

Agriculture & Landscape Program

Landscape,
Nursery &
Urban
Forestry
Program

UMass Extension Landscape Message #22 - 2011

September 2, 2011

Scouting Information by Region

Regional Notes

Cape Cod Region (Barnstable) – General Conditions: Typical late summer weather has been the norm for the past two weeks. Warm, slightly humid days followed by cool nights have left heavy dew on lawns. Tropical Storm Irene blew through the cape and Islands, bringing strong winds but little precipitation. There was considerable tree breakage, bringing down power lines and leaving lawns littered with debris. Wind gusts of over 60 MPH were recorded in several towns on the Cape. Scant rainfall came with Irene so the Cape avoided the flooding that plagued much of New England. Hardy Crepe Myrtle is in full bloom.

Pests/Problems: Tree damage from Irene headlines the problems this reporting period. Many trees and/or tree limbs came down. A 250-year-old Purple European Beech came down on a house, causing structural damage to the roof. The tree had been in decline for several years and when it did come down it had a very hollow core. This was probably a poster child for hazardous trees. Because Irene was a “dry” storm, salt-laden winds damaged salt-sensitive trees and shrubs. It may take several days to show up but many trees, especially maples, will exhibit burned foliage over the next several weeks and may defoliate. Japanese beetles are just about gone for the year. Western conifer seed bugs are starting to look for over-wintering sites. Wasp and hornet colonies are peaking in size. Katydid are singing loudly in the evening. Powdery Mildew is heavy on native flowering dogwood. Many samples of Hydrangea have come into the office with Leaf Spot.

Southeast Region (Hanson) – General Conditions: Warm, humid weather continued over the past two weeks leading up to Hurricane Irene. Hanson received 1.50 inches of rain from Irene and lots of debris. Like other areas of Massachusetts, many Plymouth County towns were without power for several days and many trees were felled during the high wind gusts. Power outages were numerous from the number of trees taking out power lines. *Clerodendron trichotomum*, Rose-of-Sharon, *Albizia julibrissin*, *Hydrangea macrophylla*, *Hydrangea paniculata*, landscape roses, butterflybush, Rudbeckia ‘Herbstsonne,’ *Platycodon*, *Perovskia*, Joe-pye-weed, *Rudbeckia trilobum*, *Rudbeckia* ‘Goldsturm,’ *Echinacea purpurea*, *Sedum* sp., *Corydalis lutea*, *Nepeta*, *Heliopsis* ‘Summer Sun,’ *Hibiscus* ‘Copper King,’ and other hybrid hibiscus, *Hosta plantaginea* and other late blooming *Hosta*, *Coreopsis*, *Lobelia cardinalis*, *Lobelia syphilitica*, *Lobelia hybrids* and *Phlox paniculata* are in full bloom. The fruit of autumn olive (invasive), crabapple, Staghorn sumac, Kousa dogwood and *Viburnum trilobum* are providing color in the landscape. **Pests/Problems:** Asiatic beetles, Oriental beetles and Japanese beetles appear to be just about done for the year. Earwigs, wasps, stinkbugs, slugs, lacebugs, spider mites, leafhoppers, snails, biting flies, katydids, cicada killing wasps, and mosquitoes are all active. It continues to be a banner year for mosquitoes in many areas of Plymouth County, and it has been reported that mosquitoes are carrying Eastern Equine Encephalitis (EEE) in southeastern MA and that the threat is greater this year than last year. Take precautions if working out of doors especially at dusk or after sundown when mosquitoes are usually more numerous. Beneficial insects are active. Horsechestnut leaf blotch, black spot on susceptible roses, leaf spot on hydrangea, powdery mildew on many species, and giant tar spot on Norway and silver maple are just a few of the diseases prevalent at this time. Crabgrass is everywhere. Goldenrod and ragweed are also in bloom. Pollen from ragweed may cause allergies in some people, but goldenrod is often mistakenly blamed. Deer, rabbits, chipmunks and woodchucks continue to browse. Continue to remind clients to water landscape plants that were planted this season.

East Region (Boston) – General Conditions: We gained 341.5 GDDs over the past two weeks. We received 4.1 inches of precipitation, 3.1 inches falling between the 27th and 28th due to tropical storm Irene. For the entire month of August, we received 9.88 inches, almost tripling the historical average of 3.37 inches. Shrubs in bloom include: *Albizia julibrissin* (mimosas), *Callicarpa cathayana* (Chinese beautyberry), *Caryopteris* (bluebeard), *Clematis heracleifolia* var. *dauidiana* (hyacinth-flower clematis), *Elsholtzia stauntonii* (mint shrub), *Hydrangea* [*H. paniculata* (panicle hydrangea) and *H. quercifolia* (oakleaf hydrangea)], *Leptodermis oblonga* (lilac shrub), *Lycium halimifolium* (matrimony vine) and *Rhus chinensis* (Chinese sumac). Vines in bloom include: *Bignonia capreolata* ‘Tangerine Beauty’ (crossvine), *Campsis* [*C. radicans* (trumpet creeper), *C. grandiflora* (Chinese trumpet vine) and their cross *C. x tagliabuana* ‘Madame Galen’],

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Clematis [*C. apiifolia*, *C. vitalba* (pilgrim's clematis), *C. viticella* and many clematis cultivars] and *Cocculus trilobus* (Japanese snailseed). **Pests/Problems:** We were preparing for hurricane Irene which was downgraded to a tropical storm by the time she arrived in Boston. Luckily we sustained only minor damage: many limbs were down but no complete loss of plants was recorded. A one hundred year old plus silver maple (*Acer saccharinum*) did lose one main leader. Many tree-of-heaven (*Ailanthus altissima*) limbs were lost due to the wood's weak and brittle nature. Lacebug damage is becoming more evident as many daphnes have dropped all their leaves and cotoneaster leaves are yellowing and showing stippling. Japanese knotweed is flowering. Cicadas continue to sing. Viburnum leaf beetle (*Pyrrhalta viburni*) adults continue to feed, as they are finding their way higher up in the shrubs. Earlier this month they could only be found in the lower two feet of their host plants, but lately they have been found in the middle and even near the top portion of the plants. They continue to mate and lay eggs. Horsechestnut (*Aesculus hippocastanum*) leaves are entirely brown due to the horsechestnut lead blotch (*Guignardia* and *Phyllosticta*). Those who suffer from allergies can thank our friend the ragweed (*Ambrosia artemisiifolia*) who is just coming into bloom.

Metro West (Acton) – General Conditions: The Metro West area is littered with leaf debris and branches as a result of the strong winds and heavy rains from Hurricane Irene who hit the area on the 28th. She also dropped 3.95" of rain providing the area with a total of 10.4" of rain for the month which has far surpassed the historical average monthly rainfall of 3.54". Temperatures on the other hand have been rather mild and records were not broken. There were only two days where the temps crept into the 90's and that was on the 1st and 2nd with temps recorded at 91° and 92°. Woody plants in bloom are: *Albizia julibrissin* (Mimosa), *Clerodendron trichotomum* (Harlequin Glorybower), *Hibiscus syriacus* (Rose-of-Sharon) and *Hydrangea paniculata* 'Tardiva'. Herbaceous plants in bloom are: *Boltonia asteroides* (White Doll's Daisy), *Calamagrostis acutifolia* 'Karl Foerster' (Feather Reed Grass), *Cassia marilandica* (American senna), *Cichorium intybus* (Chicory), *Daucus carota* (Queen Anne's lace), *Echinacea purpurea* (Coneflower) and its cultivars, *Eupatorium purpureum* (Joe Pye Weed), *Hemerocallis* 'Stella D'Oro' (Stella D'Oro Daylily), *Macleaya cordata* (Plume Poppy), *Miscanthus sinensis* (Maiden Grass), *Monarda didyma* (Bee-Balm), *Oenothera biennis* (Common Eveningprimrose), *Patrinia gibbosa* (Patrinia), *Pennisetum alopecuroides* 'Hameln' Dwarf Fountain Grass), *Perovskia atriplicifolia* (Russian Sage), *Phlox carolina* (Carolina Phlox), *C. paniculata* (Phlox) and its many cultivars, *Rudbeckia fulgida* 'Goldsturm' (Black-Eyed Susan), *Solidago* sp. (Goldenrod) and *Thalictrum rochebrunianum* (Meadow Rue). **Pests/Problems:** Webs of the Fall Webworm have been seen on *Betula* (Birch), *Syringa* (Lilac) and *Prunus* (Cherry). Lots of Fireblight has been seen on *Prunus* (Cherry). With the moisture and humidity powdery mildew has been seen on susceptible *Filipendula* sp. (Meadow Sweet), *Phlox paniculata* (Summer Phlox), *Rosa* spp. (Roses) and *Syringa* spp. (Lilacs). Other fungal diseases appearing in the landscape are: fungal leaf spots on *Amelanchier* spp. (Serviceberry), tar spot on *Acer platanoides* (Norway Maple), Diplodia on *Pinus* spp. (Pine), rust on *Alcea* (hollyhock) and anthracnose on *Cornus florida* (Flowering Dogwood) and *Platanus* spp. (Sycamores). Be on the lookout for *Cynachum nigrum* (Black Swallowwort) and *Phytolacca americana* (Pokeweed). Both are setting seed and either the wind or the birds are dispersing the seed. Also in seed now and quite visible is *Ailanthus altissima* (Tree of Heaven). Most importantly, monitor the 13 host genera: *Acer* (Maple), *Betula* (Birch), *Ulmus* (Elm), *Salix* (Willow), *Aesculus* (Horsechestnut), *Fraxinus* (Ash), *Platanus* (Plane Tree), *Populus* (Poplar), *Celtis* (Hackberry), *Sorbus* (Mountain Ash), *Albizia* (Mimosa), *Cercidiphyllum* (Katsura) and *Keolreuteria* (Golden Raintree) for the Asian Longhorned beetle because the adult beetles are active. Look for oviposition sites, exit holes, frass and maturation feeding.

Central Region (Boylston) – General Conditions: Tropical storm Irene blew through the region on Sunday August 28th bringing high winds and dropping several inches of rain. 3.44 inches of rain fell at Tower Hill Botanic Garden but others within the region measured up to 6.5". Several semi-dwarf apple trees were uprooted, and several trees in the woodlands were uprooted or snapped. There were power outages and tree damage throughout the area, but not as severe as in other locations. Cooler nights and plentiful rainfall have favored turf, which is now lush and growing. Early season apples are ripening and vegetable gardens are producing in abundance.

Pioneer Valley Region (Amherst) - General Conditions: Weather in the Pioneer Valley began the 2-week period dry with mild to cool temperatures the first week or so, but last weekend brought Tropical Storm Irene. Saturated soil is the norm after the storm, although most lawns and trees as well as vegetable and flower gardens look robust. **Pests/Problems:** Mosquitoes and flies continue to be plentiful. Powdery mildew is active on herbaceous and woody ornamentals such as phlox, zinnia, rose, flowering dogwood, Norway maple, sycamore, and lilac.

Berkshire Region (Great Barrington) - General Conditions: There's not much to add to the heavy news coverage of the damage caused by Hurricane Irene. For the Berkshires, the extent of the damage varied depending upon proximity to flood prone rivers and streams, and to elevation – with higher elevations typically having received stronger winds. Most of the severe destruction in managed landscapes was the result of heavy rains which caused flooding and left pools of water on lawns and in gardens. Most soils are still saturated but mild and sunny weather has spurred drying on sites with fast draining soils. The combination of high winds and rain-saturated soils did bring down trees but not as many as predicted. High winds did flatten ornamental grasses and many tall perennials. Some may stand up again but if they haven't done so within a week, the stems can be cut off as soon as the foliage turns brown. Even before the storm, landscapes and gardens were beginning to show the worn out look typical at this time of year.

Pests/Problems: Slugs, snails, and mosquitoes benefitted the most from all the rain. Earwigs continue to be found in higher than usual numbers and have been a big problem for annuals, herbaceous perennials, and even some shrubs such as Rose-of-Sharon where they have been eating holes in the flower petals. Cicada killer wasps have been reported. Despite their large size, these wasps are quite docile. They belong to a group of wasps commonly referred to as digger wasps because of their habit of digging tunnels in soil.

Preferred sites are sparsely vegetated and have well drained, coarse textured soils. Though people tend to fear these wasps, control is seldom warranted. *Viburnum* Leaf Beetle egg deposits on twigs of susceptible *viburnum* species can be found now. Egg-infested twigs can be pruned out now through fall and winter. There seems to be an explosion of annoying gnats following the storm. Hopefully, dragonflies, which have been plentiful this summer, will reduce the population of the gnats and mosquitoes – favorite prey of dragonflies.

Environmental Data

The following growing-degree-day (GDD) and precipitation data was collected for an approximately two-week period, August 16 through August 31, 2011. Soil temperature and phenological indicators were observed on or about August 31, 2011. Total accumulated GDDs represent the heating units above a 50° F baseline temperature collected via our instruments for the 2011 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	2011 GROWING DEGREE DAYS		Soil Temp (°F at 4" depth)	Precipitation (2-Week Gain)
	2-Week Gain	Total accumulation for 2011		
Cape Cod	312	2238	76°	0.60"
Southeast	281	2171	75°	1.50"
East	341.5	2450	78°	4.10"
Metro West	283.5	2312	68°	5.78"
Central	n/a	2162	n/a	4.07"
Pioneer Valley	251	2233	66°	4.11"
Berkshires	225	1866	67°	8.20"
AVERAGE	282	2205	72°	4.05"
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 reporting period:

Indicator Plants - Stages of Flowering (begin, b/full, full, f/end, end)							
PLANT NAME (Botanic/Common)	CAPE	SOUTH EAST	EAST	METRO W.	CENT.	P.V.	BERK.
<i>Heptacodium micinioides</i> (Seven-Son Flower)	begin	*	*	begin	begin	*	*
<i>Clematis paniculata</i> (Sweet Autumn Clematis)	begin	b/full	full	begin	*	*	*
<i>Sophora japonica</i> (Japanese Pagodatree)	full	*	f/end	full	full	end	*
<i>Polygonum cuspidatum</i> (Japanese Knotweed)	full	full	begin	b/full	full	f/end	full
<i>Vitex agnus-castus</i> (Chastetree)	f/end	*	*	*	end	*	*
* = no activity to report/information not available							

- CAPE COD REGION - Roberta Clark, UMass Extension Horticulturist for Barnstable County, Barnstable.
- SOUTHEAST REGION - Deborah Swanson, UMass Extension Horticulturist for Plymouth County - Retired, Hanson.
- EAST REGION - Kit Ganshaw & Sue Pfeiffer, Horticulturists, reporting from the Arnold Arboretum, Jamaica Plain.
- METRO WEST REGION – Julie Coop, Horticulturist, reporting from Acton.
- CENTRAL REGION - Joann Vieira, Superintendent of Horticulture, Tower Hill Botanic Garden, Boylston.
- PIONEER VALLEY REGION - Dan Gillman, Plant Pathologist, UMass Extension Plant Diagnostic Lab, UMass, Amherst.
- BERKSHIRE REGION - Ron Kujawski, Horticultural Consultant, reporting from Great Barrington.

Woody Ornamentals

Insects

Hemlock Woolly Adelgid (HWA) - This insect remains in summer dormancy now but can still be treated, if necessary, with a summer-rate horticultural oil spray.

Fall Webworm caterpillars are nearing the end of their feeding activity. This species has a large deciduous host plant range. They become obvious when their silken webs, which are formed at the tips of the branches, become larger. Unsightly webs that are reachable can be pruned away. Products that contain Spinosad work well as sprays, if necessary.

Red-Headed Pine Sawfly larvae remain active. Mugo pine is one of the more common hosts for this species. The caterpillars are yellow with black spots and a rust-colored head capsule. They feed gregariously and can be pruned away and destroyed when occurring in small numbers. Insecticidal soap sprays or horticultural oil sprays are effective against the small and young larvae. Spinosad products work well on sawfly larvae of all ages and sizes. This insect can feed well into October if the weather remains warm.

Dogwood Sawfly larvae are active. These yellow caterpillars with black horizontal stripes secrete a white wax over their bodies, which hides their true coloration and markings and gives them the appearance of a bird dropping on the foliage. Typical of many sawfly species on deciduous plants, they mostly consume all but the main veins of the leaves. They will feed through September and into October if warm weather prevails. The larvae can be treated with a product that contains Spinosad.

Viburnum Leaf Beetle adult beetles remain active and have created much feeding damage. Adult beetles can remain active until the first frost. Treat for the adult beetle with a registered pyrethroid spray, especially if they appear on plants previously damaged by the larvae.

Lacebugs on Shrubs - Lacebug species that attack shrubs remain very active. All of these species feed and develop on the undersides of the foliage while their yellow stippling feeding injury will appear on the upper leaf surface. Small nymphs can be controlled with insecticidal soap sprays or horticultural oil sprays (summer rate); all feeding stages can be managed with a soil applied systemic treatment of imidacloprid. Given that soaps and oils are contact sprays, the sprays must be directed to the leaf undersides. Plants in sunny locations are more susceptible to severe injury from lacebugs, especially if dry periods prevail. Japanese Andromeda, azaleas, rhododendrons, and cotoneaster are some of the common hosts for these lacebugs. The 4-5 weeks of drought that much of the state experienced earlier this summer has greatly enhanced lacebug populations.

Two-spotted Spider Mite remains very active. This mite has a large host plant range. Damage appears as chlorotic foliage and close inspection reveals thousands of tiny individual piercing-sucking type wounds. Shake foliage over a white piece of paper to find the actual mites. Large numbers of mites and noticeable damage may indicate the need for treatment. Horticultural oil sprays at the summer rate can be effective. Hot and dry conditions, such as experienced within the past 2 weeks in MA greatly encourages outbreaks of this mite. Predatory mites that often keep their numbers in check tend to become inactive during hot weather thus allowing the spider mites to explode in population numbers. Water affected plants well during drought. Use of chemical insecticides can be harsh on beneficial mites (when present) and also lead to the development of pesticide resistance within the spider mite population.

Emerald Ash Borer - Although not yet found in MA, it was found in a roughly 30 mile by 15 mile area in New York State just 25 miles from the western borders of MA and CT last July (2010). Both states are actively preparing now to monitor for this unwanted exotic invader. Traps will be set out throughout Berkshire County (MA) soon to monitor for the adult beetles, which begin to appear in June. The traps are 2 feet long, triangular-shaped, and baited with Manuka Oil, which contains 4 compounds that stressed ash trees emit. These traps are common sights now in all of Berkshire County and in parts of other Franklin, Hampshire, and Hampden Counties in MA, as well as western CT and parts of southern VT. The traps are suspended in trees with rope and coated with a sticky material to catch any emerald ash borer beetles. For more information consult: <http://www.emeraldashborer.info>

Japanese Beetle adults remain active. Chemical insecticide sprays, such as pyrethroids, are usually necessary when this insect reaches unacceptable population numbers. Repeated sprays may be necessary as new beetles emerge.

Asian Longhorned Beetle - August is the most common time to find adult ALB attacking trees from the outside. Inspect closely for these large and showy beetles and their associated signs (sawdust, exit holes, new egg-laying sites, etc). Survey work continues in the Worcester and Jamaica Plain Regulated Areas. No new finds have occurred in the Boston (Jamaica Plain) area since the original 6 trees at Faulkner Hospital were discovered and removed last July (2010). Within the Worcester Regulated Area, new pockets of infestation have been found. The latest find, in Worcester but bordering the town of Auburn, has led to an expansion of the Regulated Area to now include a part of Auburn. No infested trees or beetles have been found in Auburn as of this time. The Worcester Regulated Area has expanded from being 94 sq. miles to now being 98 sq. miles. For more information consult: <http://massnrc.org/pests/alb>

Brown Marmorated Stink Bug remains active. See the Rutgers web site (<http://njaes.rutgers.edu/stinkbug/identify.asp>) for photographs of various life stages. Please report any potential BMSB findings to MDAR or UMass Extension (Robert Childs: rchilds@psis.umass.edu). Another source for information and quality photographs for this pest is: <http://ento.psu.edu/extension/factsheets/brown-marmorated-stink-bug>

Reported by Robert Childs, Extension Entomologist, Plant, Soil and Insect Sciences Department, UMass, Amherst.

Diseases

Browning of leaves on deciduous trees is a common cause of concern. When symptoms include leaf spots and blotches or sometimes leaves turn yellow-brown, curl up, and fall off prematurely, they are very likely a result of leaf spot and shoot blight disease infections. These symptoms were widespread on immature leaves and shoot tips this summer but they began during the persistent rainy spring this year. Even though these diseases cause leaf discoloration and premature leaf loss that does not seriously harm an otherwise vigorous tree. As long as 50% or more of a tree's foliage is green, it can photosynthesize the carbohydrates needed to sustain the tree so it can leaf out again next spring.

Collect and dispose of fallen leaves to reduce fungal disease inoculum around susceptible trees. If needed, promote drying of foliage by pruning trees to increase sunlight penetration and air circulation. It is too late this growing season to control these diseases with fungicides. If desired, fungicides can maintain the appearance of high value trees during future rainy springs, by protecting immature leaves. Begin as buds open/new leaves emerge. If rains persist, reapply 1-2 times at label intervals.

In addition, **it is often not possible to diagnose what is causing leaf browning and premature loss based on visible symptoms alone.** For example, leaf browning occurred on some trees because of insect feeding damage, water shortage/water-logged soils, soil compaction, and root damage as well as root rot diseases, vascular wilt diseases, and bark wounds subsequently colonized by secondary canker disease fungi.

Gymnosporangium rust infections are visible as orange-yellow spots on susceptible hawthorn, apple, and crab apple leaves. In addition, tiny yellow-white tube-like fruiting structures are extending from the underside of infected leaves and fruits. From mid-summer to autumn, spores are wind-carried from the broadleaf host's leaves and, when conditions are wet, they infect green shoots and needles of junipers. Pea-sized to 2" diameter round and elongated galls/swellings develop on susceptible juniper needles and branches between 12 and 20 months after infection. Galls caused by *Gymnosporangium* rust infections cause little or no damage to health of susceptible junipers. However, to maintain appearance of high value junipers, apply fungicides per label intervals to protect eastern red cedar and other susceptible junipers from early July through early September. An alternative approach to manage this disease is to grow *Gymnosporangium* rust resistant hawthorn, apple, and crab apple as well as juniper varieties.

Plant Problem Diagnostic Lab Woody Plant Report: The following are some of the interesting woody plant disease/abiotic disorder samples received at the [UMass Extension Plant Diagnostic Lab](#) in Amherst during the period from August 8 through August 19, 2011:

- **Andorra juniper** - mature shrub with scattered branch tip dieback last year but problem is worse this year; *Phomopsis* blight.
- **European weeping birch** - 10-15 year old tree with leaf browning/spotting and premature leaf loss; birch anthracnose.
- *Platanus occidentalis* - 15 year old tree exhibiting curled and browned leaves scattered throughout crown; powdery mildew.
- *Pinus parviflora* - ~35 year old tree showing browning of newest shoot/needle growth; *Diplodia* blight.

Reported by Dan Gillman, Plant Pathologist, UMass Extension Plant Diagnostic Lab, Amherst.

Weeds

No report this week.

Landscape Turf

No report this week.



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