

## Agriculture &amp; Landscape Program

Landscape,  
Nursery &  
Urban  
Forestry  
Program

## UMass Extension Landscape Message #9 - 2007

April 27, 2007

## Scouting Information by Region

## Regional Notes

**Cape Cod Region ( Barnstable) - General Conditions:** Spring finally arrived over the weekend, with cold, wet weather giving way to almost summer-like conditions. Plant development leaped forward, with flowering plants seemingly blooming overnight. Buttercup Winterhazel (*Corylopsis paucifolia*) and Spike Winterhazel (*Corylopsis spicata*) are in full bloom along with many of the minor bulbs of spring. Soil moisture is good, and conditions are excellent for spring planting. **Pests/Problems:** The first winter moth caterpillar was observed on Monday, April 23. They are eyelash size and feeding in the expanding buds of maples and fruit trees. Black turpentine beetle and white pine weevil adults should also be active now that temperatures have warmed up. Dandelions are blooming in lawns, along with chickweed and hairy bittercress.

**Southeast Region (Hanson) - General Conditions:** Most of the accumulation of GDD for this week occurred on Monday, April 23, when the temperatures were in the 80s. The previous weekend was also sunny and warm. Hanson received 0.27 inches of rain this past week, and soils are moist. *Abeliophyllum distichum* (White Forsythia), *Corylopsis paucifolia* (Buttercup Winterhazel), *Pieris japonica*, *Pieris* 'Brouwer's Beauty,' Leonard Messel Magnolia, *Cornus mas* (Corneliancherry Dogwood), *Helleborus orientalis*, *Helleborus foetidus*, *Corydalis solida*, *Omphalodes*, Dutchman's breeches, bloodroot, vinca, daffodils, *Pulmonaria*, early tulips, *Primula* sp. and *Scilla* sp. are in full bloom. Trillium, anemones, *Epimedium* sp., Cherry 'Holly Jolivette,' and *Pieris floribunda* (Mountain Pieris) are starting to bloom. Turfgrass has started to green-up. **Pests/Problems:** Winter moth caterpillars have hatched and have been found inside the developing buds of common lilac, American beech, Norway maple, silver maple, and sugar maple. Larch casebearer, wasps, hornets, ground-nesting bees, carpenter bees, ticks, and eastern tent caterpillars are all active. Violets and dandelions have started

**East Region (Boston) - General Conditions:** No report this week.

**Metro West (Waltham) - General Conditions:** No report this week.

**Central Region (Boylston) - General Conditions:** The warm weather brought rapid advancement in early bulbs, perennials, and flowering trees and shrubs. Daffodils, scilla, chionodoxa, corydalis, and pusckinia are in full bloom, as are *Helleborus x hybridus* cultivars. Pulmonarias and hyacinths are beginning to bloom. Snowdrops and crocus are ending. White Forsythia (*Abeliophyllum distichum*) is in full bloom, and turf is greening up nicely. **Pests/Problems:** Black flies are biting.

**Pioneer Valley Region ( Amherst) - General Conditions:** Warm, sunny spring weather arrived suddenly this week. Daffodils, *Forsythia*, Japanese flowering cherries, and magnolias, to name a few, are really coming into their own while crocuses in sunny sites are beginning to fade in the Amherst area. Twenty miles north in Northfield, MA crocuses continue to be in full bloom, and buds on *Forsythia* are just beginning to open. **Pests/Problems:** Deer ticks continue to be active. In addition, there is an abundance of young leaf growth, so this is a prime time for leaf spot and shoot blight fungal and bacterial infections to begin if the weather becomes cool and rainy. If this happens, consider applications of fungicides and/or bactericides to minimize

**Berkshire Region (Great Barrington) - General Conditions:** High temperatures, sunny skies, and strong winds have dried soils during the past week after the deluge (3.69 inches of rain) of the previous week. Grass is greening, and many trees and shrubs are breaking bud. Spring is finally underway.

**Pests/Problems:** Ticks, Asian lady beetles, carpenter bees, and an assortment of wasps were active this week. Deer continue to browse on tulips, crocus, and other bulbs as well as the buds of many trees and shrubs. Snowball aphid was observed on emerging

## Environmental Data

The following growing-degree-day (GDD) and precipitation data was collected for a one-week period, April 19, 2007 through April 25, 2007. Soil temperature and phenological indicators were observed on or about

## Quick Links

## Scouting Information

## Regional Notes

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Environmental Data  
Phenology

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## Archived Messages

April 25, 2007. Accumulated GDDs represent the heating units above a 50° F baseline temperature collected via our instruments from the beginning of the current 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.

2007 GROWING DEGREE DAYS				
Region/Location	1-Week Gain	Total accumulation for 2007	Soil Temp (°F at 4" depth)	Precipitation (1-Week Gain)
Cape Cod	34	60	50°	1.00"
Southeast	44	77	54°	0.27"
East	57	96	48°	0.00"
Metro West	45	77	50°	trace"
Central	43	48	40°	0.00"
Pioneer Valley	64	85	51°	0.00"
Berkshires	23	31	51°	0.15"
<b>AVERAGE</b>	44	68	49°	0.21"

n/a = information not available

## Phenology

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

Indicator Plants - Stages of Flowering (begin, b/full, full, f/end, end)							
PLANT NAME (Botanic/Common)	CAPE	SOUTH E.	EAST	METRO W.	CENT.	P.V.	BERK.
<i>Chaenomeles speciosa</i> (Floweringquince)	*	*	begin	*	*	begin	*
<i>P. calleryana</i> 'Bradford' (Bradford Callery Pear)	*	*	begin	full	*	begin	*
<i>Acer platanoides</i> (Norway Maple)	begin	*	begin	full	full	begin	*
<i>Rhododendron</i> 'PJM' (PJM Rhododendron)	begin	*	begin	full	*	begin	*
<i>Magnolia soulangiana</i> (Saucer Magnolia)	begin	full	full	full	begin	b/full	*
<i>Prunus serrulata</i> (Japanese Flowering Cherry)	begin	full	full	full	begin	full	*
<i>Forsythia x intermedia</i> (Border Forsythia)	b/full	full	full	full	full	full	b/full
<i>R. mucronulatum</i> (Korean Rhododendron)	full	full	full	full	full	full	*
<i>Magnolia stellata</i> cvs. (Star Magnolia)	full	full	full	full	full	full	begin
<i>Pieris japonica</i> (Japanese Pieris)	full	full	full	full	full	full	begin
<i>Cornus mas</i> (Corneliancherry Dogwood)	full	full	full	*	full	f/end	full
<i>Acer rubrum</i> (Red Maple)	full	f/end	end	full	f/end	f/end	full

\* = no activity to report/information not available

- CAPE COD REGION - Roberta Clark, Horticulturist for Barnstable County,
- SOUTHEAST REGION - Deborah Swanson, Horticulturist for UMass Extension in Plymouth County, Hanson.
- EAST REGION - James R. Allen, Horticulturist and Greenhouse Manager for UMass Biology Department, Boston.
- METRO WEST REGION – James Martin, Consulting Arborist, reporting from the UMass Extension Center, Waltham.
- CENTRAL REGION - Joann Vieira, Superintendent of Horticulture, Tower Hill Botanic Garden, Boylston.
- PIONEER VALLEY - Dan Gillman, Plant Pathologist, UMass Extension Plant Diagnostic Lab, UMass, Amherst.
- BERKSHIRES - Ron Kujawski, Specialist, UMass Extension Landscape, Nursery & Urban Forestry Program, Amherst.

## Woody Ornamentals

### Insects

The atypical high temperatures of the last week coupled with the more normal temperatures of this week have greatly accelerated plant and insect activity; spring has arrived. The early season pests, such as winter

moth, eastern tent caterpillar, larch casebearer, certain aphid species, among others will all be feeding very soon. Now is the time to begin regular inspections for the appearance of new pest problems.

#### Piercing-Sucking Pests:

- **Spider Mites:** Some species of spider mites overwinter as eggs on their host plants. These eggs are very tiny but can be seen with a hand lens magnifier.
- **Spruce Spider Mite** over-winters as an egg at the base of the needles. If this serious pest was a problem last season, then one should look now for signs of their presence. Many early-season spider mite species, such as spruce spider mite, will be active soon.

#### Aphids:

- **Snowball Aphid** on certain *Viburnum* species. This species overwinters as an egg on twigs and buds of susceptible species (cranberrybush viburnum, mapleleaf viburnum, and others are common hosts). Eggs hatch around budbreak; and as these aphids feed, they cause severe curling of the new foliage. This is only aesthetic but may reduce the sale potential of plants in the garden center and the nursery. Treat these aphids just before, or at, budbreak. Once the foliage expands and curls, the treatment of these aphids is a challenge; plus the damage may have already occurred. Monitoring for the presence of eggs now is difficult. If this pest affected certain plants last year, it is likely those plants will be attacked again this coming spring.
- **Balsam Twig Aphid** - The stem mothers will appear soon, if not already active. Using a hand lens, inspect the needles and the twigs at the base of the needles for the presence of this pale green aphid. These females will soon produce many tiny offspring that will feed heavily on newly expanding foliage causing the needles to become twisted and stuck together with much sticky honeydew. This pest is mostly a problem on balsam and Fraser firs that are grown as Christmas trees. However, they can be a problem on landscape firs as well.

#### Adelgids:

- **Eastern Spruce Gall Adelgid** on Norway and white spruces. Examine the base of healthy buds carefully with a hand lens for the presence of white cottony fibers and actual adelgids. These tiny aphid-like insects overwinter exposed at the base of buds. At budbreak, they begin to feed and cause galls to form. When in large numbers, countless new shoots will be killed. It may now be too late in many parts of the state for the use of dormant oil sprays; inspect buds and weather carefully.
- **Cooley Spruce Gall Adelgid** on blue spruce. This pest is very similar to the eastern spruce gall adelgid, but this one makes galls on blue spruce here in the eastern USA. If Douglasfir is within close proximity to a blue spruce, the problem can be severe. Oil sprays, of course, will cause blue spruce to become a dull green color for two to three months. In most cases, the blue color will eventually return to the needles, but clients should be informed ahead of time. Insecticidal soaps along with many of the registered chemical insecticides should, also, be effective against these soft-bodied and exposed insects during the early part of the season.
- **Hemlock Woolly Adelgid:** This pest has been active all winter by feeding and developing at the base of needles on the twigs of our native and Carolina hemlocks. They have already produced eggs for the new generation in the spring and are actively feeding and growing. Monitor with a hand lens for the presence of these tiny insects. Especially inspect twigs from the undersides for fine cottony masses, plump adelgids, and reddish-colored eggs. Treat with an oil spray when the weather allows for their use.  
**UPDATE: Now that egg-laying is well underway, we are seeing strong indications that HWA survived the winter weather and appears to be quite prolific, at least in western Massachusetts.**

#### Caterpillars:

- **Winter Moth:** We expect this introduced pest to be found in new areas this year as well in already established areas. Flight of the moths in December (mostly) was very spread out this year, and it was difficult to establish population sizes. However, those places that had winter moth last year should be well prepared to deal with it this year. The eggs of this pest are on the trunks of trees now but are very difficult to see. Dormant oil sprays for the eggs may be effective for smaller plants, such as blueberries, which this pest also attacks. Once the foliage has expanded, treat with a spinosad product or *Bacillus thuringiensis* Kurstaki (B.t.K.), if necessary. If these warm days continue, we could see egg hatch within the next three weeks in Massachusetts. **Winter moth eggs should now be hatching.**
- **Fall Cankerworm:** A native caterpillar pest that is similar to winter moth. This pest remains active in many of the same areas as winter moth. Eggs are in barrel-shaped clusters and wrapped around small stems. Treat the larvae the same as winter moth, once they appear. Oaks, among other deciduous hosts, are commonly attacked.
- **Forest Tent Caterpillar** has been on the increase in MA and other surrounding states for several years now. In areas of higher population densities, some mortality of this pest due to natural causes (such as disease) was seen in 2006. However, all areas where this pest occurred last year should be prepared to deal with forest tent caterpillar in 2007. Oaks in eastern MA seem to be the favored host while maples are the preferred host in western MA. However, this pest does have a rather wide deciduous host range overall.
- **Gypsy Moth:** Some areas witnessed natural decline of building populations last year due to the fungus, *Entomophaga maimaiga*. Monitor now for the tawny-colored egg masses to get a rough idea of population sizes. Once the eggs have hatched and the larvae have settled to feed, treat with a spinosad product or *Bacillus thuringiensis* Kurstaki (B.t.K.), if necessary. Eggs usually begin hatching when

shadbush (*Amelanchier* spp.) is in bloom.

- **Eastern Tent Caterpillar:** Common to *Malus* and *Prunus* species, this pest overwinters as an egg that appears in a tight cluster and is wrapped around small stems of the host plant. Inspect for the presence of these eggs. If occurring in limited numbers, egg masses can be removed and destroyed (buried or burned). Once the larvae have begun to feed and form their silken webs, they can be treated with a spinosad product or *Bacillus thuringiensis* Kurstaki (B.t.K.). This pest will become active very soon.
- **Bagworm caterpillar** did manage to survive the Massachusetts' winter and is now in the egg stage. Mostly, this pest comes into New England on plant material from more southern states, primarily on arborvitae and juniper, and usually cannot survive our winters. This last autumn was mild well into November thus allowing these intruders to pupate, emerge as adults, and then produce upwards of 1000 per female. Inspect plants for the characteristic "bags" which contain the eggs. When occurring in small numbers, remove by hand and destroy. If they occur in large numbers, wait until approximately mid to late June and treat with a *Bacillus thuringiensis* Kurstaki (B.t.K.) or a spinosad product for the caterpillars. Eggs hatch from late May into June.
- **European pine sawfly** will be active within the next couple of weeks. Look for the female "wasps" laying their eggs within the needles of such host plants as mugo pine. Eggs appear as a row of blocky-shaped patches along the needles. They are often found in clusters on the plant. Small infestations can be pruned away and destroyed. The larvae feed in packed groups and can also be pruned away and destroyed. Larger populations can be treated with insecticidal soap (young larvae) or with a spinosad product.

#### Shoot Attackers:

- **Rhododendron Borer:** Most affected rhododendron shoots now display signs of wilt and dying foliage. Don't confuse this with winterkill, which is also prevalent in much of the state. Inspect the base of injured shoots for entrance/exit holes and for piles of sawdust on the ground just below these holes. Prune out and destroy affected shoots. The larvae within the shoots are very mature and have plugged the holes with sawdust, so treatments in the spring are difficult. Specific pheromone traps can be hung in rhododendron plantings to monitor for the adult moths, which appear wasp-like, in mid to late May and through June. Use a knockdown spray for the adults when they appear. In July, if infestations are suspected, apply a coarse spray of beneficial (entomopathogenic) nematodes to the lower trunk and base of the scaffold branches.

#### Leaf Miners:

- **Inkberry Leafminer** overwinters within the mine in the leaf. Inspect for tip browning on foliage. This browning usually does not appear until late November or December and often goes unnoticed. If it is seen, it is usually attributed to winter injury. However, the browned part of the leaf should be rolled gently between the thumb and forefinger to feel the small lump within the mine that indicates a pupa of the inkberry leafminer. Leaf tips will also be hollow when torn open, if there is a miner present. Make a note to hang yellow sticky cards in early May to determine when the adult flies are emerging. That will be the time to apply a cover spray to prevent re-infestation.
- **Birch Leafminer** - As the old-time entomologists used to say, "When the birch leaves are about the size of a dime, it's time to start thinking about the birch leafminer." This adage turns out to be a good phenological indicator for the emergence of adult birch leafminers. The females require tender new foliage for oviposition (egg-laying). Make note of the white-barked birches that may have been attacked last year and hang yellow-sticky cards soon after budbreak, which will attract and catch the females. This strategy is not a control measure but rather an indicator for when to apply a cover spray to break the cycle of re-infestation.

#### Nuisance Pests:

- **Western Conifer Seedbug:** A house invader, may start to appear in the living areas of homes now that the sun is getting higher in the sky and warming roofs and siding. These insects may have been in homes all winter but dormant. Now that spring is arriving, they become active and seek a route to the outdoors. However, they oftentimes take a wrong turn and end up in the living room, sometimes in great numbers. Although relatively large insects (about 3/4") they do not bite or sting. They can be vacuumed up and released outdoors, or the bag containing them can be destroyed.
- **Ladybugs:** See the above description of western conifer seedbug. The reasons for ladybugs being in homes and how to best deal with them are the same.

Reported by Robert Childs, Entomologist, UMass Extension Landscape, Nursery and Urban Forestry Program, Amherst.

#### Diseases

The recent rainfall has given plants a good watering, but with leaves developing, they are vulnerable to new **leaf spot and shoot blight** infections, especially when accompanied by temperatures of 50-70 degrees F. This is the time to apply protective fungicides to nursery and specimen woody landscape plants known to be susceptible to diseases such as, **apple scab** on flowering crabapple, **dogwood anthracnose** on flowering dogwood, **fire blight** on mountain ash, crabapple and Callery pear, **Entomosporium leaf spot** on English hawthorn, **Phomopsis tip blight** on juniper, and **black spot** on rose.

**Ramorum blight**, also known as **sudden oak death (SOD)** and **ramorum dieback**. Since 1995, oaks and tanoaks have been dying in the coastal counties of California. Since then, surveys found other plants infected or associated with this disease caused by the water mold *Phytophthora ramorum*. Researchers in the U. S. first isolated the pathogen in Mill Valley (Marin County) on tanoak, but since that time additional surveys confirmed the pathogen on various native hosts in fourteen coastal California counties and in Curry County,

Oregon. Through ongoing surveys of nurseries, USDA-APHIS-PPQ continues to define the extent of the pathogen's distribution in the U. S. and limit its artificial spread beyond infected areas through quarantine and a public education program.

#### Status of *Phytophthora ramorum* in 2007:

**Forest Detection Survey** - For 2007, the USFS will be conducting a watercourse pilot survey throughout the US to aid in detecting *P. ramorum* in the wild land environment. This new program will replace the nursery perimeter and general forest detection surveys, which were carried out from 2003 through 2006.

**Federal Regulation, State Inspection, Nursery Survey, and Other Finds** - Through April 11, inspections required by the Federal Regulation, by State Inspection, Nursery Survey, and/or other detections identified seven positive nursery sites in four states. The states found with positive nurseries in 2007 are Washington, California, Florida, and Mississippi.

## Weeds

Treat **winter annuals and perennials** in ornamental beds with glyphosate or glufosinate. These applications are easier if done before woody ornamentals leaf out. Non-herbicidal material containing clove oil, citric acid, acetic acid, or orange extract can be used on small winter annuals but not large winter annuals or perennials. With the recent warm weather most winter annual weeds are now in flower, and they should be controlled before they set seed. Preemergence herbicides can be applied to weed-free ornamental beds now.

Reported by Randall Probst, Weed Specialist, UMass Extension

## Landscape Turf

### Diseases

The question of season long persistence of **red thread**, caused by a fungus (*Laetisaria fuciformis*) and its poor response to fertility adjustments, has been raised by lawn care professionals. Usually, red thread is not a serious problem on intensely managed turf (golf courses). However, the disease can be problematic in residential turf as the turfgrass species, perennial ryegrass and fine fescue, are more susceptible

There are two reasons in recent years why red thread is becoming a more serious problem for landscapers: 1) climate conditions and 2) poor cultural practices or growing conditions for turf. We had cool and wet weather this spring and last fall as well as a prolonged period of surface moisture on or at snowmelt. Unusually heavy precipitation in early spring this year represents a trend toward an increase in the frequency of extreme rain events (> 2 inches/48 hours). Such events result in more soil compaction, and plants become more vulnerable to disease problems caused by wet conditions. Red thread, in particular, thrives on prolonged cloudy, drizzling weather.

One of the best cultural practices to manage red thread is to provide the proper nitrogen fertility level; this is not as simple as throwing a little fertilizer at the problem. Maintain adequate and complete (potassium, phosphorous, calcium as well as nitrogen) fertility as determined by soil tests.

Other cultural practices include:

- Apply water-soluble sources of nitrogen to reduce disease severity.
- Maintain a soil pH between 6.0 and 6.5.
- Water deeply and infrequently.
- Avoid late afternoon, evening, and light, frequent irrigations which extend periods of leaf wetness.
- Prune trees and shrubs to improve air circulation and increase light penetration.
- Keep mower blades sharp to minimize leaf wounding which can enhance infection.
- Collect grass clippings when the disease is active or growing slowly to reduce the number of sclerotia that are incorporated into the thatch.

Despite limited information on cultivars susceptibility to red thread, the National Turfgrass Evaluation Program (NTEP) provides a list of perennial ryegrass cultivars' susceptibility to red thread. The web address for the NTEP is <http://www.ntep.org>

If a fungicide application is warranted for high value turf, the following materials are registered for red thread: azoxystrobin (Heritage™), chlorothalonil (Echo™ 720 F), fenarimol (Rubigan™ AS), flutolanil (ProStar™ 70 WP), fluoxastrobin (Disarm™), iprodione (26 GT™ 2SC), mancozeb (Fore™), myclobutanil (Eagle™ 20 EW), polyoxin D zinc (Endorse™), propiconazole (Banner MAXX™), pyraclostrobin (Insignia™), tridimefon (Bayleton™), and trifloxystrobin (Compass™).

Reported by M. Bess Dicklow, Plant Pathologist, UMass Extension Plant Diagnostic Lab, Amherst and Dr. Geunhwa Jung, Turf Pathologist, UMass Department of Plant, Soil and Insect Sciences, Amherst.

## Insects

No report this week.

## Weeds

**Annual Grass Weeds.** Continue to apply preemergence herbicides for crabgrass and annual grass control. Never apply a preemergence product to turf areas that are still littered with winter debris. Rake and clean turf to prevent "application shadows."

**Broadleaf Weeds.** Hold-off on treating broadleaf weeds; it is still too early.

Reported by Randall Prostack, Weed Specialist, UMass Extension Landscape, Nursery and Urban Forestry Program, Amherst.



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