



Master Gardener Thymes



WWW.LAKELANDSMASTERGARDENER.ORG

July 2011

BOARD MEETING MINUTES

By Sandy Orr

Board Members in attendance:

Dwight Long, Sandra Johnson, April Prater, Cindy Wilkins, Linda Halsey, Vince Plotczyk, Nicole Ellis, Janet Le-debuhr, Patti Larson, and Sandy Orr.

- Minutes of LMG Board meeting of 4/14/2011 were approved
- Treasurer's report 4/15/11-6/9/11 were handed out

OLD BUSINESS

- **Topiaries**- Dwight Long helped place the topiaries the first week of June and they are all on display.
- **Railroad Museum** - Sandra Johnson. The museum is not on the Garden Tour (although in today's paper supplement it was listed on the tour). Sandra has staffed it both Sat. June 25th and Sun. June 26th It will be open on Saturday and Sunday of the Festival. Approx. \$75 of annuals was planted by the Master Gardeners and Sandra Johnson has been watering them as often as she can.
- **Membership Committee Report**- Cindy Wilkins. An updated membership list and the bi-laws for LMG only to view on the website in the password-protected section, provided by Chuck Bender with help from Vince Plotczyk. The membership form is updated and will be used in the 2012 membership

drive which will begin this September. The Membership Committee has a report of inactive members and fallen away members and the Phone Committee will be contacting them in the future. (new 2012 form coming in September newsletter).

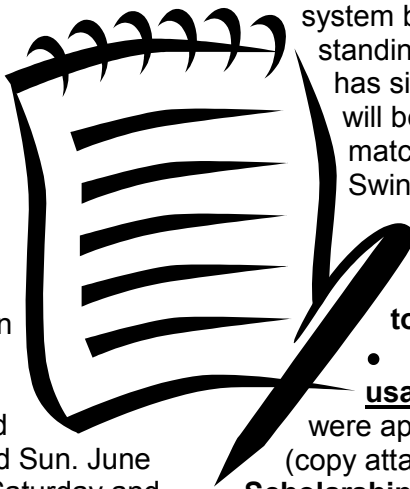
Directional Signs to GMD- Catherine Swindell. Catherine e-mailed pictures of the signs that her daughter made. They were approved by the Board, with a suggestion of painting the support system black for the free-standing sign (but Catherine has since reported that they will be painted dark green to match the arrows). George Swindell has done work on the support system also. We have 5 new signs that cost \$225.00 total.

Guidelines for e-mail usage-

The guidelines were approved by the Board (copy attached to email).

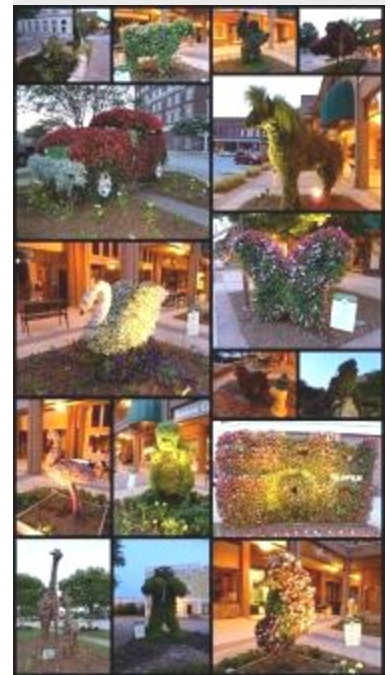
Scholarship Guidelines/Forms/

Performance Agreement- Linda Halsey and Sandra Johnson researched and developed the Scholarship form based on programs other Master Gardener groups were currently using. The application and program as outlined was approved by the Board. Each scholarship may be granted in honor of a notable Master Gardener or Extension Agent. A maximum of five scholarships of \$200 may be awarded in a year.



Dates to Remember:

- THURSDAY, JULY 14TH, 6:30 PM – GENERAL MTG CANCELLED
- THURSDAY, AUGUST 11TH, 6 PM **BOARD MEETING**
- THURSDAY, SEPT. 8TH, 6:30 PM **GENERAL MEETING WITH SPEAKER**
- THURSDAY, OCT. 13TH, 6 PM **BOARD MEETING**
- THURSDAY, NOV. 10TH, 6 PM **BOARD MEETING— BUDGET MEETING**
- THURSDAY, DEC. 8TH, 6:30 PM **CHRISTMAS PARTY**



The Lakelands Master Gardeners Association is a volunteer organization made up of Master Gardeners from Abbeville and Greenwood Counties in SC.

Continued p.2

There will be a line added to the 2011 budget and a sub-committee will be formed to interview the applicant's. Hopefully, this program can be used this year for the upcoming 2011 MG class.

Service Hour Plaques- This issue was tabled due to lack of a specific recommendation. The MG of the Year plaque has been updated and will continue to be kept at the Extension Office.

NEW BUSINESS

- **Park Seed Flower Day Staffing-** Patti Larson has set up a schedule for the LMG booth on June 25th. The Clemson Extension office will also be staffed by James Hodges
- **Festival of Flowers Railroad Museum Garden Staffing-** Sandra Johnson has set this up for Saturday, June 25th.
- **Hospice Garden-** Sandra Johnson will visit and determine the suitability as a LMG project.
- **Advertising in Newsletter-** April Prater. Tabled

until further information available.

- **Presentation of Budget-** Patti Larson presented the figures for 2010 actual expenses and proposed expenditures for 2011. The proposed budget was approved by the Board (copy attached to email).

- **Speaker Suggestions for September Meeting-** Nicole Ellis will contact a lady from Fern Ridge Farms in Athens, GA, who has done speeches for LMG in the past and does a wonderful presentation. She has since agreed to speak at our September 8th at GMD. We need a chair person for this committee. If you are interested, please contact Jimmy McInville or Patti Larson.

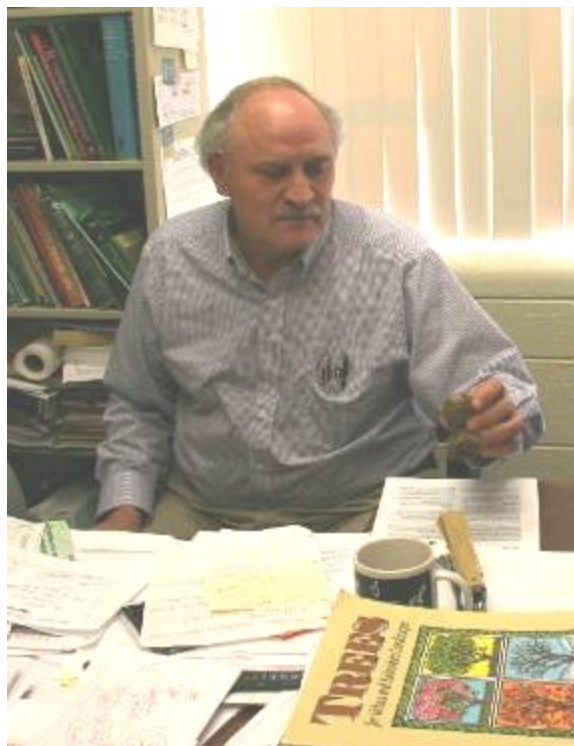
The LMG BOD next meeting- August 11, 6PM at the Clemson Extension. No General meeting scheduled for July.

Thanks for All the Support

By James Hodges

In very difficult budget times it is great to have friends who go to bat for our Extension Programs. I say thanks for all who voiced or penned their support for Extension Programming. Greenwood County council added \$10,000.00 back into our annual requests for program and 4-H agent support. This is only 40% of our original requests, but when your state funding will be 50% of what it was 3 years ago this will help us through another tough year.

Most people don't know that the full name of Extension contains the phrase



“Cooperative Extension Programs” which has always defined the extension goal of working with everyone and all different organizations to improve quality of life with emphasis on youth and agricultural areas. Greenwood Extension and yours truly benefits greatly from cooperative efforts with the Lakelands Master Gardener Association on so many horticulture, youth and community programs for our area. Thanks

Master Gardener Thymes

Tobacco Hornworm

By Ann Barklow

I often think of myself as an amateur research scientist when I am in the garden. When I see anything moving, I move in closer for inspection. For my research, I am never far from my 10X hand lens, laptop computer or iPhone, and camera.

Today I spotted a tobacco hornworm. I found it on my tomato plants and for obvious reasons; I was tempted to call it a tomato hornworm. You can distinguish the two by their markings. The tobacco hornworm has straight white lines like a cigarette pictured below and the tomato hornworm has "V" line markings like "vine" ripened tomatoes.



Tobacco Hornworm

If you have these large invaders in your garden in South Carolina it is most likely the tobacco hornworm. Tobacco, tomatoes, potatoes, eggplant and peppers are all in the *Solanaceae* family and tobacco hornworms will feed on all of them but seems to prefer tomatoes in my garden. Of course I'm not growing tobacco so I can't speak to that.

The name hornworm can confuse you too. They do have a horn but they are a caterpillar not a worm because they are the larva of a moth. Worms are in the same form all their life where caterpillars are a stage of butterfly or moth.

The reason I spotted the hornworm was because it was covered with delicate cocoons. This was thrilling because these cocoons meant that *Braconid* wasps were in my garden. These parasitic wasps are only 1/10 to 1/4 inches long and are one of the most important beneficial insects that prey on aphids and caterpillars. It is one of the reasons I plant yarrow in my garden because I know they love the nectar from the flowers.



Braconid Wasp

These predators first insert their eggs in the caterpillar. The eggs hatch and the larvae begin feeding on the caterpillar's organs causing its death. When the larvae finish, they cut their way out and spin these lovely cocoons where they pupate and turn into a wasp again and cut their way out of the cocoons. You can see their little escape hatches in the picture below. Notice the frass (insect poop) on the end under the horn. These droppings fall on the leaves below and are one of the easier ways to notice if you have hornworms since the caterpillars blend in so well. I often look for the frass and then follow up the plant and find the hornworm.



Tobacco Hornworm with Braconid Cocoons

Of course once you see one of these caterpillars you can probably find a half a dozen or more. As I looked more closely I found three more covered in cocoons and three that had no signs of attack and were eating fast and furiously. I debated for the afternoon if I should leave the ones eating so they would be available for an appetizer for newly hatched wasps but watching my plants get devoured was not easy. I have 6 very robust plants with an abundance of tomatoes and can take a bit of eating but if you only have a small patio tomato these culprits can eat it in one day! I am a big believer in biological control but sometimes it is too slow for my liking.

I decided to remove the three apparently healthy caterpillars but just in case they had wasp larvae in their bellies I placed them out into the forest a good distance from my tomato plants in hopes the wasps can complete their cycle.

This experience reminds me to continue to monitor my garden closely every day and research the critters living there. Search carefully and be sure to check undersides of leaves of your crops. If you see bugs, eggs or frass don't ignore it. Find out what it is before it does severe damage. This can prevent a lot of discouragement and disappointment in gardening. Some of the insects you find may be beneficial like the cocoons I found. If we're lucky nature will keep everything in balance with just a little help from us.

Septoria Leaf Spot of Tomato

By Vincent Plotczyk

With the gardening season under way, another common and destructive disease of tomatoes will be showing up in gardens. This disease is Septoria Leaf Spot. Septoria Leaf spot is a disease of the foliage and stems primarily of tomatoes. It does not affect the fruit directly. Septoria Leaf spot has also been reported on potatoes, eggplant, petunia, horsenettle and black night shade. Septoria Leaf spot is caused by the fungus *Septoria lycopersici*.



William M. Brown Jr., Bugwood.org

The first noticeable symptom is small water soaked circular spots scattered over the leaf. Symptoms may appear at any stage of the plants development on the leaves and stems but is most evident when the plant has begun to set fruit.



Paul Bachi, University of Kentucky Research and Education Center, Bugwood.org

Symptoms usually first appear on the older, lower leaves and stems but can also occur on petioles, and the calyx



Paul Bachi, University of Kentucky Research and Education Center, Bugwood.org

The spots enlarge to become 1/16 to 1/8 inch with dark brown margins and tan centers with dotted black pycnidia. Pycnidia are fruiting bodies of the fungus. Yellow haloes often surround the spots. Heavily infected leaves turn yellow then brown and drop prematurely. Defoliation can quickly spread up the plant towards new growth. Significant losses can occur from the defoliation which leads to the sunscalding of the fruit.

The disease can be quite destructive and crop losses have been reported to be as high as 100% in heavily defoliated fields.

Septoria Leaf spot is sometimes confused with bacterial spot of tomato. The presence of the fruiting bodies of the fungus (pycnidia) confirms Septoria Leaf spot.

The disease is favored by warm, wet, humid conditions. Spore production is abundant when temperatures are between 60°-80°F.

Spores are usually spread by wind, rain and overhead irrigation. The spores can also be spread by insects. Some of the insects include the Colorado potato beetle, flea beetles, tomato worms and aphids. Spots usually develop within 5 days after infection.

MANAGEMENT

Use 3 to 4 year rotation with non-Solanaceous crops. Control weeds in and around the edge of the garden. Deep plow, preferably in the fall, to bury all plant debris. Use only healthy, disease-free transplants. Avoid overhead watering. Avoid working with plants when they are wet. Staking and mulching help reduce infections.

Continued p. 5

Proper selection, timing and application of fungicide sprays.

Some recommended fungicides for the home gardener are chlorothalonil, fixed copper, or mancozeb. Consult the Clemson Extension HGIC bulletin 2217 Tomato Diseases for details.

When using a fungicide remember to read and follow all label directions.

The label is the law!

Organic Control Measures:

Source: ATTRA - National Sustainable Agriculture Information Service

Cultural control is one of the only ways to control/ prevent Septoria Leaf Spot.

Cultural Control

- Dispose of crop refuse by plowing under deep or composting.
- Control weeds (particularly those in the Solanum genera) in and around the edge of the garden.
- Rotate tomatoes with cereals, corn, or legumes. A 4-year rotation is recommended where disease has been severe.
- Mulch acts as a barrier between soil and plant to prevent splashing spores onto plant.
- Prune lower leaves that are infected at first sign—will also improve air circulation.
- Stay out of growing areas when the foliage is wet.
- Water early in the day and, if possible, avoid wetting the foliage, through using drip irrigation or soaker hoses.
- Stake plants.
- Be sure plants have adequate nutrition.

Control via biorational, compost tea, etc.

Fungicides, organic or not, have shown limited results with Septoria leaf spot:

- Copper and sulfur are fungicides approved by the National Organic Program (NOP) Standards. Application of copper is a routine disease control practice in organic tomato production in the eastern United States. Copper functions both as a fungicide and bactericide and is labeled (under the NOP) for anthracnose, bacterial speck, bacterial spot, early and late blight, gray leaf mold, and septoria leaf spot.

Commercial products like Kocide 101™ are used in both conventional and organic tomato production for the control of Septoria leaf spot, bacterial spot, bacterial speck, anthracnose, and early blight. Applications are made on a 7-10 day schedule and the result may be 8-12 sprays per growing season. See the resource *Eggplant, Pepper, and Tomato XXIV; Septoria Leaf Spot* by Howard Schwartz and David H. Gent of High Plains IPM for information on applying specific copper fungicidal controls. Note that the pesticides listed in this publication are not all organic. Only some of the copper fungicides are permissible.

Under the NOP, The National List of Allowed and Prohibited Substances §205.600 are:

- 1) Coppers, fixed—copper hydroxide, copper oxide, copper oxychloride, includes products exempted from EPA tolerance, Provided, That, copper-based materials must be used in a manner that minimizes accumulation in the soil and shall not be used as herbicides.

(2) Copper sulfate—Substance must be used in a manner that minimizes accumulation of copper in the soil.

- The use of copper fungicides in organic production is somewhat controversial. It is directly toxic at applied rates to some beneficial organisms, particularly earthworms and some soil microbes such as blue-green algae—an important nitrogen-fixer in many soils. Excessive use can also result in the buildup to phytotoxic (crop damaging) levels of copper in the soil. Thus, organic growers often monitor soil copper levels through regular soil testing.

Compost Teas

Research has shown that compost teas seem to work more for phytophthora (root rot) and Pythium (damping off) diseases in tomatoes. It might be beneficial to try spraying (fully cured) compost tea on just a few plants to see if it is effective for you. ATTRA offers a publication titled [*Notes on Compost Teas*](#).

Biological Controls

Unfortunately, there has not shown to be any effective biological control agent for Septoria Leaf Spot. Biological fungicides are a new and emerging field. F-Stop™, registered as a seed treatment for tomatoes, contains a biocontrol agent called *Trichoderma viride sensu* and may be effective for treating seed infected with Septoria leaf spot. There is no conclusive evidence on its efficacy with Septoria Leaf spot specifically, however.

The ATTRA publication titled *Organic Tomato Production* can help with general tomato disease control strategies as well as some specific information on other tomato diseases.

References

Hansen, Mary Ann, Extension Plant Pathologist, Department of Plant Pathology, Physiology and Weed Science, Virginia Tech. Adapted from a previous publication by R.C. Lambe. Septoria Leaf Spot of Tomato. Virginia State University Cooperative Extension. Publication Number: 450-711, Posted December 2000.

www.ext.vt.edu/pubs/plantdiseasefs/450-711/450-711.html

Delahaut, Karen and Walt Stevenson. Tomato Disorders: Early Leaf Blight and Septoria Leaf Spot. University of Wisconsin Extension. 2004. <http://s142412519.onlinehome.us/uw/pdfs/A2606.PDF>

Schwartz, Howard F. and David H. Gent. Eggplant, Pepper, and Tomato XXIV; Septoria Leaf Spot. High Plains IPM. <http://highplainsipm.org/HpIPMSearch/Docs/SeptoriaLeafSpot-EggplantPepperTomato.doc>

Sources:

Clemson Cooperative Extension
HGIC 2217 Tomato Diseases

Ohio State University Extension
HYG 3112-96
Septoria Leaf Spot of Tomatoes

Virginia Cooperative Extension
Publication 450-711
Septoria Leaf Spot of Tomato
Michigan State University Extension

Continued p. 6

Jackie Smith
MSU Diagnostic Services
Septoria Leaf Spot of Tomato

University of New Hampshire
Cooperative Extension
Tomato Leaf Spots

The Connecticut Agricultural Experiment Station
Dr. Sharon M. Douglas
Septoria Leaf Spot of Tomato

University of Wisconsin Extension
A2606
Tomato Disorders: Early Blight and Septoria Leaf Spot

University of Tennessee Extension
SP277-W
Foliar Diseases of Tomato

Organic Source:

ATTRA - National Sustainable Agriculture Information Service

Organic Tomato Production
Steve Diver, George Kuepper,
Holly Born
NCAT Agriculture Specialist
Published 1999
© NCAT
CT073

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Rose Canker

By Vincent Plotczyk

Cane canker disease is the leading cause of deadwood in rose bushes.

Hybrid tea varieties are more commonly infected with stem canker than other types of roses.

Several types of fungal stem cankers are found on roses. These are:

Common canker

(caused by *Leptosphaeria coniothyrium*),

Cane blight canker

(caused by *Botryosphaeria ribis*),

Brand canker

(caused by *Coniothyrium wernsdorffiae*), **Brown canker**

(caused by *Cryptosporella umbrina*).



Florida Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org

Cankers usually appear as dead or discolored areas on canes and vary in color from light tan to a dark purplish brown. The fungi enter healthy canes through wounds caused by improper pruning, flower cutting, wind, hail damage, winter injury, cultivation injury, insect and rodent injuries and flower removal. Broken thorns and leaf and thorn scars also serve as entries for infection.

The fungi can also invade the uninjured, tender epidermis of new growth or dormant buds.

Once the fungal pathogen has entered the plant, the can-

ker may grow and eventually girdle the stem causing a die-back of the cane and, upon reaching the crown, may destroy other canes or the entire plant.

There are no fungicides specifically available to control stem canker.

Keep plants healthy by controlling black spot, powdery mildew and insects.

Control:

Avoid injury to the plant during transplanting, cultivating, pruning, & flower – cutting.

Wounds are a major way the fungus enters the plant.

Do not handle or work among plants when the canes and foliage are wet.

Remove and destroy or haul away with the trash all infected, dead, and weak parts of canes immediately as well as infected leaves, flowers, buds, and hips.

Make all pruning cuts well below the diseased areas, and prune about one-fourth inch above an outward-facing bud node, without cutting the nodal tissue, at a 45-degree angle. Prune live canes in the spring, not fall. See Clemson Extension HGIC bulletin 1173 Pruning Roses for more information.

Disinfect cutting tools after use on a diseased plant in a solution of 1 part household bleach to 9 parts water.

Sources:

Clemson Extension
HGIC 2106
Rose Diseases

University of Illinois Extension
Department of Crop Sciences
University of Illinois at Urbana-Champaign
RPD No. 626
Rose Cane Cankers



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Shutterfly - <http://lakelandsmastergardeners.shutterfly.com>

Clemson Cooperative Extension Office– Greenwood– 864-223-3264



LAKELAND MASTER GARDENERS

Newsletter Editor-Janet Ledebuhr
articles due by the 15th of the month—
queenofseaford@yahoo.com

LMG General Meetings will be held at: The
Greenwood Metro District Meeting Room
110 Metro Dr., Greenwood, SC 29646

Directions
*From Self Regional Hospital: Take West
Alexander to Premier Dr. – stay on Premier
Dr. by turning right – turn left on Metro Dr.
From 225 Ext: Going South on 225 Ext.,
turn left on W. Alexander, turn right on Joe
Bernat Dr., turn left on Premier Dr., turn
right on Metro Dr.*

*Board Meetings are held in February, April,
June, August, and October on the second
Thursday of the month @ 6:00 pm @ The
Clemson Extension Office @ The Brewer
Center*

Miles and Hours - please submit to
Linda Halsey
halseyfarm@embarqmail.com, 864-374-
7253, or P.O. Box 82, Hodges, SC 29653

Master Gardener Office Needs Volunteers

Need hours? Volunteer to work in
the Master Gardener office any
time Monday thru Friday. The of-
fice hours are from 8:30a.m - 5
p.m. Schedules are posted at the
office for sign-ups. We encourage
everyone to work in the office for
Office Volunteer Hours.

You can sign up two ways: Go to
the Extension office and add your
name to the schedule; or call the
Extension office at 223-3264.



VOLUNTEER OPPORTUNITIES

Have a committee where you could
use an extra hand? Send it to the
newsletter and it will be listed.

3. Programs and Speakers chairman
4. Check the website for other ongoing projects

1. **Board positions**– Public Relations
2. Urban Tree project, email James

☹ **Missing a newsletter?** Looking for an earlier edition? All of our newsletters can be found at our website at— <http://www.lakelandsmastergardener.org/newslet2011.html>

THE LAKELANDS MASTER GARDENER BOARD 2011

- | | |
|---|-------------------------------------|
| President- Jimmy McInville 223-3096 | Programs & Speakers– <u>OPEN</u> |
| Secretary- Sandy Orr 543-4888 | Finance and Fund Raising– April |
| Vice President- Patti Larson 223-9891 | Prater 543-3644 |
| Past President- Dwight Long | Public Relations- <u>OPEN</u> |
| Treasurer- Patti Larson 223-9891 | Membership- Cindy Wilkins 374-7112 |
| Clemson Advisor- James Hodges 229-1295 | Social- Catherine Swindell 223-8552 |
| Community Projects- Sandra Johnson 993-4183 | Newsletter- Janet Ledebuhr 374-7781 |
| Phone- Nicole Ellis 229-2343 | Web Site- Chuck Bender 998-3123 |
| Education- Helen Spiller 223-2806 | Office- Vince Plotczyk 942-0871 |

Membership dues....it is never too late to pay your dues....please send your dues and form to: Patti Larson, 325 Nautical Way, Greenwood, SC 29649
Forms available online - print page #6
<http://www.lakelandsmastergardener.org/archives/Feb2011.pdf>

This Association shall be operated for the growth and development of its members and for the following purposes:

1. Sharing horticultural information and guidance with South Carolina residents based on re- search specific to the local climate, soils, and plants;
2. Volunteering time to assist the Extension Service in meeting the demand for reliable gardening information;
3. Providing volunteer service to improve our communities through a wide variety of horticultural projects;
4. Promoting the training of Master Gardeners and keeping Master Gardeners active in service;
5. Encouraging interest in gardening by all citizens;
6. Encouraging the utilization of all resources for better gardening, including the Department of Agriculture and Clemson University Extension Service;
7. Encouraging local environmental beautification and preservation; and
8. Helping those less fortunate prosper from the benefits of horticulture.