuto)

An Overview of *Streptocarpus*

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The genus *Streptocarpus* includes a diverse group of African gesneriads. There are over 130 species in the genus. The group includes plants of considerable beauty and easy culture, as well as plants of surpassing strangeness. Plants in the genus *Streptocarpus* are of interest both to horticulturists for their attractive appearance and easy culture, and to botanists for the unusual features of their growth and development.

Visual Appeal

The rosette forms can be grown as attractive houseplants with long blooming periods. Hybridization has resulted in a variety of colors from white through purple-blue to red-pink, often with net or splotch patterns. They are as easy to grow as the popular African violet (*Saintpaulia* sp.), and they produce larger flowers.

The sheer size of some of the unifoliate forms can be a source of wonder. The leaf can be as much as three feet long in some species. It is not at all unusual for *Streptocarpus cooperi* to form a single leaf that is two feet long and a foot across. Every gesneriad grower should grow one of the unifoliate species of *Streptocarpus* at least once. It will be an education in the weirdness of the vegetable kingdom, and can be used to amaze visitors.

At the other extreme, there are miniature forms such as the popular *Streptocarpus rimicola*, which could be grown in a thimble.

You may see the popular name "Cape Primrose" used for the rosette form of *Streptocarpus*, because they come from the Cape of Good Hope area and the leaves somewhat resemble the primrose (*Primula* sp.). The flowers do not resemble a primrose, and the groups are actually not closely related.

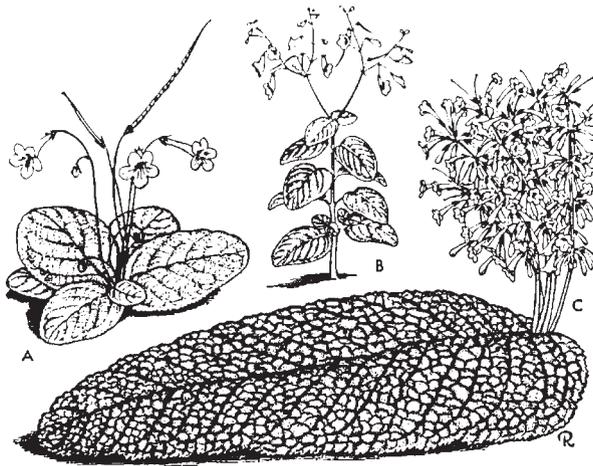
Stems, With or Without

Streptocarpus can be divided into caulescent and acaulescent species (with stems, and without stems). The caulescent species are assigned to the subgenus *Streptocarpella*. They look like "normal" plants, with distinct stems and sets of opposite leaves. Some authorities feel that these plants are actually more closely related to African violets (*Saintpaulia* sp.) than to the other streptocarpus.

The acaulescent *Streptocarpus* species (classified in the subgenus *Streptocarpus*) are the more interesting plants to many growers and botanists. These plants have a number of odd features. Many species have only a single leaf. There is no stem, rather the leaf arises directly at the joint with the roots. The flower stalks in turn arise from the base of the leaf. Furthermore, the leaf growing point is at the base rather than at the tip! This article is primarily concerned with acaulescent *Streptocarpus*.

Leaves, One to Many

The acaulescent *Streptocarpus*, like Gaul, can be divided into three parts. These are the unifoliate (one leaf), plurifoliate (several leaves), and rosulate or rosette (lots of leaves) forms. This classification scheme is useful for the grower, but does not represent a firm taxonomic division, since there are plants that do not fit neatly in the categories.



A - *S. rexii* B - *S. kirkii* C - *S. dumii*

In the unifoliate forms, the leaf is formed by the continued growth of one of the two cotyledons (seed leaves). You have probably seen cotyledons if you have ever watched a bean or other plant sprouting. When the bean first sprouts, the two cotyledons, which act as the food storage organs inside the seed, are pushed to the surface and turn green, acting as the first "leaves" of the seedling. Soon afterward the seedling grows its first true leaves, and the cotyledons shrivel and fall off. This is the growth pattern for most seed plants, but not for streptocarpus plants. In *Streptocarpus* one of the cotyledons will shrivel, but the other one continues to grow to become the only leaf of the plant! Eventually the leaf will produce flowers and seed, then die (see below).

The plurifoliate forms begin similarly, but eventually develop one or a few new leaves. The new leaves form from the sides of the base of older leaves before the older leaf dies. The new leaves form their own sets of roots. Thus the plant as a whole can remain alive indefinitely, although each leaf will still bloom once and then die.

One can think of the rosette forms as being plurifoliate, but with many leaves full size and active at once. Even the more "ordinary looking" rosette forms are not formed in the same manner as most rosette plants, with leaves arising more or less symmetrically from a short stem. Instead each leaf arises by growing out the side of the base of a previous leaf. In these species, many new leaves are formed from each older leaf, and a leaf may bloom in more than one season before dying. This set of characteristics gives the impression of dense continuous growth.

They Only Live Once...

The vegetative growth habit of the *Streptocarpus* leaf is unusual, and the flowering habit is also distinctive.

Most of the unifoliate *Streptocarpus* are monocarpic, which means that they bloom and form fruit once, and then die. (So be sure to collect the seed!) However, although they are not typical perennials, they are also not necessarily annuals. Instead they will grow each summer, and partially die back each

winter, until they decide that they are ready to bloom. This may occasionally happen all in one year, but usually will take two or three years. The duration may be partly determined by cultural conditions, but also seems to be partly determined by some sort of genetic lottery. Plants that take three years to bloom are not necessarily bigger or healthier than plants that bloom in one season. Large plants do not necessarily bloom immediately. Plants do not necessarily get larger from one year to the next! The habit of growing for several years before blooming and dying is not unique to *Streptocarpus* — consider the "Century Plant" for example.

The plurifoliate *Streptocarpus* are similar, but instead of having the entire plant die after blooming, they tend to start one or more new leaves from the base, which in turn will eventually fruit and die. There are seldom more than a few leaves at a time, often only one of which is enlarged to blooming size.

The rosette forms would show a similar pattern if inspected closely, but they are adapted to have many leaves full size and active at once. They thus provide continual growth and bloom even though each individual leaf will die after blooming for one or more seasons. The leaves tend to be roughly the same size, and several may be blooming at once.

Adaptation to Seasonal Drought

Most *Streptocarpus* species are native to southern Africa, from a region bounded by the Cape of Good Hope, Angola, and Madagascar. The caulescent *Streptocarpus* are found in a wider area including the Sierra Leone area of Africa. Contrary to the stereotypical view of Africa as permanently hot, the southern portion of the range tends to be quite seasonal, with cold and dry winters. Snow is not unknown in winter.

Notice that the seasonal pattern is different from the typical pattern in tropical America. In southern Africa a *Streptocarpus* plant can expect a cool dry winter and a warm moist summer growing season. In seasonal sections of tropical America it is more typical to have a hot dry summer and a cooler moister winter growing season. (*Streptocarpus kentaniensis* seems to be the only species that grows in a region where summer is the dry season.)



Streptocarpus kentaniensis
(grown and photographed by Martin Kunhardt)



Abscission zones on *S. prolixus* and *S. polyanthus* (photo by Chris Kunhardt)



Streptocarpus prolixus grown and photographed by Michael Riley

Streptocarpus plants in this seasonal-climate region have interesting adaptations to the cold and dry winter season. When the plant determines that winter is coming (apparently triggered by long nights) it will, like many plants, attempt to reduce its leaf area to reduce water loss. Most plants do this by dropping some or all leaves, but this option is not practical for a plant that only has one leaf, formed when it was a seedling. Instead, *Streptocarpus* plants will drop only a portion of the leaf! The plant can form an abscission zone, a narrow band of tissue that blocks water flow to and from the end of the leaf. This zone can be seen as a narrow pale line running laterally across the leaf. The end of the leaf is now cut off and will gradually die, and rot or dry and fall. More than half the leaf length may be disposed of in this way. The remaining portion of the leaf may wilt in the dry weather, but will recover when water is available. (Interestingly, leaves that have bloomed and are going to die do not form an abscission zone.)

When spring comes, the leaf will begin to grow again from the base. The basal growing region of some species of *Streptocarpus* (e.g. *S. fanniniae*) is visible as a narrow dark or red band in the midrib right at the base of the leaf.

Ordinary plants are unable to use the trick of dropping only part of a leaf because they grow from the tip, not from the base.

Many growers of rosette forms do not think of plants of *Streptocarpus* as strongly seasonal growers, similar to *Sinningia* for example. The seasonal growth pattern is less obvious in the hybrid rosette-form plants commonly grown, though occasionally these plants will form abscission zones. The seasonal growth pattern is unavoidably apparent in the unifoliate forms.

Because a unifoliate or plurifoliate *Streptocarpus* generally takes more than one year to mature, and because it will drop the end of the leaf each winter, it is seldom possible to grow such a plant to blooming size without having lost the end of the leaf at least once. This consequence of normal growth should be considered when judging *Streptocarpus* in flower shows.

Growers have been known to trim the bedraggled leaf end with pinking shears, then apply a little lemon juice to the cut edge as an anti-oxidant, in order to give the leaf a neater appearance for the public.

Begonia sutherlandii, a small-growing semi-tuberous orange-flowered *Begonia* species, is a frequent companion plant for *Streptocarpus* in southern Africa. It survives the dry season by forming small tubers, including tubers in the leaf axils. You may want to try it as a companion plant in a naturalistic planting.



Streptocarpus gardenii growing with *Begonia sutherlandii*.
(photo by Chris Kunhardt)

Adaptation to Vertical Surfaces

Many of the unifoliate species grow on steep or vertical surfaces such as stream banks, rock outcrops, or tree trunks. The habit of growing only one leaf may be an adaptation to living on vertical surfaces. It is very convenient to just drape one leaf down a cliff face, rather than wasting energy growing a stem that needs to support weight. The unifoliate growth form is found in some other plants that grow on vertical faces, such as *Sinningia defoliata*. It has also been reported that *Chirita capitis* will grow as a unifoliate when growing on a rock wall, but will grow as a stemmed plant when growing on level ground!

Plants in the genus *Streptocarpus* tend to be specialized forest dwellers, preferring moist partially shaded vertical locations. They have shallow fibrous root systems, so they require regular water when growing. They also tend to be accustomed to good drainage. This is probably connected to their habit of growing on rough-textured vertical or sloping surfaces. The plants root into crevices or into moss coverings on the rocks or trees. They prefer moderate to cool temperatures, and prefer medium light, so they will need some shade during summer.

Some species of *Streptocarpus* grow on rocky slopes not connected with forest. Generally, *Streptocarpus* favor rough-textured rocks such as granite and sandstone, and avoid smooth textured rocks such as shale. Also notice that granite and sandstone tend to be acidic rocks, and that limestone is not mentioned as a habitat for *Streptocarpus*.

In nature, some species seem to prefer particular altitude ranges. The exact reasons are not clear, perhaps it is due to particular temperature or rainfall conditions at that altitude.

Flowers and Fruit

In more "normal" gesneriads, flower stalks arise where a leaf meets a stem, and this is still the case with the caulescent *Streptocarpus*. This position for a flower stalk is not available in the acaulescent forms. Instead, flower stalks arise from the growing region at the base of the leaf. Once flowering begins, there are usually several stalks along the midrib of a leaf, each at a different stage of development. You can see the oldest stalk as a dry stump, one or more current stalks with flowers and seeds, and little knobs where new stalks are forming. The oldest stalk will be at the base of the leaf, with successively newer stalks farther up the midrib of the leaf.

Streptocarpus flowers are generally purple to blue, sometimes white, and there is one brick-red flowered species. Several species have yellow regions in the throat. As with all gesneriads, there are five fused petals forming the corolla. The shape generally includes a more-or-less narrow tube, expanding into an open face with the five lobes clearly distinguished. As with most gesneriads, the lobes show bilateral symmetry not radial symmetry, and the arrangement has one bottom lobe, two side lobes, and two upper lobes not vice-versa. There is considerable variation within the genus in narrowness of tube, size of flower, whether the tube is straight or bent, circular section or laterally compressed.... It is also noteworthy that flower color can show considerable variation within a species, but flower pattern and marking remain more constant. *Streptocarpus* (and the other African gesneriads) have two stamens. The flower stalk branches repeatedly, producing several flowers in pairs.



Streptocarpus candidus
(photo by Bob Stewart)



Streptocarpus baudertii
(photo by Bob Stewart)

The name of the genus comes from the twisted (*strepto-*) fruit (*carpus*). Once a flower has been pollinated, the ovary elongates and begins to twist. When the fruit is ripe, it dries and begins to open along the spiral seam, gradually releasing the seeds. The seed is small, with little stored food.

Propagation

One of the convenient properties of *Streptocarpus* plants is their ease of vegetative propagation. Rosette form plants are commonly propagated by placing almost any fragment of a leaf anywhere near a growing medium. Bill Richardson (who grew streptocarpus commercially) used to claim that he propagated by throwing leaves into a blender briefly, and spreading the resulting bits onto trays of mix. It may or may not be true, but it is quite believable.

Several varieties of *Streptocarpus* are capable of sprouting new plants from roots that reach the edges of their growing medium. *Streptocarpus johannis* (light form) seems to be particularly good at this. We have planted it in a 12" moss-lined wire basket. When roots reach down through the mix and out to the moss, they frequently form new plants, to the extent that the entire basket is covered top and bottom with plants.

Streptocarpus will grow readily from seed, and this is the normal method for propagating the monocarpic forms. Indeed, if seed is not collected promptly, you can end up with young plants in nearby pots. Plants grown from seed will often grow a small leaf, then growth will pause for several weeks, after which growth will resume.

Culture

Streptocarpus plants do not form a main tap root. Instead they have many branching roots, which tend to remain relatively close to the surface of the soil. The root mass often remains small, even on quite large plants. They can grow in relatively small pots.

Even moisture should be provided. *Streptocarpus* plants are adapted to seasonal winter dryness, but do not like sudden unplanned dryness during the growing season. Although small pots are generally used, young rosette-form plants can usefully be overpotted to encourage rapid growth, as long as watering is controlled to prevent soggy conditions.

The large unifoliate species can also be grown in small pots, however the leaf is likely to curl under, rub on bench tops, and become unattractive. These plants are best grown mounted on a vertical surface. This can be accomplished by wrapping the root ball in long-fiber sphagnum and tying the bundle to a piece of cork or other material. Watering must be frequent. Another approach would be to try growing them from the upper holes in a large strawberry jar. I suggest very coarse and well-drained potting material for this experiment. I have also seen unifoliate *Streptocarpus* grown on piles of cut peat blocks. "Just" pile up several large blocks into a heap, install plants on the vertical surfaces, and water well.

Streptocarpus need moderate light, much like *Saintpaulia*. Rosette forms will tolerate more light than the unifoliate forms. Inadequate light will reduce flowering. In nature, *Streptocarpus* plants tend to grow on the south side of their substrate. This is the shady side in the Southern hemisphere.

Streptocarpus tolerate and in fact prefer cooler conditions than *Saintpaulia*. Excessive temperature in summer or in enclosed growing areas

can retard development. Winter temperatures can be quite cool, but the plants are not hardy in most parts of this country.

Streptocarpus have not achieved great popularity as outdoor garden plants in this country. Most areas of the United States are too cold in the winter for *Streptocarpus* to survive outside as perennials. Most areas are also too hot and dry in the summer for *Streptocarpus* to do well. Whoever named this portion of the globe "the temperate region" must have lived somewhere else. It may be feasible to grow *Streptocarpus* as outdoor plants in semi-shaded conditions in some of the moist and temperate sections of the Pacific coast.

Hybridization

Rosette-form *Streptocarpus* have attained some modest popularity as houseplants. Hybridizing within *Streptocarpus* is generally easy to do, and seems to happen regularly in nature as well. Hybridization by humans began in 1859. Most of the currently popular hybrids are apparently largely derived from *S. rexii*, with substantial contributions from *S. dunnii* and other species. A new trend appeared in 1947 with the introduction of *S.* 'Constant Nymph', using *S. johannis*. Additional diversity was brought to the field in 1969 by the use of ionizing radiation to produce deliberate mutations.

Mixing-in some of the traits from the unifoliolate species, while still maintaining the perennial growth habit of the rosette forms, could enhance the genus' popular appeal. Many of the monocarpic species have some particular feature of horticultural interest. *Streptocarpus porphyrostachys*, *wendlandii* and some other species have beautiful purple-red leaf backs. *Streptocarpus dunnii* has red flowers, and also produces an orange-red pigment, which can appear on the surfaces of the leaf. *Streptocarpus vandeleurii*, *wilmsii*, *fanniniae* and some other species are scented. Unusual traits such as these hold possibilities for hybridizers.

Hybridizers may wish to note that there is some evidence that high growing temperatures inhibit formation of viable pollen in *Streptocarpus* (and perhaps in other gesneriads).



Streptocarpus 'Constant Nymph'
(photo from the AGGS collection)

Other Places, Other *Streptocarpus*

Madagascar is an island with many peculiar examples of fauna and flora (consider lemurs, for example). There are quite a few odd *Streptocarpus* species on Madagascar, from tiny mat-forming plants to two-meter shrubs. There is considerable scope for further study. With the exception of *Streptocarpus variabilis*, almost none of these plants are in cultivation.

Although *Streptocarpus* is fundamentally an African genus, there are a few plants from Asia that are classified as *Streptocarpus*. These pose taxonomic problems. Further study of the boundaries between *Streptocarpus*, *Didymocarpus*, *Boea*, *Chirita*, and other Asian genera could be fruitful.

Reference

This article can only skim the surface of the information available on the genus. Much of the information in this article comes from the standard reference work on the genus, *STREPTOCARPUS: An African Plant Study* by O. M. Hilliard and B. L. Burt, published by the University of Natal Press. This book is now out of print and is difficult to find, but it is where I must refer you for a truly thorough treatment.

Some Notable Species:

There are well over 100 species of *Streptocarpus*. We have only grown a few of them, and I give very brief descriptions of some of these below. Thanks in large part to the efforts of Chris and Martin Kunhardt, the AGGS Seed Fund now gives you the opportunity to try an amazing range of species which would have been completely unobtainable only a few years ago. (All the species listed below are available from the Seed Fund.) I encourage you to experiment with these fascinating plants.

- *S. cooperi* is an easy-to-grow unifoliate with large attractive flowers and a very large leaf; this is our favorite for startling visitors.
- *S. porphyrostachys* is a plurifoliate with striking red-purple undersides to the leaves. The flowers are dark purple.
- *S. johannis* is a rosette form perennial with abundant flowers in white or blue-purple. It is of modest size, easy culture, and has the interesting ability to form new plants wherever a root reaches the edge of the growing media.
- *S. fanniniae* is a large, creeping perennial species, with a sweet honey-like fragrance to the white to blue flowers. Unlike most *Streptocarpus* species, this one prefers wet marshy situations, where a colony can sprawl for hundreds of yards along a suitable wet bank or cliff.
- *S. dunnii* has brick red flowers, but an unattractive growth habit.
- *S. rimicola* is the most commonly grown miniature species. The leaf stays less than three inches long. Sometimes a second leaf will form, sometimes the leaf will grow a short "stem", and sometimes the leaf back will be reddish. Like the larger unifoliate species, this species is monocarpic; collect the seed.
- *S. vandeleurii* is a unifoliate with attractive white to creamy white flowers with an interesting scent.
- *S. kentaniensis* is notable for a number of features. It has very narrow leaves, with only thin margins of blade along the thick midrib. This species is probably evolving into a succulent. It is the only species to

bloom in mid-winter. It grows on south-facing (i.e. the shady side!) of rock faces, with roots wedged into cracks, alongside plants like *Sansevieria* and *Peperomia* in a region where the dry season occurs in summer, not winter. It also has a reputation for being difficult to propagate from leaf cuttings.

- *S. variabilis* is an unusual species from Madagascar. It is a modest-sized rosette form plant with broadly ovate leaves, and veins tending toward palmate. The plant seems to be fussier than many other species.
- *S. trabeculatus* is a thick-leafed unifoliate with extremely prominent veins.
- *S. candidus* has honey-scented flowers. It is a rosette form plant. The leaf size can vary from about three inches in unfavorable circumstances to over two feet with good conditions including high humidity.
- *S. daviesii* has a peculiar growth pattern. Once the plant is established, it will bloom each year. The blooming leaf will be about seven inches long, broad, often heart-shaped. At the base of the blooming leaf, and superimposed on top of it, will be a new young leaf that will grow to be the blooming leaf in the next year. The plant offers the visual appeal of a unifoliate, without the requirement to restart from seed every year. Hybridizers take notice.
- *S. denticulatus* is a six-inch unifoliate species. The species name refers to the margins of the corolla, which on some (but not all) plants are toothed.
- *S. haygarthii* is a foot-long unifoliate, often purplish-red below. The flowers are light violet, and have an interesting shape. The corolla lobes are more distinctly separated than in most species, giving a "flying" appearance, and the lobe edges are toothed. This is another opportunity for hybridizers.



Streptocarpus haygarthii showing the unusually shaped flowers of this species as well as the twisted fruit capsules typical of all streptocarpus.
(photo by Bob Stewart)



Streptocarpus vandeleurii
(photo by Toshijiro Okuto)



Streptocarpus candidus
(photo by Toshijiro Okuto)



Streptocarpus johannis
(photo by Toshijiro Okuto)



Streptocarpus dunnii
(photo by Toshijiro Okuto)

Growing *Streptocarpus* species

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It was in 1982 when I bought the book, *STREPTOCARPUS* by Hilliard & Burtt and I knew the wonderful world of *Streptocarpus* in it. Since then I've dreamed of growing as many of them as possible. I looked for sources of *Streptocarpus* species. A few species already being grown at botanic gardens in Japan and another few species from Kirstenbosch Botanical Garden in South Africa were all I got then. They were *S. rexii*, *S. gardenii*, *S. haygarthii*, *S. grandis*, *S. cooperi* and a few species of *Streptocarpella*. It was lucky for me to have met the late Chris Kunhardt in 1989, and he kindly gave me seeds of some species. Since then I have received a lot of seeds from him and his son, Martin Kunhardt. I've grown about 60 species by now among the 132 species described in the H&B book as well as some new species described after the book. I've grown them at the greenhouses of Hyogo Flower Center and Awaji Farm Park where I work.

Grouping of *Streptocarpus*

The genus *Streptocarpus* is divided into two subgenera: *Streptocarpus* and *Streptocarpella*. Roughly speaking, subgenus *Streptocarpus* is without a stem, and subgenus *Streptocarpella* is with a stem. According to the H & B book, there are four main groups in subgenus *Streptocarpus* classified on their growth patterns. They are unifoliate, plurifoliate, rosulate and the fourth group. Unifoliate species have only one leaf (usually big, and smaller supplementary leaves may be produced sometimes) and are monocarpic (die after fruiting) like *S. grandis*. Plurifoliate species are perennials with a few leaves, one of which is often much larger than the others, like *S. polyanthus*. Rosulate species are also perennial with several leaves of more or less equal size arising close together, like *S. rexii*. And as for the fourth group like *S. fanninia*, I grouped it together with rosulates in this article for convenience.

Cultivation of *Streptocarpus*

Propagation By Seed: In most cases, *Streptocarpus* species produce seed with natural pollination. But it would be a safe way to hand-pollinate them, because I used to get few seeds sometimes, depending on the species, or the conditions they were grown. Interspecific hybrids of *Streptocarpus* could be easily made at least within the subgenus *Streptocarpus*. I did some hybridization between various species, and I got viable seed in most of the cases. When you put different species close together, you might be afraid of natural crossings between the different species. I haven't seen any natural interspecific hybrids happening here so far. But I've often seen a kind of moth hovering in front of the flowers of streptocarpus and sucking nectar. The moths might find out that streptocarpus plants are good nectar sources, so I have to be careful not to let the flowers get hybridized by the moths.

You may sow seed soon after the harvest, or store it in a refrigerator after drying for a few days. I've stored seeds in the refrigerator at 2°C (just above the freezing point) and many (if not all) of them germinated well after more or less ten years. Every unifoliate species dies after flowering, so you usually have to grow new plants from seed. I grow plurifoliate species from seed, too, because they tend to decline after flowering once, except for the

vigorous species like *S. polyanthus ssp. polyanthus*. Some species of *Streptocarpella*, like *S. nobilis* and *S. thysanotus* are annuals or short-lived perennials. These species make tremendous amounts of seed and scatter them all over the place, so you'll find a lot of the seedlings in the pots there next year.

I sow the seed on fine vermiculite. I fill a small plastic pot with vermiculite, scatter seed on it, and keep bottom watering till I repot them. They start germinating ten to twenty days later (20-25°C [68-77°F] would be preferable for germination). I don't sow seeds in summer or just before the hot summer because high temperature prohibits germination and the small seedlings are less tolerant of heat. After germination, I add fertilizer to the bottom water once or twice before repotting.

Vegetative Propagation: Leaf cuttings are the common method for propagating rosulate species as well as cultivars of *Streptocarpus*. But the leaf cuttings apply to unifoliolate and plurifoliolate species, too. When the leaves of these species are relatively young, you can get plantlets from leaf cuttings, though the new leaves from the cuttings don't grow as big as those from seed. Dividing plants is another common way for rosulate and some plurifoliolate species; and stem cuttings are for streptocarrellas.

Growing Conditions

Temperature: Many species of subgenus *Streptocarpus* are from Southeast Africa ranging from subtropic to alpine climate. It appears that some species are less tolerant of high temperature. The species like *S. confusus*, *S. cyanandrus*, *S. dunnii*, *S. fanniniae*, *S. pumilus*, *S. vandeleurii*, and *S. variabilis* (Madagascar species) were heavily damaged and sometimes died during the summer. They grew well at the greenhouse kept cool with an air conditioning system. In general, most species of subgenus *Streptocarpus* declined with temperatures of up to 35°C (95°F) in summer here, so we shaded heavily the greenhouse in order to keep the temperature as cool as possible and protect the plants from leaf burn. Species of subgenus *Streptocarpella* I've grown were tolerant of heat, except for *S. kirkii* that deteriorated in summer. They are *S. caulescens*, *S. pallidiflorus*, *S. glandulosissimus*, *S. holstii*, *S. muscosus*, *S. nobilis*, *S. saxorum*, *S. stomandrus* and *S. thompsonii*.

Subgenus *Streptocarpella* didn't tolerate the cold weather, but subgenus *Streptocarpus* did very well. I've examined the hardiness of *Streptocarpus* in winter. I put the species outdoors under shelter from the rain during the winter at HFC where the temperature was down to a minimum of -5°C (23°F) sometimes at night. I didn't water them at all from the middle of December to the middle of March except for spraying lightly on the leaves a few times on warm days. The leaves of some species dried up to the base, or the others made abscission lines and dried to the line. *S. bauderitii* and *S. wendlandii* died during the winter, but others like *S. cooksonii*, *S. denticulatus*, *S. haygarthii*, *S. meyeri*, *S. polyanthus ssp. comptonii*, *ssp. verecundus*, *S. porphyrostachys*, *S. silvaticus*, *S. trabeculatus* and *S. vandeleurii* started new growth from the base of the dried leaves again and were restored quickly with the temperature going up.

Another thing I noticed was that low temperature influenced development of the inflorescence of some species. *S. daviesii*, *S. polyanthus ssp. comptonii*, *ssp. verecundus* and *S. silvaticus* (all were plurifoliolate) produced fewer flowers on short stalks when they were grown in the warm greenhouse.

On the other hand, they produced well-developed flower stalks and more flowers after they came through the winter outdoors.

Pots And Soil: I usually use clay pots. I prefer underpotting to overpotting. I repot streptocarpus as they grow, in 6cm (2.4") pots first, then to 9cm (3.5"), and finally to 12cm (4.7") or 15cm (5.9") according to the plant size. I don't use bigger pots even for the biggest unifoliate species. My growing medium is a mixture of peat moss, vermiculite and Hyuga-sune, a kind of volcanic sand. I use this mixture for growing most gesneriads.

Pests And Diseases: I haven't had any bad diseases on streptocarpus, but the plants have suffered from pests like mealybug, soil mealybug and thrips. Effective chemicals are available to eliminate these pests.

Flowering Time

The period from germination to first flowering is pretty much different according to the species, the time of the germination, or growing conditions. It's not that a species flowers after a fixed period. For instance, I sowed *S. grandis* in June, July, and January of the next year and all these flowered at almost the same time, in the second April. Our greenhouses are kept at a minimum temperature of 15-18°C (59-64°F) in winter. As far as rosulate species are concerned, six months to first flowering of *S. cyanandrus* was the shortest, and seventeen months for *S. fanniniae* was the longest. As for unifoliate and plurifoliate species, the shortest was nine months for *S. rimicola*, and the longest was twenty-three months for *S. eylesii*. In general, it took less than a year for rosulate species to flower for the first time, and one to two years for unifoliate and plurifoliate species.

Streptocarpus species are seasonal bloomers in the wild influenced by temperature, day length and rain. When I grew them at low temperatures and dry conditions in winter so that they went into dormancy, most species bloomed in early summer (May to July) once a year. When I grew them under warm conditions throughout the year at our greenhouses, they tended to bloom less seasonal, but even then they often made a flush of flowers in spring to early summer. I don't know what would happen under the conditions of growing with artificial light, constant temperature, constant day length and constant watering.

My Favorite Species

- S. cooksonii* (unifoliate): has one big leaf, and excellent inflorescence of deep purple flowers.
- S. eylesii* (unifoliate): has one big heart-shaped leaf, and clusters of scented large violet flowers held high above.
- S. fasciatus* (rosulate): is a vigorous grower with purplish pink flowers on long stalks.
- S. formosus* (rosulate): has pinkish violet flowers facing upward.
- S. johannis* (rosulate): is a compact plant with small violet flowers.
- S. kentaniensis* (rosulate): holds a lot of small white flowers above the thick slender leaves arranged radially; blooms in winter.
- S. penterianus* (plurifoliate): produces a small inflorescence of pure white flowers held above a compact heart-shaped, light green leaf.
- S. roseoalbus* (rosulate): is a compact plant with pink flowers; easy to grow.
- S. trabeculatus* (unifoliate): produces a dense cluster of lavender flowers matching with the light green leaf.
- S. saxorum* (*Streptocarpella*): is a trailer with fleshy oval leaves covered with violet flowers; excellent for a hanging basket.



Streptocarpus trabeculatus
(photo by Toshijiro Okuto)



Streptocarpus saxorum
(photo by Toshijiro Okuto)

Gesneriad Register

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The following registrations should be added to the Registered Gesneriads List found in Appendix C of the 1990 Gesneriad Register:

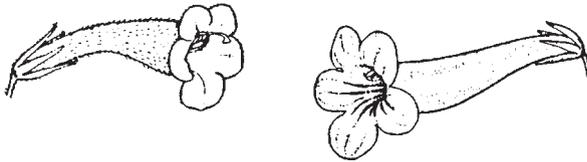
98537	<i>Streptocarpus</i> 'Juliana Sofia'	'Tiger Lily' × self	L. Potter
98538	<i>Streptocarpus</i> 'Ella'	'Lisa' × 'Heidi'	F. Davies
98539	<i>Streptocarpus</i> 'Frances'	'Jennifer' × self	F. Davies
98540	<i>Streptocarpus</i> 'Franken Kerry's Gold'	'Charlotte' × unnamed seedling	F. Davies/ K. Jones
98541	<i>Streptocarpus</i> 'Maggie'	'Lisa' × 'Kim'	F. Davies
98542	<i>Streptocarpus</i> 'Franken Maiden's Blush'	F7 seedling × 'Patricia'	F. Davies/ K. Jones
98543	<i>Streptocarpus</i> 'Mary'	F2 seedling × F2 seedling	F. Davies
98544	<i>Streptocarpus</i> 'White Wings'	'Heidi' × 'Lisa'	F. Davies
98545	<i>Streptocarpus</i> 'Dark Secret'	(<i>rexii</i> -like seedling × 'Falling Stars') × <i>porphyrostachys</i>	C. Rose
98546	<i>Streptocarpus</i> 'Gambit'	<i>parviflorus</i> × (white <i>johannis</i> × 'Elsi')	C. Rose
98547	<i>Streptocarpus</i> 'Inky Fingers'	<i>gardenii</i> (atypical form) × 'Sandra'	C. Rose
98548	<i>Streptocarpus</i> 'Largesse'	<i>formosus</i> × 'Elsi'	C. Rose
98549	<i>Streptocarpus</i> 'Old Rose Wine'	'Joanna' × ('Ruby' × 'Elsi')	C. Rose
98550	<i>Streptocarpus</i> 'Piccadilly Line'	<i>kentaniensis</i> × [(white <i>johannis</i> × 'Elsi') × 'Joanna']	C. Rose
98551	<i>Streptocarpus</i> 'Ruby Anniversary'	(<i>rexii</i> -type seedling × 'Falling Stars') × ('Ruby' × 'Elsi')	C. Rose
98552	<i>Streptocarpus</i> 'Simple Pleasures'	<i>parviflorus</i> × (white <i>johannis</i> × 'Elsi')	C. Rose
98553	<i>Streptocarpus</i> 'Turbulent Tide'	'Joanna' × ('Ruby' × 'Elsi')	C. Rose
98554	<i>Streptocarpus</i> 'Upstart'	<i>parviflorus</i> × (white <i>johannis</i> × 'Elsi')	C. Rose
98555	<i>Streptocarpus</i> 'Velvet Underground'	<i>formosus</i> × 'Elsi'	C. Rose
98556	<i>Streptocarpus</i> 'Violet Showers'	<i>parviflorus</i> × (white <i>johannis</i> × 'Elsi')	C. Rose
98557	<i>Streptocarpus</i> 'Al's Pal'	'Double Raspberry Parfait' × 'Blue Mars'	D. Martens
98558	<i>Streptocarpus</i> 'Gator's Tail'	'Pegasus' × <i>kentaniensis</i>	D. Martens
98559	<i>Streptocarpus</i> 'Lavender Rosette'	'Pegasus' × <i>kentaniensis</i>	D. Martens
98560	<i>Streptocarpus</i> 'Petite Pink Princess'	('Joker' selfed) × self	D. Martens
98561	<i>Streptocarpus</i> 'Texas Fantasy'	('Joker' selfed) × self	D. Martens
98562	<i>Streptocarpus</i> 'Texas Hot Chili'	('Joker' selfed) × self	D. Martens
98563	<i>Streptocarpus</i> 'Laura Elizabeth'	(parentage unknown)	J. Ellis
98564	<i>Streptocarpus</i> 'Hannah Ellis'	(white <i>johannis</i> × 'Elsi') × ('Ruby' × 'Elsi')	C. Rose
99565	<i>Streptocarpus</i> 'Amethyst'	'Ilsa' × 'Queen of Hearts'	J. Ford
99566	<i>Streptocarpus</i> 'Antique Rose'	141-A × 'King's Cloak'	J. Ford
99567	<i>Streptocarpus</i> 'Apple Blossom'	'Hunter' × unnamed seedling	J. Ford
99568	<i>Streptocarpus</i> 'Bandito'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99569	<i>Streptocarpus</i> 'Bermuda Sunset'	'Grape Slush' × 'Happy Time Gal'	J. Ford
99570	<i>Streptocarpus</i> 'Black Beauty'	'North Star' × 'North Star' selfed	J. Ford
99571	<i>Streptocarpus</i> 'Black Berry Brandy'	238-A × 244	J. Ford
99572	<i>Streptocarpus</i> 'Black Magic'	'Lady Anne' × 'Black Beauty'	J. Ford
99573	<i>Streptocarpus</i> 'Black Panther'	'North Star' × 'North Star' selfed	J. Ford
99574	<i>Streptocarpus</i> 'Blueberry Lane'	'Fleur-de-lis' × 'Happy Time Gal'	J. Ford
99575	<i>Streptocarpus</i> 'Bluebird'	238-A × 244	J. Ford
99576	<i>Streptocarpus</i> 'Blue Bonnet'	'Party Doll' × 'Purple Parfait'	J. Ford
99577	<i>Streptocarpus</i> 'Blue Heaven'	'Double Raspberry Parfait' × <i>johannis</i>	J. Ford
99578	<i>Streptocarpus</i> 'Brigadoon'	'Ruby River' × 'Forget Me Not'	J. Ford
99579	<i>Streptocarpus</i> 'Brown Sugar'	'Party Doll' × 'Purple Parfait'	J. Ford
99580	<i>Streptocarpus</i> 'Burgundy'	52-C × 'Toronto'	J. Ford
99581	<i>Streptocarpus</i> 'Can Can'	'Ice Capade' × 'Raspberry Charm'	J. Ford
99582	<i>Streptocarpus</i> 'Candy Cane'	'Ruffles in Pink' × 'Ruffles in Pink' selfed	J. Ford
99583	<i>Streptocarpus</i> 'Cappuchino'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99584	<i>Streptocarpus</i> 'Cecily'	'Ruby River' × 'Forget Me Not'	J. Ford

99585	<i>Streptocarpus</i> 'Cherry Cola'	'Sensation' × 'Toronto'	J. Ford
99586	<i>Streptocarpus</i> 'Cherry Vanilla'	'Cranberry' × 'Snow Sparkle'	J. Ford
99587	<i>Streptocarpus</i> 'Chorus Line'	'Ice Capade' × 'Snow Sparkle'	J. Ford
99588	<i>Streptocarpus</i> 'Christmas Eve'	'Sensation' × 'Christmas Morning'	J. Ford
99589	<i>Streptocarpus</i> 'Christmas Morning'	'Captain Blood' × 'Oglevee's Red'	J. Ford
99590	<i>Streptocarpus</i> 'Christopher Robin'	'Lemon Meringue' × 'White Nymph'	J. Ford
99591	<i>Streptocarpus</i> 'Cinnamon Girl'	'Cranberry' × 'Snow Sparkle'	J. Ford
99592	<i>Streptocarpus</i> 'Cool Blue Bitsy'	224 × 'Party Doll'	J. Ford
99593	<i>Streptocarpus</i> 'Coral Flair'	125-A × 'Coral Reef'	J. Ford
99594	<i>Streptocarpus</i> 'Cottontail'	'Blueberries and Cream' × 'Ariadne'	J. Ford
99595	<i>Streptocarpus</i> 'Cranberry'	'Imperial Lavender Lace' × 129A	J. Ford
99596	<i>Streptocarpus</i> 'Dalila'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99597	<i>Streptocarpus</i> 'Double Peppermint Candy'	'Cranberry' × 'Snow Sparkle'	J. Ford
99598	<i>Streptocarpus</i> 'Double Raspberry Parfait'	'Pink Petticoat' × 'Scottish Mist'	J. Ford
99599	<i>Streptocarpus</i> 'Double Trouble'	'Rosebud' × 'Purple Velvet'	J. Ford
99600	<i>Streptocarpus</i> 'Easter Bonnet'	'Party Doll' × 'Purple Parfait'	J. Ford
99601	<i>Streptocarpus</i> 'Easter Parade'	'Cranberry' × 'Snow Sparkle'	J. Ford
99602	<i>Streptocarpus</i> 'Engine Fire House'	'Christmas Morning' × 190-B	J. Ford
99603	<i>Streptocarpus</i> 'Fantasia'	'Sensation' × 'Christmas Morning'	J. Ford
99604	<i>Streptocarpus</i> 'Fiesta'	'Party Doll' × 'Purple Parfait'	J. Ford
99605	<i>Streptocarpus</i> 'First Love'	215 × 215-A	J. Ford
99606	<i>Streptocarpus</i> 'Fleur-de-lis'	'Prince Charming' × 'Prince Charming' selfed	J. Ford
99607	<i>Streptocarpus</i> 'Forever and a Day'	'Party Doll' × 'Purple Parfait'	J. Ford
99608	<i>Streptocarpus</i> 'Forget Me Not'	'Cranberry' × 'Snow Sparkle'	J. Ford
99609	<i>Streptocarpus</i> 'Grape Jelly'	'Scarlet O'Hara' × 'Marie'	J. Ford
99610	<i>Streptocarpus</i> 'Happy Girl'	'Red Riding Hood' × Swartz-9	J. Ford
99611	<i>Streptocarpus</i> 'Happy Snappy'	125-A × 'Coral Reef'	J. Ford
99612	<i>Streptocarpus</i> 'Happy Snowflake'	'Blueberries and Cream' × 'Ariadne'	J. Ford
99613	<i>Streptocarpus</i> 'Happy Time Gal'	'Red Riding Hood' × Swartz-9	J. Ford
99614	<i>Streptocarpus</i> 'Ice Capade'	'Lavender Lace' × 'Toronto'	J. Ford
99615	<i>Streptocarpus</i> 'Ice Carnival'	'Lavender Lace' × 'Toronto'	J. Ford
99616	<i>Streptocarpus</i> 'Irish Rose'	'Rosebud' × Mikkelson's Pink	J. Ford
99617	<i>Streptocarpus</i> 'Ivory Snow'	'Happy Snowflake' × 'Fleur-de-lis'	J. Ford
99618	<i>Streptocarpus</i> 'Jack Frost'	238-A × 244	J. Ford
99619	<i>Streptocarpus</i> 'Jamboree'	'Cranberry' × 'Snow Sparkle'	J. Ford
99620	<i>Streptocarpus</i> 'Jericho'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99621	<i>Streptocarpus</i> 'Joey'	'Party Doll' × 'Joker'	J. Ford
99622	<i>Streptocarpus</i> 'Joker'	'Red Riding Hood' × Swartz-9	J. Ford
99623	<i>Streptocarpus</i> 'Juliet'	'Sensation' × 'Christmas Morning'	J. Ford
99624	<i>Streptocarpus</i> 'King's Cloak'	'Burgundy' × 'Amethyst'	J. Ford
99625	<i>Streptocarpus</i> 'Laflora Animada'	'Cranberry' × 'Snow Sparkle'	J. Ford
99626	<i>Streptocarpus</i> 'Lemon Ice'	199-B × 154-A	J. Ford
99627	<i>Streptocarpus</i> 'Lemon Meringue'	199-B × 199-B selfed	J. Ford
99628	<i>Streptocarpus</i> 'Little Bear'	'Party Doll' × 'Purple Parfait'	J. Ford
99629	<i>Streptocarpus</i> 'Little Darling'	146-C × 'Sunrise'	J. Ford
99630	<i>Streptocarpus</i> 'Little Girl'	'Jinx Karen' × 'Karen'	J. Ford
99631	<i>Streptocarpus</i> 'Little Miss Priss'	'Cranberry' × 'Snow Sparkle'	J. Ford
99632	<i>Streptocarpus</i> 'July Fourth'	'Streaker' × 152-B	J. Ford
99633	<i>Streptocarpus</i> 'Melody'	'Ocean Rain' × 'Party Doll'	J. Ford
99634	<i>Streptocarpus</i> 'Minuet'	'Ocean Rain' × 'Party Doll'	J. Ford
99635	<i>Streptocarpus</i> 'Midnight Blue'	'Black Panther' × 94-A	J. Ford
99636	<i>Streptocarpus</i> 'Midnight Magic'	'Imperial Lavender Lace' × 'Thunder Blue'	J. Ford
99637	<i>Streptocarpus</i> 'Miranda'	'Party Doll' × 'Purple Parfait'	J. Ford
99638	<i>Streptocarpus</i> 'Moonlight Magic'	'Sensation' × 'Toronto'	J. Ford
99639	<i>Streptocarpus</i> 'Moon Over Miami'	'Black Magic' × 199-A	J. Ford
99640	<i>Streptocarpus</i> 'Moonstone'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99641	<i>Streptocarpus</i> 'Morning Song'	'July Fourth' × Blue 215	J. Ford
99642	<i>Streptocarpus</i> 'My Fair Lady'	Swartz-10 × 'Black Panther'	J. Ford
99643	<i>Streptocarpus</i> 'Niagara Falls'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99644	<i>Streptocarpus</i> 'Nova Scotia'	'Cranberry' × 'Snow Sparkle'	J. Ford
99645	<i>Streptocarpus</i> 'Ocean Rain'	120-E × 'Ruffles in Pink'	J. Ford

99646	<i>Streptocarpus</i>	'Ontario Wild Rose'	'Oglevee's Red' × 'Diana'	J. Ford
99647	<i>Streptocarpus</i>	'Over the Rainbow'	'Party Doll' × 'Purple Parfait'	J. Ford
99648	<i>Streptocarpus</i>	'Overture'	'Ruby River' × 'Forget Me Not'	J. Ford
99649	<i>Streptocarpus</i>	'Peppermint Pink'	'Cranberry' × 'Snow Sparkle'	J. Ford
99650	<i>Streptocarpus</i>	'Peppermint Schnapps'	'Cranberry' × 'Snow Sparkle'	J. Ford
99651	<i>Streptocarpus</i>	'Pianissimo'	'Cranberry' × 'Snow Sparkle'	J. Ford
99652	<i>Streptocarpus</i>	'Piccalilli'	'Sensation' × 'Christmas Morning'	J. Ford
99653	<i>Streptocarpus</i>	'Pink Souffle'	'Ruffles in Pink' × 'Ruffles in Pink' selfed	J. Ford
99654	<i>Streptocarpus</i>	'Purple Martin'	'Cranberry' × 'Snow Sparkle'	J. Ford
99655	<i>Streptocarpus</i>	'Purple Parfait'	215 × 215-A	J. Ford
99656	<i>Streptocarpus</i>	'Purple Passion'	120-E × 'Ruffles in Pink'	J. Ford
99657	<i>Streptocarpus</i>	'Purple People Eater'	120-E × 'Ruffles in Pink'	J. Ford
99658	<i>Streptocarpus</i>	'Purple Perlexity'	'Cranberry' × 'Snow Sparkle'	J. Ford
99659	<i>Streptocarpus</i>	'Purple Spider'	'Chorus Line' × 'Black Panther'	J. Ford
99660	<i>Streptocarpus</i>	'Purple Tiger'	CK54 (<i>fasciatus</i>) × 'Black Panther'	J. Ford
99661	<i>Streptocarpus</i>	'Rain Dance'	120-E × 'Ruffles in Pink'	J. Ford
99662	<i>Streptocarpus</i>	'Raspberry Charm'	52 × 'Toronto'	J. Ford
99663	<i>Streptocarpus</i>	'Razzamatatz'	'Cranberry' × 'Snow Sparkle'	J. Ford
99664	<i>Streptocarpus</i>	'Red Ransom'	'Ruby River' × 'Forget Me Not'	J. Ford
99665	<i>Streptocarpus</i>	'Red Riding Hood'	'Fuschsia Nymph' × (So. W.' × 'Oglevee's Red')	J. Ford
99666	<i>Streptocarpus</i>	'Romeo'	'Sensation' × 'Christmas Morning'	J. Ford
99667	<i>Streptocarpus</i>	'Ruby Rapture'	'Sensation' × 'Christmas Morning'	J. Ford
99668	<i>Streptocarpus</i>	'Ruffles in Pink'	'Rosebud' × 'Mikkelson's Pink'	J. Ford
99669	<i>Streptocarpus</i>	'Sapphire'	'Fleur-de-lis' × 'Happy Time Gal'	J. Ford
99670	<i>Streptocarpus</i>	'Scottish Mist'	51-B × 36-A	J. Ford
99671	<i>Streptocarpus</i>	'Seashell Pink'	Mikkelson's Pink' × 'Ariadne'	J. Ford
99672	<i>Streptocarpus</i>	'Sensation'	120-E × 'Ruffles in Pink'	J. Ford
99673	<i>Streptocarpus</i>	'Silhouette'	'Cranberry' × 'Snow Sparkle'	J. Ford
99674	<i>Streptocarpus</i>	'Sir Lancelot'	'Cranberry' × 'Snow Sparkle'	J. Ford
99675	<i>Streptocarpus</i>	'Sky Blue'	6-A × 'Twilight'	J. Ford
99676	<i>Streptocarpus</i>	'Slumber Song'	'First Love' × 'Coventry'	J. Ford
99677	<i>Streptocarpus</i>	'Strawberry Jam'	51-B × 36-A	J. Ford
99678	<i>Streptocarpus</i>	'Strawberry Shortcake'	'Cranberry' × 'Snow Sparkle'	J. Ford
99679	<i>Streptocarpus</i>	'Sugar and Spice'	'Cranberry' × 'Snow Sparkle'	J. Ford
99680	<i>Streptocarpus</i>	'Swan Lake'	'Cranberry' × 'Snow Sparkle'	J. Ford
99681	<i>Streptocarpus</i>	'Thumbellina'	'Grape Slush' × 'Happy Time Gal'	J. Ford
99682	<i>Streptocarpus</i>	'Thunder Blue'	'Lavender Lace' × 'Black Magic'	J. Ford
99683	<i>Streptocarpus</i>	'Tinker Bell'	'Party Doll' × 'Joker'	J. Ford
99684	<i>Streptocarpus</i>	'Tiny Dancer'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99685	<i>Streptocarpus</i>	'Tiny Tim'	'Sunrise' × 'Coral Flair'	J. Ford
99686	<i>Streptocarpus</i>	'Tom Thumb'	'Party Doll' × 'Joker'	J. Ford
99687	<i>Streptocarpus</i>	'Toronto'	'Ilsa' × 'Queen of Hearts'	J. Ford
99688	<i>Streptocarpus</i>	'Touch of Love'	215 × 215-A	J. Ford
99689	<i>Streptocarpus</i>	'Twilight'	'Grape Slush' × 'Happy Time Gal'	J. Ford
99690	<i>Streptocarpus</i>	'Valentine'	'Cranberry' × 'Snow Sparkle'	J. Ford
99691	<i>Streptocarpus</i>	'Waterwheel'	'Grape Slush' × 'Happy Time Gal'	J. Ford
99692	<i>Streptocarpus</i>	'White Christmas'	'Ruby River' × 'Forget Me Not'	J. Ford
99693	<i>Streptocarpus</i>	'White Star'	'Cranberry' × 'Snow Sparkle'	J. Ford
99694	<i>Streptocarpus</i>	'Wild Fire'	'Ruby River' × 'Forget Me Not'	J. Ford
99695	<i>Streptocarpus</i>	'Wind Chimes'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99696	<i>Streptocarpus</i>	'Starlit Sky'	'Cranberry' × 'Snow Sparkle'	J. Ford
99697	<i>Streptocarpus</i>	'Susie Sunshine'	'Christmas Morning' × 190-B	J. Ford
99698	<i>Streptocarpus</i>	'Waterfall Wonder'	'Grape Slush' × 'Happy Time Gal'	J. Ford
99699	<i>Streptocarpus</i>	'Wedding Day'	'Cranberry' × 'Snow Sparkle'	J. Ford
99700	<i>Streptocarpus</i>	'Crimson and Clover'	'Cranberry' × 'Snow Sparkle'	J. Ford
99701	<i>Streptocarpus</i>	'Mama Mia'	'First Love' × 'Coventry'	J. Ford
99702	<i>Streptocarpus</i>	'Peach Pink Petticoat'	'Party Doll' × 'Purple Parfait'	J. Ford
99703	<i>Streptocarpus</i>	'Purple Spotted Spider'	'Lemon Meringue' × 'Purple Tiger'	J. Ford
99704	<i>Streptocarpus</i>	'Ruby River'	136-D × 137-A	J. Ford
99705	<i>Streptocarpus</i>	'Soft-N-Silky Sweetheart'	'Rosebud' × 'Mikkelson's Pink'	J. Ford

99706	<i>Streptocarpus</i> 'Spectacular Velvet Midnight'	'Cranberry' × 'Snow Sparkle'	J. Ford
99707	<i>Streptocarpus</i> 'Blue Iceberg'	'Blushing Bride' × 'White Nymph'	J. Ford
99708	<i>Streptocarpus</i> 'Firelands'	'Judy's Delight' × 'Raspberry Charm'	J. Ford
99709	<i>Streptocarpus</i> 'Imperial Lavender Lace'	'Lavender Lace' × 'Toronto'	J. Ford
99710	<i>Streptocarpus</i> 'Jasper Sunshine'	'Party Doll' × 'Purple Parfait'	J. Ford

Due to space constraints, full descriptions of all the newly registered *Streptocarpus* hybrids will not be included here but will appear in the new 1999 *Streptocarpus* Register (see back cover for ordering information).



The Gesneriad Register of *Streptocarpus*

The newly revised Gesneriad Register of the genus *Streptocarpus* is now available. This register is over 100 pages long and includes published and registered cultivar names in the genus, as well as all known species.

Send for the 1999 *Streptocarpus* Register today. The cost is only \$8.00 for this up-to-date wealth of information on this exciting genus. See the back cover and order your copy today from AGGS Publications.

The American Gloxinia and Gesneriad Society, Inc. is the International Registration Authority for the names of gesneriads excepting the genus *Saintpaulia*. As such, we publish this information in The Gesneriad Register and make it available to all interested parties.

Judy Becker, Registrar

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Coming Events

August 16-17 — California — Grow & Study Chapter annual judged show and sale at the Huntington Mall, Huntington Beach. Open during regular mall hours. Contact Dee Probert (714-548-4713).

September 18 — Massachusetts — New England Chapter AGGS and American Begonia Society annual co-sponsored show and sale at University of Massachusetts Eastern Extension Center, 240 Beaver Street, Waltham. Saturday 12:00 noon to 3:00 pm. Free admission; handicapped accessible. Contact Alice Courage (508-640-1516) or <HelenDF@aol.com>.

September 25-26 — Missouri — Heart of America Gesneriad Society annual show and plant sale at Loose Park Garden Center, 5200 Pennsylvania Ave., Kansas City. Saturday 10:00 am to 3:00 pm; Sunday 10:00 am to 2:00 pm. Contact Linda Golubski, Show Chair, <golubski@kc.net>.

October 2 — New Jersey — Frelinghuysen Arboretum Chapter sponsored AGGS Judging School (Ben Paternoster instructor) at the Frelinghuysen Arboretum in Morristown. Saturday 9:00 am to 5:00 pm. Plant sale open following school. Registration and \$15 fee (includes lunch) required by September 18th. Contact Jeanne Katzenstein, 1 Hallvard Terrace, Rockaway, NJ 07866 <jkatzenste@aol.com>.

October 3 — New Jersey — Frelinghuysen Arboretum Gesneriad Society annual show and plant sale at the Frelinghuysen Arboretum in Morristown. Sunday 10:00 am to 4:00 pm. Free admission and parking; handicapped accessible. Contact Jeanne Katzenstein (973-627-2755) <jkatzenste@aol.com>.

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Gesneriads, The Internet and You

David Turley <dturley@pobox.com>
6118 Windsor Dr., Fredericksburg, VA 22407

As you read this, the 1999 AGGS Convention in Nashville will be a pleasant memory. I will have had the pleasure of meeting many of my online friends in person. With your help, there will be plenty of pictures of people and plants from the convention posted on the AGGS web site. If you have any photos to share, please contact me.

Speaking of photos, I hope you have discovered the updated *Streptocarpus* photo section on the web site. We recently added 73 pictures of *Streptocarpus* species from Toshijiro Okuto. I received many positive comments about this photo collection, and AGGS is indebted to Toshijiro for his generosity. You'll also notice the new layout used for the *Streptocarpus* section of the photo gallery. I think this will make for easier viewing. As time allows, I will be updating the rest of the photo gallery with this format.

I hope all of you enjoyed the annual online auction to support the Frances Batcheller Endowment Fund. This event is looked forward to by many of our online visitors. Watch the next issue of THE GLOXINIAN for complete results from this event.

This was also the first year that you were able to register for convention online using a secure form on our web site. Many of you took advantage of this service. It's a great time saver and makes it easier on our registration chairpersons as well.

Another recent change to the AGGS web site is the new "Gesneriad Message Corner". The discussion area was completely redone, with new software and a new look. We now have the ability to host multiple discussion forums for different topics. Currently there are three discussion forums open, "General Gesneriads", "Hybridizing", and "Swap Shop". Since their inception, the forums have proven to be a popular part of the AGGS online presence. In addition, the new forums will allow you to mark messages read. When you do this, new messages that have been added since your last visit are flagged as "NEW". This will help to ensure you don't miss any posts.

In keeping with the special "*Streptocarpus*" theme of this issue of THE GLOXINIAN, I am including in this month's column some recent posts concerning this popular genus.

J. Welch asked for help in finding a book: "We are looking for the source of the book, *Streptocarpus* by Rex & Gareth Dibley. Any information would be appreciated."

Soili Damm provided a pointer: "What about ordering it directly from the author? Just visit their home page <http://www.3wa.co.uk/dibleys>." (Dibley's now has a web site at <http://www.dibleys.com/>)

Lynda queried: "I have a strep that had a bloom. When the bloom dropped off there was left this 1/2" green twistie thing. Could this be a seed pod? None of my other streps have ever done this before. I believe the variety is 'Suzie'."

David replied: "Yep, that's a seed pod. *Streptocarpus* means 'twisted fruit'. Since this is a hybrid, there may or may not be viable seed inside. Just watch the fruit, it will dry and begin to untwist when ripe. Remember, don't label any seedlings from this as 'Suzie', but rather as 'Suzie' × self."

Alan LaVergne provided more details: "If the fruit ripens, it will wind up a couple of inches long. As David said, the spiraled fruit gives the genus its name. I got a lot of seed from *S. 'Suzie'* and now have a lot of 'Suzie' × self seedlings. I also crossed 'Suzie' with *S. wendlandii* and got another healthy fruit, so there's plenty of fertility left in 'Suzie'. Most *Streptocarpus* seed is not fussy about sowing conditions (just needs light to germinate, so don't keep the seed tray in the dark). Also, strep seed germinates quickly (usually about two weeks), so do try it out. Watching the seedlings develop is a treat."

Of course, *Streptocarpus* aren't the only plants discussed: **Derick Pittman** asked: "I am looking for gesneriads that will take the same conditions outside as *Lysionotus montanus*, *Titanotrichum*, and *Petrocosmea flaccida*. These three did very well for me this winter; they survived the winter of a USDA Zone 9. I am very interested in adding cooler growing gesneriads to my collection. I had some that survived last year like *Nematanthus* and *Aeschynanthus evrardii*, but the temperature dropped down into the 20's at night for a couple of weeks and the ones above are the only ones to have survived this chill. How do you start alpine gesneriad seeds? Thanks to all for any help."

John Boggan replied: "Zone 9 may actually be too warm for some gesneriads. The alpine are quite winter hardy, but they have problems making it through hot summers.

"You should definitely try *Hemiboea subcapitata* (formerly known as *H. henryi*), which is not an alpine but has proven reliably winter-hardy as far north as Illinois. It spreads by underground rhizomes; and although the top growth dies down entirely in winter, it will re-sprout from the rhizomes in the spring.

"There is another *Hemiboea* in cultivation, *H. bicornuta*, which is probably not as hardy but may tolerate cool winter temperatures short of an extended hard freeze."

Laura shared her experience: "Cool growers that have done well for me: *Chirita*, *Hemiboea*, *Streptocarpus*, *Petrocosmea*, *Primulina*.

"Note that alpine species are the only ones that may tolerate periods of frost. The cool-growers I listed above prefer cooler conditions, but are not necessarily considered alpine.

"Alpine gesneriads don't require anything different for germination, except maybe extra patience. They can be VERY slow to germinate."

The discussion forums are open to everyone. Please check in regularly for interesting gesneriad discussions.

Remember, your comments, criticisms, and suggestions are always welcome. (Criticisms that come with suggestions even more so.) You can write me at webmaster@aggs.org. The AGGS web site is at <http://www.aggs.org/>.

The Unifoliolate Scorecard

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How many of you have grown a unifoliolate streptocarpus? I know, it's not easy — you have to grow it from seed and that's so much trouble. You wait and wait for flowers that may never develop, the in-laws come to visit and make fun of your hobby, the pizza delivery man can't find your house, and then you listen to Prairie Home Companion and wind up writing like this.

If you're going to go to all the trouble of raising a unifoliolate, you want it to turn out well. You don't want a major disappointment at the end of it all — scruffy little flowers on a big ugly leaf that pushes your other pots onto the floor. That's a letdown which can be avoided if you consult the unifoliolate scorecard below. It will keep you from starting with the wrong one. You might be tempted to pick *Streptocarpus dunnii*, because you can pronounce it and because you hear it's got red flowers. What you haven't heard: 3-1/2 years from seed to flower. You will surely avoid *S. porphyrostachys*. Your in-laws would ask you what it is, and you'd have to say porpoise-tushes or something, and they'd make fun of you again. But you'd be wrong: *S. porphyrostachys* is a wonderful, can't-miss plant. Just learn to say POR-feer-o-STACK-iss — let it roll off your tongue, and take that, in-laws!

How I Grade the Unifoliate

First the plant should be easy to grow. If it dies easily, you'll find it in the flunk list below.

A plant will get points for an attractive leaf. After all, the plant is going to spend 80% of its life as that one leaf so it should be pleasant to look at. Don't underestimate the star quality of that leaf either. People who visit my cubicle at work usually don't give the gesneriad flowers a second glance, but many look at the *S. saundersii* leaf and say, "What's that????". Some of the unifoliate have intensely colored leaf backs.

Third, the flowers should be attractive too. You don't want to wait for them and then find out they are boring. Most unifoliate have smaller flowers than the great strep hybrids, and there isn't as much variety in color; but some, like *S. cooperi*, have dramatic flowers which leave nothing to be desired.

I give extra credit for being compact and for quickness to bloom. The smaller the plant, the more of them you can grow. The faster the plant comes into bloom, the fewer things which can go wrong.

Okay, here's the usual disclaimer. This is based on my own experience and my own tastes. If I liked the flowers of *S. bolusii* better, it would get a better grade; but if you like white flowers, it could be an A+ plant for you. In all other respects, *S. bolusii* is a terrific plant.

All the plants I list were grown from seed from the AGGS Seed Fund. Seed of all of them is listed in this issue of THE GLOXINIAN. If your favorite unifoliolate isn't in my scorecard, it's because I haven't grown it from seed.

Enough chat. Here are the grades.

The A Group

S. cooperi. Dramatic flowers, the best of any unifoliolate I've seen. Year and a half from seed to flower. A best buy!

S. porphyrostachys. The best leaf back: deeply sculptured, gorgeous intense purple. Year and 3 months from seed to flower. A best buy! Although the plant does not die after blooming, it should be restarted from seed. The secondary leaves make an awkward clump which Peninsula Gesneriad Society president JoAnna Behl describes as a "cabbage".

S. wendlandii. Handsome flowers, leaf almost as attractive as *S. porphyrostachys*. The leaf stalk gets very thick, another dramatic feature. But: three years from seed to flower.

S. haygarthii. A variable species. One type has red leaf back and cute, fringed-looking flowers. Another type has a plain green leaf back and larger, more strep-like flowers. Two years from seed to flower.

S. wittei. Flowers have "creosote and honey" aroma. Not a strict unifoliolate; plant produced more leaves which bloomed in succeeding years. Year and six months from seed to bloom.

S. prolixus. Compact leaf with attractive upper surface. Six-inch leaf will bloom. Flowers, large for size of plant, are light purple with yellow throat — if the color combination appealed to me more, this would be a best buy.

S. saundersii. Red-backed leaf. A *porphyrostachys* relative with pure white flowers. Easy. Eighteen months from seed to bloom. Flower size appears to vary between plants.



Streptocarpus cooperi
(photo by Toshijiro Okuto)



Streptocarpus bolusii
(photo by Toshijiro Okuto)



Streptocarpus porphyrostachys
(photo by Toshijiro Okuto)

The B Group

S. bolusii. Nice small-leaved species. Red leaf back. Year and four months from seed to flower. Flowers are plain white, small (about 1 cm long), with a faint tinge of lavender on outside, and do not have a delicate appearance; otherwise this species would be in the A group. Though small, the plant is admirably tough; this past winter it survived 28°F (-2°C) temperatures and sitting for weeks in inch-deep water.

S. michelmorei. Another species which would be in the A group if the flowers were more interesting. Two years from seed to bloom. Plant stays compact, and is very easy to grow. Leaf back is plain green.

The C Group

S. trabeculatus. A very attractive leaf, with a densely hairy underside. The robust flowerstalk is worth the price of admission. The leaf can get quite large. Three years from seed to bloom. Flowers are okay, not great. Because of the leaf, this is one of my favorite unifoliate, but not a good one to start with.

S. denticulatus. A very attractive crinkly leaf, especially when the plant is young. The leaf can get quite large. Two years from seed to bloom. But: the flowers last only a day or two. The result is a messy-looking flowerstalk, unless it is constantly groomed.

S. dunnii. The red-flowered species, from which the red in all hybrid strep flowers derives. The leaf can get up to 3 feet long, but a mature one-foot leaf can bloom. Three and a half years from seed to flower. There are orange spots on the underside of the leaf, owing to the presence of a pigment

named dunnione after this species. This appeals to me, but you might be underwhelmed. How red the flowers are varies with the plant. I haven't seen any red-red-RED! flowers. It's not red like *Sinningia cardinalis*. The lack of an intense red could be a disappointment.

The Flunk List

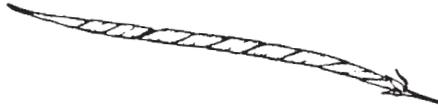
S. confusus. I tried hard, but could not keep these guys alive. I could blame myself. Nahhhh.

S. eylesii. Other people have had success with this one, but not me. Try *S. wittei* (or *S. vandeleurii*) instead.

S. goetzei. Started out okay, but died one by one. My last plant didn't survive the winter; the only other unifoliates to die had already bloomed.

Summation

If you've never tried a unifoliate strep before, do it now. Pick one of the A group, and you will not be disappointed!



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Botanical Review Committee - Report #19

John Boggan <boggan.john@nmnh.si.edu>
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Washington, DC 20670

Maximilian Weigend and Trevor J. Edwards, 1996. The palynology of *Streptocarpus* and the other African and Malagasy Gesneriaceae and its systematical implications. *Bot. Jahrb. Syst.* 118: 59-80.

The pollen morphology of 128 African/Malagasy and 2 Asiatic species, representing 7 genera, was investigated. The pollen morphology suggests a close relationship among the genera *Schizoboea*, *Saintpaulia*, African and Malagasy *Streptocarpus* and the Malagasy *Didymocarpus*, and a relationship of this group to the African genera *Acanthonema*, *Linnaeopsis* and *Trachystigma*. The species of *Didymocarpus* on Madagascar are not closely related to the Asian species of *Didymocarpus*, and should be either recognized as a new genus related to *Streptocarpus*, or included in *Streptocarpus*. The African and Malagasy gesneriads appear to be a natural group with a common evolutionary origin. However, the Asiatic species of *Streptocarpus* do not belong in this group and are probably more closely related to *Chirita*.

O.M. Hilliard and B.L. Burtt, 1997. New names in *Epithema* (Gesneriaceae). *Edinburgh Journal of Botany* 54: 111-113.

In preparation for a revision of the genus *Epithema*, seven new species are described and several other taxonomic changes are made. The new species come from Burma, Peninsular Malaysia and Malaysian Borneo, the islands of Timor and Sumatra in Indonesia, the Solomon Islands, and the Philippine Islands.

M. Mendum, 1998. Notes on *Aeschynanthus* (Gesneriaceae) from Seram. *Edinburgh Journal of Botany* 55: 359-365. Illustrated.

Two new species of *Aeschynanthus*, *A. intraflavus* and *A. roseoflorus*, are described from the poorly known Indonesian island of Seram, which lies between Sulawesi (Celebes) and New Guinea. The new species seem to be closely related to species of New Guinea. A description is also provided for *Aeschynanthus amboinensis*, a species previously described from *Amboina* (as *Trichosporum amboinense*) which is now also known from Seram. Unlike the other two species, *A. amboinensis* seems to be more closely related to species to the west.

M. Mendum and P.J.B. Woods, 1997. *Aeschynanthus flavidus* (Gesneriaceae), a new species from Sarawak. *Edinburgh Journal of Botany* 54: 254-257. Illustrated.

The new species *Aeschynanthus flavidus* is described. The species is placed in section *Aeschynanthus*. The plant is a sub-shrubby epiphyte with bright yellow flowers, and is only known from three localities.

R. Samuel, W. Pinsker, and M. Kiehn, 1997. Phylogeny of some species of *Cyrtandra* (Gesneriaceae) inferred from the *atpB/rbcL* cpDNA intergenic region. *Botanica Acta* 110: 503-510.

The relationships of several species of *Cyrtandra* to each other, and of the genus *Cyrtandra* to other genera (*Monophyllaea*, *Didissandra*, and *Didymocarpus*) of subfamily *Cyrtandroideae*, were studied using chloroplast

DNA. The results suggest that *Monophyllaea* is only distantly related to the other genera studied, while *Cyrtandra* is closely related to the genus *Didymocarpus*. The results also suggest a complex pattern of colonization of the Pacific islands by *Cyrtandra*, and provide some preliminary hints of relationships within this large and difficult genus.

J.F. Smith, M.E. Kresge, M. Möller, and Q.C.B. Cronk, 1998. A cladistic analysis of *ndhF* sequences from representative species of *Saintpaulia* and *Streptocarpus* subgenera *Streptocarpus* and *Streptocarpella* (*Gesneriaceae*). *Edinburgh Journal of Botany* 55: 1-11.

The relationships between *Saintpaulia* and *Streptocarpus* were studied using chloroplast DNA. In support of a previous study using ribosomal DNA, the results show that *Saintpaulia* is closely related to the African mainland species of *Streptocarpus* subgenus *Streptocarpella*, whereas the African species of *Streptocarpus* subgenus *Streptocarpus* are less closely related to either group; i.e., *Saintpaulia* has evolved from *Streptocarpus* subgenus *Streptocarpella*, losing its twisted fruit in the process. These relationships are also supported by pollen morphology and chromosome numbers. To better reflect these relationships, it is possible that *Streptocarpus* subgenus *Streptocarpella* will be recognized as a genus in its own right in the near future.

Wang Xiao-Quan and Li Zhen-Yu, 1998. The application of sequence analysis of rDNA fragment to the systematic study of the subfamily *Cyrtandroideae* (*Gesneriaceae*). *Acta Phytotaxonomica Sinica* 36: 97-105. In Chinese with English abstract.

The relationships of five Chinese species, representing five genera of four tribes of the Old World subfamily *Cyrtandroideae*, were studied using ribosomal DNA. The results suggest that tribe *Klugieae* (represented by *Whytockia*) is distantly related to the other tribes, representing an early offshoot of subfamily *Cyrtandroideae*, but that tribes *Trichosporeae* (represented by *Anna*) and *Cyrtandreae* (represented by *Cyrtandra*) evolved from within tribe *Didymocarpeae* (represented by *Chirita* and *Briggsia*). The authors suggest that tribes *Trichosporeae* and *Cyrtandreae* should be merged with tribe *Didymocarpeae*.

Smith, J.F., J.C. Wolfram, K.D. Brown, C.L. Carroll, & D.S. Denton. 1997. Tribal relationships in the *Gesneriaceae*: evidence from DNA sequences of the chloroplast gene *ndhF*. *Annals of the Missouri Botanical Garden* 84: 50-66.

This study differs from Smith 1997 in that it examines relationships using chloroplast DNA, rather than morphology. Surprisingly, it gives better support to current tribal arrangements, which have been based largely on morphology. As in the morphological study, Old World tribe *Klugieae* is isolated within the family, and is potentially a separate subfamily. Otherwise, the subfamilies *Cyrtandroideae* and *Gesnerioideae* are well-supported. Subfamily *Coronantheroideae* is a natural group but appears to belong within subfamily *Gesnerioideae*. The New World tribal arrangement is well-supported, with the exception that the Brazilian genera *Sinningia*, *Paliavana*, and *Vanhouttea* should be recognized as a tribe separate from other *Gloxinieae*. In the Old World, the results support the morphological study in placing tribes *Trichosporeae* and *Cyrtandreae* within tribe *Didymocarpeae*. The relationships of the Old World genera, in particular, need further study.

A Round Robin with a Broken Wing

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Remember last issue when I told you that everything was going well with the round robins? Although things were all right at the time, they are not anymore.

Some of you may know that I moved from a huge apartment to one that has a total surface area equal to that of the closets I had in Québec (no kidding here; facts are facts). Some things had to go. Of course, I could not leave my dictionaries and other reference books behind so they came with me. Bed, desk, computer, sofa, stereo and cats came along, but all the paper work that could be let go of, was. Paperwork pertaining to round robins was part of what was left. Everything was put on the hard disk of my computer and there I was. Since I had not seen a robin come my way in a while, all of them were to be re-started. All the letters written to me by those of you who wanted to join one robin or another were being answered—some of you even received the first batch I printed. But then came the crash, and everything was lost. I certainly hope all that data has gone to cyberheaven, because I seem to have gone in the opposite direction. There is not a single list left, no names or addresses. As a matter of fact, NOTHING is left.

All I can do now is apologize to you all for being so overconfident as not to back up anything, and ask that all of you write to me again to state what robin you are supposed to be in or want started. I shall go on from there.

I expect to receive a lot of mail in the coming weeks so that the robins start flying again before the end of this year. My request for participants to direct robins still stands, so please, if you are willing to do it, say so in your letters.

By the way, my gesneriads did not make it to Toronto either, but that is another story altogether. (Don't get me started on how my son left the boxes on the sidewalk in Québec!) Fortunately, members of the Toronto Chapter have been very generous with cuttings, seedlings and such, so I have started from scratch, and it feels like being young all over again.

More to come in the robins....

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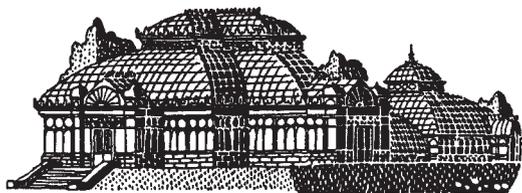
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Line drawings in this issue from *African Violets, Gloxinias and their relatives* by Harold E. Moore, Jr. and *Streptocarpus, an African Plant Study* by Hilliard and Burt.

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