Wisconsin Horticulture Update Summary Aug. 2, 2013

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WI WEATHER REVIEW

For the week ending July 28, 2013, a cold snap hit the state, stalling crop growth. Daytime highs plunged from the 80s to the upper 50s and 60s, and overnight lows dipped into the low 40s in the far north. Cities across the state recorded record low daytime highs for July 27. Rainfall was scattered, with some areas receiving a good soaking and some areas missed entirely. Crop reporters commented that late plantings, along with the wide swings in temperature and precipitation experienced this season, have produced enormous variability in crop progress and condition.

Across the reporting stations, average temperatures last week were 4° to 7° below normal. Average high temperatures ranged from 74° to 78°, while average low temperatures ranged from 53° to 60°. Precipitation totals ranged from 0.43" in Eau Claire to 2.32" in Madison. (WI Crop Report)

Growing degree days (GDD)

Growing degree days is an accumulation of maximum and minimum temperature averages as related directly to plant and insect development. This week, the GDD_{mod50} in Wisconsin ranged from 968.4 to 1810.2. Following is a

list of GDD as of August 2, 2013 for the following cities: Bayfield 968.4, Beloit 1810.2, Crandon 1194.1, Cumberland 1340.5, Dubuque 1704.3, Eau Claire 1508.5, Fond du Lac 1452.5, Green Bay 1363.4, La Crosse 1617.4, Madison 1650.2, Milwaukee 1421.5, Wausau 1301.7. To determine the GDD of any location in Wisconsin, use the degree day calculator at the UW Extension Ag Weather webpage http://www.soils.wisc.edu/uwex_agwx/thermal_models/degree_days

To put it in perspective, following is an abbreviated list of plant and insect phenological stages in relation to GDD accumulations at which the events occur. Common lilac first bloom 207; common flowering quince full bloom 208; Sargent crabapple first bloom 213; wafaring tree viburnum first bloom 227; **elm leafminer adult emergence 228**; Koreanspice viburnum full bloom 233; eastern redbud full bloom 254; common horsechestnut first bloom 260; **pine needle scale egg hatch 1st generation 277**; Sargent crab full bloom 282; **eastern spruce aldegid egg hatch 283**; wayfaringtree viburnum full bloom 287; blackhaw viburnum first bloom 301; redosier dogwood first bloom 311; common lilac full bloom 323; **lilac borer adult emergence 324**; Vanhoutte spirea first bloom 329; common horsechestnut full bloom 344; **lesser peach tree borer adult emergence 362**; **oystershell scale egg hatch 363**; blackhaw viburnum full bloom 370 pagoda dogwood first bloom 376; redosier dogwood full bloom 408; Vanhoutte spirea full bloom 429; black locust first bloom 455; pagoda dogwood full bloom 486; smokebush, first bloom 501; common ninebark first bloom 507; arrowwood viburnum first bloom 534; **bronze birch borer adult emergence 547;** black locust full bloom 548; **potato leafhopper adult arrival 568; juniper scale egg hatch 571;** common ninebark full bloom 596**;** arrowwood viburnum full bloom 621; multiflora rose full bloom 643; northern catalpa first bloom 675; **black vine weevil first leaf notching due to adult feeding 677;** Washington hawthorn full bloom 731**; calico scale egg hatch 748; greater peach tree borer adult emergence 775;** northern catalpa full bloom 816**; cottony maple scale egg hatch 851;** panicle hydrangea first bloom 856**; fall webworm egg hatch 867;** fuzzy deutzia full bloom 884**; winged euonymus scale egg hatch 892;** chickory full bloom**, squash vine borer adult emergence 900; Japanese beetle first emergence 970;** littleleaf linden full bloom 1117; Rose-of-Sharon first bloom 1347**; pine needle scale egg hatch, 2nd gen. 1923; magnolia scale egg hatch 1938; banded ash clearwing borer adult emergence 2195.**

INTRODUCTION

The host for today's WHU was Columbia Co. Agriculture Educator George Koepp. PDDC Director Brian Hudelson, Insect Diagnostic Lab Director Phil Pellitteri and Janesville Rotary Garden Horticulture Director Mark Dwyer were special guests. Participants in today's discussions were representatives from the following counties: Brown (Vijai Pandian), Burnett/ Sawyer/ Washburn (Kevin Shoessow), Marquette (Lyssa Seefeldt), Milwaukee (Sharon Morrisey), Outagamie (Jill Botvinik), Portage (Sophie Demchik),) St. Croix (Hiedi Doering), and Winnebago (Kim Miller).

HORTS' SHORTS

Agents report the following issues to be of interest this week: Variations in precipitation around the state this week put some western counties in drought situation, and some southeastern counties in wet soils. A wide range of observations and issues were brought up. Japanese beetle incidence was reportedly low in the southeast, but high in Brown and St. Croix Counties. Spotted Wing Drosophila was confirmed in a Pepin Co. commercial growing field. Colorado potato beetle, striped cucumber beetle and spotted cucumber beetle happily have not been causing much problem in the southeast. Co. Squash vine borer was observed in Brown and St. Croix Counties. New Emerald Ash Borer confirmations were announced in Mauthe Lake (Fond du Lac Co.) and Watertown (Jefferson /Dodge Co.), placing Dodge Co. in the quarantine area for the first time. Diseases were in the upswing, with leaf spots on woody and herbaceous ornamentals (Septoria, anthracnose, etc.,), root rots on herbaceous plants, powdery mildew on vegetable crops and maples, black knot on Prunus, and declining trees. There have been many complaints of vegetables not producing fruit, but where fruit was present, there was sunscald or end rots. Grapes were reported having a hard time thriving, and suffering from anthracnose. Weeds, including crabgrass, remain a constant problem.

Emerald Ash Borer Update Aug. 2: see press release below under "WHU Off the Air"
Top Five Reasons It's an Epic Crabgrass Year (MSU Aug. 2):
http://msue.anr.msu.edu/news/top_five_reasons_its_an_epic_crabgrass_year

SPECIALIST REPORT: Plant Diagnostic Disease Clinic

Presented by Brian Hudelson, Sr. Outreach Specialist, UW-Plant Pathology and Director of the UW-Extension Plant Disease Diagnostics Clinic (PDDC) bdh@plantpath.wisc.edu

The PDDC update is attached to the end of this summary.

Plant Disease Clinic update

Oak wilt was very active, with many samples coming in testing positive this week.

Verticillium wilt was also detected in samples submitted.

Root and crown rots were found in raspberry samples throughout the state. The responsible pathogens varied from site to site: *Phytophthora, Pythium, Rhizoctonia*. Available fungicide options were outlined. For Rhizoctonia root rots, no fungicides are registered for fruit crops such as raspberry and strawberry, although there are fungicides for other types of plants. Fungicides may be applied this time of year, but they should be targeted to wet periods when the root rot organisms tend to be active. If *Rhizoctonia* is abundant in a raspberry patch, the recommendation is to start a new patch, with new plants and in a new, very well drained location.

Oak Wilt (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Oak_Wilt.pdf
Oak Wilt Management – What are the Options? (UWEX): http://learningstore.uwex.edu/Assets/pdfs/G3590.pdf
Verticillium Wilt of Trees and Shrubs (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Verticillium_Wilt_of_Trees_and_Shrubs.pdf
Root and Crown Rots (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Root_and_Crown_Rots.pdf
Growing Raspberries in Wisconsin (UWEX): http://learningstore.uwex.edu/Assets/pdfs/A1610.pdf
Small Fruits: Insect and Disease Management for Backyard Fruit Growers in the Midwest (UWEX): http://learningstore.uwex.edu/Small-Fruits-Insect-and-Disease-Management-for-Backyard-Fruit-Growers-in-the-Midwest-P402.aspx

Questions

All *Fusarium* are not alike

A Master Gardener sent in a Shasta daisy sample diagnosed with Fusarium. Is there a fungicide that can be used to control it?

There are different species of *Fusarium*. Some are root- and crown-rotting pathogens, others are vascular wilt pathogens, and some *Fusarium* are not pathogens at all. *Fusarium*, in general, are more active with wet conditions, especially the root-rot pathogens. The root-rot forms may be controlled with commercially-registered fungicides, but here are no fungicides available for the vascular wilt forms of the fungi.

Fusarium Wilt Diseases of Ornamental Plants (UIUC): http://web.aces.uiuc.edu/vista/pdf_pubs/650.pdf

SPECIALIST REPORT: Insect Diagnostic Lab Update

Presented by Phil Pellitteri, Distinguished Faculty Associate, UW-Madison Department of Entomology and Director, UW-Extension Insect Diagnostic Lab pellitte@entomology.wisc.edu

Sample submissions to the lab continue to be high this year, with a wide range of insects.

Spotted Wing Drosophila

The numbers of SWD are exploding with adults observed statewide. The larvae seen so far are very small, probably an indication that the next generation will be hatching soon and causing a huge increase in fruit activity.

Questions

Do the SWD young adults have different coloration than mature adults?

When they first emerge they may be lighter, and darken up over time. Color is not quite as important as the other characteristics: adult males always have the distinct spots on the wings (not at the tips), and females have the distinctive toothed ovipositor.

Spotted Wing Drosophila (UW-Madison): http://labs.russell.wisc.edu/swd/

Japanese Beetle populations

What is your impression of Japanese beetle populations throughout the state? In Milwaukee, the numbers are low this year, but we have not had a long history with this pest.

In areas where Japanese beetle have been well established, and that have also experienced last year's drought, the numbers are low. These areas have reached a natural balance, and with the drought, numbers were expected to be low. In Madison, where the pest had been established for 12 years, the population is now at about 10% to 15% of what is was at its highest point. If there were no natural balance going on there would be no reason for the reduction. Other states have reported experiences with an initial push in numbers followed by a later drop in populations.

In Milwaukee, the drought of 2012 probably had a major impact on the numbers this year.

In areas where the populations are new -- within the first four- to five-years of infestation -- the numbers were expected to climb, especially if the area was not caught in a severe drought, such as in Brown Co.

As a prediction for 2014, with the lush growth and high moisture we have had this year, there may be a bit of a bump of the population.

Chris Williamson (UW-Madison) is doing interesting research on a Bt formulation to be sprayed on adult Japanese beetles. Bt has been traditionally used to kill larvae, but it seems this formulation may be effective on the adults. This could be an organic approach to control Japanese beetles.

Someone has invented a little mechanical device to attach to the stem of plants that shakes the plant on a regular basis. The beetles do not like the disturbance and fall off the plants. That technology is still in the development stage, but it may have an application for other insects that may be disturbed by vibration.

Japanese Beetle (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Japanese_Beetle.pdf

SPECIAL TOPIC: Shade Perennials

Presented by Mark Dwyer, Director of Horticulture, Rotary Botanical Gardens, Janesville, WI *mark.dwyer@rotarygardens.org*

A PDF version of Mark's full presentation, as well as a PDF handout of the presentation (6 slides per page), are available at:
http://fyi.uwex.edu/wihortupdate/2013/07/31/august-2-2013-shade-perennials-downloads/

Introduction

The Rotary Botanical Gardens in Janesville, WI, is a 20 year-old, non-profit botanic garden dedicated to international peace and friendship. Its mission is to provide horticultural education and appreciation for everyone. The Gardens feature many styles, such as the Japanese Garden, and the English Cottage Garden. There are various planting themes, employing many colors. 900 varieties of annuals totaling over 150,000 plants are used, some in trials. 3000 varieties of perennials are used, with large collections of ferns, daylilies and hostas. The Gardens also have 1200 taxa of woody ornamentals. Volunteers provide much of the labor in the garden, along-side Mark.

Mark Dwyer, trained in landscape architecture and forestry, has been with the Gardens for fifteen years. He thoroughly enjoys public horticulture and plants. Mark's daily gardening blo, which includes pictures of the Gardens, has been running for five years.

This presentation will focus on a few shade plants that are good performers, not just new plants that have not been trialed. The adage, "All new plants are not good and all good plants are not new" holds true, especially for shade plants.

Defining shade garden conditions

It is most important to define what shade is when questioned about shade plant recommendations. There are many types of shade situations, such as dappled shade, indirect sunlight, morning sunlight, mid-day sun, or evening sunlight. Available light and the intensity change throughout the day and through the growing season all matter. There are countless gradations to be considered.

Soils are also an important factor in choosing plants; soil types vary from rich, moisture retentive to competitive, dry soils.

Consumers need to know a plant's preferences for light, soil moisture and maintenance. Are they willing to provide extra irrigation or soil modifications to improve conditions for the plant? For example, it may take many years of amending soils to achieve desirable conditions for moisture-sensitive plants.

Know the plant and understand its needs. What light intensity does it prefer, and what will it tolerate? What is the pH and preferred soil type? What is the preferred soil moisture level; will it tolerate root competition? Does the plant have special needs: deadheading, frequent division, staking? Will it be a clump-former, or will it spread?

Shade plant recommendations

This is a short list of recommended plants for shade, there are many more suitable for some types of shade.

Asarum canadense (**Canadian Ginger**) is a ground cover with heart shaped leaves. The interesting spring blooming maroon flowers are hidden at ground level. It is a mat-forming perennial, crowding out weeds. At Rotary Gardens, it is planted in the Japanese garden where the soils are moderately dry. Considered somewhat drought tolerant, in the drought of 2012 it shriveled and went dormant early in the summer. ***Asarum europaeum*** **(European Ginger**) has smaller, glossy leaves and slowly forms clumps. Its spring flowers, similar to Canadian Ginger, are also found at ground level. The very glossy foliage provides an interesting texture to the shade landscape, a very important consideration in gardens where foliage texture, color and size are significant than flowers.

Waldsteinia ternata **(Barren Strawberry)** is a very good mat-forming ground cover. Once it colonizes it eliminates almost all weed competition. This colonizer does not stop spreading, a consideration when choosing this plant. It has a beautiful yellow flower, blooming heaviest in mid-spring, with sporadic bloom through the summer. It will tolerate much shade. At Rotary Gardens, it has performed well in the toughest part-shade areas that are not irrigated; it is quite drought tolerant after establishment.

Brunnera macrophylla **(False Forget-me-not)** has seen a boom in new varieties. The species tolerates partial shade, dappled light, morning or afternoon light, but does not perform well in deep shade or in full sun. In full sun, and in drought the large leaves dry out without proper irrigation. Tolerant of tough soils, they do better in richer, moisture retentive soil with infrequent, deep waterings. The beautiful blue flowers bloom in spring for approximately two weeks and then disappear. The species has a rough leaf that is not troubled by deer browsing, pests or diseases. There may be occasional holes from slugs or earwigs, but the damage is usually very minimal. *Brunnera* is a clump former. It is lovely used as a specimen or in groupings, forming a pseudo-ground cover. It is used well in association with ferns and hostas. Cultivars with variegated foliage are quite effective in providing a silver glow to a shaded site. *Brunnera m.* 'Variegata' is an older cultivar with wide white edges; 'Jack Frost' has a silver patina with green venations that shines beautifully in moonlight gardens. There are a few cultivars similar to 'Jack Frost', with almost identical coloration, some with much larger leaves. 'Looking Glass' has a brighter silver patina, glowing in the garden. 'King's Ransom' has the silver patina of 'Jack Frost' with added lime highlights in spring. One of the best collections of *Brunnera* is in the old trial garden area at Chicago Botanic Gardens.

Pulmonaria species (**Lungworts**) have dozens of cultivars available. The Lungworts have many similar benefits of *Brunnera*: they are deer resistant due to abrasive leaves, mostly pest and disease resistant, and have lovely spring flowers in hues of pink, blue, raspberry, salmon or white that last for two to three weeks in early April. Under twelve inches high, *Pulmonaria* are slowly expanding clump-formers. Tolerant of dry shade, they would prefer a richer soil, but they have performed well under competitive tree roots and at the dry crest of berms. They are tough stalwarts of the shade gardens. Although the flowers of this plant are lovely for a few weeks, choose the Lungworts for their interesting variegated foliage. Solid green, solid silver, silver-edged, silver-centered, and silver-spotted cultivars are available. There are variations to the leaf shape also; 'Samurai' is an example of a cultivar with long narrow foliage.

Helleborus species (**Hellebore**, **Christmas Rose, Lenten Rose**) have seen resurgence lately. There are many hybrids being bred and cultivars being chosen. The foliage, rarely touched by disease or pests, is deer resistant,

and considered semi-evergreen in our climate. As the flowers emerge in spring, the old foliage may be trimmed off to be replaced with fresh new growth. The flowers are often held downward, but breeders are working toward more upright flowers. The flowers bloom very early in spring and are effective for a few months in the garden. Hellebores may be used as specimens or clumping groundcovers when used *en masse*. A very useful plant to consider for tough conditions, Hellebores are able to tolerate relatively dry soils and partial to moderate shade, but do not perform well in clay soils with excessive moisture. If planted in full sun, they must have adequate moisture. They partner well with *Pulmonaria* because of similar cultural tolerances. Olbrich Botanical Gardens' heavy use of Hellebores creates a spectacular sight in early April through May.

Cimicifuga (now known as Acteae) species (**Fairy Candles**) flower in mid-summer with spires of fragrant blooms. Used for their unique architecture, the plants may tower 4-7' tall in flower. All the **Cimicifuga (Actaea)** are dependent on moisture and rich soils. Although the species is shade tolerant, the dark foliaged cultivars benefit from more sun for intense leaf color. ***Cimicifuga racemosa (Actaea recemosa)*** blooms July through August. ***C. simplex (A. simplex, A. matsumurae***) includes the dark leaved types, and blooms later in the season, September though October. At Rotary Gardens, the Fairy Candles are planted in tight groups of fifteen plants for a showy flower display.

Corydalis lutea **(Yellow Fumitory)** is hardy to zone 5, and possibly zone 4. The bluish-green foliage is reminiscent of Bleeding Heart or Columbine. The yellow flowers are the longest blooming of any shade perennial, from late April to the hardest of frosts, and are self-cleaning. It spreads by seed, so it is not necessary to buy many plants; is easy to cull out seedlings. It does well in all but deepest shade. At 12" high this *Corydalis* works as a very good filler plant between heavier textured shade perennials.

Dicentra species (**Bleeding Heart**) has an ever-blooming type, *Dicentra eximia* (Fringed Bleeding Heart), which features a smaller, lacier stature and longer blooming period than the common *Dicentra spectabilis,* now classified as *Lamprocapnos spectabilis* (Bleeding Heart). It will bloom heavily in spring before the overhead tree canopy leafs out and sporadically through mid-summer. There are many cultivars of *D. eximia*. The old fashioned Bleeding Heart cultivar, *Dicentra spectabilis* 'Goldheart' (*Lamprocapnos spectabilis* 'Goldheart'), offers chartreuse foliage on a large 3' x 4' shrubby plant until it goes into dormancy in mid-summer. *Dicentra* species prefer part shade, not full shade, and rich, moisture retentive soil.

Heuchera species (**Coral Bells**) have hundreds of cultivars, offering many foliage shades and flower colors. *Heuchera* foliage colors will take on color changes during the growing season. Most Coral Bells will perform best in part sun to full sun with adequate moisture; in the shade garden they should be placed in the sunniest areas. *Heuchera villosa* has larger leaves, are taller and tolerate the hot Wisconsin summers better than most of the other species. Winter heaving, and an intolerance to drought and heat, weaken or kill many of the *Heuchera* planted here.

Hosta (Funkia) has thousands of cultivars. Rotary Gardens, a national display garden for the American Hosta Society, only has about 500 varieties in its collection. Leaf color, leaf shape, leaf size, leaf texture, fragrance, flower, and colorful stems are characteristics for which Hosta are bred and chosen. The most notorious pest of *Hosta*, the slug, has been kept under control at Rotary Gardens by applying slug control products three times during the growing season to minimize damage. *Hosta* planted in rich soils are the best performers. Every three to four years, the plants are divided at the Gardens. They are one of the easiest shade plants to grow and one of the best for variety diversity.

Aruncus species (**Goatsbeard)** require very moist soils and tolerate some shade. In dry springs and summers, they may go dormant very quickly. *Aruncus dioicus* will reach 5' to 6' in rich, moist soils. *Aruncus* x 'Misty Lace' is a smaller version, at 30", blooming in mid to late spring for three weeks; the dried blossoms are also attractive. *A. aesthusifolius*, the smallest Goatsbeard, is effectively used at the garden edge with its attractive May flowers and fine foliage, as long as it is kept moist.

Epimedium species (**Barrenwort**), along with *Pulmonaria* and *Helleborus*, is a favorite for dry soil applications. They have clean foliage, are pest and disease resistant and offer three seasons of interest. In spring, the foliage is tinged red, followed by two to three weeks of spring blooms, and followed by colorful foliage in fall again. A clumping groundcover, it is a sturdy plant that does well planted in masses. Not the easiest to divide or move, consider planting them in large numbers to create a hardy weed-free groundcover. *Epimedium* may stay evergreen

until spring, at which time it can be pruned back and allowed to re-leaf. There are about 40 varieties of *Epimedium* hardy to zone 3 to 4. *Epimedium rubrum* features short wands of downward facing orchid-like blooms. *Epimedium pugiberum*, with orange blooms, is another one of the many under-utilized Barrenworts.

Grasses and Sedges offer a variety of hues and unique texture to the shade garden. Knowing the plants and their habit is important before making recommendations. Vigorous, running sedges may not be controllable in some landscapes. One beautiful clumping shade grass, *Hakonechloa macra* (Hakone Grass), is hardy to zone 5, but may survive in colder areas if well protected. Numerous varieties offer gold or white highlights to lighten an area and soften edges with a fountain-like habit. *Carex* species (Sedges) are not true grasses, but are grass-like; most are tolerant of shade. *Carex elata* 'Bowles Golden' is hardy to zone 4. It is used at Rotary Gardens in combination with ferns, contrasting with linear architecture and a bright gold blast of color. *Carex pennsylvanica*, a native sedge, may be used as a flowing groundcover or edger.

Ferns are another important plant group to use in the shade garden. Ferns may be used as effective groundcovers, offering a variety of colors and texture. Most ferns require ample moisture and rich soils. *Dennstaedtia punctilobula* (Hay-scented Fern) is one that may tolerate moderately dry soils. In general, ferns are very well-behaved plants, but there are a few, for instance our native *Matteuccia struthiopteris* (Ostrich Fern), that are rhizomatous, vigorously spreading beyond the bounds of a small garden space. *Adiantum pedatum* (Maidenhair Fern), hardy to zone 3, and Adiantum aleuticum (Alaska Maidenhair Fern), hardy to zone 2, are very delicate in appearance, but also very tough. *Polystichum acrostichoides* (Christmas Fern) is one of the best native ferns for erosion control and tough conditions. Deep green in color, it remains evergreen through the winter and sends out fresh new fronds in spring. *Onochlea sensibilis* (Sensitive Fern) is effective along wet streams and roadsides, where it will colonize to form a nice patch. Sensitive to frost, it turns yellow at 40°F. *Athyrium* 'Dre's Dagger' is a hybrid of Lady Fern exhibiting crisscrossed pinnae. Athyrium 'Frizelliae' (Tatting Fern) is a 12" tall by 12" wide clumping fern used well in a repeating fashion. Ahyrium niponicum var. pictum (Japanese Painted Fern) has silver fronds and burgandy stems. They achieve the best color after about three years in the ground, showing most intensely in spring after they emerge. These ferns may be used in part sun. There are many varieties of Japanese Painted Fern; at Rotary, 30 cultivars are featured, many of them appearing identical to each other. Most varieties of this fern will be 12-15" high. *Athyrium nipponicum* var. *pictum* 'Silver Falls' has a high proportion of silvering. 'Samurai Sword' has a beautiful combination of burgundy and silver. 'Burgundy Lace ' has more maroon in the pinnae than most . The pinnae of 'Applecort' fan out in crests. Athyrium 'Ghost', a cross between Painted Fern and Lady Fern, has the hardiness and height of Lady Fern, 24" -30", with the silver coloring of Painted Fern. A. 'Branford Beauty' is another tall silvered fern. A. 'Branford Rambler' is a silvery-green, tall, spreading groundcover. A. 'Ocean Fury' is a crested Lady Fern-Painted Fern hybrid reaching 24" tall.

Mosses, of which there are 400 natives species in Wisconsin alone, offer a beautiful option to a shade groundcover. Dale Sievert, retired professor at MATC, shared his passion and knowledge of mosses when he renovated the Rotary Gardens moss garden. Mosses will never displace turf because the cultural requirements are so different. If moss is growing in a shady area, consider leaving it, appreciating it and cultivating it.

Questions

I planted a few Hellebores this year and they seem to be doing nothing. They are planted in light shade, moist soil. Are they unhappy?
Hellebores are slow to establish, taking about three years for them to reach their full potential. It is common for them to do nothing the first year planted. Once they are established there is no need to divide them.

Rotary Botanical Gardens: http://rotarybotanicalgardens.org
Rotary Botanical Gardens Blog: http://rotarygardens.blogspot.com
Olbrich Gardens: http://www.olbrich.org
Boerner Botanical Gardens: http://www.boernerbotanicalgardens.org
Chicago Botanic Gardens: http://www.chicagobotanic.org

ANNOUNCEMENTS

August 7: Trial Garden and Plant Health Field Days at Boerner Botanical Gardens
http://counties.uwex.edu/waukesha/files/2010/12/2013-PHFD-Brochure-small.pdf

August 7: UW Day at the Fair, State Fair Park, Milwaukee

August 8: WNA Field Day http://www.wgif.net/wna-wisconsin-nursery-association.aspx

Aug. 8: Vineyard Walk near Tilden **See Information below**

August 20: Annual Twilight Garden Tour, Spooner Agriculture Research Station

August 20 – 22: Diagnosing Tree/Shrub Diseases & Pests Workshops sponsored by Winnebago, Outagamie and Brown Co. UW -Extensions. http://winnebago.uwex.edu/files/2010/05/2013-Insect_Disease-Brochure.pdf

Aug. 8: Vineyard Walk near Tilden
CR Vineyard near Tilden to Host Regional Vineyard Walk Thursday, August 8

The UW-Extension Fruit Team will be hosting a regional summer vineyard walk on Thursday, August 8th from 4:00 pm to 6:00 pm at CR Vineyard near Tilden. With continued interest in commercial wine and table grape production in Wisconsin, UW-Extension and hosts Randy and Cathy Feuling invite beginner and experienced commercial grape growers to see first-hand how grapes are grown in NW Wisconsin.

Participants will walk through the vineyard and hear how the Feuling's established and manage 6500 vines on 12 acres. CR Vineyard produce seven different cultivars of wine and table grapes, including Marquette, La Crescent, Bluebell, Frontenac Gris, and Somerset
.
Speakers include Patty McManus, UW-Extension Fruit Crop Plant Pathologist and Christelle Guedot, UW-Extension Fruit Crop Entomologist. They will discuss diseases and insects affecting grapes in 2013. Kevin Schoessow, Agriculture Development Agent based in Spooner, and Jerry Clark, Chippewa County Crops and Soils Educator, will also be available to answer production questions.

CR Vineyard is located at 8489 120th Ave., Chippewa Falls. To get to the vineyard take the Tilden exit off HWY 53. Turn east on HWY B, then north on HWY Q to HWY C. Travel HWY C west to 120th Ave and watch for vineyard walk signs.

The registration fee is $5, payable at the vineyard walk. For more information or to register for the walk, contact the Chippewa County UW-Extension Office at 715-726-7950, ext. 5.

FINAL NOTES

The full audio podcast of today's and archived WHU conferences can be found at http://fyi.uwex.edu/wihortupdate/

The Aug. 9 Wisconsin Horticulture Update will be hosted by Patti Nagai. The Special Topic will be on Plants + People Program

UW LINKS

Wisconsin Horticulture webpage http://hort.uwex.edu

UW Plant Disease Diagnostics webpage http://labs.russell.wisc.edu/pddc/

UW Insect Diagnostic Lab http://www.entomology.wisc.edu/diaglab/

UW Turfgrass Science http://turf.wisc.edu/

UW Vegetable Pathology Webpage http://www.plantpath.wisc.edu/wivegdis/

UW Vegetable Entomology Webpage http://www.entomology.wisc.edu/vegento/people/groves.html#

UW-Extension Weed Science http://turf.wisc.edu/

UW-Extension Learning Store http://learningstore.uwex.edu

UW Garden Facts http://labs.russell.wisc.edu/pddc/fact-sheet-listing/

WHU "OFF THE AIR"

During this past week specialists have commented on these issues off the air:

Vegetable Crop Updates

Disease Supplement #5 is available
Cooler, wetter weather has promoted late blight this past week in several regions of the state. Just yesterday, we confirmed potato late blight of genotype US-23 in Dunn County. This morning, we confirmed US-8 on potato in Portage County. The discovery of this genotype indicates potential risk for production of oospores on susceptible hosts, as US-23 is an A1 mating type and US-8 is an A2. Disease supplement #5 offers further detailed information and a general request for samples so we can better characterize the late blight in Wisconsin.
Vegetable Crop Updates: http://www.plantpath.wisc.edu/wivegdis/

Spotted Wing Drosophila Update and Management

Newsletter #1 is an update on Spotted Wing Drosophila occurrence and management practices in small fruit. Spotted Wing Drosophila (SWD), *Drosophila suzukii*, is an invasive small vinegar fly from Eastern Asia that can cause significant damage to berries, tree fruits and grapes, though it prefers soft-fleshed fruit. It was first detected in the continental US in 2008 in California, and has since been reported in 35 States. SWD was first detected in Racine County, Wisconsin in 2010, and in 2012 populations were confirmed in multiple counties. The majority of confirmed cases have been in bramble crops. Unlike other Drosophila flies that only infest rotting or damaged fruit, SWD females have a serrated ovipositor that enables them to lay eggs inside ripe and ripening fruit, in addition to damaged or rotting fruit.

Spotted Wing Drosophila (SWD) has now been confirmed in Crawford, Vernon, Iowa, Bayfield, Columbia, Dane, Sauk, Door and Trempealeau Counties. It is also suspected in Jefferson, Washburn, Kenosha, Wood, Pierce, Rock, Monroe, Buffalo, and Lacrosse Counties. Numbers of adults caught in traps are still very low at these locations. Larvae have also been found in fruit at some of these locations. As you can see, SWD is rapidly appearing throughout the state at the same time, suggesting that it is probably overwintering in Wisconsin.

Very few adults have been caught so far in traps baited with the apple cider vinegar. The reason could be that in previous years, experiences from other states were with vinegar that was changed less frequently than once a week. Odors emitted by the vinegar will change over time as it is fermenting in the trap. When changing the bait once a week, less fermentation occurs and the apple cider vinegar is likely to be less attractive. The yeast and sugar bait is much more attractive to SWD and is preferred for monitoring. This bait will attract flies earlier and in higher numbers than the vinegar. We are thus strongly recommending to monitor for SWD in your crop with a yeast and sugar bait (1 Tbsp. active dry yeast: 4 Tbsp. sugar: 12 oz water), and take action if SWD is present and the fruit is at a susceptible stage.

Click on the following links for management recommendations for:

Raspberry http://labs.russell.wisc.edu/swd/files/2013/06/Recommendations-for-SWD-Management-in-Raspberry.pdf

Blueberry http://labs.russell.wisc.edu/swd/files/2013/06/Recommendations-for-SWD-Management-in-Blueberry.pdf

Strawberry http://labs.russell.wisc.edu/swd/files/2013/06/Recommendations-for-SWD-Management-in-Strawberry.pdf

Cherry http://labs.russell.wisc.edu/swd/files/2013/06/Recommendations-for-SWD-Management-in-Cherry.pdf

Please, feel free to pass this along to berry and cherry or other fruit growers in your area.

July 31 SWD Newsletter: http://labs.russell.wisc.edu/swd/newsletter/

Contact Christelle Guédot, Fruit Crop Entomologist, at guedot@wisc.edu if you have any questions, and check out our website at http://labs.russell.wisc.edu/swd/.

Emerald Ash Borer Update

From DATCP, Aug. 2, 2013: We have updated the list of communities where we have confirmed EAB within counties that are already under quarantine. The complete list is available at http://datcpservices.wisconsin.gov/eab/articleassets/ConfirmedEABFindsInWisconsin.pdf.

Emerald ash borer has been found at Mauthe Lake in Fond du Lac County, and in Watertown's Riverside Park in Dodge County.

As a result, Dodge County will be quarantined. Part of Watertown also lies in Jefferson County, which is already under quarantine for EAB because of its proximity to infestations in neighboring counties.

Fond du Lac County has been under quarantine for emerald ash borer since 2008, because of its proximity to infestations in neighboring Washington County. However, this is the first time the tree-killing insect pest has been found in Fond du Lac County.

Wisconsin Department of Natural Resources staff found an adult beetle in a trap set at the Mauthe Lake campground in the Northern Unit of Kettle Moraine State Forest. They submitted the beetle to the Wisconsin Department of Agriculture, Trade and Consumer Protection for initial identification, and U.S. Department of Agriculture officials in Michigan confirmed that it was EAB.

DNR staff will remove a number of unhealthy-looking ash trees in the immediate area, and will examine them for signs of EAB. The pest poses a minimal threat on most of the 30,000-acre Northern Unit, because it contains few ash trees. Ash trees make up more than a quarter of the trees on 3,000 acres, and EAB will likely have greater impact there.

The Dodge County find was also caught in a monitoring trap that had been set along the Rock River in Riverside Park just north of the Dodge-Jefferson county line. There was no obvious damage to trees nearby.

For Fond du Lac County, the find does not change anything from a regulatory standpoint, since the county is already under quarantine. The Dodge County quarantine will be put in place by Wisconsin emergency rule until a federal quarantine can be enacted.

The quarantine prohibits wood products from being moved out of the county to areas that are not infested. For private citizens, this means that they cannot take firewood from Fond du Lac County or Dodge County to non-quarantine counties. For businesses handling wood products that could carry EAB, it means that they must work with DATCP to assure that their products are pest-free before shipping.

Visitors to the state forest are reminded that they can bring in firewood only if they buy it within 25 miles of the campground, or if it carries the DATCP-certified label.

Property owners in quarantined counties should take these measures:

- Keep a close watch on ash trees for signs of possible EAB infestation: Thinning in the canopy, D-shaped holes in the bark, new branches sprouting low on the trunk, cracked bark, and woodpeckers pulling at the bark to get to insect larvae beneath it.
- Consider preventive treatments for property within 15 miles of a known infestation. Whether to treat depends on several factors: the age of the trees, the size of the trees, and the number of trees. Treatment costs vary depending on size of the tree and whether you do the treatments yourself or hire a professional.
- Consider planting different species of trees that are not susceptible to EAB.
- Contact a professional arborist for expert advice, and visit emeraldashborer.wi.gov for detailed information.

Emerald ash borer is native to China, and was first found in the United States about 10 years ago on packing

material, showing up first in Michigan. EAB adults lay eggs on the bark of ash trees in mid- to late summer. When the eggs hatch a few weeks later, the larvae burrow under the bark for the winter and eat the wood, destroying the tree's ability to take up nutrients and water and killing it within a few years. In summer, the adults emerge through D-shaped holes in the bark. On their own, they may spread about a half mile per year.

It appeared in Wisconsin in 2008 in Washington County. Dodge County joins 17 other Wisconsin counties under quarantine: Brown, Crawford, Fond du Lac, Jefferson, Kenosha, La Crosse, Milwaukee, Ozaukee, Racine, Rock, Sauk, Sheboygan, Trempealeau, Vernon, Walworth, Washington and Waukesha counties.

The Wisconsin Emerald Ash Borer Program includes partners from the following agencies: Wisconsin Department of Agriculture, Trade and Consumer Protection; Wisconsin Department of Natural Resources; University of Wisconsin – Madison; UW-Extension; United States Department of Agriculture- Forest Service and Animal and Plant Health Inspection Service.

PDDC UPDATE

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update

Brian Hudelson, Ann Joy, Erin DeWinter and Joyce Wu, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from July 20, 2013 through July 26, 2013.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
BROAD-LEAVED WOODY ORNAMENTALS			
Catalpa	Verticillium Wilt	*Verticillium* sp.	Brown
Crabapple	Apple Scab	*Venturia inaequalis*	Fond du Lac
Ginkgo	Pseudomonas Leaf Spot	*Pseudomonas* sp.	Dane
Oak (Unidentified)	Anthracnose Leaf Blister Monochaetia Leaf Spot Oak Wilt Tubakia Leaf Spot	*Discula* sp. *Taphrina caerulescens* *Monochaetia* sp. *Ceratocystis fagacearum* *Tubakia* sp.	Sheboygan Sheboygan Waukesha Pierce, Walworth Outagamie
FRUIT CROPS			
Apple	Black Rot	*Sphaeropsis* sp.	Pierce
Raspberry	Raspberry Leaf Spot Root Rot	*Cylindrosporium rubi* *Rhizoctonia* sp., *Fusarium* sp.	Grant Bayfield
HERBACEOUS ORNAMENTALS			
Stachys	Gray Mold/Botrytis Blight	*Botrytis cinerea*	Portage
Turk's Cap Lily	Anthracnose Gray Mold/Botrytis Blight Root Rot	*Colletotrichum* sp. *Botrytis cinerea* *Rhizoctonia solani, Pythium* sp.)	Dane Dane Dane
NEEDLED WOODY ORNAMENTALS			
Pine (Scots)	Cyclaneusma Needle Cast Diplodia Shoot Blight and Canker	*Cyclaneusma minus* *Diplodia pinea*	Sheboygan Sheboygan
VEGETABLES			
Horseradish	Root Rot	*Fusarium* spp., *Pythium* sp.	Dunn
Tomato	Herbicide Damage Septoria Leaf Spot	None *Septoria lycopersici*	Barron Dane
Watermelon	Pythium Fruit Rot	*Pythium* sp.	Waushara

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.