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GLOXINIAN

The Journal for Gesneriad Growers

Vol. 54, No. 2

Second Quarter 2004



Aeschynanthus burttii

American Gloxinia and Gesneriad Society, Inc.

A non-profit membership corporation chartered by the State of Missouri

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Gesneriad Hybridizers Association — CrossWords, 3 issues, \$8 (\$9 outside U.S.A.). Send to Vincent Parsons, 18300 SW Shaw St., Apt #7, Aloha, OR 97007-1357 <gesneriaceae@yahoo.com>.

Newsletter Editors — Newsviews, free to editors; \$6 subscription to others. Contact Leslie Milde, 373 Main St., P.O. Box 14, Fremont, NH 03044 <meribush@aol.com>

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British Streptocarpus Society — to join from the USA/Canada send \$10 to Dale Martens, 1247 Island View Dr., Sherrard, Illinois 61281. To join from any other country, send £7 or 10 euro to Don Corfield, 1019 Warwick Rd, Acocks Green, Birmingham, England, B27 6QJ. Queries to FKSTREPS@AOL.COM

For Your Information

Membership Cards: The address label on the back cover of THE GLOXINIAN is your membership card.

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

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American Gloxinia and Gesneriad Society, Inc.

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GESNERIAD REGISTRATION — The American Gloxinia and Gesneriad Society, Inc. is the International Registration Authority for the names and cultivars of gesneriads excepting the genus Saintpaulia. Any person desiring to register a cultivar should contact

desiring to register a cultivar should contact Judy Becker, 432 Undermountain Road, Salsbury, CT 06068 <jbecker@mohawk.net>.

AGGS Home Page: www.aggs.org

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COVER

Aeschynanthus burttii Mendum (photographed at the RBGE by Debbie White) Cover story on page 10.

President's Message

Susan Grose <sagrose@aol.com> 4201 West 99th St., Overland Park, KS 66207

Greetings Gesneriad Growers Everywhere,

It has been 30 years since I attended my second AGGS convention, which happened to be on Long Island, in 1974. I lived in Massachusetts then, and Anna Spencer from Indiana was President of AGGS. If you read the information on the inside front cover of The Gloxinian, you will notice the list of all the past presidents. One time when I was looking at a list of AGGS members in my current neighborhood of Overland Park, Kansas, I noticed a Life Member named Anna Spencer. I wondered if it were possible that this was the same Anna Spencer who had lived in Indiana 30 years ago when she was president of AGGS. Recenly I visited Anna Spencer who lives in a retirement community just about a mile from my home in Kansas, and it turns out she is the same person. What do you think the chances of this happening are?

Anna had moved to Kansas some years ago to be nearer to her family. Even though she no longer has her extensive plant collection, she is able to keep up with AGGS activities because she is a Life Member and still receives The Gloxinian from which she has someone read her the articles. She is 98 years old and still sharp as a tack. I'm convinced it's those gesneriads that keep you thinking young and on your toes. Anticipating she might not have a lot of space, I brought her a very small glass container with the new micro-mini *Sinningia* sp. "Rio das Pedras". I assumed she probably had not seen a live specimen yet. I will be returning again to check on her. She said she might even have her daughter bring her to one of our local chapter meetings if I let her know the dates, so you can be sure our chapter will be sending her notification of our meetings.

I must give you a quick reminder to register for the 2004 AGGS Convention on Long Island, NY if you haven't already. See details in the First Quarter issue of The Gloxinian or online at <www.aggs.org>. It promises to be a great time. There are not too many places one can go and focus on gesneriads for almost an entire week with over 100 other enthusiasts. You never know if 20 or 30 years later you will be living in a new city far away and discover another gesneriad grower met at a previous convention. Wherever you go, you are never far from home if you can connect with another gesneriad afficionado.

In this issue are several special articles. Lee Stradley tells us about the recent trip members took to Brazil in search of gesneriads in the wild. An article about the British Streptocarpus Society and photos of their show will make you want to take a trip to England to see so many Streps all in one place. Don't miss Part III of the story by Anton Weber on contributions of Austrian botanists to the study of Gesneriaceae. In an article by Christian Feuillet and Larry Skog, we will be introduced to two newly published genera ... and I can hardly wait to find out more about these new gesneriads. For those of you who missed the lecture "My Forty Years of Gesneriad Growing" by Michael Kartuz at last year's AGGS Convention, there is a chance to read about it in this issue. What a story! I am proud to say that I have known Michael for 35 of those 40 years. We are grateful for the continued interest

and dedication of commercial gesneriad growers and friends of gesneriads like Michael and the others who advertise in THE GLOXINIAN. Through their efforts we have a wide variety of gesneriad species and hybrids available. Please continue to order plants and supplies from our advertisers so they can keep up their good work.

I hope to see you at the convention on Long Island.



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- Cover photo sponsored by Liberty Bell Chapter, in memory of Laura Shannon
- Photo on page 8 sponsored by Eleanor Taylor, Virginia Heatter, and the Liberty Bell Chapter, in memory of Maryjane Evans
- Photos on page 36 sponsored by the Brazil trip participants, in honor of Mauro Peixoto
- Photos on page 37 sponsored by Lee Stradley and his 2003 picnic friends

Larry Skog Retires from the Smithsonian Institution

Longtime AGGS member and authority on Gesneriaceae, Dr. Laurence E. (Larry) Skog officially retired on October 31, 2003 from his position as Curator and Research Scientist at the Smithsonian Institution after 30 years on the staff of the Department of Botany. He is continuing to work there part-time as a research associate in an emeritus capacity but now will also be spending time with many other activities.

Larry Skog was presented an AGGS Award of Appreciation in 1985 and continues to be involved with AGGS both at the local and national levels. An article in the next issue of The Gloxinian will cover more about Larry's history, his work with Gesneriaceae, his contributions to the world of gesneriads and AGGS, and his future plans.

American Gloxinia and Gesneriad Society, Inc.

48th Annual Convention – 2004 July 6 to July 11 – Smithtown, New York

Call for 2004 Annual Membership Meeting

The Annual Meeting of the members of the American Gloxinia and Gesneriad Society will be held on Friday, July 9, at 12:15 P.M. for the purpose of transacting business that may properly come before the meeting.

Call for 2004 Board of Directors Meeting

The Board of Directors meeting will be held on Tuesday, July 6, at 1:00 P.M. for the purpose of transacting business that may properly come before the meeting. A special Board meeting will be held on Friday, July 9, at 4:00 P.M. A meeting of the new Board will be held on Sunday, July 11, at 9:00 A.M.

Peter Shalit, Recording Secretary

Nominating Committee Report

The following members have agreed to have their names put in nomination as directors for a three-year term ending in 2007:

Carol Ann Bonner
Alan LaVergne
Bill Price
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Vancouver, BC, Canada
Peter Shalit
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Vancouver, BC, Canada
Seattle, Washington
Tucker, Georgia
Millerton, New York

AGGS Nominating Committee: JoAnne Martinez, Chair

Carolyn Conlin-Lane Carolyn Ripps

Convention Dates to Remember

- April 15 Deadline for convention registration to enjoy early admission to the opening plant sale (Thursday, July 8 at 9:00 p.m.).
- June 1 Convention registration deadline. After this date, registration for activities will be on a space-available basis and subject to a \$25 late fee.
- June 5 Hotel registration deadline to guarantee convention room rate.
- June 15 Judging School registration deadline. Be reminded that no registrations will be accepted at convention.

Deadline for artistic entry niche reservations, and for commercial and educational exhibit registrations.

For registering online, visit the AGGS web site at www.aggs.org/convention.html

Seed Fund

Bob and Carol Connelly <Bob_Connelly@email.msn.com> 2391 Phillips Drive, Auburn Hills, MI 48326-2450

As we write this column, it is early January and temperatures here in the Detroit area are in the single digits. The recent holiday period has been very hectic for us, and we have been swamped with a number of very large orders so there have been some additional delays in shipping orders. Thank you for your patience.

Now on to what might seem to be our favorite topic, although we assure you that we would really prefer not to have to talk so much about it. Of course this is our regular appeal for more seed donations. When we started with the Fund in 2000, there were about 670 varieties of seed available. Now in 2004, we are down to about 560 varieties of seed available. More than half of this decline has been in the past year. With the loss of Maryjane Evans, who was the largest contributor of seed to the Fund, we are increasingly concerned about the long-term health of the Seed Fund. We welcome your ideas as well as your contributions.

We would like to thank the most recent contributors to the Seed Fund for their generosity: Marlene Beam, Elizabeth Branson, Kyle Hedberg, Alan LaVergne, Leong Tuck-Lock, Ying-Hua Liu, Charlene Marietti, Carol Schreck, Peter Shalit, Carol Sharits, Daniel Thompson, M. J. Tyler, Catherine Walbridge, and Wallace Wells.

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- Eucodonia 'Nova' mixed hybrids
- Hemiboea strigosa (D,L)
- Sinningia guttata (LM)
- Sinningia sp. "Rio das Pedras" (dark) (F,P)
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- Make checks payable to the AGGS Seed Fund in U.S. funds
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Cremosperma nobile C.V. Morton (photographed in Ecuador) – one of the more than 1,000 slides donated to AGGS by John Littner Clark

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Fund For Progress/Color Photo Fund — \$807
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Lee Stradley, proceeds of plant sale and auction at picnic
Eleanor Taylor, in memory of Maryjane Evans
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Liberty Bell Chapter, in memory of Maryjane Evans
Nancy Hagerman, in memory of Margaret Waguespack
Brazil trip participants, with thanks to Mauro Peixoto

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John Littner Clark, collection of over 1,000 gesneriad slides

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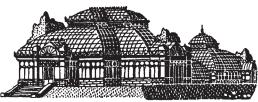
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New Flower Show Award

In memory of Maryjane Evans, a special award has been sponsored for the "Best Gesneriad Exhibiting Fruit" at the 2004 Convention Flower Show. Any plant displaying fruit that scores 90 or above in the Horticulture Division will be eligible for this new award that was created to encourage the growing and showing of gesneriad fruit and, hopefully, the subsequent harvesting of seed and its donation to the Seed Fund.

A Special Visit with Bill Burtt

Molly Schneider 608 Hillwood Dr., Nashville, TN 37205

As Chair of AGGS Awards of Appreciation, I was excited to personally visit the Royal Botanical Garden Edinburgh and officially present the 2003 award certificate to Bill Burtt who started the garden's gesneriad research. The award to Bill Burtt was presented in his absence at the 2003 Convention by Michael Riley. Since I had a trip planned to the United Kingdom with my sister in August, it was a perfect opportunity to meet Bill Burtt and visit the RBGE. Arrangements were made with the help of Mary Mendum, but unfortunately she was not there on the day of my visit.

Hannah Atkins met me first, and then Bill Burtt and Steve Scott joined us for a wonderful tour of both the warm and cool gesneriad research greenhouses. Today the RBGE is a world-reknowned hub of research in gesneriads of the Old World, in particular the genera *Aeschynanthus*, *Streptocarpus*, *Cyrtandra*, *Didymocarpus*, *Saintpaulia* and *Agalmyla*. Bill Burtt collected and wrote about *Streptocarpus* for over fifty years. He is officially retired now but comes to the gardens every day and is still involved with gesneriads and *Streptocarpus* identification. During our greenhouse tour, he showed me the plants that he knew and loved.

At RBGE, Mary Mendum works with *Aeschynanthus*, and Hannah Atkins studies *Cyrtandra*. As Horticulturist of Research Collections, Steve Scott is in charge of gesneriad growing and knows all the plants. I could not believe that he waters the plants by hand with a green watering can with room-warmed water, drawn into a large basin the night before, as they have no electricity for pumps or water heaters. The greenhouses were full of mostly Old World gesneriads. Many unifoliate *Streptocarpus* were unfortunately past blooming but had tagged seed pods. Also growing were tall stemmed *Streptocarpus* species such as *S. papangae*, and a variety of *Aeschynanthus* species I had never seen or heard of before.



Hannah Atkins, Steve Scott, and Bill Burtt in one of the gesneriad research greenhouses at RBGE



Bill Burtt receiving his AGGS award from Molly Schneider



The delicately spotted flower of *Aeschynanthus burttii*

After visiting the gesneriads in the Research Collections, Bill directed us to the "Glasshouse Experience" (as the public greenhouses are called) specifically to see the world's largest rhododendron collection. Many gesneriads grow in these display houses as well.

The three of us then met in the lobby of the science building's botanic garden offices where I presented the AGGS Award of Appreciation to Bill Burtt. The week after my visit, the gardens had a celebration marking Bill's 90th birthday. A Festschrift celebration in an upcoming issue of the "Edinburgh Journal of Botany" will honor his life's work.

Continuing my own tour of the garden, I walked around all the green-houses, including their 1858 palm house, the rock and heath gardens, the alpine house (with a few more gesneriads) and the herbaceous border and winter garden. I concluded a splendid visit with a lunch and gesneriad conversation with Hannah in the terrace café overlooking the arboretum.

Note: For more information on Bill Burtt and gesneriads at Edinburgh, see The Gloxinian, Vol. 53, No. 1. In addition, the 2003 summer issue of "The Botanics", magazine of the National Botanic Gardens of Scotland, featured "Gesneriad Gems – On your Windowsill, Around the World" with a flower close-up of *Aeschynanthus guttatus* on the cover.

Aeschynanthus burttii

This new species is a trailing, epiphytic forest dweller collected by Mary Mendum in Sulawesi. It was named after Bill Burtt, the man who started RBGE's gesneriad research, to mark his 90th birthday last August. The recently published *Edinburgh Journal of Botany* **Festschrift** contains a full description of *A. burttii* and other new gesneriad species in addition to many papers and articles on subjects in which Bill has a particular interest. To order a copy (estimated £35 including postage and handling) contact the RBGE Publications Department at <pps@rbge.org.uk>.



Congratulations to the Tampa Bay Chapter on winning Second Best Exhibit at the 2003 Florida State Fair. Design and construction by Michael Boses assisted by Richard King; plants and educational materials provided by Charlene Boses, Mollie Howell, Phyllis King, Shirley Kirkpatrick, Jo Anne Martinez, Barbara Matthews, and Carol Schreck.

Coming Events

April 30 – May 1 — Alberta, Canada — Stampede City African Violet Society 28th AVSA Judged Show and sale "Violets with Culture" at Northland Village Mall, 5111 Northland Drive, N.W. Calgary. Friday 10:00 am to 9:00 pm; Saturday 9:00 am to 4:00 pm. Website information <www3.telus.net/scavs>. Contact Winston Goretsky <violets@telus.net> Phone 403-241-8300.

May 1 — Vancouver, BC, Canada — Vancouver African Violet and Gesneriad Society 43rd annual judged show and sale at the VanDusen Botanical Gardens, 5251 Oak St., Vancouver. Saturday 1:00 to 4:00 pm. Contact Arleen Dewell <arleendewell@shaw.ca>.

May 1-2 — New York — African Violet & Gesneriad Society of Western New York annual judged show and sale "A Symphony of Color" at Walden Galleria Mall, Walden Avenue, Cheektowaga. Saturday sales 9:30 am (show 11:30 am) to 9:00 pm; Sunday 10:00 am to 4:00 pm. Contact Holly P <CoralBells51@aol.com>.

June 26-27 — California — American Gesneriad Society of San Francisco judged show and sale at Pending Auditorium, San Francisco Fair Building (just inside the Golden Gate Park entrance 9th Avenue and Lincoln Blvd), San Francisco. Saturday 1:00 to 3:30 pm; Sunday 10:00 am to 3:30 pm. Contact Katherine Henwood <oakenhead@att.net> Phone 650-359-1719.

Gesneriads from the Guianas: Two New Genera, *Cremersia* and *Lampadaria*

Christian Feuillet <feuillet.christian@nmnh.si.edu> & Dr. Laurence E. Skog <skog.larry@nmnh.si.edu> Department of Botany, MRC-166 Smithsonian Institution, Washington, DC 20013-7012

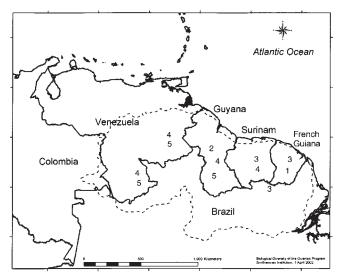
Collecting plants in the Guianas — High temperature and high humidity are characteristic of tropical rainforests, and when it is not rainy it is often uncomfortable even at night. Inside the forest there is usually no wind to cool you or dry your clothing. The annual rainfall is above 100 inches a year (2250 mm) in most places in the Guianas in South America, with the best places for gesneriads receiving near or above 150" (3250 mm). By comparison, Central Park in New York City receives less than 50" per year. The "dry" season (meaning less rain) usually runs from August until November and the bulk of the rainfall occurs in April to July with often a secondary high from December to February. Of course, because of the high temperatures and humidity, few collecting trips are organized during the rainy season. For that reason plants that bloom only during the rainy months are rarely collected, and remain relatively unknown.

The most commonly collected species in the Guianas are found near roads or along the rivers near the coast. Among those are *Codonanthe calcarata* and *C. crassifolia, Columnea oerstediana, Drymonia coccinea* and *D. serrulata, Nautilocalyx pictus*, and *Paradrymonia densa*. In the rainforest, along little creeks or trails, one can see species of *Besleria, Episcia xantha*, species of *Napeanthus, Nautilocalyx mimuloides*, and *Paradrymonia campostyla*.

The regions where rare gesneriads grow have no roads, asphalted or not. Rivers can be used as highways only by using narrow canoes that can pass the rapids, and then usually only during the rainy season when there is enough water in the rapids. Places where a helicopter can land are few and far between at any time of the year, so the basic means of transportation for collecting are an average pair of legs and carrying a backpack. Fortunately, it is not 17th century exploration, so that canoes come with outboard engines and clothes can be kept in waterproof bags, but sleeping in a hammock under only the protection of a sheet of plastic overhead is the rule. Three-star camps actually have a tarp above the hammocks. However, looking for plants makes one forget the discomfort, we assume, because we keep going back.

Since the 1950s there has been an intensification of botanical collections by scientists in the Guianas and in the Guayana area of neighboring Venezuela, a region also called the Guiana shield because of its geological history. As a result, for the Gesneriaceae, several new species have been discovered and new plants that could not be placed in existing genera warranted the description of new genera by Leeuwenberg in 1958: *Lembocarpus* (1 species), *Rhoogeton* (2 species), and *Tylopsacas* (1 species).

Recently three projects have fostered further collecting programs: the Flora of the Guianas, the Flora of the Venezuelan Guayana, and the Guide to the vascular plants of central French Guiana. Among the recent collections,



Endemic genera of the Guiana shield: 1 *Cremersia* (1 sp.), 2 *Lampadaria* (1 sp.), 3 *Lembocarpus* (1 sp.), 4 *Rhoogeton* (2 sp.), 5 *Tylopsacas* (1 sp.)

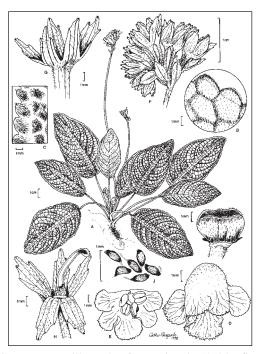
some proved to belong to two new genera, each with one new species – *Lampadaria rupestris* first collected in Guyana by Tim McDowell in May 1991 and *Cremersia platula* collected in French Guiana by Georges Cremers in April 1993. In the last three years both have been recollected and photographed, respectively, by Dave Clarke in June 2001 and by Jean-Jacques de Granville in June 2002. (Note that each collection was made during the rainy season.) Both genera belong to the subfamily Gesnerioideae that includes nearly all the American species. These two genera were described in April 2003, but so far neither one is yet in cultivation.

Lampadaria — *Lampadaria rupestris* grows on rocks (*rupestris* in Latin means rock-dweller). Each plant forms a loose rosette of leaves each with a bullate surface and a white pattern along the veins (according to herbarium labels). It could be a spectacular foliage plant. The flowers are 5 mm long (less than 1/4"), white with a bluish purple tinge, and gathered in a small head on top of a 15-20 cm (6-8") long flower stalk. This new species lives in the rainforests of Guyana in South America and is known from two localities in the north of the Potaro-Siparuni Region. One collection was made about 10 km north of Mt. Wokomung at 650 m elevation, the other about 5 km SE of Mt. Ebini, between 275 and 350 m. Those names bring me (CF) back to my childhood when I was identifying myself with the heroes of Jules Verne's novels. I am convinced that is when I developed a taste for exploration and a passion for the tropical forests.

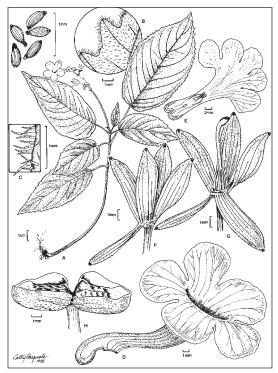
The name of this new genus is the feminine form of *lampadarius*, Latin for torchbearer, referring to the long stalk holding the compact inflorescence head above the foliage. We began working on this genus before the Sydney Olympic Games. Obviously the flame being carried across continents inspired me (LES) to coin this plant's name.

Systematic position (for easy reading, you may skip this paragraph) — The position of *Lampadaria* in a tribe of the Gesnerioideae can be assessed by looking at the following characters: 1. ovary superior (therefore not a member of the tribes Gesnerieae, Gloxinieae, or Sinningieae); 2. nectar ring reduced to two glands (not a Beslerieae, Gesnerieae, or Napeantheae); 3. stomata irregularly scattered (not a Napeantheae); 4. inflorescences with bracts (not a Beslerieae). In contrast, all those characters are found in the tribe Episcieae. Although the drying process used to prepare herbarium specimens is not ideal for the preservation of the molecules of DNA, we gave a fragment of herbarium specimen to Eric Roalson (Washington State University, Pullman, WA) for DNA analysis. DNA analysis suggested that Lampadaria is definitely not a member of the Beslerieae, Gesnerieae, Gloxinieae, Napeantheae, or Sinningieae tribes. "Whether Lampadaria is a member of the Episcieae, or a lineage outside of this tribe as currently circumscribed, is not yet clear." In other words, the fragments of DNA recovered from herbarium material allowed 100% exclusion from five tribes, but are inconclusive for its placement in the Episcieae or outside the six tribes.

As morphology and DNA point in the same direction, we placed *Lampadaria* tentatively in the tribe Episcieae where it is unique because of its short campanulate (bell-shaped) corollas, its free (not joined in pairs) anthers, and its fruits strongly laterally compressed. It is also unusual because of its capitulate inflorescences (shaped like little heads) with a very long peduncle (a character shared with a few species of *Paradrymonia*), its nectar ring reduced to 1 dorsal gland and 1 ventral gland (not identical but close to *Corytoplectus* and a few species of *Columnea*).



Lampadaria rupestris illustration from Brittonia 54: 346, fig. 1, 2003



Cremersia platula illustration from Brittonia 54: 349, fig. 2, 2003

Cremersia — Cremersia platula is a small herb growing on cliffs or on the sides of large boulders in the rainforest of southern French Guiana. The plant's stem has a few pairs of leaves and grows out from the rock face. The stems, petioles, and the under surfaces of the leaves are reddish. The inflorescences have purple flowers reminiscent of some narrow tube Achimenes flowers in shape and color. Collections have been made on the slopes of Mt. Bakra, in mid-elevation primary forest where the plants were growing on granite boulders or cliffs.

This new genus is named for Georges Cremers, Christian's friend and colleague, who has been a tireless plant collector in French Guiana since the late 1970s.

Systematic position — The position of *Cremersia* in a tribe of the Gesnerioideae can be assessed through the following characters: 1. ovary superior (not a member of the tribe Gesnerieae, Gloxinieae, or Sinningieae); 2. nectar ring reduced to one dorsal gland (not a Gesnerieae, Gloxinieae, or Napeantheae); 3. stomata irregularly scattered (not a Napeantheae); 4. inflorescences with bracts (not a Beslerieae). In contrast, all those characters are found in the tribe Episcieae. We also gave a fragment of *Cremersia platula* for extraction and analysis of DNA to Eric Roalson. DNA analysis "suggests that *Cremersia* is part of the Episcieae" and may be close to *Chrysothemis*, *Nautilocalyx*, and *Paradrymonia*.



Cremersia platula growing in situ in French Guiana (photos by J. J. de Granville)





Fruit of *Lembocarpus amoenus* (photo by Christian Feuillet)



Fruit of *Rhoogeton viviparus* (photo by Christian Feuillet)

Affinities of *Cremersia* with *Lembocarpus & Rhoogeton* — Although the corolla shape is unique in the Episcieae, the affinities of *Cremersia* in this tribe are illustrated by a loose inflorescence with a long peduncle (like in *Chrysothemis* or *Rhoogeton*) and the fruit morphology. The fruits of the Episcieae are berries (e.g., *Codonanthe, Columnea, Corytoplectus*, etc.) or display capsules (e.g., *Drymonia, Episcia, Nautilocalyx, Nematanthus*, etc.). In these latter genera fleshy or semi-dry capsules can open up to 180°, the opened valves are convex, and the mass of seeds remains standing in the middle.

In *Cremersia* the fruits open 180° in the shape of a short canoe (*platulus* means wide open in Latin). The placentas (membrane bearing the ovules, therefore where the seeds are attached) remain in the concave valves acting as a lid over the seeds. Narrow openings on the side of the placentas are the way out for the seeds. In the Gesnerioideae this type of capsule was previously known only in *Lembocarpus* whose name means "boat fruit". The affinities of *Cremersia* also led us toward *Rhoogeton* whose fruits had not been described previously. We studied the specimens on loan at the Smithsonian Institution and found one well-preserved fruit showing the same characters. This type of canoe-shaped fruit is unique to these three genera.

The characters shared by the three genera are a fully superior ovary, the structure of the fruits (unique in the family), the endemism to the Guiana shield, and the habitat (vertical cliff faces and boulders). They differ as follows: Lembocarpus has an annular disk, not a bilobed dorsal gland; the corolla lobes of Rhoogeton are red, not purple; and, so far as we know, Cremersia does not have tubers. In addition they grow on different substrates: Lembocarpus on lateritic rocks, Cremersia on granite, and Rhoogeton on sandstone. Because of the similarities to Rhoogeton and the new genus Cremersia, we suggest that Lembocarpus does not belong in the tribe Sinningieae where it had been placed by Wiehler, but in the Episcieae.

Compared to other regions that are much richer in species, the Guiana shield has a surprisingly large number of endemic genera. We know five so

far. This is probably due to the ancient age of the Guiana shield compared to surrounding regions of South America. The very low number of species and their specialized habitat restricted to relatively empty vertical rock faces suggests the old age of those genera.

Acknowledgements — We are grateful to the New York Botanical Garden for authorizing the use of drawings published in "Brittonia" and the colleagues who shared their photographs with us.

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Images of type specimens at the SI may now be viewed online at http://rathbun.si.edu/botany/types. The SI botany website is http://www.nmnh.si.edu/botany.



Flower of *Lampadaria rupestris* (photo by H. David Clarke)

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Correction

On page 17 of the 1st Quarter 2004 Issue of THE GLOXINIAN (54:1:17) the top right photo is *Gloxinia nematanthodes* (not *Gloxinia sylvatica* as captioned).

The British Streptocarpus Society

Ken Jones, Chairman

As this article is being written, it is now November 2003. The British Streptocarpus Society had its inaugural meeting in May 1999, and the society was formally started in September of that year. How did it all come about?

I had been growing Streptocarpus since the early 1980's. They were quite new to me at that time as my main interests were with exhibition Chrysanths. Having seen Streptocarpus several times at shows that I attended, I became very intrigued with their beautiful flowers. It seemed to me, however, that a number of these show plants, even though they had wonderful flowers, were not being grown to what I would term their full potential.

I bought several plants. At first I did not realize there were named varieties so the ones that I had were really commercial type seedlings. There was nothing wrong with that. They flowered well, but they were definitely not what I was looking for to put on the show bench.

Being an avid reader, I have many books on gardening and growing so I searched through all my old and new ones for information about Streptocarpus. Each time I found something, it was a case of one little paragraph and nothing more! So there was nothing much, in a general way in the gardening press, that British people could learn about the genus. I finally purchased a Royal Horticultural Society Handbook which contained a little more information, but even then it was a little out of date.

Having found that indeed there were named varieties, I quickly set about purchasing some. A love story began, for I seemed to quickly find an affinity to these plants and they quickly responded to my ways of growing them. They all grew well despite my trying several methods and mixes. I was soon able to successfully compete with them at several shows. You must understand that here in Britain there are few or no classes for Streptocarpus so competition is generally against a whole range of other flowering pot plants. Therefore the likes of species Streptocarpus would be no use at all in shows.

During my time growing and showing, I again met up with Frank Davies who was an old friend I had lost contact with for a few years. A grower himself, he asked what I was growing at that time; and, after telling him, he and his wife Mary came along to see my plants. Both were quickly enthralled, for at that time my Streps were at their best. Frank went away with some of my plants and leaves for cuttings, as well as Rex Dibley's address to purchase some of the varieties I did not already have! The following year Frank discarded all the other plants in his greenhouses in complete favour of Streptocarpus.

There the story of the British Streptocarpus Society starts to unfold. Early on we were competing against each other at shows. At several of these shows we were asked if we could put on exhibition stands which we then started to do. At first these were on flat tables which didn't best show off the plants. So Frank, who is rather good at woodworking, set about making a tiered stand which displayed the plants much more advantageously.

By taking Streptocarpus out to the general public like this, we were bombarded with questions on where they came from, how to grow them,

how to take cuttings, etc. We found it unbelievable that so many people who had taken cuttings had failed to root them. Even today it is the one thing we get asked about more than any other problem.

Frank and I quickly found out that there were far more people who grew Streptocarpus than we had imagined – from people who just grew two or three as houseplants in the home, to several dozen in a conservatory, to others who grew fifty to one hundred in a greenhouse. People started requesting our addresses or phone numbers so they could later ask about various problems. Then as we started traveling further to shows outside our immediate area, people asked why there wasn't a society for Streptocarpus as there was for so many other plants. Well, we talked about it many times, and people continued to ask us to start a society. We asked around at other plant societies and found that a lot of these were actually losing members year by year as a considerable number of local shows had folded up. We were very dubious of starting something which might die a quick death. More pressure was put on us, so we decided to advertise a meeting via the Gardening Press and see what kind of response we would receive. The date was set, and although many people promised to attend, we only had 16 people show up that day. However, Gordon and Sue Long from South Wales had brought with them a list of people from there who were willing to become members. So the Society started out with about 32 members. By the end of the first full year, it rose to around 150 members. We believed that if we could achieve 200-250 maximum that would be about it. Little did we know that as we went further afield we would pick up so many more Streptocarpus lovers. At this time, we have around 750 members worldwide—an achievement in numbers we never dreamed would happen.



British Streptocarpus Society Gold Medal Stand at Tatton Park RHS Show 2003. An RHS Gold Medal is the highest award a society can possibly win – the equivalent of Olympic Gold. All the plants were grown by Frank Davies and staged by Mary Davies.

Myself, I am Ken Jones, Chairman of the Society. Frank Davies is currently our very overworked Secretary. His wife, Mary, is Show Secretary helping Frank out, and she is the person who stages the plants on the stands at the shows. Our Newsletter Editor, Tom Causer, very ably assists us. He would be the first person to tell you he is a total non-grower, but he is very valuable to us in his particular role. Don Corfield from the Birmingham area is our Treasurer who very ably looks after the society's finances. Well past his retirement years, he visits as many shows with us as he can and helps and advises with great gusto. Sue Long is our Seed Fund person and a very good job she does indeed. Along with her husband Gordon, they put on quite a few award winning displays of Streptocarpus in the South Wales area. At some of the shows down there, they do have actual classes for Streptocarpus. Bob Counsell from Weston-Super Mare is also one of our committee members. He is now quite well known to a number of you in the States as for the past three years he has attended the AGGS annual conventions, usually bringing back a wealth of plant material. Chris Rose from the Bristol area is also a member who is well known to American growers for sending seed and writing articles for various publications. We have committee members in many parts of Great Britain who also come along and help out at various shows all around the areas that we visit.

The large shows that we attend are usually 3-4 day events and, in many cases, cater to every kind of horticultural situation including the various plant societies. There are many shows for various plant groups, and we will attend different ones throughout the season according to the flowering or growing and showing times. Also at these shows will be areas for large specialist nurseries for plants of every type sometimes from all over the world. All kinds of gardening tools, machines and gadgetry will also be on sale. In addition, many of these shows have all-day entertainment and cater to families who want to enjoy the day together.

A lot of the places we visit will have many thousands of people attend each day, so we will be very busy at these shows from early morning until late afternoon. Also at a number of these, depending on what organization runs them, our stand may not be put up for any kind of award. We will be eligible for awards if we are at shows which are either run by the RHS or jointly run by them and another society. By going to these shows, we are taking Streptocarpus out to the general public, and more and more people seem to be growing them each year.

Nowadays Frank Davies and I mainly grow hybrids that are bred by us under the "Franken" prefix as well as varieties bred by other amateurs from Britain and around the world. We only have one or two varieties that are commercially available at this time. Nothing at all is wrong with commercial ones, but we have so many amateur-raised ones that we cannot grow them all. Fortunately we now have an ally in the form of "Oakland Nurseries" from Leicester that carries stock of the varieties that we release.

One of the AGGS members in the States who has always helped and supported us even before we became a society is Dale Martens. She is still a wonderful ambassador for us enlisting new members and relaying various bits of information over there for us.

Regarding individual showing of plants, we only have one Streptocarpus show nationally, and that is now held in July. When we first started, it was held in early September. The reason for the change was because many of our





Above: Ken Jones discussing Streps at the first BSS show

Left: Bob Counsell showing newly rooted Strep cuttings at a recent show

Below: Frank Davies at home in one of his greenhouses assessing potential show plants



members who only grow a small number of plants said that in September many of their plants were not at their best. Certainly moving the show to July has increased the number of people exhibiting and this year certainly saw a big jump in the quality of plants being shown. So, as a society, whatever advice we are giving to our members is now coming to fruition. In the future we hope to form area groups and encourage people to organize shows in their own areas either incorporating classes for Streptocarpus in local horticultural shows or, better still, having their own show.



Some recent Streptocarpus introductions and seedlings at a BSS exhibit (photos courtesy of Ken Jones and the BSS)

To join the British Streptocarpus Society from the USA or Canada, send \$10 to Dale Martens, 1247 Island View Drive, Sherrard IL 61281. To join from any other country, send £7 or 10 euro to Don Corfield, 1019 Warwick Road, Acocks Green, Birmingham, England, B27 6QJ. Queries to <fkstreps@aol.com>.



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When you join us at Convention, you may wind up meeting someone who was, is, or will be a famous Long Islander. See you in July!

Paul Susi. Convention Chair

Convention Speakers

Paul Susi <captaur@optonline.net> 10 Briarwood Lane, Millerton, NY 12546

We will have three speakers for you at convention in July and hope you will make some time to come and listen to their presentations. I'd like to thank Robert Hall, Speakers Chair, for the time he spent putting together such an outstanding lineup.

Dr. Tamson Yeh (Friday, July 9th) — Dr. Yeh has spent the last seven years of her professional life as an extension education coordinator with the Cornell Cooperative Extension in Nassau County on Long Island. Her areas of concentration are entomology and plant pathology, as well as integrated pest management for commercial and homeowner audiences. Dr. Yeh has a BA in Biology from Wells College, an MS in Animal and Veterinary Science from the University of Rhode Island, and a Ph.D. in Plant Science, also from the University of Rhode Island. Dr. Yeh's presentation will show you how to apply integrated pest management techniques for gesneriads in the home environment.

John Littner Clark (Friday, July 9th) — John Littner Clark is a botanist conducting his Ph.D. dissertation research on the plant family Gesneriaceae. His research incorporates molecular sequencing techniques and field-based observations for understanding evolutionary history (phylogeny). John's presentation will review some of the obstacles in understanding biodiversity and will cover progress made throughout the last ten years of his research in Latin America. John will be illustrating his talk with exceptional photos of a variety of gesneriads that he has taken in the course of his many field trips.

Vincent Woo (Saturday, July 10th) — Vincent Woo has grown gesneriads since he was a teenager, but he never thought he'd have the chance to pursue this passion formally. He recently took a year off from work and traveled to New Zealand to study *Rhabdothamnus solandri*, the island's only native gesneriad. While in New Zealand, he became interested in how this species relates to its South Pacific gesneriad cousins. In addition to studying populations of *Rhabdothamnus* around the North Island of New Zealand, he was also able to travel to New Caledonia and Lord Howe Island. His project has now expanded to look at Southern Hemisphere subfamilies, flower pigments, DNA fingerprinting and a revision of one of the genera, *Coronanthera*.

Gesneriad Hybridizers Association Speaker

Dr Michael Kotarski (Wednesday, July 7th) — In addition to the three convention programs described above, Dr. Michael Kotarski will speak at the GHA meeting on Wednesday evening. His topic will be "Strategies for Producing New Varieties of Gesneriads". Dr. Kotarski is an Associate Professor of Biology at Niagara University in Niagara, NY. He says this about his topic: "Chemical mutagens can be used to produce new mutations of Saintpaulia and Streptocarpus, especially those involving variegation. Ethyl methane sulfonate (EMS) is used to treat petioles or leaf sections and the plantlets grown from the mutagenized tissue are examined for new characteristics. Transferring genes from other plant species into African violets using sterile culture and molecular techniques is another viable way of altering violet traits. Reliable tissue culture procedures have been worked out and the first gene transfer and violet gene cloning experiments are underway."

The AGGS Auction

The Frances Batcheller Endowment Fund has grown over the years because of your generous contributions and also because of your participation in the annual auction. This year we again ask for your donations of gesneriad or horticulturally related items. We are especially interested in live plant material – possibly one of your award-winning show plants? We all remember the generosity of several members at last year's convention who donated both show plants and new hybrids to the live auction.

At the Long Island Convention this year we will be holding only one live auction – a concentrated offering of high-quality plant material at Saturday's luncheon. The silent auction will run its usual course, from Friday morning to just before the Saturday luncheon. If you cannot attend convention, you may send your auction items to Ben Paternoster, 14 Coptor Court, Huntington, NY 11743-4335 by June 30. Of course, you may also make a monetary contribution directly to the fund. Your check, made out to AGGS, should be sent to Helen Bortvedt, 20 Beeson Road, P.O. Box 2584, Sequim, WA 98382-8870. Questions about the auction can be addressed to Paul Susi, 10 Briarwood Lane, Millerton, NY 12546 <captaur@optonline.net>.

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Growing Gesneriads Outdoors: Achimenes

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1 chimenes are scaly rhizomatous gesneriads from Mexico and Central America with brightly colored flowers in shades of purple, red, orange, yellow, and white. They are strongly seasonal plants and pass the winter as dormant scaly rhizomes, which are modified underground stems with tightly packed fleshy scales instead of leaves. This seasonal growth habit helps make them suitable for growing outdoors. Achimenes species and cultivars are particularly well suited to growing outdoors in my area as they love our hot and humid mid-Atlantic summers and have a long enough dormant period to keep them in an out-of-the-way place indoors over the winter. Moreover, they begin to bloom early in their growing cycle and continue to bloom for a long period. Achimenes were first grown and hybridized in the 19th century in Europe where they enjoyed an early popularity and since then have been widely grown both inside and outside AGGS circles. This genus is well established as a bedding plant in the southern United States, and perhaps because they have been widely grown for so long, Achimenes have acquired a variety of common names of obscure origins, among them "magic flowers", "widow's tears", "cupid's bower", "nut orchids", and "hot water plants".

Culture: All Achimenes are easy to grow and require more or less the same culture: warm temperatures, bright shade, loose rich soil, and plenty of water during the growing season. They do not perform well in direct sun or heavy clay soils, and while drought won't usually kill them, they may bloom less or even go into early dormancy. Rhizomes can be started indoors in early spring in a standard potting mix, and the young plants grow well under fluorescent lights. The plants grow rapidly once they break dormancy, so don't start them too soon as this indoor growth tends to be weak and can easily be damaged when the plants are put outdoors. Achimenes are warm-weather plants and should not be put out until nighttime temperatures are warmer than about 50°F. Although they are shade-lovers outdoors, for the sturdiest growth they should be given as much light indoors as you can provide.

Achimenes can be planted close together as they produce weak, unbranched or sparingly branched stems. Planting closely also helps keep some of the taller, weak-stemmed plants from flopping all over. I usually plant several rhizomes per pot, and often start them in recycled plastic 4- and 6-packs left over from last year's annuals. They can be started in very small containers which helps keep the rootball together when they are popped out to plant. Most respond well to pinching and will branch and become bushier if the tips are pinched out after they produce their first two or three pairs of full-sized leaves, although this may delay blooming somewhat. Most are low growing and should be planted in the front of the border. Ferns and hostas make good garden companions that will not crowd them and will complement rather than compete with their flowers. They are especially attractive when paired with maidenhair ferns (*Adiantum* spp.). Among all the gesneriads I've tried outdoors, Achimenes give the most "bang for the buck" and provide colorful flowers throughout the growing season.

In the fall, Achimenes will stop growing and blooming and prepare for dormancy by producing new rhizomes underground. They will do this no matter what you do because they are sensitive to day length, but it may help rhizome production to stop watering them in the fall. After frost has killed the foliage, carefully dig up the clumps, allow them to dry out a bit, and separate the rhizomes.

Storing rhizomes: Achimenes rhizomes should be kept cool, dark, and dry. I keep them bone-dry without losing any. In fact, I have had trouble with rhizomes molding or rotting in moistened potting mix and/or in sealed plastic bags. Plastic bags are convenient because they let you see when the rhizomes start sprouting, but I always poke a few small holes to allow air circulation. When they are ready to grow they will let you know by starting to grow, even without being potted up. Some Achimenes are more insistent about sprouting than others but if they begin to sprout too soon they can be held for 2-3 weeks until you're ready to plant them. Just bury the rhizomes, sprouts and all, and they'll grow just fine. Others have a long dormant period and won't start to grow until they're good and ready, even if you plant them and water them at a time you think is appropriate! I've experimented with extending dormancy by storing them in dry potting mix in plastic bags in the refrigerator, and they keep for several weeks this way – but I've always forgotten and left them in the fridge until they rot!

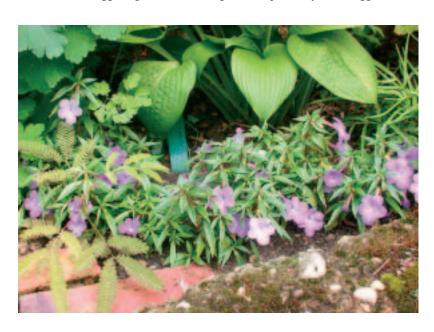
Achimenes grown indoors, or grown outdoors in pots or hanging baskets, can be left right in the pot all winter, cutting back the dead leaves and stems and keeping the soil dry until new growth appears in the spring. This is the lazy method (which means it's the one I use more often than I like to admit!). Alternatively you can dump out the soil and harvest the rhizomes, keeping them in bags over the winter. This lets you see when they begin to sprout and allows you to plant them in fresh soil (& share!) If you grow Achimenes in the ground, you have no choice but to dig them up unless you grow in zone 8 or warmer.

Propagation: Achimenes are easily grown from seeds or cuttings but I get the best results with the least amount of effort by growing them from rhizomes. Depending on the species or cultivar and how vigorously it has grown, a single plant can produce anywhere from two or three to dozens of rhizomes. The rhizomes vary in size. Larger rhizomes can be broken into smaller pieces, right down to individual scales, to propagate them on a larger scale. In addition some Achimenes produce tiny scaly rhizomes, called propagules, on the stems above ground. After the normal dormant period, these propagules will grow just like rhizomes. Small rhizomes can be planted about 1/2" deep, and larger rhizomes 1-2" deep. Don't worry too much about planting them at the right depth because they can sprout through several inches of soil, and deeper potting helps them develop a strong underground stem and root system.

Hardiness: Achimenes are best treated as tender perennials north of zone 8 although some of the hardiest will apparently overwinter with some protection in zone 7b. Since they overwinter as underground rhizomes, they can be mulched heavily. In a mild winter they may overwinter as far north as Washington, DC. I have not had any return after even mild winters, but I haven't grown a wide variety of species or cultivars outdoors yet. I have seen *A. heterophylla* and A. 'Purple King' listed as hardy to zone 7b in some commercial catalogs, so these two might be worth trying. If you want to attempt keeping them outdoors, cover them with a heavy mulch ... and save a few rhizomes indoors for insurance!



Achimenes 'Purple King ' (above) and A. cettoana (below) growing outdoors in John Boggan's garden in Washington, DC (photos by John Boggan)



Brazil – The Trip of a Lifetime

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After an all-night flight, we landed in São Paulo, one of the largest cities in the world. It was quite exciting as there were buildings as far as you could see. I had wondered what this trip would be like because the participants were from such diversified backgrounds. They were Mauro Peixoto (our Brazilian guide), Gussie Farrice (our treasurer), Jeanne Katzenstein (our wonderful coordinator), Marilyn Allen, Robert Hall, and Bill Price (from Canada), Nola Carr and Elizabeth Glazebrook (from Australia), Ingrid Lindskog (from Sweden), and Carol Ann Bonner, Thad and Betty Holcomb, Dave Moody, Ben Paternoster, Carolyn Ripps, Wallace Wells, and me (from all around the USA). Last, but not least, was our bus driver, Antonio "Toto" Domingos.



Brazil Study Group participants at Iguassu Falls

I thought this would be a "roughing it" trip so you can imagine my surprise when we walked out of the airport to board our deluxe Mercedes Benz bus, complete with rest room and refrigerator. As we started our trip into the Atlantic coastal rainforest areas of Brazil, Jeanne pointed out the *Cecropia* tree, a good indicator plant for finding gesneriads. Later we also discovered other indicator plants for finding them such as begonias, orchids, bromeliads, and tropical cactus. Well out of the city heading toward our first hotel, we stopped to search for gesneriads. Even though it was raining, we wanted to walk up a short trail along a small stream just to see what was there. Growing in heavy shade in a very moist environment, we found our first gesneriad – a *Besleria* species with white flowers and yellow calyces.

Our second day was even more exciting for me as we headed into the mountains near Paratí enjoying a wonderful view up into the clouds. It was fascinating to see the clouds wrap around the slopes and bathe the plants in a cool mist. The elevation was about 800 meters (2500 feet) when the bus could travel no further on the small road. We got out and started walking further up the hill and found *Sinningia schiffneri* and a *Besleria* species, both growing in heavily shaded wet areas. We found *Codonanthe gracilis* and *C. devosiana* growing low on the sides of some rocks. Higher up on other boulders grew *Nematanthus brasiliensis* and *N. fluminensis* with their attractive flowers and open seed pods. We also saw many plants of *Nematanthus monanthus* in the same area. Find a large boulder, and chances are you would find a Nematanthus rambling around on top or on the sides, partially shaded by other plants, not really growing in much of anything except some compost and around other plants.

Further up the trail we spotted *Sinningia douglasii* tubers that were hanging from the rocks and about to fall. With a boost from yours truly, Bill Price rescued a few. These tubers grew, mostly exposed, holding on only by a few roots clinging to cracks in the rocks with small amounts of compost. Some were bathed with a small stream of water trickling around them. We found several fallen flowers, and Jeanne showed us how "nectar robbers" had chewed holes in the sides of the flowers to steal the nectar.

Going from one extreme to another, we headed down the mountain to visit a park at sea level. In much warmer conditions there along the ocean, we saw *Codonanthe gracilis* growing in open woods. There seemed to be much less humidity in this area, and I could see that the plant's succulent leaves would come in handy. At times, the ocean would bathe the beach and wooded areas in a salty mist. How could a gesneriad survive in this? We also found *Nematanthus fissus* growing on a mango tree in the same area.



Lee Stradley helping Bill Price reach tubers of *Sinningia douglasii*



Tuber of *Sinningia bulbosa* fully exposed on a wet rock face



Nematanthus fluminensis



Nematanthus sericeus



Sinningia macropoda



Sinningia bulbosa



Besleria species



Sinningia pusilla



Nematanthus crassifolius



Nematanthus brasiliensis

Brazil photos courtesy of Lee Stradley, Carol Ann Bonner, Gussie Farrice, Jeanne Katzenstein, and Carolyn Ripps Later we passed the mountain where *Sinningia* sp. "Rio das Pedras" was found. It was a bittersweet sight as it was great to see the locale, but we did not have time to make the 2-1/2 hour (or more) hike up to where the plants grew. On the trip we spent many hours riding from spot to spot enjoying the wonderful scenery of Brazil. The views heading up to Teresópolis were fantastic with the most wonderfully steep peaks you could ever imagine. We stopped along the way and found two species of *Vanhouttea* growing next to the highway. After arriving at our next hotel, we took a walk in the open woods nearby. In fair light there, attached about five feet above the ground in a tree with no media to speak of, grew *Nematanthus crassifolius*.

The next day was our planned visit to the popular Serra dos Órgãos park. We took short and long hikes, on many trails, searching for gesneriads. I fell in love with an unusual form of *Nematanthus sericaeus* (which means silky leaves) that we found growing on a stump in full sun. This form had large red flowers, kissed with a yellow star across the front of the flower, and grew with its many branches standing almost straight up. Not the norm for sure, as most Nematanthus we had seen earlier grew with their stems arched toward the ground and in much shadier conditions. Also in the park we found *Nematanthus crassifolius*, a *Besleria* species, *Vanhouttea gardneri*, *Sinningia douglasii* and *Sinningia cooperi* just coming out of dormancy. It was interesting to find *S. cooperi* growing on tree trunks under a light coating of moss, bone dry at that particular time of year.

Near the top of the park was a sky trail, unfortunately closed as huge rocks had come off the mountain and smashed the trail and the woods for some distance ahead. Surely that might have opened up new habitat for the various plant species to reclaim, amongst them, hopefully, more gesneriads. Mauro did some fast-talking and got permission for us to walk part of the



Searching for *Vanhouttea* species alongside the road into the Organ Mountains



Sinningia cooperi growing under a bromeliad on a tree at Serra dos Órgãos Park

trail. This sky trail wasn't in the trees but was along the side of the cliff in places too steep to walk. I admit I was a bit disappointed at first that day because the drought they were having had kept many plants from growing or flowering well yet. As we walked along the trail, we found some Sinningia tubers here and there on the trees. I had never expected to see them growing like that! We walked as far as we could on the trail, then turned around. Just behind us, part-way up a tree, was a beautiful plant of *Sinningia cooperi* in full bloom. The tuber was fully exposed, and a huge bromeliad was growing over it. It was a fantastic sight, and I had fun taking pictures of people taking pictures of it.

The next day we started early for our eight-hour ride to Campos. We left the mountains and headed down toward Búzios, a resort area along the coast as this was known to be *Sinningia speciosa* country. Arriving at the beach area, we walked down a steep bank toward the ocean and looked for plants among grasses and big cactus in full sun. It was bone dry at the time. I was amazed to think that such a delicate-looking plant like *S. speciosa* could survive these conditions. We searched on a cliff and found tubers just starting to sprout. They were high up, out of reach, except to the zoom lens of the cameras. I couldn't imagine how the plants survive in that habitat – the other plants must provide some shade and protect them from the ocean winds. We continued our ride heading further north.

The next morning we were again going to an area with smaller roads so two small vans had been contracted to take us through sugar cane fields and up a mountain to find the habitat of *Sinningia pusilla*. There were few epiphytes except Spanish moss to be seen on the way up the mountain. We parked near the top and took a short walk to a large boulder where Mauro had previously seen *S. pusilla*. We were surprised to see a whole colony of plants growing there on the less-exposed side of the boulder. They were growing vertically, among the dry moss, with a few grasses and small cactus shading them. I had to wonder if this out-of-the-way area was one of the last places this species grew in the wild. Some of the plants were in flower. We were fortunate enough to see a small bee visiting and thought that perhaps it was the natural pollinator of this species. (I hope someone in our group got a photo.) We said goodbye, sweet *pusilla*, and headed back down the mountain to meet our bus and head south toward Rio.

The next day we took a side trip to find *Sinningia bulbosa*. We spotted tubers growing fully exposed on vertical cliffs, with water dripping on some of them. Their roots must grow into the cracks in the rocks. On the lower side of the road, we found some plants in flower. They were growing, in full sun alongside cacti and kalanchoe, in some rotting debris nestled in large chunks of rock that had been dumped there. It was hard climbing down to get good photos, but we enjoyed the added bonus of a beautiful ocean view. Later that day we saw some of the sights of Rio.

Our next planned excursion was an overnight trip to Iguassu Falls which is located on the western border of Brazil. Our flight arrived that afternoon in time for some of us to take helicopter rides to better view the falls, and they were breathtaking, while others explored a nearby bird park. We spent the next day at the falls taking photos, seeing monkeys and coati-mundis, and looking for the different color forms of *Sinningia sellovii*. I had to laugh thinking that only gesneriad addicts would be looking at the ground when everyone else was watching the waterfalls (and probably laughing at us). We



Sinningia sp. "Ibitioca" growing in a large pot in the lobby of Instituto Plantarum



Sinningia sellovii growing in an outdoor garden at the Instituto Plantarum

found numerous plants, a few in bloom. Many grew so close to the railings that someone had decided to groom the area and cut them down. It was hard to imagine gesneriads growing like weeds there.

We flew back to São Paulo and met Toto and our bus to continue our adventure. Mauro arranged for us to spend the next day near Nova Odessa with Rogerio Salviani who had previously discovered field locations for *Sinningia piresiana, S. eumorpha, S. guttata* and a few others, perhaps even another new species. We visited Saltão Falls and descended a steep trail there and found *Sinningia eumorpha* growing along the banks in the clay, silt, and loam soil with oxalis and begonias. At the base of the narrow waterfall, we found *Sinningia macropoda* growing among chunks of rocks, not in bloom on the drier, shadier side. On the sunny side, we found plants in bloom; and in some cases, the mist from the falls would even bathe them as the wind blew the water over them. These were growing in loose chunks of rocks with debris, soil and leaf matter.

We walked down the main stream and up another small stream to a dead end with a cliff in front of us. Rogerio got out his rope and scrambled up to secure it. We climbed up the wet, muddy, slimy rocky slope around 40 feet to a small ledge where we were able to walk with some difficulty alongside the cliff. We found a few plants of *Sinningia piresiana* in bloom. When they get too big, the tubers fall off the cliffs and rot. We found some dead tubers on the ground, along with bunches of orchids. Also growing up there were begonias and some pleurothallid orchids. In damper areas on the ground, tubers of *Sinningia eumorpha* were sprouting. That was a wonderful climb, but we still had more places to go, and headed out for our next stop.

We arrived at the privately run Instituto Plantarum. It was established by Harri Lorenzi who grows plants to photograph for the books he publishes – he even autographed some copies for us. (Mauro and Rogerio had both previously worked at the Instituto collecting and maintaining the plants in the collection.) Inside the office was a huge plant of *Sinningia* sp. "Ibitioca" that really impressed me. Many gesneriads were in the greenhouses and others, like *Sinningia warmingii* and *S. sellovii*, were growing outside in full sun. The grounds were wonderful, filled with so many tropical plants that I didn't want to leave. We were getting down to only a few days left on our trip, and I started to wonder how I could leave all these great people we had met and fantastic places we had been. It was quite emotional to think of letting go of all this and going back to New York.

But more excitement was yet to come. Our next day's visit was to the country home of the Peixoto family – a beautiful place with a large house, small chapel, pond, swimming pool, and plants everywhere, of course. We were greeted with kisses from Mauro's mom. She prepared the BEST meal I had the whole trip, and we had some pretty good ones. It was a feast fit for kings. Mauro's family and friends were wonderful to us and made us feel right at home. The day was cold and misty, perfect for spending hours in Mauro's greenhouse enjoying the many plants there. I saw the biggest tuber ever (I bet it was the size of a beach ball) and took a picture of Mauro next to the plant. There were impressive species of *Nematanthus* in bloom like *N. punctatus* (ined.) with large, heavily spotted white flowers and another that was not as large but also spotted which Mauro thinks is a new species. Besides gesneriads, Mauro was growing orchids, begonias, carnivorous plants, hoyas, vines, and many other plants I had never seen before. Mauro was a very hospitable host, and we cannot begin to thank him for all he did for us.



Gussie Farrice climbing the rock face with the help of the guide rope fastened by Rogerio Silviani



Mauro and Rogerio in the gesneriad greenhouse at Instituto Plantarum

On our last day in Brazil we explored some areas around São Paulo. We drove to a favorite nearby spot of Mauro's and walked down a path to a place in the woods so beautiful that it could have been the Garden of Eden. There was a small waterfall, meandering streams, and lush undergrowth, and, most importantly, the best habitat for all sorts of epiphytes. Unfortunately the stream was swollen and we could not easily cross it. We were so near, but yet so far. I was ready to wade across the fast-moving stream but waited to see what the group wanted to do. Luckily we had a quick-thinking construction worker in our group who took control of the situation. Dave disappeared, then came back with a huge board so heavy it really needed two people to carry it. He plopped it across the stream and we were able to reach that beautiful habitat. There we found *Nematanthus fritschii* and *N. villosus* as well as a natural hybrid between the two species. We only had a little time left to scan the area, but we also found three species of *Codonanthe* — *C. gracilis*, *C. cordifolia*, and *C. devosiana*.

Along the road on our way back was an above-ground water main that carried water to São Paulo. The pipe was enormous, and a large access strip was kept cleared on both sides of the pipe. Growing in this clay loam, which seemed quite heavy to me, were plants of *Sinningia allagophylla* just coming into bud. I was told that the tubers were quite deep in the ground. In a nearby wooded area we found *Nematanthus fritschii* in bloom. As we were about to leave, we spotted *Sinningia elatior* growing on the bank above the road in full sun. Seeing those plants in full bloom was a fitting end to our visit to Brazil.

Time to leave was sad, but I think we were all too tired to realize it. It was a trip of a lifetime with friends I hope to have for a lifetime as well. Growing gesneriads has brought so many wonderful people into my life that it isn't just about plants now. It's about the friendships they kindle.

I would like to add special thanks to Carol Schreck who helped me with this article.



Mauro Peixoto in his greenhouse with an impressive specimen of *Sinningia lineata*

For more information and photos of gesneriads and other Brazilian plants, go to <www.brazilplants.com>. To inquire about guided tours in Brazil for individuals or groups, contact Mauro Peixoto at <mpeixoto@uol.com.br>.

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Financial Statement – January 1, 2003, to and including December 31, 2003

CENEDAL FUND. Combined Descine Charling and Coming	-	,
GENERAL FUND — Combined Receipts, Checking and Saving	S	26.655
Membership Promotions		26,655 1,234
Ads in The Gloxinian		943
Education & Slide Programs		500
Sales of Literature & Supplies, including PO		1,751
Seed Fund Sales		6,367
Judging Publications		722
Donations – Fund for Progress		2,956
Donations – Color Photo Sponsorships		2,170
Miscellaneous Receipts		2,330
TOTAL – Combined Balances		\$45,629
(Checking \$24,406 / Savings \$21,223)		Ψ10,02>
GENERAL FUND		
Checking Account – Beginning Balance, December 31, 2002		12,679
Add from Combined Balances Above		24,406
Miscellaneous		2,319
Held for Expenses		29,780
Held for Convention Expenses		28,020
Advanced Convention 2004		6,000
TOTAL Receipts – Checking		\$103,204
		Ψ100,20.
DISBURSEMENTS Publication of The GLOXINIAN		(34,017)
Other Publications		(121)
Judging "Appraisal"		(582)
Membership Processing		(997)
Promotions		(459)
Operating Expenses:		(10)
Miscellaneous	(2,347)	
Chair Expenses	(1,140)	
Stipends	(3,600)	
Liability Insurance & Umbrella	(3,114)	
Convention Advance & Expense	(1,204)	
To FBEF for Life Awards	(2,625)	
Grants (2)	(<u>3,300</u>)	(17,330)
Hold for Disbursements		(36,038)
Total Disbursements		(89,544)
TOTAL on Hand, Checking – December 31, 2003		\$13,660
GENERAL FUND – Savings		
Beginning Balance – December 31, 2002		31,567
From Combined Balances		21,223
Interest		94
Convention Gross – less Donations to Fund for Progress		32,519
Endowment – Crisafulli, net		1,950
Miscellaneous		1,395
Total Receipts		\$88,748
Credit Card Fees and Supplies	(1,153)	. ,
Bank Fees and Supplies	(166)	
Convention Refunds	(642)	
Miscellaneous	(600)	
Awards	(1,780)	(4,340)
To Wa Fed, CD/Endowment, Crisafulli		(1,950)
2004 Convention Expense Advance		(6,000)
2003 Convention Expense		(37,020)
Expenses – remits to Checking Accounts		(20,500)
TOTAL Disbursements		(<u>\$69,810)</u>
SAVINGS Balance, December 31, 2003		\$18,938

GENERAL FUND		
Checking Account		13,659
Savings Account		18,936
CD/Endowment, Crisafulli Mutual Funds:		1,978
Safeco Int Term Government Fund	8,835	
	,	19.005
Safeco Int Term Municipal Bond	9,170	18,005
TOTAL – General Fund – December 31, 2003		\$52,578
ELVIN McDONALD RESEARCH ENDOWMENT FUND		
Balance – December 31, 2002		18,331
Donations		500
Interest – Savings		24
Interest – CD #1 @ 5.09% APY held at Key Bank Interest – CD #2 @ 3.50% APY held at Wa Fed		606 82
Savings Balance	4,632	82
Balance, Certificate of Deposit #1	12,494	
Balance, Certificate of Deposit # 2	2,416	
Ending Balance, December 31, 2003	19,542	\$19,542
	17,512	Ψ1,012
INTERNATIONAL GESNERIAD REGISTER FUND		12 049
Beginning Balance – December 31, 2002 Sale of Registers		13,948 344
Interest – Savings		29
Interest – CD @ 3.00 % APY held at Wa Fed		287
Savings Balance	5,642	
Balance – Certificate of Deposit #1	8,966	
Ending Balance, December 31, 2003	14,608	\$14,608
FRANCES BATCHELLER ENDOWMENT FUND		
Beginning – Combined, December 31, 2002		165,114
Changes in Value – Mutual Funds		105,111
Fidelity – Asset Manager		7,343
Safeco – Int Term Government Fund	7,164	
Safeco – Int Term Municipal Bond	7,298	14,462
Life Memberships		8,960
Donations		338
Convention Auctions		3,115
Interest Earned to December 31, 2003:		
Savings	21	
Key Bank USA, CD, #1 @ 3.67 % APY Wa Fed, CD #2 @ 2.75 % APY	2,178 127	
Wa Fed, CD #2 @ 2.73 % AP1 Wa Fed, CD #3 @ 5.00 % APY	885	
Wa Fed, CD #4 @ 5.00 % APY	532	
7 ta 1 ca, 02 m 1 c 2 100 /0 111 1		3,743
Less Transfer from Savings to MF		(13,000)
Balances, December 31, 2003		
Savings	13,554	
Certificate of Deposit #1	44,727	
Certificate of Deposit #2	4,754	
Certificate of Deposit #3	18,593	
Certificate of Deposit #4	11,166	
Fidelity Asset Manager – Mutual Fund Safeco Int. Term Gov't Fund – Mutual Fund	50,091 30,203	
Safeco Int. Term Gov't Fund – Mutual Fund Safeco Int. Term Muni – Mutual Fund	16,988	
TOTALS – Combined Balances – December 31, 2003	190,076	\$190,076
101ALS - Combined Datances - December 31, 2003	190,070	\$130,U/O
AGGS AGGREGATE BALANCES – DECEMBER 31, 2003		
- , -		\$276,805

Research on Gesneriaceae in Austria — Part III: Students and Contemporaries of Karl Fritsch

Anton Weber <anton.weber@univie.ac.at> Institute of Botany, University of Vienna Rennweg 14, A-1030 Vienna, Austria

Although Karl Fritsch (see last issue of THE GLOXINIAN) was certainly the most prominent Austrian botanist working on Gesneriaceae in his time, he was not the only person. Several others, companions or students of Fritsch, showed interest in the family and contributed studies on various aspects. **Karl Rechinger** (father of the distinguished botanist and founder of "Flora Iranica", Karl Heinz Rechinger), from the Museum of Natural History in Vienna, published a series of papers on Gesneriaceae trichomes (Rechinger 1898). This work, concentrating on the trichomes of the floral organs, was continued much later by a female student of Fritsch, **Olga Pongracic** (1931). Another student at Graz, **Franz Wonisch**, studied the vascular system of Cyrtandroideae and discovered secretory canals accompanying the medullary bundles of *Monophyllaea*, *Klugia* and *Rhynchoglossum* (Wonisch 1909a, 1909b).

It was mentioned last time that two late papers of Fritsch refer to the inflorescences of the European gesneriads Ramonda and Haberlea. These papers were supplemented by a paper on the third European genus, Jancaea, written by August Hayek (1926), who included the Gesneriaceae of the Balkan peninsula in his "Prodromus florae peninsulae Balcanicae". Hayek (1871-1928) was a medical doctor, passionate botanist and part-time botany lecturer at the University of Vienna (and father of the Nobel Prize winner in Economic Sciences 1974, Friedrich August v. Hayek). Neither Frisch nor Hayek reached a sound morphological explanation of the inflorescence, nor did they realize that the type of inflorescence found in the three genera is one of the most significant features characterizing the family Gesneriaceae as a whole. Another lecturer at the University of Vienna was Karl Schnarf (1879-1942). He was an acknowledged embryologist, well known as the author of a classical handbook on comparative embryology of Angiosperms (1931). He also included Gesneriaceae in his studies and published a special paper on the embryology of Klugia zeylanica (now Rhynchoglossum gardneri) (Schnarf 1921).

A supplementary branch of Gesneriaceae research was stimulated by **Julius Ritter von Wiesner** (1838-1916), founder of and professor at the Institute of Plant Physiology of the University of Vienna. Among many other things, he was interested in the phenomenon of anisophylly, the unequalness of the leaves on a node found in many plants with whorled phyllotaxis, including Gesneriaceae. His studies were continued by a student of Wiesner, **Wilhelm Figdor** (1866-1938), who published the book "Die Erscheinung der Anisophyllie" in 1909, in which he summarized the respective knowledge of his time. Like Wiesner, Figdor's approach was from the experimental side. Among his experimental plants were also numerous Gesneriaceae in which he also studied the seedling behaviour (he was the first to prove convincingly that all Gesneriaceae seeds need light for germination and early develop-

ment; Figdor 1907a, 1912) and regeneration processes (Figdor 1903, 1907b). A student of Figdor, **J. Jurisic** published a short note on the germination physiology of *Chirita*, *Sinningia* and *Streptocarpus*. This was announced as a first preliminary contribution, but others apparently did not follow.

At Graz, shortly before the arrival of Fritsch, the plant physiologist **Gottlieb Haberlandt** stimulated similar studies on regeneration in unifoliate Gesneriaceae. These were performed by **Ferdinand Pischinger** and published in 1902. He made skillful experiments with *Monophyllaea* and *Streptocarpus* seedlings and found that they react in a different way when one of the two cotyledons is removed.

Reverting to floristics and taxonomy, an Austrian botanist must be mentioned who is well known to all botanists working on the flora of China: **Heinrich Freiherr von Handel-Mazzetti** (1882-1940). He was a student of Wettstein and worked first (1903-1925) at the Institute of Botany of the University of Vienna and later (1925) became Keeper of the Natural History Museum in Vienna. In 1913 he was invited to join an expedition to Southwestern China, financed by the Academy of Sciences of Vienna. Handel-Mazzetti arrived in China at the beginning of 1914, but could not return until 1919 because of the outbreak of World War I. He spent all the time traveling and collecting in South and Southwest China and also visited Upper Burma and parts of Tibet. After his return, he published a remarkable book on his adventurous trip, entitled "Naturbilder aus Südwest China" (1927). Fortunately, the book has recently been translated by David Winstanley into English and complemented by a number of additional chapters including a biography of Handel-Mazzetti. The book is entitled "A



Chirita lavandulacea Staph – young plant with first flower emerging from the axil of the large macrocotyledon (photo by A. Weber)



Tetraphyllum roseum Stapf – this species from Thailand has a curious habit with a teramerous leaf whorl on top of the stem (photo by H. Kurzweil)

botanical pioneer in South West China. Experiences and impressions of an Austrian botanist during the first world war. Heinrich Handel-Mazzetti. Keeper of the Botanical Department, Natural History Museum, Vienna" and is available both in printed form (ISBN 0-9529230-0-9) and online: http://www.paeon.de/h1/hand_maz/pioneer/00titel.html>.

We know today that the area visited by Handel-Mazzetti is very rich in Gesneriaceae and, therefore, members of the family could not have been overlooked by him. He indeed collected a lot of species, described 18 as new for science, and made a number of new combinations. A summary was given in vol. VII of Handel-Mazzetti's "Symbolae Sinicae", published in 1936. Handel-Mazzetti also described a new genus of Gesneriaceae, Brachiostemon, which, however, was later synonymized with Ornithoboea C.B.Clarke (Burtt 1958a). Some of Handel-Mazzetti's species disappeared into synonymy or were transferred to other genera, but there are still a dozen species bearing a Handel-Mazzetti name. Five of them, Chirita fimbrisepala Hand.-Mazz.. Hemiboea subacaulis Hand.-Mazz.. Lysionotus sessilifolius Hand.-Mazz., Lysionotus sulphureus Hand.-Mazz. and Tremacron rubrum Hand.-Mazz., are still in use in their original form. Unfortunatly, most of these species are little known and only *Chirita fimbrisepala* seems to be in cultivation, but drawings of several species can be found in the new Flora of China (Wang & al. 1998) and on the internet http://mobot.mobot.org/W3T/ Search/image/iix262.html>. The generic position of most species described by Handel-Mazzetti under *Didymocarpus* and later transferred to *Chirita* (Wood 1974) is still uncertain (Weber & Burtt 1998e, Weber, Burtt & Vitek 2000).

A last Austrian botanist must be briefly mentioned, although he performed most of his scientific work not in Austria, but in Great Britain: Otto **Stapf** (1857-1933). He was born in Upper Austria, studied in Vienna and went to Kew in 1891 where he became assistant director of the Royal Herbarium in 1909. His name is commemorated in a journal, "Stapfia", edited by the Biology Center of the Regional Museum of Upper Austria in Linz. This journal was established in 1977 by Dr. F. Speta and now numbers over 80 issues (detailed information under http://www.biologiezentrum.at/ biowww/de/biblio/staphia.php>. Stapf edited the six-volumed "Index Londinensis" and many volumes of the "Botanical Magazine". His taxonomic work also covered a number of Gesneriaceae from SE Asia. He described more than a dozen new species and two new genera, Chlamydoboea and Dichiloboea, which, however, were later sunk into synonymy (Paraboea and Trisepalum, respectively). Examples of Stapf Gesneriaceae species are Aeschynanthus magnificus Stapf, A. sikkimensis (C.B.Clarke) Stapf, Agalmyla bracteata (Stapf) B.L.Burtt, Chirita lavandulacea Stapf, Cyrtandra clarkei Stapf, Cyrtandra areolata (Stapf) B.L.Burtt and Tetraphyllum roseum Stapf.

With the death of Stapf (1933), Fritsch (1934), and Handel-Mazzetti (1940), work on Gesneriaceae in Austria nearly came to a standstill for several decades. Fritsch's position at Graz was filled with the prominent Austrian botanist **Felix J. Widder** (1892-1974). Widder was a student of Fritsch and assisted him in his late publications. He did not work on Gesneriaceae himself, but always kept an interest in the family. One of his students, Ms **Wilma Burri**, resumed Fritsch's investigations on Gesneriaceae inflorescences and gathered material for a doctoral thesis, but she did not finish and did not publish any observations.



Chirita fimbrisepala Hand.-Mazz. – from southern China, one of the rare Handel-Mazzetti species found in cultivation (photo by T. Okuto)



Chirita lavandulacea Stapf – from Vietnam, described by Stapf from cultivated material. (Bot. Mag., t. 9047, 1925)



Aeschynanthus sikkimensis (C.B.Clarke) Stapf – originally described as a variety of A. maculatus, but recognized as a distinct species by Stapf (Bot. Mag., t. 8938, 1922)



Cyrtandra clarkei Stapf – described by O. Stapf from Mt. Kinabalu in Borneo (photo by A. Weber)

In the late sixties, **Walter Leinfellner** (1910-1981) at the Institute of Botany of the University of Vienna, revived interest in the family and laid the foundation for Gesneriaceae research lasting until today. This work will be surveyed in Part IV of Research on Gesneriaceae in Austria.

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Greater New York Chapter exhibit at the 1968 New York Flower Show featured "classic gesneriad" *Gloxinia perennis* grown by Peter Shalit who was 15 years old at the time.



Michael Kartuz in 1965 at the Akron Convention

Note: This article is adapted from the lecture introduction given by Mike Kartuz at the 2003 Convention. With his 40 years of growing experience and dedication to gesneriads, Mike is an important part of AGGS history.

My Introduction to Gesneriads and a Short History of Kartuz Greenhouses

Michael A. Kartuz <mikekartuz@aol.com> 1408 Sunset Dr., Vista, CA 92083-6531

My introduction to gesneriads was back in grammar school when a teacher brought in an African violet, possibly *Saintpaulia* 'Blue Boy'. I was fascinated by the velvety, deep violet-blue flowers and the small, neat appearance of the plant.

At a local nursery several years later, I saw Florist Gloxinias (Sinningias) and also Episcias which especially impressed me with their beautiful silvery foliage and tropical appearance. Still later, I visited nurseries in New Jersey that had large collections of African violets and a few other gesneriads such as *Alsobia dianthiflora*.

The dates are uncertain, but some time during the 1950's while living with my immediate family in Flushing and working in New York City, I became involved with a local African violet society. Mostly on group tours, I visited Albert Buell's and Lyndon Lyon's greenhouses. During these years I exhibited plants at the New York Flower Show, met Elaine Cherry and Elvin McDonald, and became a charter member of the Greater New York Gloxinia and Gesneriad Society. Some other AGGS members of this charter group were Irwin Rosenblum and Ruth and Al Katzenberger. Around this time I met Laura Progebin who became a dear friend and supporter. I later visited her and her husband a number of times in Florida. Some of you may also remember Hal Moore who wrote the first book on gesneriads, "African Violets and their Relatives" which became the gesneriad bible and reference book. I was also privileged to know Robert Lee and visited him in Florida several times after he retired.

Around this time in the late 1950's, home life took a turn for the worse and relocation to some other area became imperative. My job in NYC was a dead-end, among other reasons. The opportunity presented itself in 1960, with the help of a friend, to relocate near Boston for the possibility of starting a mail-order houseplant business specializing in gesneriads and begonias. It was rough going at first, but the feeling of freedom and elation of getting away from the city and living in beautiful semi-rural Massachusetts carried me through. My attention to growing plants was regimented 24/7 from that day forward to the present.

While living in Wilmington, MA, we formed the New England Chapter of AGGS. It all started with an exhibit of gesneriads at the New England Flower Show. Early members were Frances and Joseph Batcheller, and Frances was a guiding light of our group. Some of you may have known Paul and Hazel Deschenes who lived in Marblehead, I believe. He was a bit strange in believing some gesneriad members were plotting against each other. I never believed any of it. During this time, I sometimes called upon Hans Wiehler for identification and nomenclature advice. It was interesting to follow the disagreement between Hans Wiehler and Larry Skog regarding whether *Trichantha*, and other members of the *Columnea* tribe, should be kept separate or combined. I don't know if this has been resolved to this day. I am deeply saddened to see the Gesneriad Research Foundation closed.

In the 1970's the fuel crisis made it imperative to relocate the business to a warmer climate. There were really only two choices – Florida or California. The eventual choice was easy.

While still living in New York, I had been introduced to the wonderful and interesting plant family of begonias through my friendship with Bernice Brilmayer whose book on begonias is a collector's item. Among the very wonderful begonia people that I came in contact with were Ralph and Mabel Corwin who lived in Vista, California. In a nursery trade magazine I saw an ad for property for sale in Vista. It included a house, a greenhouse and a shadehouse, so I asked the Corwins to look at the property. Their evaluation was that this might be the place we were looking for. With the help of Patrick Worley, we were able to move to Vista in late 1979. I had met Patrick a few years earlier at an AGGS Convention in Minneapolis, MN. Patrick was a member of Kartuz Greenhouses until personal egos made it impossible to continue the partnership. The first few years in California were difficult, but worth it.

Today, with the help of the Internet, a new catalog, and a devoted staff, business has increased greatly. The future of Kartuz Greenhouses, and its gesneriad collection, seems secure ... except that I am considering the possibility of retiring.

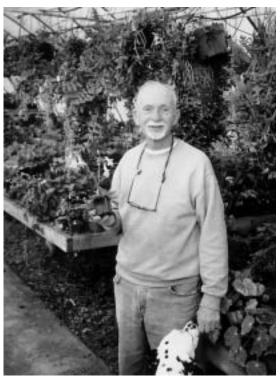
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Michael Kartuz with his gesneriads and companion Rena in his California greenhouse in 2003

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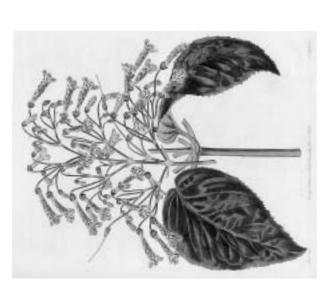
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After 180 years, it still exists in the wild in Brazil and is being grown worldwide. Seed is available in the AGGS Seed Fund. (Illustration from Bot. Reg., t. 1110, 1827)

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