Landscape Message: Jul 1, 2016

Archived Messages

Jul 1, 2016
Issue: 15

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 bi-weekly July through September. Happy Independence Day! The next message will be available on July 15. To receive immediate notification when the next Landscape Message update is posted, be sure to join our e-mail list.

NEW! 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 growing-degree-day (GDD) and precipitation data was collected for an approximately one week period, June 23 through June 29. Soil temperatures and phenological indicators were observed on or about June 29. Total accumulated growing degree days (GDD) represent the heating units above a 50° F baseline temperature collected via our instruments for the 2016 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.

Region/Location	GDD		Soil Temp (°F at 4" depth)		Precipitation (1-Week Gain)	Time/Date of Readings
	1-Week Gain	*2016 Total*	*Sun*	*Shade*		
Cape Cod	123	748	76	68	0.04	5:00 PM 6/29
Southeast	122	748	79	71	0.70	5:15 PM 6/29
North Shore	120	739	66	62	0.16	9:30 AM 6/29
East	141.5	863	73	69	0.14	5:00 PM 6/29
Metro West	135	801	69	65	0.09	5:45 AM 6/29
Central	144	881	74	67	0.26	4:30 PM 6/29
Pioneer Valley	148	883	72	69	0.29	11:00 AM 6/29
Berkshires	117	747	71	65	0.25	9:30 AM 6/22

AVERAGE	131	801	73	67	0.24	-

n/a = information not available

Phenology

Phenological indicators are a visual tool for correlating plant development with pest development. The following are indicator plants and the stages of bloom observed for this period:

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.
Oxydendron arboreum (Sourwood)	*	*	*	*	Begin	*	*	*

Koelreuteria paniculata (Goldenrain Tree)	*	*	Begin	*	*	*	*	*
Hydrangea paniculata (Panicle Hydrangea)	Begin	*	*	Begin	*	*	*	*
Itea virginica (Virginia Sweetspire)	Full	Full	Full	Full	*	Full	Full	Full
Hydrangea macrophylla (Bigleaf Hydrangea)	Begin	Begin	*	Begin	Begin	*	Begin	*
Hydrangea arborescens (Smooth Hydrangea)	Begin	Begin/Full	*	Begin	Begin	Begin	Begin	*
Tilia cordata (Littleleaf Linden)	Begin/Full	Full	Full	Full/End	Full	*	Full	*
Rhus typhina (Staghorn Sumac)	Begin/Full	End	Full	Full	Full	Full	Full	Full
Ligustrum spp. (Privet)	Full	Full/End	Full/End	Full/End	Full/End	Full/End	End	Full/End
Sambucus canadensis (American Elderberry)	Begin/Full	Full	Full/End	Full/End	Full/End	Full	Full/End	Full
Catalpa speciosa (Northern Catalpa)	Full	Full	Full/End	End	End	Full/End	Full/End	Full
Syringa reticulata (Japanese Tree Lilac)	Full/End	Full/End	Full/End	End	End	Full/End	End	Full
* = no activity to report/information not available								

Regional Notes

Cape Cod Region (Barnstable)

General Conditions: Another week of beautiful warm weather for this reporting period; another week of no appreciable rain also for this reporting period. It is concerning to be in a deficit at this time of year. Chatham has instituted water restrictions, as has Hyannis Water District. Other towns and Water Districts may follow suit shortly. Advise clients to check with their Town or District to see what applies to them.

Kousa dogwoods continue to look spectacular this year. Stewartia (*Stewartia pseudocamellia*) is beginning to bloom. Landscape roses are in full bloom. In the perennial border, Shasta daisies (*Leucanthemum* x *superbum*) are beginning to bloom, along with Tickseed (*Coreopsis* spp.)

Pests/Problems: Male gypsy moth caterpillars have pupated, for the most part. Female caterpillars, which have one more instar than the males, are quite large, reaching lengths of slightly over 2". They are still feeding but are also beginning to look for pupation sites and can be seen crawling on houses and fences. Some areas have extensive defoliation of oaks as well as extensive feeding on white and pitch pines. The drought will not be helping defoliated trees. If possible, they should be watered deeply on a regular basis. Do not fertilize stressed trees.

Second generation Lily leaf beetle are feeding and laying eggs. Late instar larvae continue to feed but will pupate soon. Asiatic garden beetle is active. This cinnamon-reddish beetle feeds at night and hides in the soil during the day. Hibiscus sawfly larvae are still active, as are leafhoppers, plant hoppers, and Andromeda lacebug. Sycamore lacebug is active. Brown tips on pitch pine are a good indicator of Nantucket pine tip moth caterpillars. Spider mites are active. Cottony taxus and cottony maple scale nymphs are active. Signs of drought stress are starting to show up. Marginal burning of leaves and wilting of foliage are the primary signs. Unirrigated lawns are brown.

Southeast Region (Hanson)

General Conditions: Beautiful summer weather continued this past week and but with no rain until the 29th and then not enough. Hanson received 0.70 inches of inches of rain. It cannot be emphasized enough, how important it is for clients to provide water to drought-stressed plants, especially those plants planted this season or plants damaged or defoliated by caterpillars. *Stewartia pseudocamellia*, *Stewartia rostrata*, *Catalpa ovata* (Chinese catalpa), *Hydrangea anomala petiolaris, Hydrangea quercifolia* (Oakleaf Hydrangea), *Hypericum androsaemum* 'Mrs. Gladis Brabazon', *Indigofera* sp.*, Calycanthus floridus* (Common Sweetshrub), *Lonicera sempervirens*, Clematis, Roses, *Spiraea* sp., Weston hybrid azaleas, *Asclepias tuberosa* (butterfly weed), *Asclepias syriaca (*common milkweed), *Campanula* sp.*, Geranium* sp., *Persicaria polymorpha*, *Achillea, Alchemilla mollis, Spigelia marilandica* (Indian Pink),*Thermopsis, Coreopsis* sp., *Aruncus dioicus, Lamium,* Foxgloves, *Valeriana officinalis* (Garden Heliotrope),*Anemone canadensis, Corydalis lutea*, daylilies, *Astilbe*, *Allium* and Asiatic lilies are in full bloom. *Heliopsis* sp. and *Lysimachia punctata* are beginning bloom. *Sinocalycanthus chinensis* and *Styrax japonicus* are ending bloom. *Cotinus obovatus* (American Smoketree) and *Cotinus coggygria* (European Smokebush) are still 'looking good' with their colorful 'smoke'. Staghorn sumac has ended bloom and is beginning to develop pink-red fruit.

Pests/Problems: Gypsy moth caterpillars have caused extensive, yet scattered, defoliation in many

areas of the state, including many in Southeast MA; it varies by town and even neighborhoods. Reports are that this is the worst outbreak in 30 years. Oaks are the primary host plant, but because of the sheer magnitude of high numbers of caterpillars, many other plants like white pine, cherry, willow, even spruce, arborvitae and other pines are showing severe damage. At this time most of the caterpillars are in the process of pupation or have pupated; however, there are still a few caterpillars feeding, but it should be over soon and the adult moths will soon emerge, mate and the female moths will lay their pale, tan egg masses for next year. Based on the incredibly high number of pupae we are seeing, next year should be 'off the charts' as far as gypsy moth caterpillars go, unless we get lucky and next spring is rainy and *Entomophaga maimaiga* manages to knock down and kill the gypsy caterpillars. Scouting this week in Hanson revealed a few dead gypsy moth caterpillars, most likely killed by the fungus, *Entomophaga maimaiga,* but, probably not enough dead caterpillars to make a difference. We desperately needed rain to activate the fungus and we did not receive it. (See Tawny Simisky's Insect section of the Landscape Message).

Oriental beetles emerged this week in Hanson. These grey-tan beetles, similar in shape to Japanese beetles, feed on a wide variety of plant material, especially at night, along with Asiatic garden beetles and earwigs, which are also active. Japanese beetles usually emerge around the 4th of July.

Hibiscus sawfly continues to feed on the foliage of untreated perennial hibiscus.

Along with mosquitoes, dog ticks and deer tick nymphs, remain active. Take precautions against being bitten by using a repellent like DEET.

The following insects remain active: Andromeda lacebug on *Pieris japonica,* dogwood sawfly larvae on certain dogwood, planthoppers, four-lined plant bugs, White pine sawyer beetles (Asian longhorned beetle lookalike), sunflower moth caterpillars (*Homoeosoma electellum),* Hemlock woolly adelgid, cottony camellia scale on Meserve hollies and *Taxus, Taxus* mealybug, aphids, stink bugs, leafhoppers, lily leaf beetle and larvae, slugs, snails, pine spittlebugs, azalea whitefly and biting flies

The white, spore-covered Azalea leaf galls (*Exobasidium vaccinii*) continue to show up on deciduous Azaleas; remove galls and place in the trash.

The following weeds are in bloom: Queen-Anne's-lace. *Linaria vulgaris* (Yellow toadflax), Japanese honeysuckle (*Lonicera japonica* - Massachusetts invasive plant), *Achillea,* oxeye daisy, clover, and fleabane.

Continue to prune, or remove and destroy, invasive plants, like Multiflora rose, burning bush, Oriental bittersweet and autumn olive, which are now forming seeds.

North Shore Region (Beverly)

General Conditions: We had sunny and clear skies most days during during this reporting period except for June 28 and 29 when had cloudy weather and overcast skies. The day temperatures were mainly in mid to high 70s except for June 27 when the temperature climbed to 85 degrees Fahrenheit. Night temperatures were mainly in the low 50s to the low 60s. We gained 120 growing degree days at

Long Hill during this reporting period. June has been a very dry month. We recorded 0.16 inches of rainfall at Long Hill during this reporting period. Woody plants seen in bloom include: Tall Stewartia (*Stewartia monadelpha*), Longstalk holly (*Ilex pedunculosa*) Japanese tree lilac (*Syringa reticulata*), Peking tree lilac (*Syringa pekinensis*), Stewartia (*Stewartia rostrata*), Kousa Dogwood (*Cornus Kousa*), Lemoine Deutzia (*Deutzia lemoinei*), Sweet azalea (*Rhododendron arborescens*), Virginia sweetspire (*Itea virginica*), Magician Deutzia (*Deutzia magicien*), Oakleaf Hydrangea (*Hydrangea quercifolia*), Japanese Hydrangea vine (*Schizophragma hydrangeoides)* and Mountain Laurel (*Kalmia latifolia*). Herbaceous plants in bloom include: White Clematis (*Clematis paniculata*), Virginia rose (*Rosa virginiana*), Garden roses (*Rosa* sp.) Baptisia (*Baptisia australis*), Nepeta (*Nepeta* sp.), Geranium (*Pelargonium* spp.), Aruncus (*Aruncus dioicus*), Corydalis (*Corydalis lutea*), Allium (*Allium* sp.), Water lily (*Nymphea odorata*) and ox-eye daisy (*Leucanthemum vulgare*).

Pests/Problems: Cedar-Hawthorn rust (*Gymnosporangium globosum*) was observed on fruits of single seed hawthorn (*Crataegus monogyna*). Phyllosticta leaf blotch continues to be observed on Witchhazel (*Hamamelis intermedia*). Leaf tip necrosis was observed on a Japanese stewartia, probably caused by anthracnose. If you notice this in your landscape, consider sending a sample to the UMass Extension Plant Diagnostic Lab for diagnosis of the problem. Learn how to identify poison ivy to prevent exposure. Weeds in the landscape continue to flourish. Take measures to control weeds before they set seed. Mosquitoes and ticks are still very active. Protect yourself with insect repellent when working outdoors especially at dawn and at dusk.

East Region (Boston)

General Conditions: June is coming to an end with temperatures averaging 70° F over the past week. High temperatures averaged 83° F while lows averaged 57° F. We have gained 141.5 GDDs for a total of 863. We experienced humid conditions on the 28th and the 29th resulting in several passing thundershowers accumulating only 0.14 inches of precipitation. We've received only 1.32 inches of rain so far this month compared to the average 3.7 inches of rainfall – the landscape is dry and supplemental irrigation is needed. Plants in bloom: *Actinidia polygama* (silvervine), *Amorpha fruticosa* (indigobush), *Castanea mollisima* (Chinese chestnut), *Diervilla lonicera* (dwarf bush honeysuckle), *Diospyros virginiana* (persimmon), *Hypericum* 'Kolmuni' Magical Universe® (St. John's wort), *Ilex* sp. (holly), *Leptodermis oblonga* (lilac shrub), *Rhododendron arborescens* (smooth azalea), *Sorbaria sorbifolia* (false spiraea), *Spiraea japonica* (Japanese meadowsweet), *Spiraea latifolia* (broadleaf meadowsweet), *Stewartia pseudocamellia* (Japanese stewartia), *Tripterygium wilfordii* (thunder god vine), and *Yucca* sp. (yucca).

Pests/Problems: We are in a moderate drought; turf in shallow soils has gone dormant. Broadleaf weeds continue to thrive; crabgrass (*Digitaria* sp.) has germinated. Burdock (*Arctium minus*) and

pokeweed (*Phytolacca americana*) continue to gain height. Weeds in flower include: black swallow-wort (*Cynanchum louiseae*), common chicory (*Cichorium intybus*), Queen Anne's lace (*Daucus carota*), and spotted spurge (*Euphorbia maculata*). Weeds in seed include black swallow-wort (*Cynanchum louiseae*), garlic mustard (Alliaria petiolata) and greater celandine (*Chelidonium majus*). Giant leopard moth (*Hypercompe scribonia*) has emerged; grapevine beetle (*Pelidnota punctata*) adults are active.

Metro West (Acton)

General Conditions: One would think that it was August and not June based on the hot temperatures and brown lawns. Once again, precipitation was pretty much non-existent during this recording period. The average monthly precipitation for June is 3.93” and recorded so far for the entire month has been a mere 1.57”. Woody plants seen in bloom this past week are *Buddleia* spp. (Butterfly Bush), *Catalpa speciosa* (Northern Catalpa), *Hydrangea arborescens* (Smooth Hydrangea), *Potentilla fruiticosa* (Potentilla), *Rhus typhina* (Staghorn Sumac), *Rosa rugosa* (Rugosa Rose), *R. '*Knockout' (The Knockout family of Roses), *Rosa* spp. (Rose), *Sambucus canadensis* (American Elderberry), S*pirea japonica* 'Alpina' (Daphne Spirea), *Stewartia psuedocamellia* (Japanese Stewartia), and *Tilia cordata* (Littleleaf Linden). Woody vines in bloom are: *Clematis* spp. (Clematis) and *Lonicera japonica* (Japanese Honeysuckle). Contributing even more color and interest to the landscape are some flowering herbaceous plants including: *Achillea millefolium* (Yarrow), *Alcea rosea* (Hollyhocks), *Aruncus aethusifolius* (Dwarf Goat’s Beard)*, Asclepias syriaca* (Common Milkweed), *Astilbe* spp. (False spirea), *Campanula persicifolia* (Peach-leafed Bell Flower), *Campanula takesimana* ‘Elizabeth’ (Bellflower), *Clematis recta* 'Purpurea' (Clematis), *Coreopsis* sp. (Tickseed), *Daucus carota* (Queen Anne's Lace), *Digitalis purpurea* (Foxglove), *Filipendula* sp. (Meadow Sweet), *Geranium sanguineum* (Cranesbill Geranium), *G.* ‘Johnson’s Blue’ (Cranesbill), *Hemerocallis* 'Stella D'Oro' (Daylily), *H. fulva* (Orange Daylily), *H.* spp. (Daylily), *Heuchera* spp. (Coral Bells), *Hosta* spp. (Plantain Lily)*, Liatris spicata* (Spike Gayfeather), *Lilium* spp. (Lily), *Lychnis coronaria* (Rose Campion), *Monarda didyma* (Bee-Balm), *Nepeta* spp. (Ornamental Catmint), *Oenothera macrocarpa* (Ozark Sundrops), *Penstemon digitalis* 'Husker Red' (Beardtongue), *Perovskia atriplicifolia* (Russian Sage),

Platycodon grandiflorus (Balloon Flower), *Salvia nemerosa* (Salvia)*, Tradescantia* sp. (Spiderwort)*,* and *Yucca filamentosa* (Yucca).

Pests/Problems: The lack of any substantial rain continues to be a concern for our trees and shrubs in the landscape especially compounded with any other stresses such as winter, tent or gypsy moth caterpillars, hemlock woolly adelgid, snow and ice removal applications, or anthracnose on our plants. Signs of stress are apparent in the landscape including premature leaf drop and wilting. Asian Longhorned Beetles have yet to emerge but will soon! Begin to scout for the Asian Longhorned beetle! Monitor the 12 host genera: *Acer* (Maple), *Betula* (Birch), *Ulmus* (Elm), *Salix* (Willow), *Aesculus* (Horsechestnut), *Fraxinus* (Ash), *Platanus* (Plane Tree), *Populus* (Poplar), *Sorbus* (Mountain Ash), *Albizia* (Mimosa), *Cercidiphyllum* (Katsura) and *Keolreuteria* (Golden Raintree) for this invasive pest. Look for oviposition sites, frass and exit holes.

Central Region (Boylston)

General Conditions: Conditions remain very dry - non-irrigated turf has browned out and slipped into dormancy. Vigilant, deep watering and proper mulching will help ornamental and productive landscapes through this hot dry period. Showers over the last two days were light and provided a mere 0.26” of rain. In spite of this, many perennials are blooming including Salvias*, Asclepias syriaca*, *Rudbeckia hirta*, *Alchemilla mollis*, *Geranium* ‘Rozanne’, *Persicaria polymorpha*, *Knautia macedonica*, *Verbacum chaixii*, early *Hemerocallis* cultivars, *Lychnis coronaria*, and *Stachys macrantha* ‘Robusta’. Among the trees and shrubs in bloom are Knock Out Roses, *Rosa rugosa, Itea virginica*, *Ilex verticillata*, *Rhododendron*

maximum, *Cornus kousa*, *Stewartia monadelpha*, and *Stewartia pseudocamellia*.

Pests/Problems: Added to the very dry conditions are several pest problems including Gypsy Moths which have defoliated pockets of oaks throughout the region. Birch Sawfly caterpillars were spotted today, as were dogwood sawfly caterpillars. Imported Willow Leaf Beetle adults and larvae remain active, as do the adults and larvae of the Lily Leaf Beetle. Hibiscus Sawfly larvae are damaging the foliage of Hibiscus. On a positive note the larva of a Monarch Butterfly was spotted yesterday.

Pioneer Valley Region (Amherst)

General Conditions: The dry conditions continue to be a major concern in the Pioneer Valley, as we have not received significant rainfall for several weeks. Despite the dry weather, most trees and shrubs appear healthy and vibrant. How much longer they can remain healthy without significant rain is unknown. Turfgrass is another story; lawns are browning throughout the region and even lawn weeds are wilted and desiccated. Scattered showers did pass through during this past reporting period with accumulations ranging from 0.04–0.66″. As is typical, the hill towns on the west side of the Connecticut River received the most rain while the valley bottom and points eastward received only a pittance. Hampden County fared better than Hampshire and Franklin, with showers during the morning of 6/28. As we close out the month of June, we are well below our monthly average precipitation and the long-term forecast calls for much of the same. Irrigated trees and shrubs look very robust right now, as high temperatures have mostly hovered in the 80s and while low temperatures have cooled to the middle 50s almost every night. But, there is speculation that water restrictions will be imposed soon if we do not receive normal rainfall. Humidity levels have been low this summer to date, until 6/28 when dew points rose considerably to the mid-60s in the valley. The dry weather has suppressed many foliar blight and stem cankering pathogens that would otherwise be active. However, increased dew points allow atmospheric moisture to condense on plant surfaces, which may provide enough free moisture for spores to germinate and invade leaf and stem tissues.

Pests/Problems: Weakened and stressed trees and shrubs in open, exposed settings are showing symptoms of drought stress, such as: scorched leaf margins, wilting foliage and shoot tip dieback. Drought-stressed birch, especially European and Himalayan white birch, are susceptible to infestation by the bronze birch borer. Scout for upper canopy dieback and D-shaped exit holes on symptomatic branches. Scout arborvitae and Hinoki falsecypress for arborvitae leafminer (see Tawny Simisky's insect report below for more information). Needle blight of arborvitae has been very common, and at times very destructive, since 2014 and damage from insect pests can provide infection sites for the fungal pathogens responsible.

Symptoms of Dutch elm disease are now appearing, especially on trees in urban settings suffering from mechanical injury, soil compaction and drought stress. Because of the dry conditions in recent weeks, flagging of upper canopy branches due to elm anthracnose is less likely compared to wetter summers. White pines that experienced premature shedding of older needles earlier this season are exhibiting a new and troubling symptom: needle tip blight on the current season's growth. In 2015, this was the predominant symptom that affected trees exhibited, although in those cases, the trees had healthy, older foliage to rely on. This new development is worrisome and casts doubt on these trees ability to survive the 2016 growing season. What's perplexing about this current white pine decline is that in most cases, neighboring white pines that are subjected to the exact same growing conditions are healthy with no symptoms of decline. This would suggest that certain trees are predisposed to whatever abiotic and biotic stresses are responsible for the needle browning and premature shedding.

Berkshire Region (Great Barrington)

General Conditions: The first full week of summer brought above normal temperatures, some reaching into the upper 80s. However, the period was very dry until the night of Tuesday the 28th when rain fell

throughout most of the region. As is typical with summer storms, the amount of rainfall varied considerably. Here in Great Barrington, rainfall for the night – and for the entire week – was 0.25 inches; the Berkshire Botanical Garden recorded 0.70 inches; Pittsfield Airport received 0.41 inches; and zero rainfall was reported for Sheffield. Meanwhile in northern Dutchess County, NY, just 35 miles away, 1.50 inches was reported to have fallen. Even with the rain of the 28th, much of Berkshire County has a rainfall deficit of over 5 inches. Soil moisture is very low, and the recent rain did little to alleviate the drought. In general, landscapes are lush with attractive floral displays. With regard to flowers, daylily season has begun and many early blooming cultivars, such as 'Orange Prelude' and 'Itsy Bitsy Spider', are in full flower.

Pests/Problems: Drought conditions have taken their toll on many lawns and again point out the importance of avoiding low mowing or scalping of turfgrass. Some scorch was observed on oaks and a few herbaceous plants growing in full sun, and wilting of non-irrigated annuals was not uncommon. On the plus side, disease development has been slow. Apple scab and cedar apple rust infections which were noted back in late May on crabapple have not developed very much. However, frog eye (*Sphaeropsis*) was seen on one crabapple specimen which has been monitored regularly this season. Powdery mildew continues to be a big problem on *Physocarpus* 'Coppertina', yet another purple leaf cultivar, 'Diablo', seems to have escaped any infections. Asiatic garden beetle adults are numerous. The beetles which are about half the size of Japanese beetles and have shiny cinnamon colored wing covers feed on the leaves and flowers of many different vegetable, fruit, and ornamental plants. They are rarely seen eating holes, mainly along the edges of leaves, in these plants because they are nocturnal feeders. Where we see them most often is when weeding in gardens and turning up the beetles which spend daytime in the soil. Among the pests which continue to be active are wooly beech aphid, imported willow leaf beetle (all stages), hydrangea leaf tier (pupae), aphids, leaf hoppers, cutworms, slugs and snails, and ticks, wasps, and mosquitoes. The latter critter has appeared in great numbers over the past week. Oak lace bugs have yet to hatch though the egg masses are quite visible on the undersides of leaves of oaks.

Regional Scouting Credits

- *CAPE COD REGION - Roberta Clark, UMass Extension Horticulturist for Barnstable County - Retired, 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, Beverly.*
- *EAST REGION - Kit Ganshaw & Sue Pfeiffer, Horticulturists, reporting from the Arnold Arboretum, Jamaica Plain.*
- *METRO WEST REGION – Julie Coop, Forester, Massachusetts Department of Conservation & Recreation, reporting from Acton.*

- *CENTRAL REGION - Joann Vieira, Superintendent of Horticulture, reporting from the Tower Hill Botanic Garden, 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 pathogens of interest seen in the UMass Extension Plant Diagnostic Lab:

Anthracnose of Japanese maple (***Acer palmatum***) caused by ***Colletotrichum***. Tree is approximately 10-years-old and 2" in diameter, growing in full sun with lawn sprinkler irrigation. This year, the foliage did not appear as its usual red color, instead appearing pinkish-yellow. Foliage also appeared undersized. *Colletotrichum* was abundant on the submitted sample but the tree may have been predisposed by winter injury, which appears to have affected many Japanese maples in the area.

Stem cankering of Kousa dogwood (***Cornus kousa***) caused by ***Phomopsis*** and ***Colletotrichum***. Tree is 5" in diameter and approximately 12' tall. It was installed 13 months ago as part of a large tree and shrub installation. During the fall of 2015, the drip irrigation system malfunctioned and the trees were watered continuously for 72 hours until the well that fed the irrigation system went dry. In early June of this year, foliage has become chlorotic and is prematurely shedding. Waterlogged soils can starve roots of oxygen, leading to canopy thinning and dieback for trees that are not adapted to wet sites.

Maple anthracnose, caused by ***Discula campestris***, of sugar maple (***Acer saccharum***). Tree is over 35-years-old and is growing in a landscape setting with full sun. The center leader of this multi-leader tree has been losing foliage this season. The root flare is buried and a girdling root is visible on the north side of the tree. Additionally, turf grass is growing right up the trunk. Drought stress, girdling roots and deep planting are likely making it difficult for the tree to move water to the uppermost canopy parts, making the foliage susceptible to attack from anthracnose fungi.

Decline and dieback of ornamental peach (***Prunus persica***) caused by peach leaf curl (***Taphrina deformans***) and stem cankering (***Cytospora***). The tree is six-years-old and has been present at the site for only 18 months. Branch tips are dead and this season's foliage has become brown and is prematurely shedding. Remaining foliage is distorted by the peach leaf curl fungus, *Taphrina*. The tree was almost assuredly predisposed by the subzero temperatures in mid-February, which ravaged peach trees in orchard and landscape settings throughout the northeast.

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

Insects

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

- White Spotted Pine Sawyer (WSPS): Adults are still active and will be throughout this month, 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 emerge in Massachusetts in July and August. Beginning in this month, 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. 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 captured an Asian longhorned beetle or have seen damage caused by this insect, such as exit holes, 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 or https://www.aphis.usda.gov/pests-diseases/alb/report .

- Gypsy Moth: Caterpillars are still being seen, but many are pupating. Adult emergence will occur primarily this month, at which time mating and egg-laying will take place. It is too late to manage gypsy moth this year, as the adults do not feed. However, if many egg masses are laid in your area by the adult females, it may not be a bad idea to start planning which management options you are going to choose for next spring. These options can include hoping for a wet spring, so that *Entomophaga maimaiga*, the insect killing fungus, will become more active earlier in gypsy moth and reduce the population next year. They can also include using *Bacillus thuringiensis* Kurstaki on the young caterpillars when they first hatch from their eggs next year around 90 GDD's, base 50°F. Be advised that while this may lead to the demise of young caterpillars hatching from eggs on the host trees to which it is applied, it is not a guarantee that caterpillars "ballooning in" (using silk strands to catch air currents to disperse) from wooded areas won't do any damage.

  Caterpillar numbers were elevated in certain areas this year, corresponding to locations with high numbers of egg masses laid last season. Therefore, caterpillar and pupa presence is patchy across the landscape and not all locations are experiencing high gypsy moth populations. Reports of gypsy moth caterpillar activity continue to be made in certain locations. Spotted areas in towns including but not limited to Sturbridge, Monson, Uxbridge, Brimfield, Charlton, Northborough, Westborough, Plymouth, Carver, Hanson, Kingston, Wareham, Sharon, Winchendon, Framingham, West Bridgewater, Braintree, Rowley, Georgetown, Ipswich, Newbury, Boxford, Topsfield, Gloucester, and Wrentham are reporting continued and elevated caterpillar activity paired with defoliation. Defoliation (mostly oaks) has been observed by motorists driving in certain areas on Rt. 3 (Plymouth area), I-495 (Acton, Littleton, and Worcester areas), and the MA Turnpike (I-90) near Charlton. However, there have been multiple reports of gypsy moth caterpillars having fed on pines and spruce this season.

  There are few scattered reports of some caterpillars exhibiting signs of *Entomophaga maimaiga* infection and some succumbing to the NPV virus, but this has occurred too late this season to help with the defoliation currently being seen. Some good news from the Brookfield/Sturbridge area on 6/29/16 indicates that in certain areas in those towns, more widespread signs of caterpillars dying from *Entomophaga* have been observed. Monitoring the landscape for large numbers of tan-brown egg masses laid on hosts by the adult females this month will help folks predict what to expect of these caterpillars next season and to plan management for the spring. However, environmental factors such as rainfall amounts next spring (which impact *Entomophaga* spread and infection in these caterpillars) can make predicting caterpillar activity for next season difficult.

- Andromeda Lacebug: *Stephanitis takeyai* is active on Japanese Andromeda and will continue into September. Inspect plants known to have *S. takeyai* in the past (or exhibiting yellow stippling on the upper leaf surface) and inspect undersides of leaves for this season's lacebugs. Before populations become too large, treat with a summer rate horticultural oil spray as needed. Be sure to target the undersides of the foliage in order to get proper coverage of the insects.
- Arborvitae Leafminer: *Argyresthia thuiella* adult moths are active. If arborvitae is exhibiting numerous browned needle tips, shake the branches to observe whether or not the tiny moths take flight. If large numbers of moths are present, the plant may be treated with a pyrethroid insecticide, as necessary. The use of yellow sticky cards to monitor for this insect has not been found to be successful. As eggs laid by the adults hatch, larvae can be targeted with a summer rate horticultural oil spray, however timing is critical. Observe suspect plants with a hand lens or microscope for the presence of larvae before making any management decisions.
- Asiatic Garden Beetle: *Autocerica castanea* adults are active. These rusty-red colored beetles are bullet-shaped and active at night. They are often attracted to porch lights. They feed on a number of ornamental plants, defoliating leaves by giving the edges a ragged appearance and also feeding on blossoms. Butterfly bush, rose, dahlia, aster, and chrysanthemum can be favored hosts. When levels of damage reach a management threshold, pyrethroid- based insecticides may be necessary. Read and follow label instructions and avoid harming non-target organisms.
- Azalea Lacebug: *Stephanitis pyrioides* is active on evergreen azaleas. This insect may be more damaging on plants located in warm, sunny locations. Like andromeda lacebug, this insect will remain active into the fall. Plants in hot, dry, sunny sites may be severely impacted by mid-August. Horticultural oil sprays targeting the undersides of the foliage can be very effective for this pest.
- Black Vine Weevil: *Otiorhynchus sulcatus* damage is apparent on rhododendron and taxus, but can also be seen on azalea, mountain laurel, and *Euonymus*. Adult weevils feed along the leaf/needle margins and create rounded notches. Inspect foliage of these plants for notching as adults are feeding. Burlap laid around the base of plants during the time adults are active, now through August, can be inspected weekly for adult weevils which can be killed before egg laying.
- Cottony Taxus/Camellia Scale: *Pulvinaria floccifera* nymphs are actively feeding and now empty white, oblong cottony egg sacs can be seen on host foliage. Holly, camellia, *Taxus*, rhododendron, certain maples, English ivy, and others can be hosts of this pest. Inspect leaf undersides for this soft scale. Treat with a horticultural oil spray at the summer rate, targeting twigs and foliage where the pest is residing.
- Dogwood Borer: *Synanthedon scitula* adult moths remain active. Flowering dogwoods (and others) exhibiting dieback beginning in the crown and working its way downward may be attacked by this pest. Avoid mechanical injury to these host plants at this time, either accidental or by pruning, as the adult female moths are attracted to these wounds where they will lay their eggs. (Wounds provide easy entry for newly hatched larvae.)
- Dogwood Sawfly: *Macremphytus spp.* caterpillars are actively feeding. Inspect chewed foliage of dogwood, particularly *Cornus racemosa* (gray dogwood) for caterpillars skeletonizing the leaves. Foliage will be consumed down to the mid-vein. Spinosad based products are successful

where needed, however small infestations can be removed by a gloved hand and destroyed. Do not apply spinosad to plants in flower.

- Eastern Tent Caterpillar and Forest Tent Caterpillar: Both of these insects are finished feeding for this season and can be observed to be pupating at this time. Adults will mate and lay eggs. Management until next spring can include removing the rounded-edged egg masses of the eastern tent and squared-edged egg masses of the forest tent caterpillar.
- Emerald Ash Borer: *Agrilus planipennis* readily attacks ash (*Fraxinus spp.*) including white, green, and black ash and has also been found developing in white fringe tree (*Chionanthus virginicus*). Adults are active. For a map of the known locations of emerald ash borer in the state, as well as further information about this insect, please visit: https://ag.umass.edu/fact-sheets/emerald-ash-borer .
- Hemlock Woolly Adelgid: *Adelges tsugae* is present on eastern and Carolina hemlock. The adelgid will be entering its summer dormant period by the time we have our next Landscape Message (July 15th) which will last until approximately mid-October. Dormant nymphs can be treated throughout the summer with a horticultural oil spray at the summer rate, however be careful to follow all label instructions to avoid injury to the plant.
- Lily Leaf Beetle: Larvae continue feeding. Pyrethroids can be used against adult beetles, whereas spinosad products are most effective against the larvae.
- Mountainash Sawfly: *Pristiphora geniculata* larvae are actively feeding on foliage. Examine leaflets of the plant in shady areas for clusters of yellow-green larvae. Remove clusters by hand where possible and treat with a product such as spinosad when present in high numbers. This sawfly is capable of consuming all foliage down to the midvein.
- Rhododendron Borer: *Synanthedon rhododendri* clearwing moths are active. Female moths can lay eggs at the base of shoots near the ground. Tiny, wood-boring caterpillars will emerge and chew an entrance hole through the bark. Inspect the base of shoots, old pruning sites, and branch crotches for sawdust, which may indicate the presence of this pest. If timed correctly, an application of a pyrethroid on larvae before they enter the shoot may be helpful.
- Rhododendron Lacebug: *Stephanitis rhododendri* is active on rhododendron but also is a pest on other broadleaf evergreens along with aforementioned Azalea lacebug, *S. pyrioides*. Horticultural oil sprays targeting the undersides of the foliage can be very effective for these pests that cause leaf-yellowing/stippling/chlorosis as they feed with their piercing-sucking mouthparts.
- Taxus Mealybug: *Dysmicoccus wistariae* remain active. Inspect the inner branches of yew (*Taxus*) for the white, soft-bodied insects. Honeydew and sooty mold may also be present. When present in large numbers, plants may become stunted and unsightly. If needed, treat the inner branches with a horticultural oil spray at the summer rate.
- Two-Spotted Spider Mite: *Tetranychus urticae* is active and is a “warm-season” mite that loves hot and dry weather which may favor the quick reproduction and build-up of this pest. (Not unlike the weather we have been experiencing as of late!) Management should seek to preserve beneficial predatory mites. Monitor susceptible hosts (such as many deciduous species) for increasing numbers of these mites until mid-August. Mites will be found on the undersides of leaves and cause stippling of the foliage.

- Viburnum Leaf Beetle: Adults will be emerging within the next couple of weeks and will resume feeding on the plant into September. Adult beetles may be targeted with a pyrethroid; however, adult beetles are generally more difficult to manage than the larval stages. Planting species of viburnum that are most resistant to the viburnum leaf beetle can help manage this pest. Resistant varieties include *V. bodnantense* (dawn viburnum), *V. carlesii* (Koreanspice viburnum), *V. davidii* (David viburnum), *V. sieboldii* (Siebold viburnum), and others. Highly susceptible species of viburnum frequently attacked by this beetle can include *V. dentatum* (arrowwood viburnums), *V. opulus* (European cranberrybush viburnum), and *V. rafinesquianum* (Rafinesque viburnum).

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.

A note about Deer 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. Adults and nymphs are active and 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 Laboratory of Medical Zoology (www.tickdiseases.org) and click on the red Test a Tick button for more information.

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

Management Practices

Plant of the Week: ***Stewartia pseudocamellia***

Stewartia pseudocamellia is a small to medium sized, slow growing tree growing 20-40’ tall. The 2-3” camellia-like white flowers with bright yellow-orange anthers emerge in late June into July (the species name *pseudocamellia* means false camellia). Leaves are medium to dark green turning yellow, red to reddish purple in the fall. The gray, orange, and red-brown exfoliating bark becomes showier with age, providing ornamental interest in the winter. Fruits are 5-valved brown capsules that open at maturity to reveal seeds. These capsules can persist on branches throughout the winter and into the next season. Japanese stewartia has no serious insect or disease problems. Plants are best sited in a moist, well-drained soil in full sun to part shade. Hot summer temperatures and dry soil will limit growth.




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

Landscape Turf

Diseases

The uncommonly dry weather we've had in the past month has been tough on turf, and symptoms of drought stress are evident on local golf courses and other green spaces. The wilting and yellowing caused by lack of moisture can resemble symptoms of disease. At the UMass Extension Plant Diagnostic Lab we have seen an increase in submissions from home lawns and golf courses, particularly from fairways. While stress-related diseases such as summer patch or anthracnose may also be present, drought stress is frequently the primary issue. Most of these samples have also had another thing in common - excessive thatch layers.

Thatch is a dense layer of dead and living stems, roots, and leaves that lies between the turf and the soil. It is normally broken down by soil microbes; however, management practices such as fertilization rates and the use of some pesticides can affect the health of this microbial community, slowing the rate of thatch breakdown. Thatch buildup is therefore more common on intensively managed turf. Factors such as soil pH, aeration, species of turf present, and soil moisture level also influence the rate of thatch accumulation and breakdown.

Excessive thatch is detrimental to turf health for a number of reasons. It hinders deep rooting, dries out quickly, and restricts the movement of water into the soil. These qualities can seriously impair the ability of turf to withstand periods of drought. Thatch impedes the movement of fertilizers and some pesticides into the root zone, rendering these materials less effective. Thatch can also harbor pathogenic fungi that may cause disease on drought-stressed turf.

Under most circumstances, the thatch layer should be no more than 0.5" thick. When it becomes excessive, thatch management measures are imperative. Practices such as de-thatching or core cultivation are better done in cooler weather when desirable grasses are actively growing, so at this point in the season it is best to wait until late summer or early fall. In the meantime, there are other cultural methods you can use to improve the drought tolerance of your turf, such as raising mowing height, avoiding high nitrogen levels, and using judicious watering practices.

For more information on managing turf during drought stress periods, see the fact sheet "Management Tips to Improve Turfgrass Drought Survival" at https://ag.umass.edu/fact-sheets/management-tips-to-improve-turfgrass-drought-survival-0

Report by Angela Madeiras, Diagnostic Technician, UMass Extension Plant Diagnostic Lab

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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 and follow us on Facebook and Twitter.

For a complete listing of upcoming events, see our Upcoming Educational Events page.

For commercial growers of greenhouse crops and flowers - Check out the New England Greenhouse Update at http://negreenhouseupdate.info

For professional turf managers - Check out Turf Management Updates at https://extension.umass.edu/turf/management-updates

For home gardeners and garden retailers - Check out home garden resources. 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

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 Problem Diagnostics

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 web site at: http://soiltest.umass.edu/ 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