


Gleanings

a monthly newsletter from The Gesneriad Society, Inc.

(articles and photos selected from Chapter newsletters,
our journal GESNERIADS, and original sources)

Volume 3, Number 12 December 2012

Welcome to the latest issue of **Gleanings**! This issue includes photos from the greenhouses at the Marie Selby Botanical Gardens, Gary Hunter's thoughts on improving a species, and Bob Stewart discussing the characteristics of gesneriads.

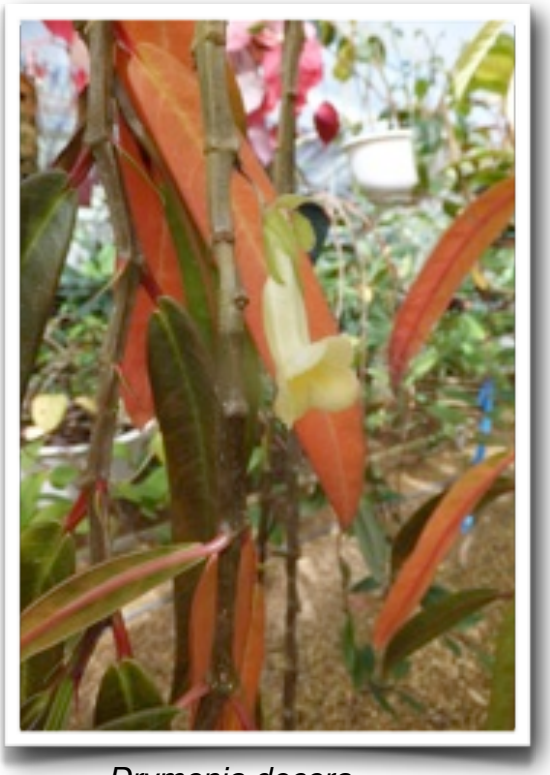
Hope you enjoy **Gleanings**!

Mel Grice, Editor

Ruth Coulson, Balcolyn, Australia posted these photos on Gesneriphiles Internet Discussion Group — "I am particularly delighted with this new peloric *sinningia* seedling that has just begun to flower. I like the shape of the flowers, the colour, and the fact that it is a compact plant, around the size of a small *Sinningia eumorpha*."

The Greenhouses at the Marie Selby Botanical Gardens, Sarasota, Florida, USA

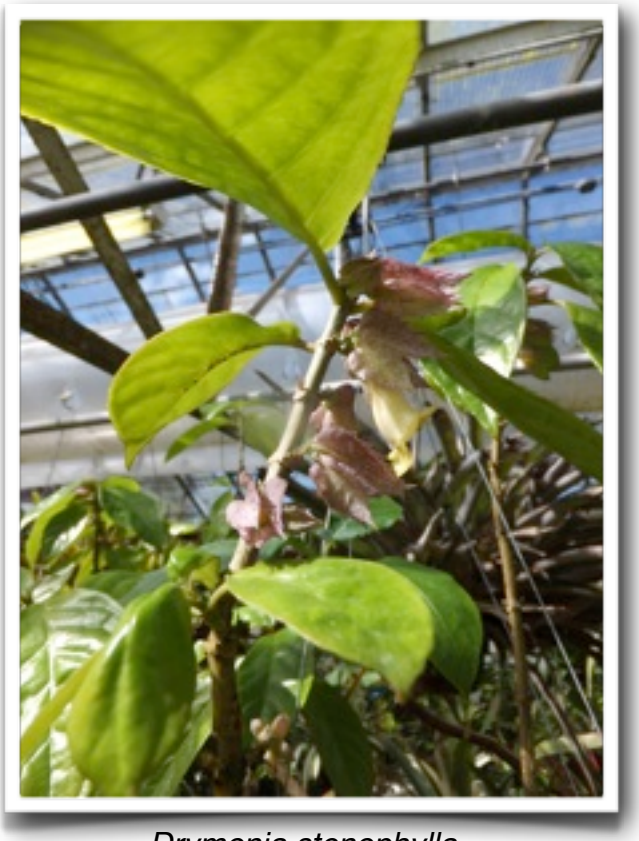
Columnea verecunda



Drymonia decora

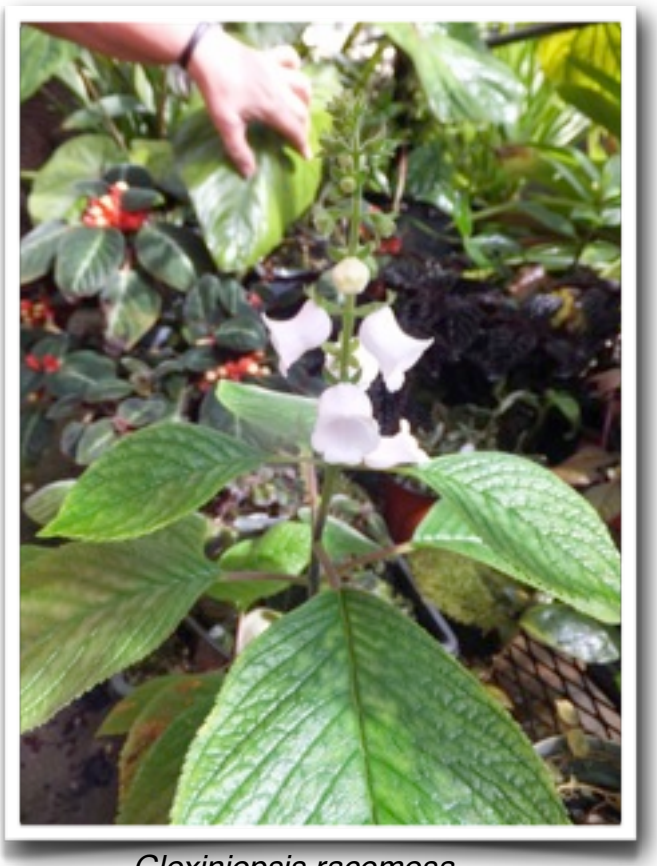
Codonanthe crassifolia

Codonanthe macradenia



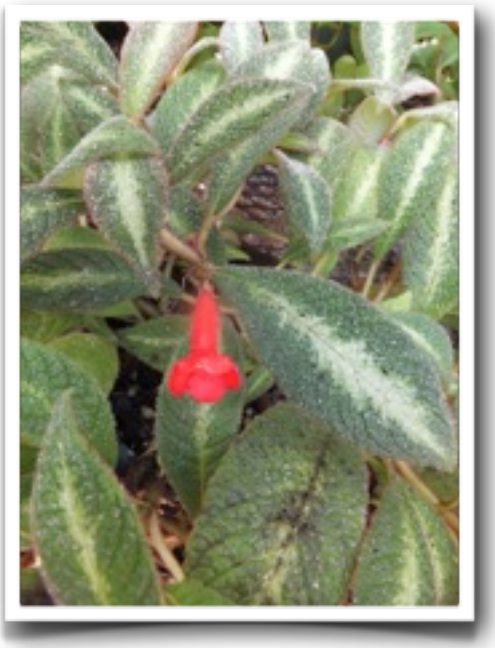
Drymonia stenophylla

Drymonia uninerva



Gloxiniopsis racemosa

Rhytidophyllum species



Nautilocalyx porphyrotrichus

Codonanthopsis ulei

Photos courtesy of Mel Grice

Grouping of species *Saintpaulia* plants

Seemannia purpurascens

Columnea eburnea

Above *Drymonia pudica* Below *Columnea sulfurea*

Can we make a species better?

Gary Hunter gary@GarysSpecialtyPlants.com
Drumore, PA, USA

Can we make a species better than it already is? Is it possible to improve on a species that has survived for untold millions of years in the wild?

I learned the original definition of a botanical 'species' as a plant found in nature that is uniform in its characteristics and comes true (identical to the parent) when self-pollinated.

So if they are all identical then how can they be improved? It seems that the modern day definition is not as rigid and some species are variable and in some cases can have different colored flowering forms within the species.

The plant that I want to improve is *Codonanthe devosiana*, a small trailing plant with small bell-shaped white flowers and orange berries. Well grown plants will self-branch and get a flower at every leaf axil. It could be a commercial plant in the terrarium market if crop time could be speeded up.

My proposal is to grow quantities of seed crops of *Codonanthe* and select for speed and flower size. In every measurable step, we select the best. Save the first to germinate and from them, the first to flower. If flower size improves, of course, you save them. You record the times so we can see if any improvement is made in successive generations.

Does science support this plan? I think so. Plants have been improved by intercrossing species within a genus. This is self-pollinating a species and hoping for variability. In nature seed germinates at varying rates to insure survivability, so we will just select the fastest.

Since no one has tried to improve *Codonanthe devosiana*, the story is not yet written. But nothing can be lost in trying since all plants, fast or slow, can be sold. If somehow flower size improves then all the observation will pay off.

There is a pink-flowered form of *Codonanthe* from Brazil that we are attempting to establish. The goal there will be to select for the brightest pink. Then cross the white with the pink and see if we get hybrid vigor and a big, bright, pink flower on a tough little trailing plant. But that's a different story.

http://GarysSpecialtyPlants.blogspot.com/

The article on the preceding page appeared originally in The Newsletter of the Delaware African Violet and Gesneriad Society, Vol. 14, No. 4, December 2011, Quentin Schlieder, editor.

Update from Gary:

I still think that it makes sense to try this. It is frustrating that I have made no progress in my plan. I have the clone that I want — It is the species we had years ago that has white flowers and orange berries. Luckily, Barb Borleske, in our DAVS group was still growing it.

I had collected one group of berries, but got careless, and they got too dry before I collected the seed. So, not even one generation to start the selection process.

This is a multi-year project and will require a certain odd-ball dedication. I would ask for help from anybody who likes quirky challenges. I see the goal of creating a 'super-clone' of *Codonanthe* as a worthwhile effort. There would be fame and fortune for anyone who could improve this species — well, minor fame — in the gesneriad world. It is more than an academic exercise; it would advance horticulture.

Gary

The Gesneriad Society 2012 Annual Appeal

Each year The Gesneriad Society undertakes an annual appeal that helps support gesneriad research and education through its special funds. We ask you to consider a generous donation to at least one of these important funds at this time.

The Nellie D. Sleeth Scholarship Endowment Fund (NDSSEF) supports the education of students interested in the Gesneriaceae.

The Elvin McDonald Research Endowment Fund (EMREF) supports gesneriad research.

The Students and Speakers Convention Fund enables the Society to help students participate by awarding grants to offset the cost of attending convention. Your donation will help train the next generation of gesneriad students and researchers.

Donate online now by credit card or PayPal (or paste this link into your browser: http://www.gesneriadsociety.org/Donate/donatespecial.htm).

Paul Susi,
Development Chairperson,
The Gesneriad Society, Inc.

What Makes a Plant a Gesneriad?

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Stow, Massachusetts, USA

What makes a plant a gesneriad? The ultimate answer seems to be that this label applies to plants that share a common ancestor with the other plants in the family. However, if you don't happen to have your portable instant DNA analyzer with you, it can help if you can recognize some of the typical characteristics of the family. The leaves are usually in opposite pairs. There are very few gesneriads with alternate leaves (I can only think of one). Furthermore, the leaves are often “opposite decussate”; this means that successive pairs of leaves are at right angles to each other. In some genera [e.g. *Aeschynanthus* and *Primulina* (formerly rosette *Chirita*)] the leaves are sometimes in whorls of three rather than two, and successive layers are at 60 degrees to each other rather than 90 degrees. Furthermore, in some genera (e.g. *Columnea*) the leaves in a pair can be highly unequal in size. (The flowers will usually be in the axil of the larger leaf only.) Of course, as anyone who has seen a *Streptocarpus* will realize, the leaf pattern is not a universal characteristic.

One characteristic that I have not seen an exception to is that the flower petals are fused to form a single tube called the corolla. You have all noticed that spent *Saintpaulia* petals fall off as one unit, but spent rose petals fall off separately. The flowers almost always have five petals in nature, though there are cultivated forms with more petals. There are also five calyx lobes. The flowers are almost always "zygomorphic": they have right-left symmetry but not five-way symmetry. This is like a snapdragon and unlike a rose. In most species the single center petal is at the bottom, but there are several species where the entire flower is held "upside-down" with the single center petal at the top.

There are normally either two or four active stamens, depending on the genus. (A vestigial fifth stamen is sometimes seen in dissected flowers.) Furthermore, the stamens are "epipetalous"; this means that they are attached to the corolla tube and fall off with it, rather than being attached to the base of the flower as in many other families (e.g. roses). There is only one stigma. The flowers are often "proterandrous"; the stamens mature first and then shrivel, and then the stigma matures. This limits self-pollination.

Flower shapes are highly varied, as are fruit types, so you cannot pick out a gesneriad that way. Even the seemingly distinctive flower shape of *Columnea* also appears in other plant families. Most members of the family have hairs of one type or another, often quite prominent but sometimes only visible under close inspection.

Reprinted from ***Bells and Slippers***, the newsletter of the Gesneriad Society of New England, November 2011, Bob and Dee Stewart, editors.

From the editor –

The holiday season is fast approaching. So much to do. Remember to take time to care for your plants and they will reward you with gorgeous and interesting blooms. Please take photos to send me that can be shared in future issues.

Please continue sending articles. If you have suggestions, comments, or items for possible inclusion in future issues, please feel free to contact me at editor.gleanings@gesneriadsociety.org.

Mel

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Donations

The Gesneriad Society, Inc. is a tax-exempt organization with an IRS section 501 (c)(3) status for donations. You can make your donations online at www.gesneriadsociety.org. You may also send your donation (check payable to The Gesneriad Society) to:

Paul Susi, Development Chairperson
2 Rushmore Street, Huntington Station, NY 11746

For additional information, contact: <development@gesneriadsociety.org>.

Membership and Changes of Address

The Gesneriad Society Membership Secretary, Bob Clark,
1122 East Pike Street, PMB 637, Seattle, WA 98122-3916 USA

Changes of Address — Send changes of address to the Membership Secretary <membership @gesneriadsociety.org> 90 days prior to moving to avoid missing an issue. The Society is not responsible for replacing issues missed because of late notification of address changes. Back issues may be ordered from The Gesneriad Society Publications.

Renewals — Send dues to the Membership Secretary. A Renewal Notice is sent two months prior to the expiration date of your membership. (The expiration date is printed on your mailing label/membership card on the back cover of GESNERIADS.) Please remit your dues prior to the expiration date to avoid missing an issue as we are not responsible for replacing issues missed because of late payment of dues. Back issues may be ordered from Publications.

Application for Membership — *The Gesneriad Society, Inc.*

WELCOME – membership in our international society includes quarterly issues of *GESNERIADS – The Journal for Gesneriad Growers,* a copy of *How to Know and Grow Gesneriads*, a packet of gesneriad seeds and a wealth of information about our Chapters, Flower Shows, Publications, Research, Slide Programs and Seed Fund. Membership begins upon receipt of dues.

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