Hitchhiking Spotted Lanternfly
Linda Geist, Writer for University of Missouri Extension

**In This Issue**
- Hitchhiking Spotted Lanternfly
- Yellow Lady’s Slipper
- One Itchy Chigger
- Power of Education
- Japanese Beetles
- Annual Flowering Vines
- Upcoming Programs

COLUMBIA, Mo. – An exotic pest that hitchhikes on train cars, trucks and boats could suck the life out Missouri crops.

Spotted lanternfly has the potential to establish populations in Missouri, says University of Missouri Extension field crop entomologist Kevin Rice. It damages soybean, corn and hops, as well as fruit and ornamental trees. According to MU Extension viticulturist Dean Volenberg, it could have damaging effects on Missouri’s 1,700 acres of grapes, its primary host.

Spotted lanternflies are active in June and July. Entomologists reported seeing the spotted lanternfly in Pennsylvania in 2014. It has appeared since then in Virginia, Delaware and New York.

The plant hopper likes to lay its eggs on smooth, metal surfaces such as those found on train cars, boats and tractor-trailers. Its honeydew secretions attract other pests. It leaves weeping wounds as it feeds.

The adult lanternfly’s forewing is gray with black spots. The wingtips are black blocks outlined in gray. It has distinctive bright orange-red and white underwings, but it appears less vibrant and may be difficult to see when its wings are not spread, Volenberg says.

It likes fall feeding on Ailanthus altissima, also known as tree of heaven, a medium-sized invasive tree with stout branches that spread.
Continued from page 1

Plants with Winter Interest
Katie Kammler, MU Extension Horticulture Specialist

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What to do if you spot lanternflies
• Do not kill it. The insect contains cantharidin, the same toxic chemical found in the blister beetle.
• Capture it if you can. Lanternflies are jumpers.
• Take a photograph of it. Email to ricekev@missouri.edu.
• Collect a specimen and put it in a vial filled with alcohol to preserve it.
• Take it to your county extension center and note where you found it. GPS coordinates are helpful. The extension center will send it to Rice, who will track its spread in Missouri.
• Use caution when handling tree of heaven; its sap can cause headaches, nausea and possible heart problems, according to Penn State Extension.

Native Plant of the Month:
Yellow Lady’s Slipper
_Cypripedium calceolus_

Herbaceous perennial

**Height:** 1 to 2.5 feet

**Flower:** Yellow “slipper” with brown twisting flags, one upright and two on each side of the slipper.

**Bloom time:** April to June

**Comments:** Found in upper and middle elevations of wooded slopes facing north or east in acid soil statewide. Pollinated by small bees and various flies. Uncommon find but very noticeable when in bloom.

**Information sources:** Missouri Wildflowers and

When its wings are not spread, the spotted lanternfly is fairly unremarkable in its appearance. Photo courtesy of Pennsylvania Department of Agriculture.
Outdoor Flowering Plants and Ornamentals

- Watch for bagworms feeding on many garden plants, especially juniper, arborvitae and other evergreens. Spray before the bags get too big!
- Keep applying organic mulches to planting areas to conserve moisture, discourage weeds, and enrich the soil as they decay.
- Apply a balanced rose fertilizer to roses after the first show of blooms is past.
- Trees and Shrubs may still be fertilized before July.
- Fertilize annual flowers in containers with quarter strength balanced fertilizer once a week.
- Sow seed of biennial flowers such as hollyhock and foxglove for next years bloom. Mark the area to keep from disturbing any seedlings coming up.
- Mite activity increases with hot, dry weather. Repeat strong gets of water every couple days or releasing beneficial predators can help control populations.

Vegetable Gardening

- Early detection is essential for good control of vegetable pests. Learn to identify and distinguish between pests and beneficial predators.
- Plant pumpkins during the first part of June. Large varieties will a need 100+ day growing season.
- Pinch top growth on herbs to encourage branching and keep flowers off of plants.
- Corn needs water at two crucial times: when the tassels at the top are beginning to show, and when the silk is beginning to show on the ear. If weather is dry at these times, water!
- Consider planting successive crops of green beans, cucumbers, and zucchini.

Fruits and Nuts

- Thinning overloaded fruit trees will result in larger and healthier fruit at harvest time. Thinned fruit should be a hands-width apart.
- Want a few types of home-grown fruit, but have little or no garden area to work with? Consider growing dwarf fruit trees, strawberries, and blueberries in containers.
- Time to renovate strawberry beds after they quit producing fruit.

Turfgrass

- Water turf as needed to prevent drought stress.
- Gradually increase the mowing height of zoysia lawns throughout the summer. By September, the mowing height should be 2 to 2.5 inches.
Weeds can be hard to identify because many of them are very similar. Here are three weeds that can be confused with each other because of their trifoliate leaf structure. They are also all in the legume family.

Black medic (*Medicago lupulina*) is a low-trailing summer annual with yellow flowers. It is found throughout the US and is primarily a problem weed in turfgrass. The stems are prostrate, hairy, and radiate from a taproot. The compound leaves are alternate, with wedge to oval shaped leaflets with toothed margins. This weed can be easily confused with hop clover, large hop clover, yellow woodsorrel and others. The key identifier is that the central leaflet is on a longer stalk compared to the lateral leaflets.

Large hop clover (*Trifolium campestre*) is a low-growing summer annual with yellow flowers clustered in a small head. The leaflets are ovate hairless and the plant tends to sprawl.

Lespedeza (*Lespedeza striata*) is a summer annual with trifoliate leaves also. Each trifoliate leaf has a short petiole. It forms mats with tough stems and taproots and blooms small inconspicuous pink to purplish flowers.

The biggest difference between lespedeza and black medic and hop clover is that it has small purple flowers.

“When life is not coming up roses, look to the weeds and find the beauty hidden within them.”

- L.F. Young
Chigger season is upon us. Chiggers are the tiny, immature stage of a large mite called a redbug. These colorless, parasitic larvae measure only 1/150 of an inch in diameter, but they pack a hefty punch with their itchy bites throughout summer, not letting up until it frosts in the fall.

You’ll find chiggers wherever there is unmanaged vegetation - unmowed, wild areas that have tall weeds and brush. They especially love brambles! They crawl around, waiting to attach to a host. Birds, livestock, snakes, rodents and other animals are their natural hosts. Humans are accidental hosts. Two to three generations of chiggers are produced each year in Missouri. Once on a human host, they crawl upward until they find an area where clothing fits tightly against the skin, such as waistbands, bra bands and socks. Then they settle in and feed. Their favorite feeding spots are the backs of knees, the crotch and in the armpits.

To feed, chiggers pierce the host’s skin with their mouthparts and inject a digestive enzyme that dissolves the skin tissues. The chigger then sucks up the dissolved epidermis as food. As they feed, the tissue around the bite hardens into a tiny tube. For three to four days, the chigger continues sucking liquefied tissue through the tube, much like a person drinking through a straw. The chigger never burrows into the skin and does not feed on blood. Even though the chigger mite itself is usually scratched off and killed soon after biting, the tiny hardened tube and the digestive enzymes stay in the skin. They continue to itch and to ooze the liquefied tissues, which dry to form a hardened cap. Over a few weeks, the skin heals and the bites go away.

The best defense against chiggers is to avoid them. Mowing yards and weed eating weedy areas is the best strategy to keep chigger populations down. If mowing is not desired, you can spray infested areas, but this only provides temporary control and may affect beneficial populations of insects and mites. Tightly woven fabrics reduce the threat of chiggers penetrating clothing. Tuck pant legs inside boots and tightly button cuffs and collars. Launder clothing soon after visiting areas where chiggers are likely to live. Chemical repellents ward off chiggers. Insect sprays containing DEET (diethyltoluamide) or picaridin are effective. Reapply every two to three hours. Sulfur powder also works but has a strong, unpleasant odor.

Another thing, if you suspect that you have been in chigger-infested areas, take a hot, soapy shower as soon as possible. The mites are so small it may take them several hours to make it up to areas where they want to bite. Once your clothes have been changed, wash the clothes you were wearing that are chigger infested.

For more information, the MU Extension guide “Chiggers” (G7398) is available for free download at http://extension.missouri.edu/p/g7398.
Gardeners have gathered several times over the last 4 months to learn more about horticulture. Horticulture is an industry that is always changing and advancing. Not only have the participants in these tours and educational events learned from the farm owners and speakers, they also gain knowledge from fellow participants. Everyone has a different knowledge base and experience that we can learn from by networking at these events. As always, check the calendar of events for upcoming opportunities.

**Power of Education**

Donna Aufdenberg, MU Extension Horticulture Specialist

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**Fruit Tree Workshop including Grafting and Pruning demonstrations at Jackson on April 20, 2018.**

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**Mushroom Workshop in Perryville on May 4, 2018**

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**Blackberry Workshop at Crown Valley in Coffman, Mo on April 26, 2018**

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**Eating from the Garden at South Elementary in Jackson, Mo during April.**
The Garden Spade

Growing Winter Onions

Rennie Phillips, Scott County Master Gardener

Japanese Beetles

Amber Middleton, Cape Girardeau County Master Gardener

The dreaded Japanese Beetle is the bane of existence for every gardener I know. As their name implies, the Japanese Beetle originates in Japan. They were accidentally imported and made arrival to the United States, specifically, New Jersey in 1916. They are approximately ½ inch long with an iridescent hunter green body and copper colored wings. They lay eggs just below the ground’s surface. The eggs will overwinter and emerge as grubs ten months later. They then make their grand entrance for approximately six weeks during the months of June and July. If you do not see clumps of them crowding your foliage or walk into a cloud of them you will find proof of their existence in the bite marks that appear in a cut out fashion between the veins of leaves and sometimes even on flower petals. While I appreciate the design in doilies I do not in my plant leaves. There are a variety of topics to cover; from their anatomy, to how to identify them, to even how to prevent them, but for this article I will focus on the best way from my experience to deal with them once they are there. One method to dealing with Japanese Beetles is to use Carbaryl. This dust can be spread onto leaves where the Beetles will ingest the chemical and die. Admittedly I have used this method before. However, with the fall of pollinator numbers we need to find other methods that will not damage their existence. Is the death of the Japanese Beetle worth the death of bees and other pollinators? Another method is bag and bait. Years ago, before I knew better, I did the bags and bait. I realized that once putting the bag and bait out I was immediately inundated with the beetles. I did some research and found the bait is actually pheromones which will call the beetles for miles around thinking they will get lucky in love. A wise person once shared their method with me and I am in turn sharing it with you now. While pheromones call them to your garden area when bags are present there is a way to make them avoid your garden with another scent. Gather these supplies and you will be good to go. You will need a bucket or another kind of container that will adequately hold water. A splash of dawn dish liquid and hands ready for picking means you’re all set. You see, Japanese Beetles are incapable of swimming. Pick them off and toss them into the soapy water. The soap within the water is to discourage mosquitos from using the water as a breeding ground. Just as Japanese Beetles give off a pheromone scent to draw in potential partners they also give off a death scent. In death this scent, while not noticeable to the human nose will spread the word to others that this is an area they’d rather not visit. Is this the easiest way to deal with the Japanese Beetle problem? Maybe not. Does this get rid of them completely? No, it does not, but so far it has been the most effective pollinator friendly solution for me. The second I see them arrive I go at it and pick to my heart's content knowing it will make a difference. This will be my third year trying this method and the number of friends coming to the party has decreased dramatically. I encourage you to also try a more pollinator friendly version of Japanese Beetle control.

Japanese Beetle I.D.

- Adult beetles measure approximately 0.5 inches in length
- Metallic green with bronze-colored wing covers
- Just below the wing covers, on each side of the abdomen are six tuft of white hair
Upcoming Events

The following Master Gardener meetings are held each month. All are welcome to attend. Please contact your local extension office to confirm location if you did not attend the previous meeting.

Parkland MGs - 1st Monday at 6:30pm, Farmington Library
Poplar Bluff MGs - 1st Tuesday at 6:00pm, Call 573-686-8064 for location.
St. Genevieve MGs - 2nd Thursday, at 6:30pm, Ste. Genevieve County Extension Center
Cape Girardeau MGs - 3rd Thursday at 7:00pm, Cape County Extension Center in Fall and Winter and Shawnee Park Center in Spring and Summer. Call 573-238-2420 for questions
Perry MGs - 4th Monday at 6:30pm, Perry County Extension Center

June
12 - Summer Horticulture Tour to Daylilies of the Valley from 10 a.m. to noon. 573 Hwy D off MO-72, Ironton, MO
28-29 - Save the Date - Tomato School, Cape Girardeau County Extension Center in Jackson, MO. http://freepdfhosting.com/02e06fd439.pdf

July
12-15 - Ste. Genevieve County Fair
25 - Summer Tour - Indian Hills Winery, 5:30 p.m. at 9625 County Road 250, Puxico, MO.
31-Aug 4 - Ste. Francois County Fair

September
28-30 - Master Gardener State Conference at the Château on the Lake, Branson, MO. http://momg18.org/
8-15 - SEMO District Fair

Click on blue underlined link to be taken to a corresponding website...

Annual Flowering Vines
Donna Aufdenberg, MU Extension Horticulture Specialist

Annual flowering vines can be a great addition or any garden or landscape! They grow quickly and bloom profusely over summer.

Annual flowering vines are commonly overlooked for adding color, texture, and height to the landscape or the garden. Flowering vines are a great addition to any landscape or garden. They are fairly inexpensive since they can be grown easily from seed and germinate readily in native soils. They can camouflage unsightly fences, walls, or unsightly structural defects on buildings. They are great for creating a temporary screen for privacy or shade for us or other plants.

Many of the vines are highly ornamental, with attractive flowers, foliage or fruits.

Most vines climb by twisting around a support and anchor themselves to walls or a trellis. Trellises can be made of wood, fencing, wires or twine, depending on the growth habit of the vine. For vines that climb by twining, supports can range from a single strand of wire to an elaborate wood trellis system. Tendrils can grip twine, wire and narrow stakes, like bamboo, but cannot hold on to larger supports. Vines that cling by means of suction cups or root-like growths can climb up a wall without any support. With any vine, a trellis which includes both vertical and horizontal supports are best.

Scarlet Runner Beans (Phaseolus coccineus) are warm...
The Garden Spade

Annual Flowering Vines
Donna Aufdenberg, MU Extension Horticulture Specialist

Continued from page 8 season plants so plant the seed after the danger of frost is past. The flowers are bright red and the vines bloom all summer long and into the fall. After the flowers bloom, the plant will set bean pods which are edible if you pick them when they are young and tender. If they over grow, don't worry -- leave them to mature and save the seeds for next year!

Black-eyed Susan Vines (*Thunbergia alata*) have colorful bright orange, yellow or white flowers, resembling black-eyed Susans. The vine is a vigorous climbing annual and blooms in one season. The black-eyed Susan is a very versatile vine which can be planted in part shade to full sun. They are warm season vines so plant them after the danger of frost is past.

Moonflower (*Ipomoea alba*) is a leafy vine that has white fragrant blossoms that bloom in the evenings into the night. Place this vine where you can enjoy the fragrant blossoms because they will be gone the next morning. Moonflowers open in the evening so they can be pollinated by moths and like most moth pollinated flowers, the Moonflower is white, which attracts the moths. It is best to start from seed after the threat of frost has past. Seeds benefit from soaking for 24 hours before planting.

Hyacinth Bean Vine (*Lablab purpureus*) produces an abundance of purple or white pea flowers on 6-inch long peduncles. Flowers are followed by shining purplish-iridescent fat bean pods that grow to 2 ½ inches long. Because the plant is a vigorous vine it continues to flower throughout the summer as long as conditions are favorable. The seed pod is not edible. Seed may be planted directly in the garden where they will grow. For faster germination, soak the seeds in water for a few hours before planting.

Cardinal Vines and Cypress Vines are very similar although they are different species. Both have a similar twining growth habit but Cypress vine has ferny leaves whereas Cardinal vine has palm shaped leaves. Both plants offer scarlet red flowers which are favored by hummingbirds. Both readily self-seed into the garden from year to year and can become a nuisance, so take care on planting location.
Summer Tours

Experience Horticulture and gather inspiration and knowledge for your next project.

These tours will offer diverse horticulture enterprises and practices. Growers/farmers will be available to answer questions and provide hands-on learning experiences.

Tours are open to all. **Pre-registration is required.** $5 fee for each event.

For more information or to register call 573-238-2420 or email aufdenbergd@missouri.edu

June 12 - Daylilies of the Valley @ 10:00 am - 573 Hwy D off MO-72, Ironton, MO

July 25 - Indian Hills Winery @ 5:30pm - 9625 County Road 250, Puxico, MO

StrikeForce Project partnerships include University of Missouri Extension, NRCS/USDA, and Lincoln University who provide training that will help educate Missouri’s farm community, private landowners, conservation organizations, cooperating agencies, and general citizenry by:

- Increasing consumption of local and regionally produced products;
- Increasing customers and sales of local and regionally produced products;
- Strengthening market opportunities for farm and ranch operations serving local markets; and
- Improving food safety of local and regionally produced products.

Free registration to StrikeForce Events for Veterans with veteran ID card.