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## Landscape Message: Sep 20, 2019

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**Sep 20, 2019**

**Issue:** 20

Happy Fall Equinox!

*UMass Extension's Landscape Message is an educational newsletter intended to inform and guide Massachusetts Green Industry professionals in the management of our collective landscape. Detailed reports from scouts and Extension specialists on growing conditions, pest activity, and cultural practices for the management of woody ornamentals, trees, and turf are regular features. The following issue has been updated to provide timely management information and the latest regional news and environmental data.*

The Landscape Message will be updated monthly October through December. The next message will be available on October 4. To receive immediate notification when the next Landscape Message update is posted, be sure to [join our e-mail list](#) (</landscape/email-list>).

To read individual sections of the message, click on the section headings below to expand the content:

## Scouting Information by Region

### ▾ Environmental Data

The following data was collected on or about September 18, 2019. Total accumulated growing degree days (GDD) represent the heating units above a 50° F baseline temperature collected via our instruments for the 2019 calendar year. This information is intended for use as a guide for monitoring the developmental stages of pests in your location and planning management strategies accordingly.

MA Region/Location	GDD		Soil Temp (°F at 4" depth)		Precipitation (2-Week Gain)	Time/Date of Readings
	2-Week Gain	2019 Total	Sun	Shade		
CAPE	186	2276	65	63	3.04	12:00 PM 9/18
SOUTHEAST	170	2409	67	60	0.50	3:00 PM 9/18
NORTH SHORE	156.5	2329.5	61	58	0.28	10:00 AM 9/18
EAST	188.5	2546	66	60	0.42	5:00 PM 9/18
METRO	189	2301	57	56	0.62	7:00 AM 9/18
CENTRAL	149.5	2398	53	52	1.29	3:00 PM 9/18
PIONEER VALLEY	190	2441.5	63	62	1.12	11:30 AM 9/18
BERKSHIRES	134.5	2146.5	65	60	1.43	9:30 AM 9/18
AVERAGE	171	2356	62	59	1.09	-

n/a = information not available

For both a map and a list of towns currently under water use restrictions, see: <https://www.mass.gov/service-details/outdoor-water-use-restrictions-for-cities-towns-and-golf-courses> (<https://www.mass.gov/service-details/outdoor-water-use-restrictions-for-cities-towns-and-golf-courses>)

As of September 17, there are two 'abnormally dry' areas in MA according to the US Drought Monitor: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?MA> (<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?MA>)

## Phenology

INDICATOR PLANTS - STAGES OF FLOWERING (BEGIN, BEGIN/FULL, FULL, FULL/END, END)								
PLANT NAME (BOTANIC/COMMON)	CAPE	S.E.	N.S.	EAST	METRO W.	CENT.	P.V.	BERK.
<i>Heptacodium miconioides</i> (seven-son flower)	Full	*	Full	Full	Full	Full	Full	Full
<i>Clematis paniculata</i> (sweet autumn Clematis)	Full	Full	Full	Full	Full	Full	Full	Full
<i>Polygonum cuspidatum</i> (Japanese knotweed)	Full/End	Full/End	Full/End	Full/End	Full	Full/End	Full	Full

\* = no activity to report/information not available

## Regional Notes

### ▾ Cape Cod Region (Barnstable)

**General Conditions:** The average temperature for the period from September 4 through September 18 was 63° F, with a high of 81° F on September 4 and a low of 46° F on September 13. Temperatures have cooled off significantly during this period with 8 days which did not break 70° F. Nighttime temperatures have also cooled with most nights in the 50s. Nights in the 50s are a good signal that it is time to prepare houseplants and tropical plants for their return indoors. During the period there were just over 3 inches of rain. Approximately 2 inches of rain were received as a result of Hurricane Dorian passing far offshore on September 6 and 7. Topsoil and subsoil moisture is adequate. The window for lawn renovation is closing. Conditions are good for dividing spring blooming perennials. The first signs of fall color are appearing in *Nyssa sylvatica* and *Acer rubrum*.

**Pests/Problems:** Lecanium scale and the sooty mold as a result of high populations of Lecanium scale are still the primary issue in the area. For more detail see the Trouble Maker of the Month in June's HortNotes, <https://ag.umass.edu/landscape/newsletters/hort-notes/hort-notes-2019-vol-305> ([/landscape/newsletters/hort-notes/hort-notes-2019-vol-305](https://ag.umass.edu/landscape/newsletters/hort-notes/hort-notes-2019-vol-305))

Other insects or insect damage seen during the period include chilli thrips on Hydrangea, azalea lacebug on 'PJM' Rhododendron, Andromeda lacebug on Japanese Pieris. Disease symptoms or signs observed over the period include tar spot on both red maple and Norway maple, cedar-apple rust, apple scab, and marsonni leaf spot on crabapple, downy mildew on garden impatiens, powdery mildew on lots of species; annuals, perennials, shrubs, and trees. Weeds in bloom include crabgrass (*Digitaria* spp.), smartweed (*Polygonum pensylvanicum*), ragweed (*Ambrosia artemisiifolia*), beggarticks (*Bidens frondosa*), horseweed (*Conyza canadensis*), European hawkweed (*Hieracium vulgatum*). Fall fruiting mushrooms are starting to show up. Keep yourself protected from mosquitoes, some areas of the Cape are considered at moderate risk due to recent detections of EEE. (See Insect report below.) Yellow jackets are an increasing annoyance at this time of year as their normal food sources start to diminish.

#### ▼ **Southeast Region (Dighton)**

**General Conditions:** It's dry, dry, dry and more dry. Despite the transition to cooler temperatures there has been very little rain. Trees and shrubbery in stressed locations have been showing fall coloration and many have already lost their leaves. Day length sensitive annuals such as petunias have stopped blooming unless they receive supplemental lighting. Poison ivy, burning bush, and red and sugar maples are starting to show fall coloration. The following plants are in flower: butterfly bush (*Buddleia davidii*), Franklin tree (*Franklinia alatamaha*), *Hydrangea macrophylla*, *H. quercifolia*, black-eyed Susan (*Rudbeckia* spp.), autumn Clematis (*Clematis paniculata*), Canada goldenrod (*Solidago canadensis*), New England Aster (*Symphyotrichum novae-angliae*), Joe-Pye weed (*Eutrochium purpureum*), ragweed (*Ambrosia psilostachya*), rose of Sharon (*Hibiscus syriacus*), common evening primrose (*Oenothera biennis*), Hosta, Japanese knotweed (*Reynoutria japonica*), Jerusalem artichoke (*Helianthus tuberosus*), and *Sedum* "Autumn Joy".

**Pests/Problems:** Drought remains the biggest problem in the landscape. Plants are wilting. Leaves are dropping. Unirrigated lawns are grey and brown. Be sure to water deeply and thoroughly, especially for new landscapes and plants on stressed sites. Take the time to calibrate and measure output to be sure that plantings are receiving at least one inch of water each week. Ash rust is apparent on some turf along coastal areas. Powdery mildew is also an issue, especially along coastal sites that receive morning dew. The risk of EEE infection remains in the news as the number of reported infections rises to double digits. (See Insect report below.) Please be sure workers are taking proper precautions. Avoid locations and hours where mosquitoes are active. Wear appropriate clothing and use

repellents. Despite cooler temperatures mosquitoes will continue to be a threat until we get a hard frost.

#### ▾ North Shore (Beverly)

**General Conditions:** This reporting period we experienced cooler temperatures; daytime temperatures were mostly in the mid-60s to low 70s, with only one day above 80 degrees Fahrenheit. Night temperatures were mostly in the mid-40s to mid-50s. There has not been any significant amount of rain received during this two week period. Approximately 0.28 inches of rainfall were recorded at Long Hill during this period. There is no rain in the weather forecast for the next 10 days. Woody plants seen in bloom include: butterfly bush (*Buddleia davidii*), Franklin tree (*Franklinia alatamaha*), seven-son flower (*Heptacodium miconioides*), and bush clover (*Lespedeza thunbergii*). Herbaceous plants seen in bloom include: New England Aster (*Symphotrichum novae-angliae*), garden phlox (*Phlox paniculata*), 'Autumn Joy' Sedums (*Sedum* spp.), Rudbeckia (*Rudbeckia hirta*), coneflower (*Echinacea purpurea*), Japanese Anemone (*Anemone x hybrida*), hardy Begonia (*Begonia grandis*) and autumn crocus (*Colchicum autumnale*). An assortment of annuals, including garden mums are also contributing color in the landscapes.

**Pests/Problems:** Due to the lack of significant rainfall, the soils are dry and this will affect the fall planting season if there is no significant rainfall in the next few weeks. Some plants are showing signs of drought stress. Some are yellowing and showing early foliage color change. Powdery mildew was observed on lilac, Rudbeckia and garden phlox. Deer damage was observed on Hostas. Crabgrass and other weeds are thriving in the landscape. Goldenrod (*Solidago canadensis*) is in full bloom and continues to thrive. Mosquitoes are still very active at dawn and dusk. The risk of EEE from mosquito bites is still high. (See Insect report below.) Protect yourself with insect repellents when outdoors. Ticks are also still active.

#### ▾ East Region (Boston)

**General Conditions:** The first two weeks of September have been dry. We received only 0.42" of precipitation from September 4th through the 17th. Nighttime temperatures averaged 53.7 °F, ranging from 43.7 to 65.2 °F. Daytime temperatures ranged from 64.9 to 85.6 °F, averaging 73.3 °F. There was a gain of 188.5 growing degree days this period for a total of 2546 for the year so far. Crabapple, kousa dogwood and Magnolia fruit are adding color to the landscape. The underutilized *Heptacodium miconioides* (seven son flower) is in full bloom and attracting pollinators.

**Pests/Problems:** Lack of precipitation in September has contributed to extremely dry soil conditions. Map of EEE risk: (<https://www.mass.gov/info-details/massachusetts-arbovirus-daily-update#eee-risk-map-> (<https://www.mass.gov/info-details/massachusetts-arbovirus-daily-update#eee-risk-map->)) See Insect report below for details also.

## ▼ Metro West (Acton)

**General Conditions:** The cooler temperatures have arrived but not without a day or two of warm summer weather thrown into these first couple of weeks of September to remind us that summer is not over yet. Signs of fall are visible in the landscape and soon enough will be the arrival of the fall equinox on September 23rd. Some birches, dogwoods, and maples are exhibiting early fall color and plants are heavy with fruit, seed, berries, and nuts. In some stage of bloom at this time are the following woody plants: *Buddleia* spp. (butterfly bush), *Franklinia alatamaha* (Franklin tree), *Heptacodium miconioides* (seven-son flower), *Hibiscus syriacus* (rose-of-Sharon), *Hydrangea paniculata* (panicle Hydrangea) and its many cultivars including 'Tardiva', *Potentilla fruticosa* (Potentilla), and *Rosa* 'Knockout' (the Knockout family of roses). Woody vines in bloom are *Campsis radicans* (trumpet vine) and *Clematis paniculata* (sweet autumn Clematis). Contributing even more color and interest to the landscape are some flowering herbaceous plants including: *Aster* spp. (New England Aster, New York Aster, smoother Aster, white wood Aster), *Chasmanthium latifolium* (northern sea oats), *Chelone lyonii* (pink turtlehead), *Echinacea purpurea* (coneflower and its many cultivars), *Eupatorium purpureum* (Joe Pye weed), *Hemerocallis* spp. (daylily), *Hibiscus moscheutos* (swamp mallow), *Hosta* spp. (plantain lily), *Kirengeshoma palmata* (yellow wax bells), *Leucanthemum* sp. (Shasta daisy), *Miscanthus* spp. (maiden grass), *Panicum virgatum* (switchgrass), *Patrinia gibbosa* (Patrinia), *Pennisetum alopecuroides* (fountain grass), *Perovskia atriplicifolia* (Russian sage), *Phlox carolina* (Carolina Phlox), *P. paniculata* (garden Phlox), *Rudbeckia fulgida* var. *sullivantii* 'Goldsturm' (black-eyed Susan), *Sedum* 'Autumn Joy', *S. 'Rosy Glow'* (stonecrop), and *Solidago* spp. (goldenrod). Adding even more color and interest to the landscape are the colorful fruit on *Convallaria majalis* (lily of the valley), *Cornus* (dogwood), *Crataegus* (hawthorn), *Malus* (crabapple), *Rosa* (Rose) and *Viburnum*.

**Pests/Problems:** Let's hope that we receive more rain now that the fall planting season is upon us. September's average rainfall is 3.77" and a total of 1.36" has been recorded for the month so far. Observed in the landscape these past two weeks were leaf blotch on *Aesculus* sp. (horse chestnut), and cedar apple rust on *Amelanchier* spp. (serviceberry). Look to the Official Website of the Executive Office of Health and Human Services <https://www.mass.gov/guides/eee-in-massachusetts> (<https://www.mass.gov/guides/eee-in-massachusetts>) for additional information on Eastern Equine Encephalitis (EEE) but do know that EEE has been detected in Middlesex county as well as nine other counties within the state. (See Insect section below also.) Currently towns surrounding Acton are considered to be at low, moderate, high-risk or critical levels for EEE and residents are encouraged to take precautions.

## ▼ Central Region (Boylston)

**General Conditions:** During the reporting period, temperatures were consistently cool, save for one day when we touched the mid-80's for a daytime high. Overnight temperatures are quite low, frequently in the mid-40's. Rainfall continues to be scarce, making soils quite

dry and thirsting for some good soaking rain. The cooler night time temperatures are spurring along fall foliage. Many maples, particularly *Acer rubrum* (red maple) and *Acer saccharum* (sugar maple) are nearly at peak foliage color. Some of our early shrubs are showing nice color to compliment what appears to be good ornamental fruit set this year on Viburnums and hollies, generally. We're seeing a full complement of fall blossoms at the moment, from goldenrods to asters. *Symphyotrichum novae-angliae* (New England aster) and *Symphyotrichum laeve* (smooth aster) are stunning, and loaded with pollinators. The rather unusual closed gentian, *Gentiana clausa* is spectacular in the garden where you can find it; interestingly, the flower never fully opens, but bumblebees who have the strength to force their way in, are rewarded with a sweet nectar meal.

**Pests/Problems:** Magnolia scale continues to be a problem on many different types of Magnolias in our area. This problematic pest is in the crawler stage at this time of year, so treatment is best made in late August and early September. Most of the pest issues we're seeing at the moment are related more to human health than plant health. EEE continues to scare everyone indoors (see Insect report below for details), ticks are very active, and hornets and wasps are everywhere. Standard late season foliage issues (powdery mildew, for example) abound.



(/sites/ag.umass.edu/files/pest-alerts/images/content/symphyotrichum\_novae-angliae\_new\_england\_aster.jpg)



(/sites/ag.umass.edu/files/pest-alerts/images/content/symphyotrichum\_puniceum\_purple\_stemmed\_aster.jpg)



(/sites/ag.umass.edu/files/pest-alerts/images/content/ilex\_verticillata\_winter\_gold\_winterberry\_holly.jpg)



(/sites/ag.umass.edu/files/pest-alerts/images/content/hydrangea\_paniculata\_nana\_pee\_gee\_hydrangea.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/gentiana\_clausa\_closed\_gentian.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/gentiana\_clausa\_closed\_gentian\_en\_masse.jpg) (/sites/ag.umass.edu/files/pest-

alerts/images/content/ilex\_verticillata\_winter\_gold\_winterberry\_holly.jpg)



(/sites/ag.umass.edu/files/pest-alerts/images/content/symphyotrichum\_novae-angliae\_new\_england\_aster.jpg)

### ▼ Pioneer Valley Region (Amherst)

**General Conditions:** We experienced continued mild daytime temperatures with cool nights over this past reporting period, a trend that's held steady since the last week of August. We did have one warm and humid day on 9/11, when the heat index reached 90°F. But otherwise, temperatures have been beautiful for fall planting and other outdoor activities. Four rain events were recorded at the gauge station since our last report, but none of these storms produced more than 0.32" of precipitation. Soils remain dry and while drought conditions never fully developed this season, it feels like it's been a dry summer. Many storms just failed to produce enough rain to soak the rooting zone for landscape trees and shrubs and when we did experience events with >1", the water was absorbed immediately. Continue to provide supplemental water for recent transplants but check soil moisture since usage is decreasing with the waning daylight and cooler temperatures. Over-irrigation can lead to significant problems for many landscape plants. Maples are starting to turn but overall, color remains very limited at this time. Along with red maple, leaves of Viburnum, Euonymus and dogwood, among others, are taking on a red coloration due to the production of anthocyanins. These are believed to protect the foliage from excessive sunlight during autumn as plants try to recover sugar and other nutrients from the foliage. This process of resorption can return valuable nutrients to the plant before the leaves are shed. Autumn anthocyanin production is at its highest during warm and sunny days. A frost advisory was enacted by the National Weather service for the early morning hours on 9/19. The area of coverage included central/eastern Franklin and central/eastern Hampshire counties.

**Pests/Problems:** Many branch and trunk cankering pathogens of deciduous hardwoods, such as the beech bark disease fungus *Neonectria*, become more active as trees go dormant for the season. Continue to prune and remove dead stems and branches as they develop to reduce overwintering inoculum in the canopy. Other states in the region are reporting the heavy needle senescence within eastern hemlock canopies. This is a normal process perhaps triggered by some environmental cue from this season. The lack of soil moisture has kept many wood-rotting fungi from producing their annual fruiting bodies in the landscape but there's still time if conditions improve. As deciduous foliage declines toward senescence and shedding from the canopy, late season foliar diseases can develop. These types of disease have very little impact on the overall health of the plant and in most cases,



do not warrant management. It's time to start thinking about winter protection for certain trees and shrubs in the form of feeding repellents and guards to protect the bark near the soil line. Applications and installations aren't required for several weeks but it's a good time to start preparing. Crabgrass has gone to seed so avoid using grass clippings as mulch at this time if this common weed is a big component of your yard. Turfgrasses are enjoying the cooler air and soil temperatures and have resumed growth in many locations.

#### ▼ **Berkshire Region (Great Barrington)**

**General Conditions:** The weather of the past two weeks has taken a decidedly autumn-like turn. Eight of the 14 days between September 5 and September 18 registered overnight lows in the 40s with the lowest temperature of 41 ° F occurring on the morning of September 13. The highest daytime temperature was 83 ° F on September 11. Other than that day, high temperatures during the scouting period ranged from the mid-60s to low 70s. Precipitation was below normal for the period and is currently (as of Sept 18) about 1 ¼ inches below normal for the year. Changes in tree foliar color are occurring more frequently, especially this week. Cool temperatures and some rainfall have increased the growth rate of turfgrass though some brown patches still exist where low mowing was practiced through the summer. Gardens and landscapes remain colorful with lingering annuals, late summer perennials, and *Hydrangea paniculata* carrying the burden of late summer flowering. *Cholchicum autumnale* (a.k.a. autumn crocus, naked lady, meadow saffron) has come into bloom during the past week. The invasive burning bush (*Euonymus alatus*) is rapidly developing its red fall color.

**Pests/Problems:** Plant pest pressures remain low with aphids, spider mites, and stink bugs being observed during scouting. In general, any foliar consuming insects, such as fall webworm, should not be worthy of control at this point as trees have now completed growth and have stored sufficient carbohydrate to support spring growth. More prominent in the landscape are diseases, mostly foliar diseases. Leaf spots have advanced to the point of covering large portions of individual leaves, leading to premature leaf color change. Many, if not most, crabapples are now completely defoliated as a result of apple scab and cedar apple rust diseases. Nuisance pests remain numerous. These include mosquitoes, eye gnats, wasps, yellow jackets, and earwigs. Black-legged ticks continue to be numerous and the usual precautions and protections should be heeded. Animal browsing in managed landscapes by deer, woodchucks, squirrels, and chipmunks are steadily increasing as these critters seek the more succulent vegetation found around homes. Speaking of homes, the cooler temperatures have initiated the annual home invasion by Asian multicolored lady beetles, Western conifer seed bug, box elder bugs, cluster flies, stink bugs, and spiders.

#### ▼ **Regional Scouting Credits**

- CAPE COD REGION - Russell Norton, Horticulture and Agriculture Educator with Cape Cod Cooperative Extension, reporting from Barnstable.

- SOUTHEAST REGION - Brian McMahon, Arborist, reporting from the Dighton area.
- NORTH SHORE REGION - Geoffrey Njue, Green Industry Specialist, UMass Extension, reporting from the [Long Hill Reservation \(http://www.thetrustees.org/places-to-visit/north-shore/long-hill.html\)](http://www.thetrustees.org/places-to-visit/north-shore/long-hill.html), Beverly.
- EAST REGION - Kit Ganshaw & Sue Pfeiffer, Horticulturists reporting from the Boston area.
- METRO WEST REGION – Julie Coop, Forester, Massachusetts Department of Conservation & Recreation, reporting from Acton.
- CENTRAL REGION - Mark Richardson, Director of Horticulture reporting from [Tower Hill Botanic Garden \(https://www.towerhillbg.org/\)](https://www.towerhillbg.org/), Boylston.
- PIONEER VALLEY REGION - Nick Brazee, Plant Pathologist, UMass Extension Plant Diagnostic Lab, reporting from UMass Amherst.
- BERKSHIRE REGION - Ron Kujawski, Horticultural Consultant, reporting from Great Barrington.

## Woody Ornamentals

### ▾ Diseases

Recent pests and pathogens of interest seen in the UMass Extension Plant Diagnostic Lab [https://ag.umass.edu/services/plant-diagnostics-laboratory/\(/services/plant-diagnostics-laboratory\)](https://ag.umass.edu/services/plant-diagnostics-laboratory/(/services/plant-diagnostics-laboratory))

**Brown cubical root and butt rot of Japanese larch (*Larix kaempferi*) caused by *Phaeolus schweinitzii*.** A mature tree (22" dbh) on the UMass campus that resides in a protected, mulched bed with full sun exposure. For over 10 years, fruiting bodies of *P. schweinitzii* have appeared within the rooting zone on a nearly annual basis from late August to mid-September. Specifically, the mushrooms form on roots within 4 – 15' from the base of the trunk. Sonic and electrical resistance tomography scanning in 2018 confirmed that significant butt rot has occurred, with more than 50% of the cross-sectional area close to the soil line in a state of decay. There are no major symptoms of decay present but the uppermost portions of the canopy have experienced dieback in recent years.

**Botryosphaeria stem cankering of several Rhododendron hybrids (*Rhododendron* 'Purpureum Elegans', *R.* 'Edith Bosley' and *R.* 'Nova Zembla').** All three plants were transplanted this season with varying site conditions (sunny to shaded) and aftercare (drip irrigation to no irrigation). All three plants appeared healthy at the time of purchase and planting but shortly after, leaves began to curl and wilt. *Botryosphaeria* was abundant on the stems of all three plants. Once stems were incubated, large numbers of black-colored fruiting bodies ruptured through the bark. *Botryosphaeria* is one of the most common stem cankering pathogens of Rhododendron and is widespread in the landscape and on nursery stock.

**Volutella leaf and stem blight caused by *Pseudonectria buxi* (formerly *Volutella buxi*) on boxwood (*Buxus* sp.).** 50 shrubs, approximately 10 to 15-years-old, present in a

residential landscape with full sun and overhead lawn irrigation. Deer repellents are also used to protect the plants from browsing. Submitted sample included brown, desiccated leaves that were still attached to the dead shoots. This is a common symptom of *Volutella* blight and stands in contrast to boxwood blight, which causes leaves to rapidly shed from infected shoots. The overhead lawn watering should cease and this will greatly aid in reducing the population of the fungus in the canopy.

**Decline and dieback of Tanyosho pine (*Pinus densiflora* 'Umbraculifera') as a result of stem cankering (*Cytospora*), needle blight (*Pestalotiopsis*) and a bark beetle infestation (*Pityophthorus* sp.).** Tree is 15-years-old and has been present at the site for 10 years. It resides in a shaded setting with drip irrigation and decent soils. Approximately two years ago, needles began to brown and prematurely shed from the canopy. The tree receives compost tea and a mycorrhizal deep root injection annually. Most pines, including *P. densiflora*, require full sun in order to thrive and will not tolerate shade. Thus, the shaded setting is the primary issue impacting the tree. *Cytospora* is opportunistic on a wide array of pine species in the area as are the other agents found here.

**Bacterial leaf spot of American cranberrybush Viburnum (*Viburnum trilobum*) caused by *Xanthomonas campestris*.** The shrub is roughly six-years-old and resides in a shaded garden with drip irrigation and a mixture of clay-loam soils. Dark-colored and angular spots were developing on the foliage, gradually affecting all leaves in the canopy. The symptoms first appeared in August of this year and have not been present in years past. Bacterial leaf spot can occur on a range of landscape plants but is most common in nursery settings, where overhead irrigation readily moves the pathogen, especially when air flow is limited.

*Report by Nick Brazee, Plant Pathologist, UMass Extension Plant Diagnostic Lab, UMass Amherst.*

## ▼ Insects

### **Peak Transmission of Mosquito-Borne Illness Extends Through September in Massachusetts:**

- **Mosquitoes and Eastern Equine Encephalitis (EEE):** EEE virus activity has been detected in Barnstable, Bristol, Essex, Franklin, Hampden, Hampshire, Middlesex, Norfolk, Plymouth, and Worcester counties. **Nine human cases of EEE have been confirmed this year at the time this was written:** <https://www.mass.gov/news/state-officials-announce-9th-human-case-of-eee-in-massachusetts> (<https://www.mass.gov/news/state-officials-announce-9th-human-case-of-eee-in-massachusetts>). For more information about EEE, who is at risk, how to minimize risk/steps to protect ourselves, manage mosquitoes in our landscapes, and for more information about EEE from the MA Department of Public Health, and the Centers for Disease Control and Prevention, visit UMass Extension's Hort Notes under "Trouble Maker of the Month": <https://ag.umass.edu/landscape/newsletters/hort-notes/hort-notes-2019-vol-307> (/landscape/newsletters/hort-notes/hort-notes-2019-vol-307) .

### **Aphids on Milkweed:**



(/sites/ag.umass.edu/files/pest-alerts/images/content/aphids\_on\_milkweed\_1.jpg)



(/sites/ag.umass.edu/files/pest-alerts/images/content/aphids\_on\_milkweed2.jpg)



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**Oleander Aphid:** *Aphis nerii* or the oleander aphid is also sometimes referred to as the milkweed aphid. This bright yellow/light orange insect is often found feeding on oleander (*Nerium* spp.) and milkweed (*Asclepias* spp.). This aphid is cosmopolitan in its distribution, found in tropical to warm temperate regions throughout the world. It is thought that it likely originated in the Mediterranean region along with its principle oleander host. It is suspected that this insect is an obligate parthenogenetic species, meaning that all individuals are female and give rise to young without sexual reproduction. Females deposit nymphs (rather than eggs) and five nymphal instars are known. Offspring are clones of the females which can be winged or wingless as adults. Winged individuals are formed when overcrowding occurs on a host plant and dispersal is necessary, or when plants are senescing. Like other aphids, the oleander aphid removes plant fluids/sap with piercing-sucking mouthparts in order to feed. The damage this insect causes is mainly aesthetic, as large amounts of honeydew (sticky, sugary, excrement) can be produced. Stinging insects are attracted to the honeydew and may also visit the plants. However, sometimes plant terminals are deformed by their feeding and when infestations are heavy enough, stunted plant growth has been reported. Reduced levels of watering, pruning, and fertilization may moderate the production of tender shoots, the favorite feeding location for oleander aphids. Aphids can also be dislodged with a strong stream of water. Naturally occurring biological control can also be an effective means of managing oleander aphids. The most commonly reported species of parasitic wasp attacking these aphids is *Lysiphlebus testaceipes*. The female wasp lays her eggs inside the aphid nymphs. Parasitized aphids develop into light brown, swollen, papery aphid "mummies". A single parasitic wasp leaves the aphids body through a hole it creates once the aphid has been eaten from the inside out!

Woody ornamental (and other) insect and non-insect arthropod pests to consider, *a selected few*:

- **Asian Longhorned Beetle:** (*Anoplophora glabripennis*, ALB) Look for signs of an ALB infestation which include perfectly round exit holes (about the size of a dime), shallow

oval or round scars in the bark where a female has chewed an egg site, or sawdust-like frass (excrement) on the ground nearby host trees or caught in between branches. Be advised that other, native insects may create perfectly round exit holes or sawdust-like frass, which can be confused with signs of ALB activity.

The regulated area for Asian longhorned beetle is 110 miles<sup>2</sup> encompassing Worcester, Shrewsbury, Boylston, West Boylston, and parts of Holden and Auburn. If you believe you have seen damage caused by this insect, such as exit holes or egg sites, on susceptible host trees like maple, please call the Asian Longhorned Beetle Eradication Program office in Worcester, MA at **508-852-8090** or **toll free at 1-866-702-9938**.

**To report an Asian longhorned beetle find online or compare it to common insect look-alikes, visit:** <http://massnrc.org/pests/albreport.aspx> (<http://massnrc.org/pests/albreport.aspx>) or <https://www.aphis.usda.gov/pests-diseases/alb/report> (<https://www.aphis.usda.gov/pests-diseases/alb/report>) .

- **Brown Marmorated Stink Bug:** (*Halyomorpha halys*; BMSB) is a non-native insect first detected in the United States in 1998 in Allentown, PA. This insect was accidentally introduced from Asia. It was first detected in MA in 2007. It has since been reported in multiple counties of MA. **Shortly after BMSB was mentioned in last week's Landscape Message, UMass Extension's Fruit Program announced on September 9<sup>th</sup> that for the first time in Massachusetts, there is now evidence of BMSB directly feeding on fruit crops in a commercial orchard setting. On this date, BMSB nymphs were observed feeding on peach in Belchertown, MA. More information about BMSB in commercial fruit can be found here:** <https://bit.ly/2IWcWvu> (<https://bit.ly/2IWcWvu>) . BMSB attacks a broad variety of plants, including fruit crops and shade trees. Host plants include but are not limited to: peach, apple, pear, maples, dogwoods, butterfly bush, and vegetable crops. A more comprehensive list of hosts may be found here: <https://www.stopbmsb.org/where-is-bmsb/host-plants/> (<https://www.stopbmsb.org/where-is-bmsb/host-plants/>) . **An adult brown marmorated stink bug was observed feeding on an Amur maple (*Acer ginnala*) samara in Amherst, MA on 9/3/2019.** Brown marmorated stink bugs can be distinguished from native stink bugs by the white bands on the antennae and alternating white and dark bands at the rear edge of the abdomen. Adults emerge around April from their overwintering locations. Females can lay approximately 500 eggs during their lifetime, in clusters of 30 eggs or so at a time, roughly from June-August. Eggs hatch and the immature insects (the nymphs) undergo 5 instars. Adults can be nuisance insects as they become fall home invaders, roughly by the end of September and into October, seeking sheltered locations to overwinter.

More information about BMSB can be found at:

<https://www.massnrc.org/pests/pestFAQsheets/brownmarmoratedstinkbug.html>  
(<https://www.massnrc.org/pests/pestFAQsheets/brownmarmoratedstinkbug.html>)  
(<https://www.massnrc.org/pests/pestFAQsheets/brownmarmoratedstinkbug.html>).

- **Deer Tick/Blacklegged Tick: REGISTER NOW** for the next **FREE** live TickTalk with TickReport webinar on **October 9, 2019** with **Dr. Stephen Rich** of the **UMass Laboratory of Medical Zoology**. Sign up to attend here: <https://ag.umass.edu/landscape/events/webinar-2019-tick-updates-from-umass-laboratory-of-medical-zoology-lmz> (/landscape/events/webinar-2019-tick-updates-from-umass-laboratory-of-medical-zoology-lmz)

Deer tick (*Ixodes scapularis*) adult activity will increase again in October, and remain active throughout the winter whenever temperatures are above freezing. For images of all deer tick life stages, along with an outline of the diseases they carry, visit:

[http://www.tickcounter.org/tick\\_identification/deer\\_tick](http://www.tickcounter.org/tick_identification/deer_tick)  
([http://www.tickcounter.org/tick\\_identification/deer\\_tick](http://www.tickcounter.org/tick_identification/deer_tick)).

**Anyone working in the yard and garden should be aware that there is the potential to encounter deer ticks.** The deer tick or blacklegged tick can transmit Lyme disease, human babesiosis, human anaplasmosis, and other diseases. Preventative activities, such as daily tick checks, wearing appropriate clothing, and permethrin treatments for clothing (according to label instructions) can aid in reducing the risk that a tick will become attached to your body. If a tick cannot attach and feed, it will not transmit disease. For more information about personal protective measures, visit: [http://www.tickcounter.org/prevention/protect\\_yourself](http://www.tickcounter.org/prevention/protect_yourself) ([http://www.tickcounter.org/prevention/protect\\_yourself](http://www.tickcounter.org/prevention/protect_yourself)). **For a quick overview of skin repellents available to protect yourself from ticks, visit “Tickology: Skin Repellents” by Larry Dapsis of Cape Cod Cooperative Extension:**<https://bit.ly/2J8IJB1> (<https://bit.ly/2J8IJB1>).

Have you just removed an attached tick from yourself or a loved one with a pair of tweezers? If so, consider sending the tick to the UMass Laboratory of Medical Zoology to be tested for disease causing pathogens. To submit a tick to be tested, visit: <https://www.tickreport.com/> (<https://www.tickreport.com/>) and click on the blue **“Order a TickReport”** button. **Results are typically available within 3 business days, or less.** By the time you make an appointment with your physician following the tick attachment, you may have the results back from TickReport to bring to your physician to aid in a conversation about risk.

The UMass Laboratory of Medical Zoology does not give medical advice, nor are the results of their tests diagnostic of human disease. Transmission of a pathogen from the tick to you is dependent upon how long the tick had been feeding, and each pathogen has its own transmission time. TickReport is an excellent measure of exposure risk for the tick (or ticks) that you send in to be tested. Feel free to print out and share your TickReport with your healthcare provider.

- **Emerald Ash Borer: (*Agrilus planipennis*, EAB) additional communities in Berkshire and Middlesex counties have been added to the list of locations in**

**Massachusetts with confirmed emerald ash borer populations by the MA Department of Conservation and Recreation. For a map of these locations, visit:**[https://ag.umass.edu/fact-sheets/emerald-ash-borer \(/fact-sheets/emerald-ash-borer\)](https://ag.umass.edu/fact-sheets/emerald-ash-borer (/fact-sheets/emerald-ash-borer))

This wood-boring beetle readily attacks ash (*Fraxinus* spp.) including white, green, and black ash and has also been found developing in white fringe tree (*Chionanthus virginicus*) and has been reported in cultivated olive (*Olea europaea*). Signs of an EAB infested tree may include D-shaped exit holes in the bark (from adult emergence), “blonding” or lighter coloration of the ash bark from woodpecker feeding (chipping away of the bark as they search for larvae beneath), and serpentine galleries visible through splits in the bark, from larval feeding beneath. Positive identification of an EAB-infested tree may not be possible with these signs individually on their own.

For further information about this insect, please visit: [https://ag.umass.edu/fact-sheets/emerald-ash-borer \(/fact-sheets/emerald-ash-borer\)](https://ag.umass.edu/fact-sheets/emerald-ash-borer (/fact-sheets/emerald-ash-borer)). If you believe you have located EAB-infested ash trees, particularly in an area of Massachusetts not identified on the map provided, please report here: <http://massnrc.org/pests/pestreports.htm> (<http://massnrc.org/pests/pestreports.htm>) (<http://massnrc.org/pests/pestreports.htm>).

- **Hickory Tussock Moth:** *Lophocampa caryae* is native to southern Canada and the northeastern United States. There is one generation per year. Overwintering occurs as a pupa inside a fuzzy, oval shaped cocoon. Adult moths emerge approximately in May and their presence can continue into July. Females will lay clusters of 100+ eggs together on the underside of leaves. Females of this species can fly, however they have been called weak fliers due to their large size. When first hatched from their eggs, the young caterpillars will feed gregariously in a group, eventually dispersing and heading out on their own to forage. Caterpillar maturity can take up to three months and color changes occur during this time. These caterpillars are essentially white with some black markings and a black head capsule. They are very hairy, and should not be handled with bare hands as many can have skin irritation or rashes (dermatitis) as a result of interacting with hickory tussock moth hairs. By late September, the caterpillars will create their oval, fuzzy cocoons hidden in the leaf litter where they will again overwinter. Hosts whose leaves are fed upon by these caterpillars include but are not limited to hickory, walnut, butternut, linden, apple, basswood, birch, elm, black locust, and aspen. Maple and oak have also been reportedly fed upon by this insect. Several wasp species are parasitoids of hickory tussock moth caterpillars.
- **Spotted Lanternfly:** (*Lycorma delicatula*, SLF) is **not known to occur in Massachusetts landscapes (no established populations are known in MA at this time). However, officials with the Massachusetts Department of Agricultural Resources (MDAR) urged residents to check plants for spotted lanternfly. On February 21, 2019 MDAR announced the discovery of a single dead spotted lanternfly adult at a private residence in Boston. As a result of this discovery, officials asked the public to check potted plants they purchase and report any suspicious insects.** MDAR reports that this particular individual appeared to have

been unintentionally transported this past December in a shipment of poinsettia plants originating from Pennsylvania. Officials also report that there is currently no evidence that this pest has become established in MA. **For more information about this finding, please visit the MA Department of Agricultural Resources press release:**<https://www.mass.gov/news/state-agricultural-officials-urge-residents-to-check-plants-for-spotted-lanternfly> (<https://www.mass.gov/news/state-agricultural-officials-urge-residents-to-check-plants-for-spotted-lanternfly>) (<https://www.mass.gov/news/state-agricultural-officials-urge-residents-to-check-plants-for-spotted-lanternfly>).

This insect is a member of the Order Hemiptera (true bugs, cicadas, hoppers, aphids, and others) and the Family Fulgoridae, also known as planthoppers. The spotted lanternfly is a non-native species first detected in the United States in Berks County, Pennsylvania and confirmed on September 22, 2014.

The spotted lanternfly is considered native to China, India, and Vietnam. It has been introduced as a non-native insect to South Korea and Japan, prior to its detection in the United States. In South Korea, it is considered invasive and a pest of grapes and peaches. The spotted lanternfly has been reported from over 70 species of plants, including the following: tree of heaven (*Ailanthus altissima*) (preferred host), apple (*Malus* spp.), plum, cherry, peach, apricot (*Prunus* spp.), grape (*Vitis* spp.), pine (*Pinus* spp.), pignut hickory (*Carya glabra*), Sassafras (*Sassafras albidum*), serviceberry (*Amelanchier* spp.), slippery elm (*Ulmus rubra*), tulip poplar (*Liriodendron tulipifera*), white ash (*Fraxinus americana*), willow (*Salix* spp.), American beech (*Fagus grandifolia*), American linden (*Tilia americana*), American sycamore (*Platanus occidentalis*), big-toothed aspen (*Populus grandidentata*), black birch (*Betula lenta*), black cherry (*Prunus serotina*), black gum (*Nyssa sylvatica*), black walnut (*Juglans nigra*), dogwood (*Cornus* spp.), Japanese snowbell (*Styrax japonicus*), maple (*Acer* spp.), oak (*Quercus* spp.), and paper birch (*Betula papyrifera*).

The adults and immatures of this species damage host plants by feeding on sap from stems, leaves, and the trunks of trees. In the springtime in Pennsylvania (late April - mid-May) nymphs (immatures) are found on smaller plants and vines and new growth of trees and shrubs. Third and fourth instar nymphs migrate to the tree of heaven and are observed feeding on trunks and branches. Trees may be found with sap weeping from the wounds caused by the insect's feeding. The sugary secretions (excrement) created by this insect may coat the host plant, later leading to the growth of sooty mold. Insects such as wasps, hornets, bees, and ants may also be attracted to the sugary waste created by the lanternflies, or sap weeping from open wounds in the host plant. Host plants have been described as giving off a fermented odor when this insect is present.

Adults are present by the middle of July in Pennsylvania and begin laying eggs by late September and continue laying eggs through late November and even early



December in that state. Adults may be found on the trunks of trees such as the tree of heaven or other host plants growing in close proximity to them. Egg masses of this insect are gray in color and, in some ways, look similar to gypsy moth egg masses.

Host plants, bricks, stone, lawn furniture, recreational vehicles, and other smooth surfaces can be inspected for egg masses. Egg masses laid on outdoor residential items such as those listed above may pose the greatest threat for spreading this insect via human aided movement.

For more information about the spotted lanternfly, visit this fact sheet:

[https://ag.umass.edu/landscape/fact-sheets/spotted-lanternfly\\_\(/landscape/fact-sheets/spotted-lanternfly\)](https://ag.umass.edu/landscape/fact-sheets/spotted-lanternfly_(/landscape/fact-sheets/spotted-lanternfly)) .

- **Tuliptree Aphid:** *Illinoia liriodendri* is a species of aphid associated with the tuliptree, wherever it is grown. The tuliptree aphid was seen feeding on the undersides of leaves on 7/25/19 and again on 8/21/19, and 9/17/19 in Amherst, MA. Depending upon local temperatures, these aphids may be present from mid-June through early fall. Large populations can develop by late summer. Some leaves, especially those in the outer canopy, may turn brown or yellow and drop from infested trees prematurely. The most significant impact these aphids can have is typically the resulting honeydew, or sugary excrement, which may be present in excessive amounts and coat leaves and branches, leading to sooty mold growth. This honeydew may also make a mess of anything beneath the tree. Wingless adults are approximately 1/8 inch in length, oval, and can range in color from pale green to yellow. There are several generations per year. This is a native insect. Management is typically not necessary, as this insect does not significantly impact the overall health of its host. Tuliptree aphids also have plenty of natural enemies, such as ladybeetles and parasites.
- **Yellowjackets:** (*Vespula* spp. and *Dolichovespula* spp.) Often times, when we think that we have been “stung by a bee” the true culprit is some type of yellowjacket. Yellowjackets frequently interact with humans at the end of the summer due to a shift in their foraging behaviors. Early in the season, they can act as beneficial insects as they are predators of many pest insects such as caterpillars. These protein resources can be useful to them when rearing their young. Later in the season, they may switch to foods high in carbohydrates or sugars, including nectar and honeydew, but also some of our favorite items to pack during outdoor picnics or cookouts (soda and other sugary treats).

Unlike European honeybees (*Apis mellifera*), yellowjackets are capable of stinging multiple times (multiple stings from a single individual). This includes aerial yellowjackets such as the baldfaced hornet and other species in the genus *Dolichovespula* spp. European honeybees (the workers) can only sting once due to the fact that they have a barbed stinger/ovipositor. This causes the ovipositor to become stuck in the skin, tearing this structure free from the abdomen of the honeybee, thus killing the honeybee. Honeybees are often not aggressive and only attack when otherwise threatened. This may not be the case for yellowjackets.

Be on the lookout for their nests, and avoid. **Baldfaced hornets and other aerial yellowjackets make aerial nests that are nearly completely covered with a papery shell (except for an opening for entrance/exit of the nest). These can be found in trees and shrubs located up off the ground.** Some yellowjackets will also create subterranean nests or nest in cavities of trees, decayed stumps, or associated with buildings. If nests are in areas where these insects are unlikely to interact with humans, they can be left alone. These nests are not used again the following season, and by the first couple of hard frosts, all individuals will be gone. However, if they are close to homes/doorways, walkways, benches, etc. (high traffic areas) management may be necessary, especially if the homeowner/individuals using the property are allergic to stings.

Attempts to remove yellowjacket or baldfaced hornet nests should be made at night, or at least very early or very late in the day when temperatures are still cool, activity by the yellowjackets is likely to be low, and the individuals are likely to still be contained (largely) within the nest. Note that although the insects may not be terribly active, any disturbance to the nest/colony will change that. Wear protective clothing (long sleeves and pants tight around wrists and ankles and close-toed shoes or boots, at minimum). Many insecticides are labelled for use against yellowjackets and baldfaced hornets, including products that can be shot into the opening of the nest from many feet away. Note that agitated yellowjackets may leave the nest, looking for the source of aggravation (you), and will be ready to sting. Use extreme caution, and individuals who are allergic to stings should not attempt this. Hire a professional. Again, if the nest is in a location where interaction with people is unlikely, consider leaving it alone until a few hard frosts have hit, at which time the nest can be removed if desired.

**Concerned that you may have found an invasive insect** or suspicious damage caused by one? Need to report a pest sighting? If so, please visit the Massachusetts Introduced Pests Outreach Project: <http://massnrc.org/pests/pestreports.htm> (<http://massnrc.org/pests/pestreports.htm>).

A note about **Tick Awareness:** deer ticks (*Ixodes scapularis*), the American dog tick (*Dermacentor variabilis*), and the lone star tick (*Amblyomma americanum*) are all found throughout Massachusetts. Each can carry their own complement of diseases. Anyone working in tick habitats (wood-line areas, forested areas, and landscaped areas with ground cover) should check themselves regularly for ticks while practicing preventative measures. Have a tick and need it tested? Visit the web page of the UMass Laboratory of Medical Zoology (<https://www.tickreport.com/> (<https://www.tickreport.com/>)) and click on the blue **Order a TickReport** button for more information.

*Reported by Tawny Simisky, Extension Entomologist, UMass Extension Landscape, Nursery, & Urban Forestry Program*

## ▾ Urban and Community Forestry

### **Planting for Resilience: Selecting Urban Trees in Massachusetts**

The new street tree selection guide, titled "Planting for Resilience: Selecting Urban Trees in Massachusetts," has been produced by the Department of Environmental Conservation and the Center for Agriculture Food and the Environment, at the University of Massachusetts Amherst. The guide was authored by graduate researcher, Ashley M. McElhinney, and Extension Associate Professor of Urban and Community Forestry, Dr. Richard W. Harper. It is designed to function as a key resource for anyone interested in selecting and planting a tree in the Commonwealth of Massachusetts – tree wardens, urban foresters, professional arborists, volunteers that work with urban trees, and private residents.

The guide aims to provide readers with the information necessary to more confidently choose which tree species is best for their planting site, employing the "right tree, right place" approach. Proactive planning is a critical strategy to creating and maintaining a healthy, diverse urban forest, that ranges from the downtown urban core, to parks and greenways, to private properties. Trees growing in urban areas are becoming increasingly important in maintaining and protecting human and environmental health in the face of urbanization and global climate change.

This guide outlines the characteristics and attributes of each of its tree species, detailing ornamental traits and site preferences. It also includes observations regarding tolerance to adverse conditions often found in urban environments and information relative to climate change adaptability.

Profiles for nearly 80 recommended tree species are included, ranging from native trees found commonly grown and planted in Massachusetts, to non-native trees adept at surviving in tough urban environments. A critical objective of this guide is to encourage diversity among urban trees at the time of selection and planting.

A two-part resource featuring both a **video** tutorial discussion of the guide and a **free downloadable version of the guide** (pdf), has also been made available in the "Lectures" section of the menu on the <http://www.urbanforestrytoday.org/> (<http://www.urbanforestrytoday.org/>) website. Certified arborists that view the tutorial and download the guide may obtain continuing education credits (1.0 ISA CEU's & 0.5 MCA credits).

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*Reported by Rick Harper, UMass Extension Associate Professor of Urban & Community Forestry, Department of Environmental Conservation, UMass Amherst*

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## **Additional Resources**

To receive immediate notification when the next Landscape Message update is posted, be sure to [join our e-mail list \(/landscape/email-list\)](/landscape/email-list) and follow us on [Facebook](http://www.facebook.com/pages/UMass-Extension-Landscape-Nursery-and-Urban-Forestry/519809748159819) (<http://www.facebook.com/pages/UMass-Extension-Landscape-Nursery-and-Urban-Forestry/519809748159819>) and [Twitter](https://twitter.com/umasslandscape) (<https://twitter.com/umasslandscape>).

For a complete listing of upcoming events, see our [Upcoming Educational Events page \(/landscape/upcoming-events\)](/landscape/upcoming-events).

**For commercial growers of greenhouse crops and flowers** - Check out UMass Extension's [Greenhouse Update \(http://neginhouseupdate.info/\)](http://neginhouseupdate.info/) website

**For professional turf managers** - [Check out Turf Management Updates \(/turf/management-updates\)](/turf/management-updates)

**For home gardeners and garden retailers** - Check out [home lawn and garden resources \(/resources/home-lawn-garden\)](/resources/home-lawn-garden). UMass Extension also has a Twitter feed that provides timely, daily gardening tips, sunrise and sunset times to home gardeners, see <https://twitter.com/UMassGardenClip> (<https://twitter.com/UMassGardenClip>).

## **Diagnostic Services**

**A UMass Laboratory Diagnoses Landscape and Turf Problems** - The UMass Extension Plant Diagnostic Lab is available to serve commercial landscape contractors, turf managers, arborists, nurseries and other green industry professionals. It provides woody plant and turf disease analysis, woody plant and turf insect identification, turfgrass identification, weed identification, and offers a report of pest management strategies that are research based, economically sound and environmentally appropriate for the situation. Accurate diagnosis for a turf or landscape problem can often eliminate or reduce the need for pesticide use. For sampling procedures, detailed submission instructions and a list of fees, see [Plant Diagnostics Laboratory \(/services/plant-diagnostics-laboratory\)](/services/plant-diagnostics-laboratory)

**Soil and Plant Nutrient Testing** - The University of Massachusetts Soil and Plant Nutrient Testing Laboratory is located on the campus of The University of Massachusetts at Amherst. Testing services are available to all. The function of the Soil and Plant Nutrient Testing Laboratory is to provide test results and recommendations that lead to the wise and economical use of soils and soil amendments. For complete information, visit the [UMass Soil and Plant Nutrient Testing Laboratory \(/services/soil-plant-nutrient-testing-laboratory\)](/services/soil-plant-nutrient-testing-laboratory) web site. Alternatively, call the lab at (413) 545-2311.

**Ticks are active at this time!** Remember to take appropriate precautions when working and playing outdoors, and conduct daily tick checks. UMass tests ticks for the presence of Lyme disease and other disease pathogens. [Learn more \(/services/tick-borne-disease-diagnostics\)](/services/tick-borne-disease-diagnostics).

## Newsletters & Updates

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Landscape Message (/landscape/landscape-message)

Archived Landscape Messages (/landscape/landscape-message-archive)

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Hort Notes (/landscape/newsletters-updates/hort-notes)

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**CAFE:** Units, Programs, Projects, Interest Areas

**NetId Login** ([https://ag.umass.edu/Shibboleth.sso/Login?target=https%3A%2F%2Fag.umass.edu%2F%3Fq%3Dshib\\_login%2Fnode%2F20619](https://ag.umass.edu/Shibboleth.sso/Login?target=https%3A%2F%2Fag.umass.edu%2F%3Fq%3Dshib_login%2Fnode%2F20619))

[Civil Rights and Non-Discrimination Information \(http://ag.umass.edu/civil-rights-information\)](http://ag.umass.edu/civil-rights-information)

This site is maintained by [Center for Agriculture, Food and the Environment \(mailto:ag@cns.umass.edu\)](mailto:ag@cns.umass.edu) in the [College of Natural Sciences \(http://www.cns.umass.edu/\)](http://www.cns.umass.edu/).

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