Landscape Message: May 18, 2018

May 18, 2018
Issue: 8

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 weekly in May and June. The next message will be posted on May 25. 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

Environmental Data

The following data was collected on or about May 16, 2018. Total accumulated growing degree days (GDD) represent the heating units above a 50° F baseline temperature collected via our instruments for the 2018 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 (1-Week Gain)	Time/Date of Readings
	1-Week Gain	*2018 Total*	*Sun*	*Shade*		
Cape Cod	40	143	60	58	0.40	4:00 PM 5/16
Southeast	37	181	63	56	0.90	5:10 PM 5/16
North Shore	69	255	58	55	0.49	9:30 AM 5/16
East	64	257	64	60	1.37	5:00 PM 5/16
Metro West	n/a	n/a	n/a	n/a	n/a	n/a
Central	47	170	56	51	1.06	7:00 AM 5/16
Pioneer Valley	60	226	66	57	1.10	11:00 AM 5/16
Berkshires	56	194	63	58	0.92	9:00 AM 5/16
AVERAGE	28	204	61	56	0.89	-

n/a = information not available

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.
Rhododendron catawbiense (Catawba rhododendron)	Begin	*	Full	*	*	Begin	*	*
Aesculus hippocastanum (common horsechestnut)	Begin	Begin/Full	Full	Begin	*	Begin	Begin/Full	Begin

Elaeagnus umbellata (Autumn-olive)	Begin/Full	Begin/Full	Full	Begin	*	*	Begin	*
Spiraea x *vanhouttei* (Vanhoutte spirea)	Begin	*	*	*	*	*	Begin	Begin
Syringa vulgaris (common lilac)	Begin/Full	Full	Full	Full	*	Begin/Full	Full	Begin/Full
Rhododendron spp. (early azaleas)	Full	Full	Full/End	Full/End	*	Full/End	Full	Begin/Full
Cornus florida (flowering dogwood)	Full	Full	Full	Full	*	Full	Full	Full
Malus spp. (crabapple)	Full	Full	Full	Full	*	Full	Full/End	Full
Cercis canadensis (redbud)	Full	Full	Full	Full	*	Full	Full/End	Full
Amelanchier spp. (shadbush, serviceberry)	Full/End	Full	Full	End	*	Full	Full/End	Full
Chaenomeles speciosa (common flowering quince)	End	Full	Full/End	End	*	Full/End	End	Full
Pyrus calleryana (Callery Pear)	End	Full/End	End	*	*	*	End	Full
Rhododendron 'P. J. M.'	End	End	Full/End	*	*	Full	End	Full/End
* = no activity to report/information not available								

Regional Notes

Cape Cod Region (Barnstable)

General Conditions: The average temperature over the last week was 54°F with a high of 71°F on May 15 and a low of 43°F on May 12. Conditions have been favorable for outside work with temperatures mainly in the 50s and 60s. Less than a half inch of precipitation fell in two rain events, one on May 12 and the other on May 15. Topsoil and subsoil moisture conditions remain adequate.

Pests/Problems: Winter moth caterpillars continue to develop and can be found on susceptible hosts. Though populations are expected to be lower than previous years, damage can be found on crabapple, maple, and Japanese maple in many locations. Damage to oak is not yet visible due to slow bud expansion. Gypsy moth started to hatch late last week on the Cape. While most of the Cape has little to no gypsy moth, the area from Orleans/Eastham to Truro does have a significant population in some areas. Monitoring should occur to assess potential for defoliation. Other pests or damage observed over the last week are viburnum leaf beetle, *Pyrrhalta viburni*, on viburnum, snowball aphid on viburnum, rose slug sawfly on rose, fungal needle casts on white pine, boxwood leafminer, *Monarthropalpus flavus,* larvae on boxwood, spruce spider mite, *Oligonychus ununguis,* on spruce and eastern tent caterpillar, *Malacosoma americanum*, on cherry. There is extensive browning of pitch pine along the eastern shoreline of the outer Cape, likely due to environmental damage from winter storms. The following weeds are in bloom; autumn olive (*Elaeagnus umbellata*), bush honeysuckles (*Lonicera* spp.), garlic mustard *(Alliaria petiolata)*, dandelion (*Taraxacum officinal*e), mouse-ear chickweed (*Cerastium vulgatum*), yellow rocket (*Barbarea vulgaris*), henbit (*Lamium* spp.) and *Veronica* spp.

Southeast Region (Hanson)

General Conditions: Nice spring-like weather was enjoyed this past week. Soils were beginning to dry out, but a passing thunderstorm on May 15th provided 0.90 inches of rain, which was needed. As we go into warmer weather, remind clients to water newly planted lawns, trees, shrubs, and perennials. It is especially important to water those trees that were defoliated last spring by gypsy moth caterpillars.

The weather has been conducive to extending bloom, making for a colorful spring. The reduced populations of winter moth caterpillars have made for a wonderful flowering of crabapples, one of the best years ever for crabapple flowers, with fragrance filling the air. It was also a banner year for Kwanzan cherries. The following plants are in full bloom: *Aesculus hippocastanum* (common horsechestnut), *Halesia* spp. (Silverbell), late blooming magnolias, *Cercis canadensis* (eastern redbud), Kwanzan cherry, *Malus* spp. (apples, crabapples), *Cornus florida* (flowering dogwood), *Prunus serotina* (black cherry), *Wisteria floribunda* (Japanese wisteria), *Enkianthus campanulatus*, *Weigela florida* ‘Versicolor’, *Daphne* x *burkwoodii* 'Carol Mackie', *Daphne tangutica*, *Viburnum* ‘Eskimo’, *Viburnum pragense*, *Syringa vulgaris* (common lilac), *Ilex* x *meserveae*, *Chaenomeles speciosa* (common floweringquince), *Spiraea prunifolia* f. *simplicifolia* (bridalwreath spirea), *Fothergilla* major (large Fothergilla), *Fothergilla gardenii* (dwarf Fothergilla), *Pieris* 'Brouwer's Beauty', *Kerria*, *Vaccinium corymbosum* (highbush blueberry), *Rhododendron* ‘Olga Mezitt’, *Lonicera tatarica* (invasive), *Rhododendron schlippenbachii* (royal azalea), *Azalea* ‘April Snow’, *Persicaria bistorta* ‘Superbum’, *Corydalis lutea*, *Tiarella cordifolia* (foam flower), *Geranium* spp., *Convallaria majalis* (lily-of-the-valley), *Polygonatum* spp. (Solomon's seal), *Corydalis scouleri*, *Arisaema dracontium*, *Arisaema ringens*, *Arisaema sikokianum* and other *Arisaema* spp. (Jack-in-the-pulpit), *Euphorbia polychroma*, *Lamiastrum galeobdolon*, *Mertensia virginica* (Virginia bluebells), *Myosotis sylvatica* (forget-me-not), *Omphalodes verna*, *Primula* spp, *Epimedium* spp., *Trillium* spp., *Galium odoratum* (sweet woodruff), *Brunnera macrophylla*, *Asarum canadense*, *Stylophorum diphyllum* (wood poppy), *Phlox divaricata*, *Phlox subulata*, *Pulmonaria* spp.,

Ajuga, dwarf bearded Iris, *Saruma henryi*, *Lamium* spp., *Dicentra spectabilis*, *Dicentra cucullaria* (Dutchman's breeches), violets and *Vinca minor*. The following plants are are beginning bloom: *Magnolia fraseri*, Rutgers hybrid dogwoods (Stellar series), *Aesculus pavia*, *Viburnum plicatum* f. *tomentosum* (doublefile viburnum), *Aristolochia durior* (Dutchman's pipe), *Phlox stolonifera* and *Aquilegia* spp. (columbine). The following plants are ending bloom: *Pieris floribunda* (mountain pieris), *Viburnum carlesii* (Mayflower viburnum), *Viburnum* x *burkwoodii* 'Mohawk' and Exochorda racemosa.

Lawns are lush and green and mowing is routine. If using a preventative grub management product that contains Chlorantraniliprole (Acelepryn^{TM}, GrubEx^{TM}), it is best applied before the end of May; follow the directions on the label before applying. There are observations and reports of numerous *Hydrangea macrophylla* stems that were winter-killed by the below zero temperatures. These dead brown stems may be pruned back and removed, once it is certain that they will not be producing flowers this year. Remontant *Hydrangea* cultivars should produce flowers on new growth. Cabbage white butterflies and spring azure butterflies have been observed over the past two weeks and on May 15th, a Canadian swallowtail butterfly and a sphinx moth were observed in Pembroke, MA. An American bald eagle was seen in Hanson, MA on May 15th.

Pests/Problems: Good news: It has been difficult finding winter moth caterpillars as the numbers are so low this year! However, they were found on Japanese maples, roses, European beech and many others. so continue to monitor susceptible plants and manage as needed. Most of the winter moth caterpillars found were 2nd and 3rd instar. Second instar gypsy moth caterpillars were found in high numbers feeding on oak, but they will also feed on a wide range of plant material. They were also found feeding on roses, Japanese maple, etc. Monitor for gypsy moth and if found, manage early, especially those trees that were heavily damaged last year. Damage to trees, especially oaks, from previous years' gypsy moth caterpillar feeding, is easily seen this spring. Several trees observed are dead or have dead branches. Jeff Boettner, from Dr. Joe Elkinton's UMass Lab, reports seeing major tree death from previous years due to gypsy moth caterpillar feeding at Wompatuck State Park, Hingham, MA. Small gypsy moth caterpillars were seen ballooning or floating through the air this past week on warm days. As the weather warms up we may see more gypsy moth caterpillars ballooning. It is too early to say if it will be a big year overall for gypsy moth caterpillars, however, there will most likely be numerous "hot spots" where the numbers will be high; be vigilant and monitor. (See the Insect Section of the Landscape Message for more information). Lily leaf beetle adults are active on true lilies. Monitor the undersides of the foliage and look for the small reddish eggs. Remove and crush the eggs. Hand-pick and destroy the adults when possible or manage with a labeled insecticide. Bright green azalea sawflies are active on deciduous azaleas. These caterpillar-like sawflies may be difficult to see. They usually feed on the edge of the leaf and work their way in towards the midrib, causing significant foliar and floral damage. Sawflies are not lepidopteran caterpillars (butterflies & moths) so Bt (*Bacillus thuringiensis*) is not effective on sawfly larvae.

(/sites/ag.umass.edu/files/pest-alerts/images/content/roseslug_sawfly_damage_deborah_swanson_5_16_18_5.jpeg) (/sites/ag.umass.edu/files/pest-alerts/images/content/roseslug_sawflies_deborah_swanson_5_16_18.jpeg)
Roseslug sawfly larvae are active on rose foliage. Look for "window-pane"- like damage on the top of the rose foliage (Photo1) and monitor the undersides of rose foliage for the small, slug-like larvae (Photo 2). Feeding by the larvae on the undersides of the foliage creates the "window-pane effect". If left

untreated, the sawfly larvae will usually completely skeletonize the rose foliage and the foliage will appear brown and scorched. (See the Insect section of the Landscape Message).

Mosquitoes are active and numerous this season. Biting flies and dog ticks are also active. Deer tick nymphs are active and will remain active for several months. The tiny, poppy-seed sized nymphs are difficult to see and it is this stage that is usually most responsible for the transmission of Lyme disease. (See the Insect section of the Landscape Message). Continue to monitor for hemlock woolly adelgid and manage if found. https://ag.umass.edu/landscape/fact-sheets/hemlock-woolly-adelgid (/landscape/fact-sheets/hemlock-woolly-adelgid)

The following insects and/or pests remain active: eastern tent caterpillar, European pine sawfly, snowball aphid, boxwood psyllid, spruce spider mite, elongate hemlock scale, carpenter bees, ants, wasps, snails and slugs.

There are still some dandelions in bloom but many are ending bloom and setting seed. Veronica, garlic mustard, ground ivy, violet and chickweed remain in bloom. (See the Weed Section of the Landscape Message). *Euonymus alatus* (burning bush) and barberry are now in bloom; shear, prune or remove to help deter more seeds from forming and eventually spreading. Now is a good time to weed out invasive plant seedlings before they become established. There seems to be high numbers of Norway maple seedlings everywhere this year. Rabbits, along with deer, are eating hosta.

North Shore Region (Beverly)

General Conditions: This reporting period we experienced cooler temperatures compared to the warm temperatures during the last period. Day temperatures ranged from mid-50s to the mid-60s. Temperatures above 80 degrees were recorded only on one day during this period. Night temperatures were mostly in the mid-40s. During this period, we gained 69 growing degree days compared to 119 growing degree days gained last period. Approximately 0.49 inches of rain were recorded at Long Hill during this period. Woody plants seen in bloom during this reporting period include: beach plum (*Prunus maritima*), handkerchief or dove tree (*Davidia involucrata*), wayfaring tree (*Viburnum lantana*), mountain pieris (*Pieris floribunda*), flowering dogwood (*Cornus florida),* redbud (*Cercis canadensis),* large fothergilla (*Fothergilla major*), dwarf fothergilla (*Fothergilla gardenii*), royal azalea (*Rhododendron schlippenbachii*), common lilac (*Syringa vulgaris*), Chinese lilac (*Syringa* x *chinensis*), Kwanzan cherry (*Prunus serrulata*), crabapple (*Malus* spp.), Olga Mezitt rhododendron (*Rhododendron* 'Olga Mezitt'), apple trees (*Malus* spp.) and highbush blueberry (*Vaccinium corymbosum*). Non-woody plants seen in bloom include: daffodil (*Narcissus* spp.), forget me not (*Myosotis sylvatica*), tulips (*Tulipa* spp.), bleeding heart (*Dicentra spectabilis*), trout lily (*Erythronium americanum*), Siberian iris (*Iris sibirica*), trillium (*Trillium grandiflorum*), barrenwort (*Epimedium rubrum*), Solomon's seal *(Polygonatum odoratum)* and pig squeak (*Bergenia cordifolia*).

Pests/Problems: Winter moth caterpillars (*Operophtera brumata)* were observed feeding on apple and maple leaves. Young larvae of viburnum leaf beetle (*Pyrrhalta viburni*) were observed starting to feed on leaves of susceptible viburnum cultivars. Because of moist soil and relatively warm temperatures, weeds are thriving on some lawns and landscapes. Weeds seen in bloom include: dandelion (*Taraxacum officinale)*, ground ivy (*Glechoma hederacea)* and purple deadnettle (*Lamium purpureum)*. Ticks and mosquitos are very active. Be careful to protect yourself when working outdoors

East Region (Boston)

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General Conditions: The landscape is a rainbow of color. Conditions are favorable for plant development. We gained 64 GDDs bringing the total to 257 GDDs for the year. We received precipitation on three occasions, the majority falling over a three-hour period on May 15. Thunderstorms delivered 1.2 inches of rain, of which 0.6 inches fell over a 15-minute period. Temperatures have fluctuated over the last week. Highs ranged from a cool 52°F to hot 85°F, averaging 69°F. Lows ranged from 45°F to 57°F, averaging 49°F. Plants in bloom include: *Arisaema triphyllum* (Jack in the pulpit), *Aristolochia macrophylla* (Dutchman's pipe), *A. manshuriensis* (Manchurian pipevine), *Aronia arbutifolia* (red chokeberry), *A. prunifolia* (purple chokeberry), *Asimina triloba* (pawpaw), *Berberis* x *gladwynensis* 'William Penn' (William Penn barberry), *B.* x *notabilis* (hybrid barberry), *Convallaria majalis* (lily-of-the-valley), *Cornus* 'Rutcan' (constellation dogwood), *C.* 'Rutlan' (Ruth Ellen dogwood), *Cydonia oblonga* (quince), *Elaeagnus multiflora* (cherry elaeagnus), *Enkianthus campanulatus* (redvein enkianthus), *Exochorda giraldii* (redbud pearlbush), *Fothergilla* x *intermedia* 'Mt. Airy' (Mt. Airy dwarf fothergilla), *Halesia tetraptera* (common silverbell), *Halesia tetraptera* var. *monticola* (mountain silverbell), *Hyacinthoides hispanica* (Spanish bluebell), *Leitneria floridana* (corkwood), *Leucothoe fontanesiana* (fetter-bush), *Lonicera tatarica* (Tatarian honeysuckle), *Morus alba* (white mulberry), *Mukdenia rossii*, *Paeonia ostia* (tree peony), *P. suffruticosa* (tree peony), *P.* 'Hozan' and P. 'Kintajio' (tree peony cultivars), *Prunus grayana* (Gray's bird cherry), *P. laurocerasus* 'Schipkaensis' (Shipka laurel cherry), *P. maritima* (beach plum), *Rhododendron austrinum* (orange azalea), *R. kaempferi* (torch azalea), *R. hippophaeoides* (lepidote rhododendron), *R. periclymenoides* (pink azalea), *R. prinophyllum* (early azalea), *R. schlippenbachii* (royal azalea), *R. vaseyi* (pinkshell azalea), *R.* 'Album Splendidum' (elepidote rhododendron), *R.* 'Landmark' (lepidote rhododendron), *R.* 'Molly Fordham' (lepidote rhododendron), *R.* 'Olga Mezitt' (lepidote rhododendron), *R.* 'Sir Charles Butler' (elepidote rhododendron), *R.* 'Viola' (elepidote rhododendron), *R.* 'Windbeam' (lepidote rhododendron), *Rhodotypos scandens* (black jetbead), *Sorbus yuana*, *Spiraea chinensis* (Chinese spirea), *Vaccinium corymbosum* (highbush blueberry), *Viburnum carlesii* (Korean spice viburnum), *V. lantana* (wayfaring tree), *V. prunifolium* (blackhaw), *V. rhytidophyllum* (leatherleaf viburnum), *V.* 'Pragense' (Prague viburnum), *V. sieboldii* 'Seneca' (siebold viburnum), *Viola pubescens* (yellow forest violet), *Weigela florida* (old fashioned weigela), *W. praecox* (early weigela), *Wisteria floribunda* (Japanese wisteria) and *Xanthoceras sorbifolium* (yellowhorn). Lilacs (*Syringa* spp.) are at peak bloom.

Pests/Problems: Thunderstorms on May 15 washed out mulched beds and gravel paths leaving drains covered with debris. A *Catalpa* spp. (catalpa) was struck by lightning sending bark flying at distances over 50 feet. Viburnum leaf beetle (*Pyrrhalta viburni*) larvae continue to feed on the underside of leaves of susceptible viburnum; in this stage of their development they are feeding only on the lower epidermis. Interveinal feeding is evident on some viburnum, however not because of VLB feeding, but from winter moth feeding. Azalea sawfly is feeding on azaleas. Adult lily leaf beetle (*Lilioceris lilii*) can be found on true lilies. Mosquitos and ticks are active at this time. Garter snakes (garden snakes) are active and becoming more visible throughout the landscape. Garlic mustard (*Alliaria petiolata*) continues to flower and set seed; it's only a matter of time before seed dispersal. Dandelion (*Taraxacum* sp.) is in seed, as parachutes are flying throughout the landscape.

Metro West (Acton)

No report is available for this week.

Central Region (Boylston)

General Conditions: The warm up in the weather pattern this past week again brought many changes in the garden, such as the passing of the last daffodils and tulips going just past peak. Most of the early blooming magnolia species and cultivars, cherries and forsythia have also finished up their beautiful displays for the season. The Eastern redbud (*Cercis canadensis*) and Chinese redbud (*Cercis chinensis*) are just starting to fade. Red horse chestnut (*Aesculus* × *carnea* 'Briotii') and the crabapples (*Malus* cvs.) are very floriferous this year and are putting on quite a show. Large fothergilla (*Fothergilla major*), lilacs (*Syringa* vulgaris cvs.), cutleaf lilac (*Syringa laciniata*) and (*Daphne burkwoodii* 'Carol Mackie') are blooming. Pink-flowered mountain silverbell (*Halesia monticola* 'Rosea'), Japanese quince (*Chaenomeles speciosa* 'Nivalis') and redvein enkianthus (*Enkianthus campanulatus*) are in full bloom as well. The Catawba rhododendron (*Rhododendron catawbiense*) is just starting to open fully, while (*Rhododendron* 'P.J.M'), and (*Rhododendron* 'Olga Mezitt') are at peak. *Rhododendron mucronulatum* 'Cornell Pink' is just past bloom. Both the highbush blueberries (*Vaccinium corymbosum*) and lowbush blueberries (*Vaccinium angustifolium*) are showing high bud and flower counts, promising a chance for a bumper crop this year. Herbaceous perennials creeping phlox (*Phlox stolonifera*) and moss phlox (*Phlox subulata*) are in full bloom, along with dwarf crested iris (*Iris cristata*) and Siberian bugloss (*Brunnera macrophylla*). Spring ephemerals such as trilliums (*Trillium grandiflorum* and *T. luteum*), bleeding heart (*Lamprocapnos spectabilis*), Quaker ladies (*Houstonia caerulea*) and Virginia bluebells (*Mertensia virginica*) are all at peak bloom. The interrupted fern (*Osmunda claytoniana*) is showing its characteristic fertile spore filled pinnae "interrupting" the other pinnae.

(/sites/ag.umass.edu/files/pest-alerts/images/content/red.jpg)

(/sites/ag.umass.edu/files/pest-alerts/images/content/crab.jpg)

(/sites/ag.umass.edu/files/pest-alerts/images/content/lilac_0.jpg)

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(/sites/ag.umass.edu/files/pest-alerts/images/content/fern_0.jpg)

(/sites/ag.umass.edu/files/pest-alerts/images/content/scene.jpg)

Pests/Problems: Gypsy moth caterpillars are present in significant numbers.

Pioneer Valley Region (Amherst)

General Conditions: Spring is rolling on and the landscape is green and lush at this time. New growth continues at a steady pace and most disease and insect problems are not yet present, or at least visible. The big bloom of spring-flowering trees and shrubs is waning as cherry, apple, crabapple, pear and PJM rhododendrons have ended or are close to at this point. Temperatures were mostly seasonable during this past reporting period with highs predominantly in the upper 60s to low 70s with peaks into the lower 80s. We made it through the first half of May without a damaging frost and the prospects of one at this point are rapidly diminishing based on historical records. Heavy rainfall occurred on Tuesday, 5/15 with frequent thunder and lightning during the late afternoon hours. The Pioneer Valley mostly dodged the strong winds that brought down trees and caused extensive damage in western CT. Accumulations over 1" were reported at several weather stations in western Hampden and Hampshire Counties, while points north and east received lesser accumulations. In western Franklin County, accumulations less than 0.2" were reported. For those that received the rain, it was the first soaker of May, which had been on the drier side during the first half of the month, with less than 0.75" recorded from 5/1 to 5/14 in Easthampton. For the third week in a row, we experienced a cool and rainy weekend day, with the latest on Saturday, 5/12. The long-term forecast calls for additional rain and, yes, cool temperatures on Saturday, 5/19, continuing the trend. Regardless of the rain, recently transplanted trees and shrubs should receive supplemental irrigation during the first year to minimize transplant shock. This is especially important for conifers, as their dense canopies can shield rainwater from wetting the root ball.

Pests/Problems: Young gypsy moth caterpillars continue to feed and have been observed at several locations west of the Connecticut River where feeding pressure was low in 2017. Spruce spider mites are now active and treatment with appropriate miticides should commence on high-value conifers with active infestations. The heavy rain on 5/15 likely helped to dislodge some on infested needles. The destructive wood-rotting pathogen *Kretzschmaria deusta*, common on older European beech (but capable of attacking a wide array of landscape and urban trees) is producing new fruiting bodies at this time. New fruiting bodies are flattened against the bark and are grey-colored in the center with bright white margins. Over the course of the season, they become blackened and crustose and last year's fruiting bodies can also be visible. Meria needle cast of larch has been observed on several mature trees. The damage can often mimic frost burn and appears as browning and wilted needle tips. Since

there hasn't been a frost for many weeks now, we can easily rule out frost burn as the culprit. Damage from *Meria* can result in significant needle shedding. Middle to late May is the peak period of white pine needle shedding for trees suffering from white pine needle blight. It is also the peak period of spore dispersal and any rain event at this time can facilitate new infections. The volume of rainfall has been deemed less important in comparison to the frequency of the rain events. After the wet spring we experienced in 2017, this year is expected to be another difficult year for landscape and forest white pines. Early damage from apple scab should be visible soon. Scout and prune dead stems and branches on Japanese maple. These trees should receive an annual pruning to remove dead stems. Several stem cankering fungi can be found on these thin-barked trees and reducing inoculum on a regular basis can help retain vigor during stressful periods, such as a drought.

Berkshire Region (Great Barrington)

General Conditions: The Berkshires dodged a bullet on May 15 as a fierce storm with high winds (up to 60mph), large hail (some as large as a tennis ball) and heavy rain wrought considerable damage just to the west and south of the county. The only consequence for the Berkshires was 0.62 inches of rain and some brief power outages. Even before the rain, soils were quite moist and supported rapid growth of turfgrass and other vegetation. Most tree and shrub species have pushed out new foliage and flowers, resulting in the peak of colorful bloom in both managed and unmanaged landscapes. Herbaceous vegetation in bloom over the past week consists mostly of spring flowering bulbs, i.e. tulips and hyacinths, and early blooming perennials and ground covers such as epimediums (*Epimedium* spp.), carpet bugle (*Ajuga reptans*) and creeping myrtle (*Vinca minor*).

Pests/Problems: The black-legged tick problem continues to get worse as the population of this disease transmitting pest is extremely high. Outdoor workers should take all the usual precautions including application of a permethrin based pesticide to clothing and one containing DEET to exposed to skin. Wasp, carpenter bee, mosquito, gnat and many other insect populations are also at high levels. Forest tent and eastern tent caterpillars are still actively feeding. The eastern tent caterpillar can be distinguished from the forest tent caterpillar by the solid white stripe down its back. The forest tent caterpillar has a series of keyhole-shaped spots along its back. Boxwood leafminer remains in larval stage. Lily leaf beetle and imported willow leaf beetle adults continue to feed on their respective host plants. Spruce spider mites remain active. New pests observed this week are woolly beech aphid on copper beech and elongate hemlock scale on hemlock. The first symptoms of fire blight were found on sand cherry (*Prunus* x *cisterna*). Weir's cushion rust (a.k.a. spruce needle rust) was observed on the old needles of a white spruce. There seems to be an unusually large population of chipmunks. At this time, the most observable problem with them is the large number of holes and tunnels they make in lawns and gardens. Rabbits and voles are also plentiful and are nibbling on emerging vegetation in gardens and landscapes.

Regional Scouting Credits

- *CAPE COD REGION - Russell Norton, Horticulture and Agriculture Educator with Cape Cod Cooperative Extension, reporting from Barnstable.*
- *SOUTHEAST REGION - Deborah Swanson, UMass Extension Horticulturist for Plymouth County - Retired, reporting from Hanson.*
- *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), Beverly.*

- *EAST REGION - Kit Ganshaw & Sue Pfeiffer, Horticulturists, reporting from the Arnold Arboretum (https://www.arboretum.harvard.edu/), Jamaica Plain.*
- *METRO WEST REGION - Julie Coop, Forester, Massachusetts Department of Conservation & Recreation, reporting from Acton.*
- *CENTRAL REGION - Dawn Davies, Interim Horticulture Manager, reporting from Tower Hill Botanic Garden (http://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

Diplodia blight, caused by *Diplodia sapinea*, on Bosnian pine (*Pinus heldreichii*) and white spruce (*Picea glauca*). Trees reside at different sites. The Bosnian pine is 10-years-old and has been present at the site for five years. It resides in sandy soils with full sun in a south-facing foundation bed and does not receive supplemental water. Shoot tips were blighted and there was crusted resin on larger branches. The white spruce is 30-years-old and has been present at the site for 20 years. The shoot tips are blighted with brown and undersized needles. *Diplodia* was abundant within the blighted needles and shoots while the older growth was mostly unaffected. The tree was recently exposed to full sun after a large, nearby beech died and was removed. The shock of exposure was likely the stress that facilitated infection by *Diplodia*.

Phomopsis stem and leaf blight on Japanese holly (*Ilex crenata*) and Himalayan sweet box (*Sarcococca hookeriana* var. *humilis*). The holly is only three-years-old and was planted in autumn of 2016. Shortly after installation, symptoms of dieback (browning, premature shedding of leaves and branch dieback) were observed. Plant resides in shade and is provided with supplemental irrigation. The sweet box is 18-years-old and has been present at the site for nearly as long. Site is shaded with acidic soils and supplemental water is not provided. Last year, some leaf browning and dieback was observed but it was minimal in extent. The dieback has intensified this year and the plant did not flower. Drought stress from previous years may be a predisposing stress.

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

Insects

Mammal Damage to Trees, Sometimes Blamed on Insects:

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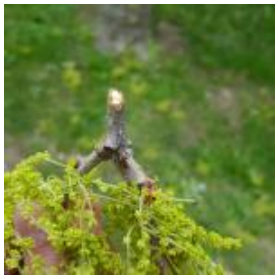
(/sites/ag.umass.edu/files/pest-alerts/images/content/squirrel_in_bur_oak_5_15_2018.jpg)

(/sites/ag.umass.edu/files/pest-alerts/images/content/entire_squirrel_severed_branch_bur_oak_5_15_2018.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/squirrel_severed_branch_bur_oak_5_15_2018.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/squirrel_severed_branches_bur_oak_5_15_2018_arrows.jpg) (/sites/ag.umass.edu/files/pest-




alerts/images/content/gm_on_squirrel_severed_branch_bur_oak_5_15_2018.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/gm_on_squirrel_severed_branch_bur_oak_5_15_2018.jpg)**Twig Pruning by Squirrels:** (*Sciurus carolinensis*) the eastern gray squirrel can cause damage to trees that is sometimes blamed, incorrectly, on insects. While the eastern gray squirrel primarily feeds on the fruits (nuts) of forest trees such as oak, beech, and hickory, they will also consume mushrooms, tree flowers and buds, caterpillars and plant shoots. They are omnivores and have been reported to consume a diverse array of foods. In addition to clipping off branch tips, the eastern gray squirrel is also known to create injuries in tree bark by chewing small pits or in some cases completely stripping away bark in larger sections. This behavior often occurs in early spring and again in early fall. In the case of this squirrel observed clipping branch ends from a bur oak in Amherst, MA on 5/15, some attention was given to the buds before dropping the severed branches to the ground (yet many buds were wasted). Why do eastern gray squirrels d0 this? One journal article by Kenward and Parish (1986) suggested that bark stripping is initiated by young squirrels, perhaps as exploratory feeding, or by older squirrels that have learned the habit. Those authors found that severe damage only occurs where tree phloem is suitable (related to average phloem width). Sometimes the phloem and cambial tissues or phloem sap is consumed. Squirrels have also been reported to eat shoots and the pith from young shoots. Such damage is often sporadic, and when plant tissues are not being consumed, some theories include behavioral reasons such as agonistic encounters between juvenile and adult squirrels; however, presence of juveniles (and lack of other food sources) does not always explain why they do this (Gill, 1991). Whatever their reasons, this bur oak lost dozens of branch tips to a small mammal, not an insect.

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

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(/sites/ag.umass.edu/files/pest-alerts/images/content/gypsy_moth_feeding_on_elm_5_16_18_arrows.jpg)

(/sites/ag.umass.edu/files/pest-alerts/images/content/gypsy_moth_feeding_on_norway_maple_5_16_18.jpg)

(/sites/ag.umass.edu/files/pest-alerts/images/content/gypsy_moth_feeding_on_oak_5_16_18_cropped.jpg) **Gypsy Moth:** (*Lymantria dispar*) host plants include but are certainly not limited to oak (favored), maple, birch, poplar, and many others. Young gypsy moth caterpillars have ballooned from their egg masses and are feeding at this time. On 5/15 and 5/16/18 in Amherst, MA tiny gypsy moth caterpillars were observed feeding on bur oak, elm, Norway maple and crabapple. If host plants are seen with small, tattered looking holes, flip leaves over and search for tiny, dark colored, hairy caterpillars. While gypsy moth is still small (under ¾ inch in length, roughly) and actively feeding, and when weather conditions allow, it is a

good time to treat caterpillars with *Bacillus thuringiensis* Kurstaki, or Btk. This active ingredient is derived from natural soil-dwelling bacteria and is specific to Lepidopteran caterpillars. Btk also offers lower risk to the applicator and the environment. (For more information about Btk, visit: (http://npic.orst.edu/factsheets/btgen.html)http://npic.orst.edu/factsheets/btgen.html (http://npic.orst.edu/factsheets/btgen.html) As caterpillars become larger and more visible (over ¾ inch in length), and create more damage to host plants, they are less susceptible to Btk.

Despite the fungal outbreak that swept through the 2017 caterpillar population, some lucky caterpillars survived to pupation and emerged as adult moths. (However, adults were present in 2017 in far fewer numbers than would have existed without the fungus.) While it is very difficult to predict how much defoliation Massachusetts will see in 2018 due to gypsy moth caterpillar feeding, we can be certain that in areas where many egg masses were seen overwintering, pockets of defoliation could still occur in certain areas of the state this year. Thanks to the gypsy moth caterpillar-killing fungus, however, the population should be on the decline, but we cannot expect the caterpillars to disappear completely from Massachusetts landscapes this season.

- **Winter Moth:** (*Operophtera brumata*) **The winter moth population is at a record low!** The 2018 outlook concerning winter moth caterpillar population numbers in Massachusetts is very positive for those of you in the eastern areas of the state accustomed to dealing with damaging populations of this insect. Dr. Joseph Elkinton, Professor of Environmental Conservation at the University of Massachusetts, Amherst, MA, has excellent news: data from his lab's research locations in eastern Massachusetts suggest that this invasive pest's population size is at an all-time low. In fact, the 2017 winter moth population was the lowest they have seen since studying and working toward the biological control of this insect for the past 13 years.

  Winter moth caterpillars, where they can be found in eastern Massachusetts, continue to feed and grow in size. It was reported from Framingham, MA and Hanson, MA that crabapple bloom has been experienced for the first time in recent memory thanks to the absence of caterpillars destroying buds before they can flower. For region-specific information, see the Scouting Reports above.

  For more information about the life cycle and management of winter moth, please visit thisfact sheet: Winter Moth Identification and Management https://ag.umass.edu/landscape/fact-sheets/winter-moth-identification-management (/landscape/fact-sheets/winter-moth-identification-management)

  Winter moth is a non-native insect that was identified in Massachusetts for the first time in 2003 following persistent reports of defoliation in eastern areas of the state such as Cape Anne and on the North Shore near Cohasset, Hingham and Rockland on the South Shore in the late 1990's. For more detailed information about the history of this insect pest in North America and Massachusetts, please visit this fact sheet: Winter Moth in Massachusetts: History and Biological Control https://ag.umass.edu/landscape/fact-sheets/winter-moth-in-massachusetts-history-biological-control (/landscape/fact-sheets/winter-moth-in-massachusetts-history-biological-control)

  This fact sheet also includes updates regarding the progress of the work of Dr. Joseph Elkinton's laboratory group at the University of Massachusetts and their efforts toward the biological control of winter moth using *Cyzenis albicans*, a tachinid fly. The fly parasitizes the caterpillars of winter moth specifically. In other areas, such as Nova Scotia where winter moth was also problematic, this fly used for biological control has been successful in reducing winter moth to a

non-pest. *C. albicans* has been released across 43 sites in Massachusetts and has been established in at least 32 of those locations as evidenced through the recovery of flies in winter moth in subsequent years. The Elkinton Lab now has data showing that at six of these locations (Falmouth, Hanson, Hingham, Wellesley, Wenham and Yarmouth, MA) the fly populations have increased alongside an observed decrease in the winter moth population there. For more information about the progress of winter moth biological control in Massachusetts, visit the following article in Hort Notes found under "Trouble Maker of the Month" here: https://ag.umass.edu/landscape/newsletters/hort-notes/hort-notes-2018-vol-292 (/landscape/newsletters/hort-notes/hort-notes-2018-vol-292)

- **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^2 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**. Adult insects of this species will not be present at this time of year.

  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)

- **Azalea Sawfly:** *Amauronematus azalae* is active on deciduous azaleas in Hanson, MA as reported on 5/16. (See Southeast Region Report above as well as the other Regional Reports for activity near you.) Continue to monitor for the feeding damage of this caterpillar. Tiny sawfly caterpillars have been seen feeding on the edge of foliage and will wave their abdomen over their head when disturbed. This insect can completely defoliate the plant if present in large numbers. Spinosad based products are effective on this hymenopteran pest, while *Bacillus thuringiensis* Kurstaki is not.

- **Deer Tick/Blacklegged Tick:** *Ixodes scapularis* adults have been active all winter, as they typically are from October through May, and "quest" or search for hosts at any point when daytime temperatures are above freezing. For images of all deer tick life stages, along with an outline of the diseases they carry, visit: http://www.tickencounter.org/tick_identification/deer_tick (http://www.tickencounter.org/tick_identification/deer_tick)

  Anyone working in the yard and garden on springtime cleanup and planting should be aware that there is the potential to encounter deer ticks at this time. 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.tickencounter.org/prevention/protect_yourself (http://www.tickencounter.org/prevention/protect_yourself)

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 red "Test A Tick" 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.

You can also follow TickReport on Twitter **@TickReport** for timely updates from the Laboratory of Medical Zoology, including the latest tick and tick-borne disease related research.

- **Eastern Spruce Gall Adelgid:** *Adelges abietis* is a pest of Norway spruce primarily, but occasionally damages other spruce species. This adelgid overwinters as a partially grown female, often referred to as a stem mother. This overwintering individual will mature around bud break and lay 100-200 eggs. The eastern spruce gall adelgid may be targeted for management between 22-170 GDD's, base 50°F.

- **Eastern Tent Caterpillar:** *Malacosoma americanum* tents are getting larger and so are the eastern tent caterpillars. Susceptible hosts include cherry and crabapple. Other host plants whose leaves are fed upon by this native insect can include apple, ash, birch, willow, maple, oak, poplar and witch-hazel. If possible, without injuring or disfiguring the host plant, tents can be pruned out and removed. Tents and the caterpillars within can also be removed with a gloved hand. Where eastern tent caterpillars can be tolerated, this native insect can be left alone. **Eastern tent caterpillar tents should not be burned while still attached to the host plant.**

- **Elongate Hemlock Scale:** *Fiorinia externa* is found on eastern, Carolina and Japanese hemlock, as well as yew, spruce and fir. Crawlers will be present this month and throughout the growing season and the overlap of many developmental stages at any given time can be observed. Treatments for the crawler, or mobile, stage of this insect may be made in late May through mid-June or between 360-700 GDD's, base 50°F.

- **Emerald Ash Borer:** (*Agrilus planipennis,* EAB) **A new detection of emerald ash borer was confirmed recently by the Massachusetts Department of Conservation and Recreation in two new communities in Hampden and Hampshire Counties.** A map of this location and others known across the state may be found here: 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*). Most recently it has been reported in cultivated olive (*Olea europaea*). Adult insects of this species will not be present at this time of year. Signs of an EAB infested tree may include (at this time) D-shaped exit holes in the bark (from adult emergence in previous years), "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) . 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)

- **European Pine Sawfly:** *Neodiprion sertifer* caterpillars continue to feed. Egg hatch for this insect was observed in Framingham, MA on 5/4. The primary host in MA is Mugo pine but it can also be found on Scots, red, jack and Japanese red pine, as well as white, Austrian, ponderosa, shortleaf and pitch pine when near the aforementioned species. This dark colored caterpillar feeds in tight groups and small numbers can be pruned or plucked out of host plants and destroyed. (Wear gloves if doing this by hand.) Larger numbers can be treated with an insecticidal soap spray when the caterpillars are still small. Spinosad products can be used between 78-220 GDD, base 50°F. *Bacillus thuringiensis* Kurstaki is not effective against sawflies.
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(/sites/ag.umass.edu/files/pest-alerts/images/content/ftc_on_crabapple_5_16_18.jpg)

(/sites/ag.umass.edu/files/pest-alerts/images/content/ftc_on_rhododendron_5_16_18.jpg) **Forest Tent Caterpillar:** *Malacosoma disstria* **egg hatch has occurred and caterpillars were observed on crabapple and** *Rhododendron* spp. **on 5/16 in Amherst, MA.** Forest tent caterpillars are significantly larger than gypsy moth caterpillars at this time. They are hairy with visible blue lateral stripes and white “key-hole” or “penguin”-shaped spots from head to hind end dorsally. Susceptible hosts whose leaves are fed on by this insect include oak, birch, ash, maple, elm, poplar and basswood.
- **Hemlock Looper:** Two species of geometrid moths in the genus *Lambdina* are native insects capable of defoliating eastern hemlock, balsam fir and white spruce. Adult moths lay their eggs on the trunk and limbs of hosts in September and October, followed by egg hatch in late May or early June. Monitor susceptible hosts for small, inch-worm like caterpillars. Where populations are low no management is necessary.
- **Hemlock Woolly Adelgid:** *Adelges tsugae* is present on eastern and Carolina hemlock. Infested trees may be treated with foliar sprays in late April to early May, using Japanese quince as a phenological indicator. Look for the females, covered in a white, woolly, waxy material and settled at the base of hemlock needles.
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(/sites/ag.umass.edu/files/pest-alerts/images/content/imported_willow_lb_mating_5_16_18.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/two_sets_of_imported_willow_lb_eggs_5_16_18_1.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/imported_willow_lb_eggs_5_16_18_0.jpg) **Imported Willow Leaf Beetle:** *Plagiodera versicolora* overwintered adults are present and have been reported as active and found on

willow foliage on 5/2 in Hanson, MA and were observed feeding on and mating on willow foliage in Chesterfield, MA on 5/9 and 5/16. Adult beetles will chew holes and notches in the leaves of willow. **Egg laying was observed on 5/16 in Chesterfield, MA and will continue through the end of this month.** Females lay yellow eggs in clusters on the undersides of leaves. Larvae are slug-like and bluish-green in color. They will feed in clusters and skeletonize the leaves. Most plants can tolerate the feeding from this insect and foliage will appear brown. Repeated yearly feeding can be an issue, in which case management of the young larvae may be necessary. Take care with treatment in areas near water.

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  (/sites/ag.umass.edu/files/pest-alerts/images/content/lily_leaf_beetle_eggs_5_16_2018_arrows.jpg)**Lily Leaf Beetle:** *Lilioceris lilii* overwintering adults have been spotted by scouts in central Massachusetts (Worcester County) and adult beetles were seen feeding on and hiding in new host plant foliage in Amherst, MA on 5/2. Adults overwintered in sheltered places and are now active. As soon as susceptible hosts such as *Lilium* spp. (Turk's cap, tiger, Easter, Asiatic and Oriental lilies) and *Fritillaria* spp. break through the ground, the adult lily leaf beetles are known to feed on the new foliage. (Note: daylilies are not hosts.) Typically mating will occur in May and each female will begin to lay 250-450 eggs in neat rows on the underside of the foliage. **In Amherst, MA, orange lily leaf beetle eggs were observed on the underside of host plant foliage on 5/16.**
- **Roseslugs**: Two species of sawfly can be found on the leaves of roses at this time. These small, caterpillar-like larvae will skeletonize the upper leaf surface and leave a "window-pane" like pattern behind. (See Southeast Region Report above for reports of roseslug activity on 5/16 in Hanson, MA.) When present in large numbers, these insects are capable of defoliating their entire host. Management options include an insecticidal soap spray **or** a product containing spinosad.
- **Snowball Aphid**: *Neoceruraphis viburnicola* becomes active on certain species of viburnum roughly between 148-298 GDD's or around redbud bloom. This insect is particularly noticeable on *V. opulus, V. prunifolium* and *V. acerifolia.* Stem mothers, appearing blueish-white, can be found in curled up and distorted foliage. Damage caused by this insect pest is mostly aesthetic. Snowball aphid activity and the associated leaf distortion on susceptible viburnum has been reported in Acton, MA as of 5/9.
- **Spotted Lanternfly:** (*Lycorma delicatula*, SLF) is **not known to occur in Massachusetts. The Pennsylvania Department of Agriculture reported on 5/14/2018 that spotted lanternfly eggs have begun to hatch in Berks County, PA for the 2018 season. Small, black and white spotted nymphs (immatures) are seen in PA at this time.**

  This insect is a member of the Order Hemiptera (true bugs, cicadas, hoppers, aphids and others) and the Family Fulgoridae, also known as planthoppers. This insect is a non-native species first detected in the United States in Berks County, Pennsylvania and confirmed on September 22, 2014. **Until November 2017, this invasive insect was only known to Pennsylvania. It has now been reported from Delaware (November 20, 2017), New York (November 29, 2017), and most recently in Virginia (January 10, 2018).** The Delaware Department of Agriculture announced the finding of a single female spotted lanternfly in New Castle County in the Wilmington, Delaware area. At this time, officials in Delaware note that it is unclear if this

individual was an accidental hitchhiker or evidence of an established population in the state. For more information about the find in Delaware, visit: https://news.delaware.gov/2017/11/20/spotted-lanternfly-confirmed-delaware/ (https://news.delaware.gov/2017/11/20/spotted-lanternfly-confirmed-delaware/) . The New York State Department of Agriculture and Markets reported on November 29, 2017 the finding of a single dead individual spotted lanternfly in the state from earlier in the month. A single dead specimen was confirmed at a facility in Delaware County, New York, which is located south-west of Albany. The NYS Dept. of Agriculture and Markets states that this dead individual may have come in on an interstate shipment. For more information about the find in New York, visit: https://www.agriculture.ny.govAD/release.asp?ReleaseID=3637 (https://www.agriculture.ny.gov/AD/release.asp?ReleaseID=3637) . Most recently, Virginia Cooperative Extension announced the finding of a spotted lanternfly population in Frederick County, Virginia, on January 10, 2018. It was noted that at the location in Virginia, numerous adult lanternflies and egg masses were discovered, in addition to more at another site approximately 400 yards away. For more information about the find in Virginia, visit: https://ext.vt.edu/agriculture/commercial-horticulture/spotted-lanternfly.html (https://ext.vt.edu/agriculture/commercial-horticulture/spotted-lanternfly.html) .

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 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) .

- **Spruce Spider Mite:** *Oligonychus ununguis* is a cool-season mite that becomes active in the spring from tiny eggs that have overwintered on host plants. Hosts include spruce, arborvitae, juniper, hemlock, pine, Douglas-fir and occasionally other conifers. This particular species becomes active in the spring and can feed, develop and reproduce through roughly June. When hot, dry summer conditions begin, this spider mite will enter a summer-time dormant period (aestivation) until cooler temperatures return in the fall. This particular mite may prefer older needles to newer ones for food. When damaging spruce spider mite populations are known from last season, dormant oil applications can be made (when temperatures are appropriate according to label instructions) between 7-121 GDD's, base 50°F. Magnification is required to view spruce spider mite eggs. Tapping host plant branches over white paper may be a useful tool when scouting for spider mite presence. (View with a hand lens.) Spider mite damage may appear on host plant needles as yellow stippling and occasionally fine silk webbing is visible.

- **Viburnum Leaf Beetle:** *Pyrrhalta viburni* is a beetle in the family Chrysomelidae that is native to Europe, but was found in Massachusetts in 2004. Viburnum leaf beetle egg hatch was observed in Boston, MA on 5/4. Tiny leaf beetle larvae can be seen feeding on the undersides of foliage at this time. **(See Regional Reports above.)** This beetle feeds exclusively on many different species of viburnum, which includes but is not limited to, susceptible plants such as *V. dentatum, V. nudum, V. opulus, V. propinquum* and *V. rafinesquianum*. Larvae, where they are present, may be treated with a product containing spinosad. Some viburnum have been observed to have varying levels of resistance to this insect, including but not limited to *V. bodnantense, V. carlesii, V. davidii, V. plicatum, V. rhytidophyllum, V. setigerum* and *V. sieboldii*. More information about viburnum leaf beetle may be found at http://www.hort.cornell.edu/vlb/ (http://www.hort.cornell.edu/vlb/) (http://www.hort.cornell.edu/vlb/).

- **White Spotted Pine Sawyer (WSPS):** *Monochamus scutellatus* will be pupating this month and adults can emerge in late May throughout July, depending on local temperatures. This is a native insect in Massachusetts and is usually not a pest. Larvae develop in weakened or recently dead conifers, particularly eastern white pine (*Pinus strobus*). However, the white spotted pine sawyer looks very similar to the invasive **Asian Longhorned Beetle,** *Anoplophora glabripennis*, ALB. ALB adults do not emerge in Massachusetts until July and August. Beginning in July, look for the key difference between WSPS and ALB adults, which is a white spot in the top center of the wing covers (the scutellum) on the back of the beetle. White spotted pine sawyer **will have** this white spot, whereas Asian longhorned beetle **will not**. Both insects can have other white spots on the rest of their wing covers; however, the difference in the color of the scutellum is a key characteristic. See the Asian longhorned beetle entry above for more information about that non-native insect.

- (/sites/ag.umass.edu/files/pest-alerts/images/content/aphid_leaf_rolling_on_elm_5_16_18_cropped.jpg) **Woolly Elm Aphid:** *Eriosoma americanum* females lay a single egg in the cracks and crevices of elm bark, where the egg overwinters. Eggs hatch on elm in the spring as leaves are unfolding. Aphids may be active from 121-246 GDD's, base 50°F on elm. A young, wingless female hatched from the egg feeds on

the underside of leaf tissue. This female aphid matures and gives birth to 200 young, all females, without mating. These aphids feed, and the elm leaf curls around them and protects them. **Curled leaves, sheltering feeding, honeydew-producing aphids within, were observed on elm in Amherst, MA on 5/16.** By the end of June, winged migrants mature and find serviceberry hosts. Another set of females is produced. These new females crawl to and begin feeding on the roots of serviceberry. Multiple generations occur on the roots of serviceberry through the summer.

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 red **Test a Tick** button for more information.

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

Weeds

Treat garlic mustard, *Alliaria petiolata*, now. Garlic mustard is a biennial and applications at this time of year will control second year plants before they go to seed as well as first year seedlings. Look for seedlings at this time as these seedlings will be next year's flowering plants.

Japanese knotweed, *Polygonum cuspidatum*, has begun to emerge from rhizomes. Do not attempt to control this weed at this time as herbicide applications are not effective. Repeat cutting or mowing can be used as a non-chemical strategy and if that is the control strategy selected then cutting and mowing should begin now. Repeat cutting or mowing should be done as regrowth reaches 4 to 6 inches.

Inspect areas of landscape where new trees or shrubs, especially those that were field grown, have been planted in the last year. Look for perennial weeds that may be growing from the root ball. Canada thistle, mugwort, quackgrass, bindweed and horsenettle are some of the possible culprits. Applications of glyphosate as a directed spray should be done at the first sign of new season growth.

Treat winter annual and perennial weeds in ornamental beds with glyphosate (Roundup Pro or equivalent) and glufosinate (Finale). These applications are easier if done now before woody ornamentals leaf-out. The new growth of herbaceous perennial ornamentals can be very susceptible to spray drift, so exercise extreme caution. Non-chemical products containing clove oil, citric acid, acetic acid or orange extract can be used on small winter annuals but not on large winter annuals or perennials. Remember these organic/non-chemical products do not translocate and will not control established perennial weeds but will control young winter annual weeds. Many winter annuals are just beginning to flower and have not set seed and should be controlled now.

Landscape mulch should be the first defense against weeds in landscape beds. Application of mulch can be done at the beginning of the season before summer annual weeds germinate. Freshly mulched landscape beds will not require a preemergence herbicide application because the fresh mulch should supply adequate control of summer annual weeds in the short term. Preemergence herbicide application should be considered for mulch areas that have not been freshly mulched or a bit later in the season. Preemergence herbicides should be applied on top of landscape mulches not underneath. Freehand (dimethenamid + pendimethalin) or Tower (dimethenamid only) are great product choices for landscape beds where yellow nutsedge is a problem.

Report by Randy Prostak, Weed Specialist, UMass Extension Landscape, Nursery and Urban Forestry Program

Plant of the Week

Viburnum sieboldii provides multi-season interest with white flower clusters in spring, lustrous green leaves in summer and fruit that changes from red to black in the fall.
https://extension.umass.edu/plant-identification/siebold-viburnum
(https://extension.umass.edu/plant-identification/siebold-viburnum)

Report by Mandy Bayer, Extension Assistant Professor of Sustainable Landscape Horticulture, UMass Stockbridge School of Agriculture

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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) and follow us on Facebook (http://www.facebook.com/pages/UMass-Extension-Landscape-Nursery-and-Urban-Forestry/519809748159819) and Twitter (https://twitter.com/umasslandscape).

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

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

For professional turf managers - Check out Turf Management Updates (/turf/management-updates)

For home gardeners and garden retailers - Check out home lawn and garden resources (/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)

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) 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)

Newsletters & Updates

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

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