



Gleanings

a monthly newsletter from The Gesneriad Society, Inc.

(articles and photos selected from chapter newsletters,
our journal *Gesneriads*, and original sources)

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Welcome to the latest issue of **Gleanings**! This issue includes photos from Hung Nguyen, excerpts from Olga Makarova and Pavel Enikeev's book on *Streptocarpus*, Tsuh Yang Chen's photo of *Chrysothemis* 'Dekla', and information about the Gesneriad Society webinars.

Hope you enjoy **Gleanings**!

Mel Grice, Editor



Alcie Maxwell of Bossier City, Louisiana, USA, sent these photos of *Sinningia* sp. "Castelo". He grew this plant from seed. It is growing under a four-bulb T8 fixture with the lights on 12 hours per day. Alcie hopes to try to cross it with another sinningia.



What's Blooming in California

Hung Nguyen
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Diastema luteola



Smithiantha 'An's
Antique Print'



Photos by
Hung Nguyen

All About *Streptocarpus* Pavel Enikeev (Павел Еникеев)

- Introduction - Part 2

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Editor's note: Olga Makarova, PhD and Pavel Enikeev are co-authoring an English-language book on Streptocarpus partially based on Pavel's Russian-language book, Стрептокарпус. The journal Gesneriads is introducing this book in serialization.



Cover of "Streptocarpus" featuring *Streptocarpus* 'DS-Kalahari'

The other group of species has a rosette form. These are perennials. All of the modern hybrids belong to this group. Having said that, it's also true that hybridizers have used species from other groups in developing their hybrids.

Other groups of streptocarpus species are also perennials, have more than one leaf and are morphologically situated somewhere in between the first two groups.

Most of the streptocarpus species bloom in summer, when the duration of light is longer. There are few species that flower in winter.

Some species bloom abundantly but for a short period of time. Other species bloom less abundantly but for a longer period of time. The same is true with the hybrids. Some hybrids flower abundantly and others more slowly over a longer period of time.

Hybridizers cross streptocarpus species that naturally would never cross. If the hybrid has genes from unifoliolate and rosette forms, the first leaf can be very large due to the expression of the unifoliolate genes. However, during growth, the rosette gene expression can switch on resulting in the next leaves growing smaller and creating a nice rosette. Even more interesting these switches can work in one environmental condition but not another. For example, differences in light or moisture may affect how the genes express themselves.

Like any other plant, a streptocarpus is a complex living organism. In order to live it needs light, water, mineral nutrients in the form of different salts, and appropriate temperature.

Light is the energy. Without light plants can't exist. Let's see what kinds of light

streptocarpus species acclimate to. In general, streps are not found among trees and bushes in jungles where African violet ancestors feel very comfortable. Rather, they need to grow in more open spaces, where they get more filtered light, but are still protected from direct sun rays. In order to get full flowering potential streptocarpus plants need more of this filtered light than African violets.

Many streptocarpus species are "lithophytes," plants that grow on the surface of rocks. Others are "epiphytes," plants (like some orchids) that do not have contact with the ground and grow on other plants (such as tree trunks and branches) without being parasitic. They get their moisture and nutrients from rain, air, and debris that can be found on the plants that support them.

The streptocarpus root system is well developed. It has long root hairs (much more than African violets) that, due to the huge absorption surface, are able to get minute amounts of moisture and nutrients from the very poor environment of barely decomposed organic materials. These roots display strong hydrotropism (ability to grow toward water), which enables them to find water from a distance. You can easily observe it when a strep grown in 100% humidity sends a root up in the air. These root systems can also adapt to an airy environment and can withstand drying. Streps do not grow in well-composted soil that has a lot of readily available nutrients, such as that which can be found in the bottoms of ravines, rich in organic material and salts washed there by rain.



Streptocarpus 'DS-1455 R'

Streps are adapted to live in adverse conditions where many other plants cannot survive, getting all they need from very poor, coarse, airy soil that lacks a lot of organic matter. We need to recreate these conditions as best we can when streps come to our house. We can't perfectly recreate a natural environment in our home because their natural environment is an open natural system and our home is a relatively closed, artificial system. That is why we have to make some amendments. Later we will elaborate on this.

Since lithophytic, epiphytic, or similar types of conditions do not provide a constant moisture supply, various strep species found interesting ways to overcome that lack of constant moisture.

Some streptocarpus species became xerophytes. Xerophytes are the plants that have adapted to live in water-deprived areas such as deserts. Cacti are a common example. Many xerophytic plants are succulents that store their water and necessary nutrients in their fleshy leaves. They can close their stomata (little pores on the surface of the plants that control gas exchange, including breathing) during the day when it is usually warmer. They open their stomata at night and start breathing. Nights are cooler and therefore water does not evaporate from the leaves as much. They also have more rigid roots.

Other species of *Streptocarpus* are able to regenerate after drying out. When water becomes available, these "resurrection plants" may fully restore their tissues.

Still other species are not so well-adapted to drought. Their habitat is rich, moist forest soil. These plants have longer and thinner leaves.

Many streptocarpus species grow in mountain areas up to 2000 meters above sea level



Streptocarpus 'DS-Psychedelic'

where there are no high temperatures. These can tolerate daily temperatures ranging from +30°C to 0°C. This is why you can keep your streps on a window sill with an open window in surprisingly cold temperatures. Short periods of cold draft, even with wet snow, will not harm your plants.

In nature streptocarpus plants practically never grow where the temperature is above 30°C for long periods of time. Therefore, they can withstand 30°C only for short periods of time. The ideal temperature for a strep is between 15° and 25°C.

When the first crosses were made, growers learned the difference between dominant traits (most always prevailing) and recessive (traits that can be in the DNA but not visible). After that, it was possible to better predict outcomes of the crossings. However, even then, breeders learned that colors are not encoded by a single gene, but by as many as eight. Now we also know that in addition to the color genes themselves, there are other genes that affect the expression of the color genes. Unless the hybridizer goes back to the native species, it is practically impossible to predict the outcome of crossings.

In the last few decades, serious advances have been made in hybridization. In the beginning, breeders were mostly concerned with new colors. Now professional hybridizers are tinkering with a number of different traits – the size, shape, strength, and color of flowers and leaves and peduncles and how these each change as the plant ages. For streptocarpus growers who want to try to make their own crosses using existing hybrids, these plants can become a live toy that can produce endless combinations of different traits in the progeny.



All photos by
Pavel Enikeev

Pavel's greenhouse



Pavel's greenhouse for mature plants

This article appeared originally in **Gesneriads** Vol. 66, No. 1, First Quarter 2016, Peter Shalit, editor. Read other interesting articles like this about gesneriads by becoming a member of The Gesneriad Society and receiving our quarterly 64-page journal.

Can't wait to read the rest of Pavel's articles? – See the Second and Third Quarter 2016 issues of **Gesneriads**.



Two of Pavel's hybrids

Chrysothemis 'Dekla'

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This is an old Frances Batcheller hybrid that was formerly *Nautilocalyx* 'Dekla'. It was a cross between *N. melittifolius* and *N. vilosus*. *N. melittifolius* is now *Chrysothemis melittifolia* and *N. vilosus* is now *Chrysothemis panamensis* so that makes it *Chrysothemis* 'Dekla'. According to Michael Riley, "Dekla is a deity of fortune and destiny in Latvian mythology. Frances Batcheller was a Classics major in college and frequently named her hybrids after mythological characters."



Photo by
Tsuh Yang Chen

Gesneriad Society Webinars

Webinars: A Quick Q&A

What are Webinars? They are live events on various topics. The Gesneriad Society is offering a number of webinars related to gesneriads.

How do I get access to a Webinar? You will find webinars in the Gesneriad Society Shop <https://the-gesneriad-society.myshopify.com/collections/webinars?page=1> and can purchase each one up until the day before the live event; you will receive a link to the live webinar within 12 hours of the live event. You are encouraged to access the event 15 minutes prior to the presentation to familiarize yourself with the application being used.

Is the Webinar interactive? You may submit questions to the presenter only during the live event using the question box provided.

Will I be able to view the Webinar again? After the live event, a link will be sent to you for online “anytime” viewing for approximately six to eight months. Also, each webinar will be available for purchase for anytime viewing for approximately six to eight months after the live event. **What if I want to purchase a copy of a Webinar?** All webinars will be available for purchase and download approximately six to eight months after the live presentation. The downloaded webinar is an MP4 file and is Windows and Mac compatible. Downloads are now available for webinars on *Streptocarpus*, *Episcia*, *Primulina*, *Kohleria*, miniature *sinningias* and the special and free Meet the Gesneriad Society webinar.

Do I need special equipment? No, but Internet access is required for both the live and anytime events but not for the MP4 download. Keep in mind that the Gesneriad Society is not responsible for technical difficulties that arise because of the type of Internet access you may have or conflicts or other problems you may experience with the anytime links or downloads.

The Society is planning future webinars on:

Growing Smaller Rhizomatous Gesneriads with Dr. Jeremy Keene on March 21, 2017

Growing *Nautilocalyx* — featuring Bill Price

Growing *Columnnea*, *Aeschynanthus*, and *Drymonia* — featuring Bob and Dee Stewart

Collecting Gesneriads in the Wild

Nematanthus and *Codonanthe*

Dale Martens along with Mary Schaeffer and Paul Susi, the webinar team.



From the editor —

My plants have started to wake up from their winter malaise. Somehow they know that the days are getting longer and they are looking better — even the ones who get no natural light.

If you have suggestions, comments, or items for possible inclusion in future issues, please feel free to contact me at melsgrice@earthlink.net

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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, programs and seed fund. Membership begins upon receipt of dues.

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