

# Gesneri-Eds

Volume 33

The Newsletter of the Tennessee Gesneriad Society

Issue 10

Next meeting:  
Sunday,  
October 10  
2:00 p.m.  
Cheekwood's  
Botanic Hall  
Refreshments:  
Audrey L.  
POTM:  
Petrocosmea

## A Message from the ~~President~~ Editor

We pulled off another show last month, though we were a little worried for a while. Unfortunately some of our best exhibitors from the past were unable to join us and we had only five exhibitors, but each person brought as many plants as they were able. It was not the greatest show we ever had, but it was still nice. We had lots of pretty plants and some nice arrangements too, thanks to Molly. We had a few more visitors, at least on Saturday morning, and so sold a fair number of plants. See the show report in this issue for the winners. I personally was very gratified to win three beautiful cups! That's the first time that ever happened to me for sure! To top it off, the following weekend I won Best of Breed and Best of Opposite Sex with a couple of my guinea pigs and the following week won a recipe contest for Vanderbilt employees! I feel like I should buy a lottery ticket!

This month's program has been exchanged with the November program. We will have our speaker next month due to

scheduling problems. This month we will have a brainstorming meeting to determine our next year's program. In addition we will see an AGGS slide show. We have several available and we can vote on which one we want to see. I will also have the photos from our show for your viewing pleasure.

I have been working to make room for the plants that will have to come in soon. For some reason they always seem to proliferate in the summer every year somehow. I spent an entire day cleaning out my greenhouse, mostly throwing away dead plants to make room for the live ones. I usually keep dead plants for two or three years, but it's a desperate situation, so I had to make some exceptions. I also did some much needed repotting, though there is still plenty that needs to be done. Time is always a problem.

Please join us for this meeting; it is an important one. It will determine what we learn next year.

*Julie*

For easy reference, here are the TGS meeting dates for 2005:

Jan. 9 \_\_\_\_\_  
Feb. 13 \_\_\_\_\_  
March 3-6  
Nashville Lawn &  
Garden Show  
April 10 \_\_\_\_\_  
May 15 \_\_\_\_\_  
June 12 \_\_\_\_\_  
July 10 \_\_\_\_\_  
Aug. 14 \_\_\_\_\_

## Show Results

The Tennessee Gesneriad Society had its annual fall show on September 17-19, 2004.

The big winners were:

**Best in Show:** Julie Mavity-Hudson for *Chirita* USBRG 98-083

**Sweepstakes:** Julie Mavity-Hudson (8 blue ribbons)

**Runner up to Sweepstakes:** Tim Tuttle (5 blue ribbons)

**Best in Artistic:** Molly Schneider for an arrangement "The Hanging Gardens of Babylon"

**Best in the Arts:** Julie Mavity-Hudson for a slide of *Pentadenia orientandina* (with the stipulation that we don't want to see any more slides of this plant ever again!)



There were only five exhibitors this year due to unavoidable circumstances preventing some of our most active members from attending and/or bringing plants. Nevertheless, there were still 67 entries, and it was a pretty nice show. We also saw a few new hybrids which were quite interesting. Exhibitors included Jonathan Ertelt, Richard Holder, Julie Mavity-Hudson, Molly Schneider and Tim Tuttle.

*Julie*

## Email Anyone?

If anyone wants to receive *Gesneri-Eds* by email, please email Julie at:

Julie.Mavity-Hudson@vanderbilt.edu

You will see everything in color and will get it earlier. *Julie*

## On the Gesneriad Trail in Middle Earth

by Vincent Woo



It has been five months since I departed Toronto, and I am finding my time in New Zealand to be a blur and a joy. It has been truly amazing to find so many like-minded people so far away, and so keen and enthusiastic about my research here.

I am studying the only gesneriad native to New Zealand, a twiggy shrub, *Rhabdothamnus solandri*, (rab-doe-thamnus soe-lan-dree) which grows throughout the North Island. It has rough-textured leaves, round with a serrated edge, varying in size from 2 to 7 cm across. The 2 cm long flowers are born singly from the leaf axils and are most commonly a reddish-orange colour. They are bell-shaped with a series of darker stripes along the inner throat. The colour and shape are suggestive of bird-pollination, and a recent study has shown that some of the native honey eaters do visit the flowers.



The purpose of my study is to look at how diverse the plants are throughout the country, by examining their DNA. That is, are plants quite closely related to each other or are they quite varied? The question is stimulated by an observation that in the wild, plants have some variation in their flower color (dark red-orange to clear lemon-yellow) as well as leaf size (island plants being much larger). I have had the chance to visit some of these sites and to see the plants growing naturally along streams, on steep banks and overhanging cliffs. The humidity must be quite high, as most plants are usually described as near or beside water, and with even shade, as most plants are found on the shadier south banks.

One aspect of my research is examining the relationship of *rhabdothamnus* to other gesneriads. New Zealand has a unique geologic history. It separated from a large land mass called Gondwanaland about 80 million years ago and was isolated from many things, including mammals. In fact, it has been isolated longer than what the family we consider as gesneriads has been around!

So how did *Rhabdothamnus*, a member of this family get here? Is it an "ancestor" for millions of years, a distant "cousin" that arrived here by some other means (wind, birds) but died out on the mainland? We don't know. I am hoping to get a better sense of where this little-studied species belongs in the gesneriad family we love.

I write this sitting in the Southland Museum in Invercargill, probably the largest city at this southerly latitude, waiting to meet my fellow passengers for a trip to the subantarctic islands. They are located south of New Zealand in the waters between here and Antarctica, and boast a rich assemblage of marine mammals, birds and endemic plant species. Especially exciting are the many species of "megaherbs," giant cold-hardy plants that have spectacular flushes of blooms, much like alpine flora in other parts of the world. They endure very low but steady temperatures and harsh rains nearly year round and flower in December and January when the temperatures reach a balmy 12 degrees Celsius. I hope to send in some

photos of the megaherb plants (likely with fruit or spent flower stalks) as well as photos of *Rhabdothamnus* in the wild.

Unfortunately, no [other] members of the gesneriad family have reached so far south ... [only] *Rhabdothamnus* and the other Chilean monotypic gesneriad species have the distinction of being so far south!



## The Ubiquitous Earthworm Shouldn't be Ubiquitous

<http://www.sciencedaily.com/releases/2000/09/000904130558.htm>  
MINNEAPOLIS / ST. PAUL -- Earthworms may be our friends in the vegetable garden and a useful addition to the bait bucket, but according to University of Minnesota scientists Cynthia Hale, Lee Frelich and Peter Reich, they appear to be an unwelcome intruder in Minnesota's hardwood forests. Hale presented a talk, "Impacts of Invading European Earthworms on Understory Plant Communities in Previously Worm-free Hardwood Forests of Minnesota," Monday, Aug. 7, in Snowbird, Utah, during the annual meeting of the Ecological Society of America. Her presentation was part of a session on Invertebrate Herbivore-Plant Interactions.

Invading earthworms appear to be causing widespread loss of native forest plant species and affecting the stability of hardwood-forest ecosystems, said Hale, a graduate student in the university's department of forest resources. During the last few decades, European earthworm species have moved into hardwood forests in the northern tier of the United States.

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*Our five exhibitors: Tim Tuttle, Molly Schneider, Julie Mavity-Hudson, Jonathan Ertel, and Richard Holder*



*The prizes: hand-painted mugs by Elizabeth Schaeffer and the silver platter for Sweepstakes*



*Tim and one of his blue-ribbon plants*



*The judges: Tim, Julie, and Carol Ann*



*Molly by her impressive and award-winning arrangement*



*The two prize winners, Julie and Molly*

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**The Ubiquitous Earthworm Shouldn't be Ubiquitous** *continued from page 2*

" We have documented significant damage in the Chippewa National Forest and in isolated forest preserves in and near the Twin Cities area in southern parts of Minnesota," Hale noted.

Minnesota's hardwood forests, which developed in the absence of native earthworms after the last glaciers retreated, contain a thick forest floor that serves as a perfect rooting medium for many species of forest herbs and tree seedlings. In the 1800s European settlers arrived, bringing with them European earthworm species in potted plants. European earthworms have been part of the habitats surrounding human habitation ever since.

When earthworms invade a forested area, they consume the forest floor, and herbaceous plant diversity and tree seedling density decrease dramatically. Heavily impacted stands have been observed with only one species of native herb and virtually no tree seedlings remaining.

"Ninety-nine percent of the populations of native plant species normally found in hardwood forests, including large-flowered trilliums, yellow violets, and Solomon's seal, are destroyed in affected areas," said Frelich, a research associate in forest resources. "In many areas, the remaining bare soil is simply eroding away."

Although it is not possible to reverse the continued migration of the earthworms, there are things people can do to help the forests recover.

"It is likely earthworms will eventually spread to all the hardwood forests except those whose soils are sandy or extremely shallow," said Frelich, "but we certainly don't want to speed up the process. People have always been told worms are good for the environment, so at the end of fishing vacations they dump the leftover worms near the lake. They don't understand how harmful earthworms can be to a forest."

Replanting native plant species is another way to help forests recover from earthworm damage. Native plants, grown from locally harvested seeds, are now available. A small industry is developing to provide native woodland plant species, a restoration effort similar to what has been happening with prairie plants.

"We're sharing the study results now," said Hale, "so ecologists become aware of the issue, realize that the presence of earthworms is an important criterion when evaluating an area, and begin to understand what their presence means." Hale and Frelich are continuing their research by conducting a formal survey of several Minnesota hardwood forests over the next two years. The third author, Peter Reich, is a professor of forest resources.



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