TEXAS MASTER GARDENER
TEXAS A&M AGRILIFE EXTENSION
ELLIS COUNTY

E-Gardening Newsletter

Volume X, Issue 6 *Official E-Newsletter of the Ellis County Master Gardeners Association, Waxahachie, Texas* *June 2023*

June's Calendar of Events

June 3-4 – **Waxahachie 53rd Annual Gingerbread Trail Tour of Homes** – The ECMGA Butterfly Garden is a Bonus Tour Location on the Gingerbread Trail this year! Master Gardener docents will be on hand to discuss the history and future plans for the garden, what's growing, what's blooming, and who is EATING OUR PLANTS on their way to becoming butterflies.

June 3 – **Master Gardener Booth at Waxahachie Farmers' Market** – June is the month for learning how to use water wisely in your garden and on your lawn. Learn about water delivery systems and how to adjust and maintain them. Indian Trail Master Naturalists will be there with activities for children.

June 10 – **Master Gardener Booth at Waxahachie Farmers' Market** – Learn when to water and how much to build drought-tolerance.

June 17 – **Master Gardener Booth at Waxahachie Farmers' Market** – Choose the right plant for the right place so thirsty plants get watered as needed and tougher plants wait.

June 24 – **Master Gardener Booth at Waxahachie Farmers' Market** – Learn how mulch can help reduce water needs.

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Planting

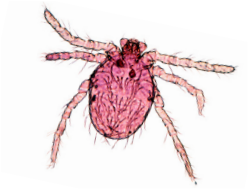
- Buy and plant crape myrtles in bloom to be sure you are getting the desired color. Know the variety's mature size to avoid future pruning. Ask for varieties that are resistant to powdery mildew.
- This is the best time to plant vinca (periwinkle) in full sun. Look for the variety "Cora" since it is resistant to soil-borne diseases. Water with drip irrigation or soaker hose to keep water off foliage.
- Plant these tropical annuals for their flowers: tropical hibiscus, "Gold Star" esperanza, mandevilla and Mexican heather. Use croton, bougainvillea and variegated tapioca for their foliage color.
- June is the time to select day lily varieties as they reach peak bloom.

Fertilizing and Pruning

- It is time for the second application of an all-nitrogen, slow-release fertilizer on turf grasses. Cut the amount by half to prevent excessive growth which means more water and mowing!
- Fertilize container plants and hanging baskets with a water -soluble fertilizer every week or two.
- Prune back autumn sage and mealy cup sage by one-third their size. Deadhead salvias, as well as annuals and perennials, to stimulate new growth to allow the plant to continue reblooming until late fall.
- Continue to prune as necessary, fall-blooming plants such as Mexican bush sage, mountain sage, Mexican mint marigold, copper canyon daises, asters and mums to keep them compact and to prevent buds from forming prematurely. Do not prune after September 1, when buds begin to form.
- Remove flower stalks on coleus, caladiums, lamb's ear and basil before buds open. This will promote new leaf growth.
- Take a critical look at your landscape while at the height of summer development. Make notes on how the landscape can be better arranged: plants that need replacement, overgrown plants that need to be removed; or possibly areas that can be converted to more family-friendly activities. Save this information for implementation later in the year or next spring.

Garden Watch

- Control aphids on crape myrtles with a strong spray of water.
- Spider mites can be troublesome, especially on tomatoes. Treat with an appropriate organic or synthetic pesticide.
- Control webworms in pecan and other trees using a pole pruner. Remove while webs are small.
- Wrap the trunks of newly planted Shumard oak and Chinese pistache trees to prevent sunscald and borers.



Chiggers on my Mind

Maureen Nitkowski, ECMGA - ITMN

As both a gardener and a naturalist, misery comes to me in the form of a mighty mite, namely a Trombiculid commonly called chigger. Until about ten years ago, the mite and I had never been up close and personal, but now we meet annually in my yard/garden as well as in the field when they are active spring through fall. This has led me to research my enemy.

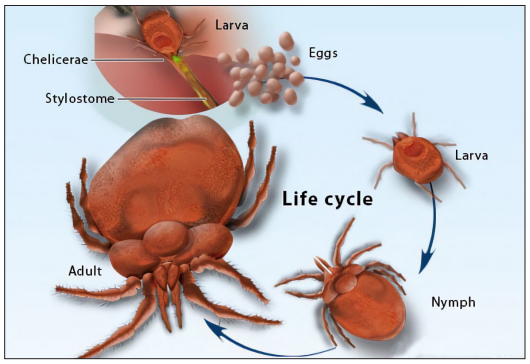
Chiggers are very small (4/100 inch) arthropods with eight legs as adults, like spiders and ticks, and live on the soil surface, where the adults feed on isopods and eggs of other very small arthropods. A chigger is the larval form of the mite which must feed on skin cells, preferably of rodents, birds and reptiles, but we humans can also provide a meal. In order to feed, the larvae pierce the epidermis through to the dermis and inject a digestive enzyme, which makes the cells ready for consumption. This process causes the punctured site to swell and itch, which has given rise to the idea that the chigger burrows, which is not accurate. After its meal, the larvae drop off, molt and become nymphs and then adults. Humans are not the best choice for a meal simply because we do not live out of doors, which is needed to efficiently continue the life cycle. Perhaps this is a very small consolation to those of us who suffer.

I know my nemesis is virtually invisible (1/100th inch for the larva) and usually found in tall grasses and brush when the weather becomes warm and humid. To prepare for the encounter, it is recommended to wear loose-fitting clothing that has a tight weave, tuck pant legs into socks and apply products containing DEET to exposed skin. Some botanical oils might be effective to some degree if DEET cannot be used. Powdered sulfur applied to long pants and boots can also be helpful. In lieu of armor plate, treating clothing with permethrin is suggested.

The reason for loose clothing is that the mites tend to feed where clothing binds, such as the beltline and underwear areas. Tender spots where the skin is thin, such as behind the knees and under arms, are also favored. All of the previously suggested chemicals are repellents rather than miticides, but if anyone comes up with a practical miticide, they will have many customers.

In doing my research, I have found that chiggers are really bizarre critters. The adult is a predator which feeds on insects and insect eggs, while the larva is a parasite. The adult has eight legs, but the larva has six, like an insect. Lawns and gardens can harbor chiggers, as well as grassy/brushy areas, and infestations can be spotty. Reactions to the inflamed stylostome (chigger piercing) vary from redness and itching to pustules that take days to heal and could become infected if scratched. After exposure to chiggers, a hot shower and vigorous toweling can dislodge those that are still seeking a feeding site. All clothing should be laundered immediately. Reaction to the piercing occurs usually 24 to 48 hours after exposure. Anti-itch creams, hydrocortizone creams or antihistamines can offer some relief. Fortunately, chiggers in this part of the world have not been found to carry diseases to humans.

If you are not scratching or feeling queasy after reading this article, you are indeed a naturalist/gardener. As for me, I will continue to carry on out of doors attired in clothing much too heavy for a Texas summer and smelling of brimstone.



Sources:

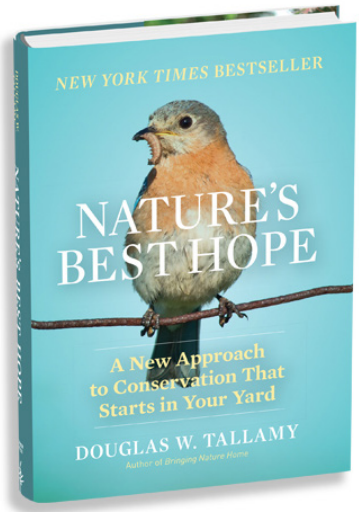
https://extensionentomology.tamu.edu/publications/chiggers/

https://citybugs.tamu.edu/2018/06/13/chigger-season

https://prairieecologist.com/2019/07/01/chiggers-are-the-worst/

WARNING

The readers of this article may get chigger bites.



A synopsis of Doug Tallamy's presentation to the 2023 Texas Master Gardeners Conference

Sally Severson, ECMG

"Nature's Best Hope", Doug Tallamy's keynote speech at the 2023 Texas Master Gardener Conference (virtual, May 3-5) gave me a Purpose-for-Planting, a Can-do Connection to Conservation, and left me wondering how I had missed such rudimentary rules of nature. For instance:

- Ninty-six percent of birds rear their young on insects, and most are caterpillars. This is because caterpillars are soft, large, nutritious, have low chitin-–making them easy for young to swallow--and are the best source for breeding carotenoids.
- Caterpillars transfer energy from plants to animals more than any other animal.
- Caterpillars are essential for birds.
- Caterpillars are host plant specialists.

And though most of us now plant for drought tolerance, using native and adapted plants, it is the native plants that support caterpillars. When I look for additions to any beds, I need to use natives to make up a larger percentage of my space. 70% should be native.

After my yard is balanced for bees, birds, and baby butterflies, I can get on with the large-scale environmental action that Mr. Tallamy explains. Since you subscribe to this newsletter, you have probably heard it said that lawns are the largest water-using crop. Shrinking lawns saves precious water and gives more space to native plants and their resulting benefits. If individual homeowners dedicate part of their lawn space to conservation of wildlife, we could create a HOMEGROWN NATIONAL PARK larger than all US national parks put together. (I think I'm doing my part without even trying, since I've pretty much let a 50'x100' patch of my backyard grow at will! Its view is blocked by trees and bushes. It has a sprawling fig tree and is filled with Turk's Caps that were planted decades ago. I know something is having a good time back there! But I'll be adding natives to the visible beds and cutting away parcels of lawn to create more space for biodiversity.)

If you want more information, go to homegrownnationalpark.org to get put on the Texas map. We are currently in the second tier of dedicated yard space. You can also find butterfly and plant partners.

This is a form to follow for those of us who can sometimes be overwhelmed by the daily loss of habitat to clueless home developers, solar panel deserts and wind "farms". It is a manageable step into "DO SOMETHING"/"SOMETHING DONE".

Butterflies and Their Host Plant

PLANT NATIVE!

	Caterpillar	Host Plant	Adult
1. Spicebush swallowtail Host Plant: Sassafras Trees AND SPICEBUSH			
2. Zebra Swallowtail Host Plant: Pawpaw Tree			
3. Gulf fritillary Host Plant: Passion Vine			
4. Monarch Host Plant: Milkweed			
5. Painted ladies Host Plant: Thistles			
6. Viceroy Host Plant: Willow Tree			
7. Tiger swallowtail Host Plant: Ash Tree Also Wild Cherry Tree Yellow Poplar Tree			
8. Red admiral Host Plant: Nettles			
9. Question Mark Host Plant: Hackberry Tree			
10. Sulphur Host Plant: Maryland senna			

https://kimsmithdesigns.com/tag/butterflies-and-their-host-plants/

Is it Sage or is it Salvia? In fact, they are the same genus. But they do not all taste the same! Be careful what flavors you are introducing into your menu. Sage or Salvia

Did you know Sage, Oregano, Lavender and Thyme are all members of the mint family?

RECIPE FOR SAGE COOKIES

From the kitchen of Dana Bowermeister
(mother of Anne Nimblett, ECMG)

Ingredients:

- 2 cups flour
- ½ cup powdered sugar
- 2 Tbsp thinly sliced fresh sage leaves
- 1 tsp coarse kosher salt
- 1 cup (2 sticks) unsalted, room temperature butter, cut into ½" pieces.
- ½ cup of turbinado/raw sugar

Directions:

- Blend first four ingredients in food processor. Add butter, pulsing until dough comes together. Shape dough into log about 1.5 inches in diameter. Roll in turbinado sugar, then roll in foil and chill at least 30 minutes.
- Position one rack in top third of oven and one rack in bottom third. Preheat to 350 degrees and grease cookie sheets.
- Cut dough in 1/3 to 1/2 inch thick rounds and place on sheets.
- Bake 6-8 minutes.
- Reverse sheets, then bake until golden, about 6-10 minutes longer. Watch carefully, as they brown quickly.
- Cool on racks.

microbe farming

AKA COMPOSTIMG

Marj McClung, ECMG

Composting is creating conditions that decay organic matter into nutrient rich humus for your soil. To do this you will be growing and pampering bacteria! You need about 3 inches of compost to amend soil, so start farming!

Macro-organisms

Roaches, crickets, millipedes, and sow bugs etc. help break down leaves and other material into smaller pieces which helps speed composting. Bugs in your compost heap are there to help!

Micro-organisms

Bacteria are the most important part of composting. Aerobic bacteria flourish in the presence of oxygen. A colony can multiply into billions with the life span of one generation, i.e., each 20 to 30 minutes. Active bacteria can heat a compost pile up to 170 degrees Fahrenheit. A temperature of 130 to 165 degrees F is good. 90 degrees F is too low and 170 is getting too high. Heat above 172 degrees kills bacteria. A slow or cold pile takes 6 months to a year to compost and doesn't destroy weed seeds or disease like a hot pile does.

Anaerobic bacteria are composters in swamps and marshes. They are not desirable in compost piles due to the smell. If your compost pile smells, reduce the amount of water.

Efficient Decomposition

Your job is to aid the micro-organisms in their work.

Particle size is important for faster composting. Grind leaves with your lawnmower and shred wood or woody plants in a chipper/shredder. This creates more surface area for bacteria to get to. Ambient temperature counts. Low outside temperatures will slow compost activity while higher temperatures speed it up. Summer is a good time to compost.

Moisture is needed for growth of micro-organisms. Tarps are rarely needed for Texas compost piles unless there is so much rain the pile doesn't drain. A more likely need is watering to keep the pile slightly damp.

Finally, turning the compost pile is needed for aerobic compost. Start a pile by layering coarse material at the bottom for air circulation and then layer lighter material on top. After about two weeks, start turning the pile. Do so at least twice a month, preferably every week. Competitive compost nerds turn every other day. Turned often, a hot compost can be ready for the garden in 32 days.

A hot pile should be 3' x 3' and at least 3' in length. But go no higher than 3 to 4' or the weight will squeeze out air.

Compostable Material

Composting requires a mix of Carbon-rich materials and Nitrogen-rich material. Carbon is a large part of dry leaves, aged hay, paper (cardboard, newspaper), chipped wood, dried grass and plants, pine needles, sawdust from untreated wood and dried herbivore manure. Nitrogen is in vegetable scraps, fruit peels and rinds, coffee grounds, fresh weeds (before they set seed),

eggshells, fresh herbivore manure and hair or feathers. Fresh grass clippings are good Nitrogen sources, but pesticide treated grass should be composted for 8 months for pesticides to dissipate. Don't use meat scraps, fats, bones or cheese which break down slowly, smell and attract pests. Feces from carnivores or omnivores can carry disease.

Carbon/Nitrogen Ratios

Materials High in Carbon	C/N
Leaves	30-80:1
Straw	40-100:1
Wood Chips or Sawdust	100-500:1
Newspaper or Corrugated Cardboard	560:1
Mixed Paper	150-200:1

Materials High in Nitrogen	C/N
Vegetable Scraps	15-20:1
Coffee Grounds	20:1
Grass Clippings	15-25:1
Fresh Herbivore Manure	5-25:1

The mix of Carbon to Nitrogen varies by material. For instance, cellulose is harder to break down. Sawdust with more surface area for microbes will break down faster than wood chips. Compost nerds get the ratio for each type of material and do the math to calculate how much of each to put in. For most of us, 30 -1 C/N parts by weight will work. (Or twice as much Carbon as Nitrogen by volume). Too much Carbon means not enough Nitrogen for microbe growth and results in slow composting. Too much Nitrogen is lost as ammonia gas, so the pile smells.

Addition of inoculants or "enzymes" should not be needed since bacteria are common. You may want to add nitrogen to facilitate a hot pile.

Compost Structures

Mulching can be slow composting. Many people shred leaves in fall and use them as a winter mulch around plants. Grass clippings can also be used as mulch which will naturally compost. Sheet composting is putting leaves on cardboard or newspaper with a little soil or compost on top. Do this several months before you start planting since this is cold composting.

Most composting is in piles. Locate your compost away from buildings since kitchen waste may attract rats, possums or racoons. The site can be in shade which will keep it from drying out too fast. It also needs good drainage.

A heavy plastic trash bag can be used for anaerobic composition. Put in Carbon and Nitrogen materials with 1 Cup ammonium nitrate and ¼ Cup hydrated lime (to counteract acidity) and 1 Quart water. Put in a sunny spot if possible. Material should be composted in 6 months to a year.
Using a bin depends on the amount of compostable material you have and your physical ability to handle maintenance. A barrel elevated with a turning mechanism is great, but the size of the barrel limits the amount of compost. A garbage can with holes works as a bin but you must dump out contents to aerate.

Finished Compost

Compost is finished when it is cool and about 1/3 the volume it was at the start. It is black and crumbly and has an earthy odor. Sift out any still identifiable pieces which need more time composting. Take care using fresh compost with new seedlings since it can burn new roots.

The Easiest Compost is Bought

You can buy compost by the bag or by the truck load. It should have no large clumps or pieces of undecomposed material. It should be dark in color and have no smell or a slight, earthy smell. Rubbed on your hands, it will leave a thin film of humus. Mushroom compost (formerly used to grow mushrooms) is considered by many to be the best compost.

https://agrilifeextension.tamu.edu/asset-external/easy-gardening-composting-to-kill-weed-seeds/

https://aggie-horticulture.tamu.edu/vegetable/wp-content/uploads/sites/10/2010/10/E-278_composting.pdf

https://aggie-horticulture.tamu.edu/earthkind/landscape/don't-bag-it

https://aggie-horticulture.tamu.edu/travis/wp-content/uploads/2013/06/compostingforkids.pdf

A Worm Primer... *There is so much to learn about worms!*

Kim Rainey, ECMG

Part I: The Invasive Species

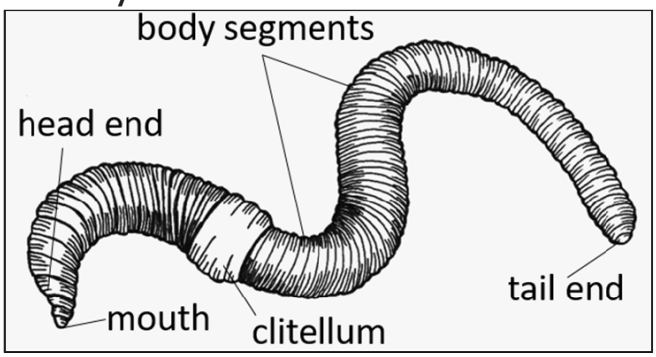
I admit I am just beginning my education. The more I learn the more I refine my plans of how to incorporate worms into my garden world.

Perhaps you already know there are "good" worms and "bad" worms. After watching the 2023 Texas Master Gardener Conference breakout session on, 'Invasive Worms', I have learned you cannot say the "good" worms in North America are native and the "bad" worms are non-native. Our native worms all died in the last ice age. The common "good" earthworms we see in the ground today are from Europe and were brought here by settlers who realized their benefit for gardening. The "bad," invasive worms are late comers to our continent (since 1900 and later). They are from Asia and New Guinea and were most likely brought here in ornamental plants.

According to TexasInvasives.org, an "invasive species" is defined as a species that is non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm.

Using this definition, our European earthworms are "invasive" when found in our forests. In that ecosystem, worm activity is more harmful than good. Our forests rely on the leaf mulch at the base of trees for nutrients. But that is also the preferred food for earthworms!

Know your worm!



Part of my education about worms has included learning which end is the head and what that bulge area is called. This is most important when learning to tell European worms from Asian jumping worms.

The "bad" guys: Asian jumping worms and terrestrial flatworms.

There are primarily three invasive species of worms in Texas. They are Asian jumping worms, Hammerhead worms and New Guinea flatworms.

The **Asian jumping worm** is probably the best known of these three. They are sometimes sold as bait under the name Alabama Jumpers or Snake worms. This species lives close to the surface of the ground and consumes far more organic material than the average European earthworm. However, they do not excrete the rich worm castings that regular earthworms do. The left-over material from Asian jumping worms is devoid of nutrients. These are also the most difficult to tell apart from European earthworms, but their behavior is quite different. As their name suggests, they are VERY wiggly. See a short video here.

This picture shows an Asian jumping worm and a typical earthworm. The top worm is the Asian jumping worm. See the relatively smooth clitellum? The larger, bottom worm is a typical earthworm. The clitellum is raised and segmented.

The **Hammerhead worm**, also from Asia, is a flatworm. These are easy to recognize, they can be large, 8-12 inches, and can reproduce via "fragmentation." In other words, any portion of the worm that is pinched off can begin to regenerate a new Hammerhead worm within 10 days.

See Hammerhead worm biology.

Hammerhead worms also secrete chemicals through their skin to paralyze meals and make themselves noxious to predators. These chemicals can cause skin irritation in humans and in pets or other domestic mammals who might consume the worms. You should be careful not to break them and be sure to wear gloves when handling them.

Another flatworm found in Southern states is the New Guinea flatworm. Terrestrial flatworms require moisture, so they are not found in situations that are dry. They can often be found under rocks, in leaf litter or under other debris on the ground where the environment remains humid or wet. They may be active all times of the year when the temperature is conducive.

All terrestrial flatworms are generalist predators. They feed on invertebrates like worms, slugs and snails. The mouth of the flatworm is not where you would expect; flatworms have their mouth on the underside of the body near the middle. They wrap around their prey and ingest it.

Like Hammerhead worms, New Guinea flatworms can reproduce themselves if the body breaks and each section can become a new worm.

It is good to be aware of these invasive species. If you see any, the Texas Invasive Species Institute is asking you to report sightings via email. Please snap a photo and send it, along with the location to invasives@shsu.edu.

On to the "good" guys...

But there is still so much more to learn about worms. How can you incorporate the "good" guys into your garden? What are the ins and outs of composting with worms? Tune in next month for Part II, the "good" guys.

Besides the links in the article, some photos and information are from North Carolina State Extension Office.

Fall Blooming Bulbs
to Plant in Spring and Summer

Marj McClung, ECMG

Gardening is an investment in the future. We plant now for a payoff next season or next year. Late spring or early summer is a good time to plan for fall blossoms, and fall bulbs can be planted that will provide blossoms for many years to come.

The following fall bulbs are now dormant and can be planted from late spring through August. With late summer or early autumn rains, they will start to bloom. They will send up the flower stalk first, and then the foliage follows later. Because they come up quickly, suddenly appearing among the leaves of other plants, each has been called a "surprise" lily.

Autumn bloomers need to be planted in beds that get sun, so the foliage that follows blooming can build up energy reserves in the bulbs for the next year's blossoms. Often, these bulbs are planted around deciduous trees, since the foliage can soak up sun in winter when the trees lose leaves. Foliage must be left uncut until it dies naturally in the spring.

Plant in areas with good drainage. You can add a little compost to get them off to a good start. Fit them in with existing plants that will give a good show for the seasons they are dormant. Mark their location in your garden bed plan, so you won't try to plant in that spot while they lie dormant. Plant in bunches for a fuller display.

The following bulbs will surprise and delight you for years to come. And they will remind you of timing, since they herald the end of the year when you must prepare for winter and spring to come.

Oxblood Lily (Rhodophiala bifida) This is also known as the schoolhouse lily, since it blooms around the time that school resumes after summer vacation. This resembles a small, red amaryllis with several blooms per stalk. It came from Argentina to New Braunfels, Texas around 1901.

Spider Lilies (Lycoris radiata) This has several blossoms on one stalk, each facing outward, forming a circle of red. The petals are thin and recurved and the pistil and anthers long, giving a spidery appearance. These are also called hurricane lilies due to the timing of their blooms. They were brought to the Carolinas by Capt. William Roberts, an officer with Commodore Wm. Perry in the opening of Japan in the early 1850's.
There are other species of Lycoris that are less commonly grown here that you may want to try. Naked Lady Lily (Lycoris squamigera) is pink. It is named for the stalk that comes up with no leaves until later. This lily comes up as early as July. L. incarnata is a lily with peppermint stripes. L caldwelli is yellow. L. aurea is golden and blooms well in Louisiana and the Houston area.

Fall crocus (Sternbergia lutea) This is the small (5" – 6"), yellow flower that blooms in September. This is also known as the Autumn Daffodil.

Rain Lily (Zephyranthes spp.) Most rain lilies are white or pale pink. There are several that bloom here after an autumn rain. Z. drummondii is the native Texas rain lily. Try Z. candida, Z. labufatosea also. These bulbs like partial shade and need moist soil to bloom.

Sparkplug Takes a Nature Walk

May 12th, 2023

Hi,
it's Tamra Boteler, one of the 2023 interns who is hiking the Appalachian Trail (2198 miles) from Georgia to Maine. I thought I would update those interested in my progress.

The spring weather has finally arrived and it's not so cold, thank goodness. The day I started, it was 27 degrees. I started on March 20, and just hit 500 miles. Woo hoo! I've been through GA, TN, NC and am now in VA with a pack weight of 25-29 pounds, depending on how much food and water I carry. (Wish it were less.) I'm probably eating about 3000-3500 or so calories per day and trying to regain about an 8-pound loss over past 2 months...this is a great weight loss program if anyone wants to come and join!

I've been thinking of all of you as I witness so much beauty with the variety of trees, flowers, and critters (Did you know there are about 250 different species of salamanders out here?!) No bear sightings yet, but they are definitely out...scat on the trail, and at one campsite a bear stole all the hiker's food bags that were hung properly in trees...the bears are getting smarter!

Today (May 9) I will hike through the Grayson Highlands where wild ponies roam. My hiking shoes probably will need to be replaced in a couple hundred miles...many other hikers have already started their 3rd pair...the trail is NOT FLAT...lots of rocks and roots!

Well, I hope the EXPO went well and everyone is doing fine.
I'll try to send some pics when I have better service.

Tamra (trail name-Sparkplug)

"Further up, further in." (C. S. Lewis)