



BRANCHING OUT

An Integrated Pest Management
NEWSLETTER
For Trees and Shrubs

Volume 28 No. 5 June 18, 2021

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Thank You to Our Scouts and Diagnosticians

Amy Albam, Lindsey Christianson, Dawn Dailey O'Brien, Don Gabel, Sandra Jensen, Hillary Jufer, Jen Lerner, Karen Klingenberg, Elizabeth Lamb, Zaidée Lucina Powers Rosales, Stephanie and Dave Radin, Mina Vescera, Sandra Vultaggio

Scouting Report Notations:

(#) Number in regular type note plate(s) in *Insects that Feed on Trees and Shrubs* (2nd edition) by W.T. Johnson and H.H. Lyon.

(#) Number in italics note plate(s) in *Diseases of Trees and Shrubs* (2nd edition) by W.A. Sinclair, H.H. Lyon, and W.T. Johnson.

Scouting Report

Conifers

Arborvitae Leafminer (14) moths recently emerged from a LIHREC sample held indoors; watch for them in the coming week. The small (1/8") pale moths with dark markings will be overly interested in arborvitae. Conserve/Entrust can work well at this timing or Acephate 97UP [2(ee) label] later in summer.

Common Bagworm (80, 81) eggs should be hatching now. Check previously infested conifers for small, pendant "bags" covered with green plant parts which will become more apparent by July. Bt, Conserve/Entrust and several other insecticides all work well.

Cottony Taxus/Camellia Scale (164) crawlers emerging now on LI. One sample at the LI Diagnostic Lab also had several mealybug-like *Hyperaspis* (lady beetle) larvae grazing on egg masses. Also watch for **euonymus** and **white prunicola scale** crawlers; latter were heavy on one sample and bright orange-yellow.



White prunicola scales and orange crawlers (courtesy Dan Gilrein)

Juniper Scale (46)—crawlers in Albany Co.

Pine False Webworm (4)—on eastern white pine in Tompkins Co.

Spruce (35)—conifer aphids active on terminals in Monroe Co.

Woolly Larch Aphid (32)—on larch in Westchester Co.



Woolly Larch Adelgids (courtesy Hillary Jufer)

Broad-leaved Trees and Shrubs

Maple Anthracnose (54)—caused by several different fungi, has been noted in Ithaca and LI. Irregularly-shaped black or brown lesions often follow veins. Fungicide treatments should be done during bud opening and leafing out to be effective.



Anthracnose on maple (courtesy Elizabeth Lamb)

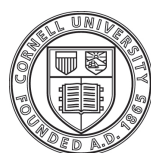
Apple Scab (42-45)—leaves of untreated crabapple on LI & Ithaca showing dark, greenish-black colonies of scab fungus. Defoliation in Ithaca.

Black Vine Weevil (20, 112)—notching on young rhododendron leaves in Monroe Co.

Boxwood Psyllid (137)—in Putnam Co.



Boxwood Psyllids (courtesy Jen Lerner)



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Curled Rose Sawfly—damage in Monroe Co.; **roseslug (58)** damage in Suffolk Co.

Cynipid Gall Wasp—on red oaks in Albany Co.



Cynipid wasp galls and oak leaf blister (courtesy Lindsey Christianson)

Downy Leafspot of Hickory (125)—showy white leafspots (aka white mold) caused by *Microstroma juglandis* seen in Monroe Co.



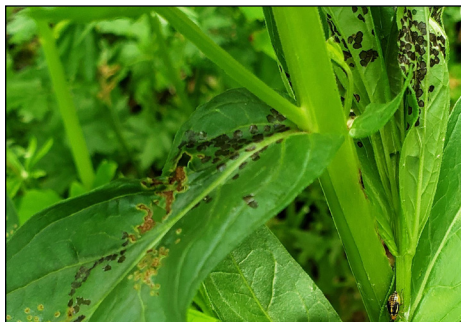
Downy leaf spot on hickory (courtesy Karen Klingenberg)

Emerald Ash Borer adults in large numbers damaging foliage on eastern LI this week in a grove of heavily infested ash. Insecticide treatments should have been made by now.



Emerald ash borer adults, leaf damage (courtesy Dan Gilrein)

Fourlined Plant Bug (190)—damage on 'Jane' magnolia in Tompkins Co., herbaceous plants in Monroe Co. & mint on LI. Nymphs in Albany Co.



Fourlined plant bug damage, nymph (courtesy Lindsey Christianson)

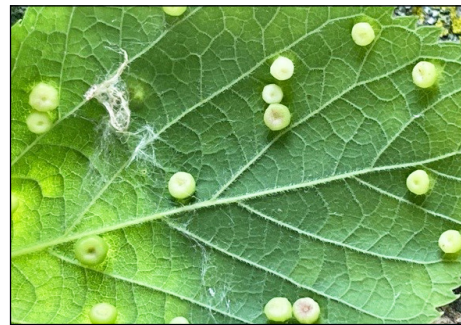
Gymnosporangium Rusts (129-132)—fruit infections seen on *Crataegus* in Westchester Co. and *Amelanchier* on LI; orange spots reported on crabapple leaves in Monroe Co. and in Capital District; telia seen on Hollywood juniper in Putnam Co.



Gymnosporangium rust on hawthorn (courtesy Hillary Jufer)

Gypsy Moth (129-132) and droppings complaints from Finger Lakes & eastern Adirondacks (Saratoga). Bt reserved for young stages; Conserve/Entrust and Acelepryn (not for LIs) are reduced-risk, exempt from notification. Acephate/Orthene, carbaryl, & pyrethroids are among other options. Entomophaga infections can dramatically reduce populations of caterpillars particularly if conditions are wet. **Twolined chestnut borer** may follow where oaks are stressed from defoliation. Protect trees from a 2nd summer defoliation and consider protectant bark sprays for borers on newly planted oaks in the year or two following gypsy moth outbreaks.

Hackberry Nipplegall Maker (217, 218)—Westchester Co.



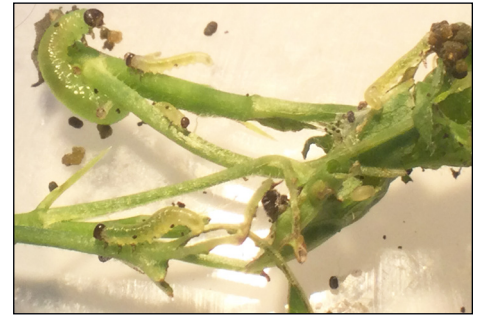
Hackberry nipplegall (courtesy Dave Radin)

Honeylocust Plant Bug (194)—heavy damage on LI this week— leaflet stunting/distortion with small dead areas. The 1/8" bright green adults were present.



Honeylocust plant bug damage (courtesy Dan Gilrein)

Imported Currantworm—on gooseberry in Tompkins Co.



Imported currantworm and damage (courtesy Elizabeth Lamb)

Lacebugs (*Stephanitis* spp.) (204-206)—nymphs, adults on *Pieris* in Westchester Co.



Lace bug nymphs and feces (courtesy Dave Radin)

Leaf Blisters (1,2)—blister-like galls of *Taphrina caerulescens* showing in Monroe & Albany Cos. on oak; sporulating now on LI. A gall mite can cause very similar damage on white oak. Peach leaf curl seen in Albany Co. Treatment time now over for season.

Maple Bladder Gall Mite (232)—galls on silver maple in Albany and Monroe Cos.



Silver maple bladder mite galls (courtesy Stephanie Radin)

Oak Shothole Miner (p.206, fig.57)—adults still active on unexpanded leaves on LI. Expect shotholing to continue developing on new foliage.



Oak shothole miner adult (courtesy Dan Gilrein)

Poplar Petiole Gall—aphids seen in Westchester Co.



Poplar petiole gall aphids (courtesy Dave Radin)

Potato Leafhopper (199)—nymphs, adults and slight hopperburn were seen on walnut on eastern LI apparently migrating north with the last heat wave. Levels have been very low but may increase quickly with migrations. Check terminals for pale, green hoppers especially on young trees in nurseries & landscapes. Red maples and birches will show stunting, yellowing and edge burn on new growth; other plants can be affected. Populations of a similar but larger green leafhopper, *Pagaronia minor* (<https://bugguide.net/node/view/94361>) are high in LI gardens. First found in US in 2005, it doesn't appear to be causing noticeable plant damage.

Rose Leafhopper (198)—damage in Monroe Co.

Rosy Apple Aphid—on apple in Tompkins & Suffolk Cos. Feeding on leaves near fruit clusters can cause fruit stunting, discoloration.



Rosy Apple Aphid damage (courtesy Dan Gilrein)

Twospotted Spider Mite (229)—in Westchester Co.; infestation on milkweed in Albany Co.

Under the Scope: Reports from Diagnostic Labs

Beech Leaf Disease samples in both NJ & NY show obvious leaf banding but nematodes not yet being found in leaf lesions.

Botrytis Blight on Peony—Rainy weather or careless irrigation has led to attack on peonies by *Botrytis paeoniae* and *B. cinerea* in recent weeks. Result is bud or flower blight. Infected petal, leaf or stem sports gray-tan sporulation in humid conditions. Plant peonies well-spaced, full sun; if Botrytis blight has been a past problem,

begin fungicide treatment when new shoots emerge. See *Cornell Guidelines for Greenhouse and Herbaceous Ornamentals* for fungicide choices.



Botrytis blight on peony (courtesy Sandra Jensen)

Boxwood Mite (229)—damage on Korean boxwoods from a nursery show as pale irregular short lines on upper leaf surfaces; may be present without mites, so verify before deciding to treat. Adults are brownish and easily seen with a hand lens. Eggs are pale and may be on either side of the leaf.



Boxwood mite, egg and damage (courtesy Dan Gilrein)

Boxwood samples in the WV diagnostic clinic are primarily **Volutella Blight**, whereas in NJ the clinic is seeing quantities of **Boxwood Blight** along with striking **Leafminer Damage**.

Brittle Cinder on Maple and Beech (102)—enquiries from LI & NYC about fleshy gray masses edged with white seen at the base of maples and beeches this week alerted us to spring growth of the brittle cinder fungus, *Kretzschmaria deusta*. This fungus causes rapid internal structural injury to trees; signs of it indicate that tree removal should be considered. Charcoal-colored masses plastered against the trunk base near the gray masses are fungal growth



Brittle Cinder spring growth (courtesy Bill Logan)

Brown Rot/Shoot Blight on Prunus (37)—wilting & browning shoots on Kwanzan and other cherry trees on LI. In humid conditions, the dead flowers & shoot tissue covered by brown mold. Symptoms appeared weeks after original infection at bloom. Treatments with chlorothalonil, mancozeb, propiconazole or Spectro 90 are labeled for use on various *Prunus* spp. as blossoms open and again 10 days later, or per label directions.



Shoots attacked by brown rot (courtesy Margery Daughtrey)

Maple Leaf Blister—a few species of *Taphrina* can cause leaf blister on maple, esp. silver & red. Recent symptoms seen at the PDDC in Ithaca on silver maple from NY & VT. Very easy to mistake these brown to black lesions for anthracnose symptoms!



Taphrina on silver maple (courtesy Sandra Jensen)

New Pest Watch

Elm Zigzag Sawfly (*Aproceros leucopoda*), named for its distinctive leaf damage, recently confirmed in US for the first time near Winchester, VA on *Ulmus parvifolia*. Also found in Quebec, Canada in 2020.



Elm zigzag sawfly larva and damage (courtesy Heather Huntington, Virginia Department of Agriculture)

Longhorned Tick, first found in US in 2017, appears to be spreading rapidly. A large animal pest, females reproduce without mating. New fact sheet: <https://tinyurl.com/LHTick>.

Branching Out
Plant Pathology and Plant-Microbe Biology
Cornell University
334 Plant Science Building
Ithaca, NY 14853

Beech Leafmining Weevil (*Orchestes fagi*) confirmed in Nova Scotia in 2012 on American beech (European beech also host). Creates blotch mines & tunnels; leaves appear scorched in high infestations. Defoliation is associated with higher beech mortality possibly due to increased susceptibility to root rot fungi. Not yet in US, but with more eyes on beeches (for leaf disease) keep this one in mind. <https://tinyurl.com/BLMWeevil>

Miscellany

Cornell Tree and Shrub Guidelines is out! Contact your local Cornell Coop. Extension office or obtain on-line at <https://tinyurl.com/CornellRx>

International Boxwood Webinars: The Boxwood Blight Insight Group (BBIG) in collaboration with HRI has a great free series. Live sessions available for later viewing. **3/18: Boxwood Blight** (Thomas Brand, Germany), **6/2: Knowing and Growing Boxwood** (Lynn Batdorf, Ret. Curator, National Boxwood Collection, USA), **8/25: Boxwood Breeding** (Katrijn Van Laere, Belgium), **12/2: Box Tree Moth** (Marc Kenis, Switzerland), **3/10/2022: Boxwood Blight in the UK and New Zealand** (Matthew Cromey, UK). <https://www.hriresearch.org/thrive-web-series>

Phenology

Albany Co: Flowering—*Syringa reticulata*, *Catalpa* early bloom

Suffolk County: Flowering—Japanese tree lilac, *Catalpa*, *Hydrangea macrophylla*; early bloom: southern magnolia, privet

Tompkins County: Flowering—peonies, mock orange, weigela; Miss Kim lilac finished

Westchester County: Flowering—Japanese tree lilac, *Catalpa*, *Ailanthus*, assorted garden roses; *Hydrangea paniculata* early bloom

Dan Gilrein, Karen Lynn Snover-Clift, Margery Daughtrey & Shari Romar, editors

Growing Degree Days

As of June 16, 2021

Station	GDD ₅₀	Station	GDD ₅₀
Albany.....	555	Ithaca.....	560
Binghamton.....	581	New Brunswick,NJ.....	897
Boston, MA.....	834	Riverhead.....	797
Bridgeport, CT.....	742	Rochester.....	677
Buffalo.....	727	Syracuse.....	777
Central Park.....	1,026	Watertown.....	517
Farmingdale.....	811	Westchester.....	705
Hartford, CT.....	801	Worcester, MA.....	666

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It's Galling!

Dan Gilrein, Extension Entomologist, Cornell Cooperative Extension of Suffolk County

Among plant disorders, galls may be the most intriguing: how does one organism induce such a response in its host plant, and why such diversity? Other mysteries surround gall makers, such as the role of fungi and inquilines (“roommates”) that may share, amicably and otherwise, their unique spaces. And what is a “gall” anyway? Several definitions exist but Sinclair et al. (*Diseases of Trees and Shrubs*) defines it simply as a “localized overgrowth.” This goes beyond the conventional thinking of swollen or tumor-like formations to include symptoms like leaf blistering, felt-like eruptions and proliferating growths.

Galls can be caused by many biotic and some abiotic agents. I focus most on those related to insects, mites and (sometimes) plant pathogens. They can be elaborate, attractive or strange, alarming and even seriously damaging, on roots or above ground parts. These structures provide a safe home for the residents and their shapes, colors and locations in many cases provide clues to their identity. The references listed are those I've found most useful to identify insect- and mite-related gall makers. Some may be major pests but most are not and are only rarely observed. There's much to learn about gall-makers and their control. Below is a sample of a few insect and mite galls I've encountered.



Black oak twiggall wasp (left); dieback on black oak from black oak twiggall wasp (right). (All photos courtesy Dan Gilrein.)

Gall Wasps

Oaks are hosts for an amazing array of wasps (cynipids, of the insect family *Cynipidae*) each with one or more favorite parts: roots, trunk, male flowers, acorns, twigs, or leaves. Some more damaging galls occur on twigs, causing dramatic infestations, dieback or even death of large trees, such as gouty and horned oak galls on pin and sometimes red or other oaks. Long Island and SE New England have lost mature black oaks in recent years to black oak twiggall wasp, *Zapatella davisae*, aka “crypt gall wasp.” Galls are easily-overlooked subtle swellings in twigs that lead to dieback sometimes over large areas of the tree canopy. We've only seen it affect black oak (*Q. velutina*).



Neuroterus tantulus galls on white oak.



Bullet gall on white swamp oak hybrid (left); white oak club gall (right).

Increased use of swamp white oak means more reports of bullet galls (*Andricus quercusstrobilanus*) on twigs, a curiosity that can also affect bur oak. Oak club gall (*Callirhytis clavula*) is found on white oak and possibly swamp white oak hybrids. *Neuroterus tantulus* produces small saucer-shaped galls under white oak leaves. These turn from green to brown, then drop by early summer, leaving small brown spots easily mistaken for disease.

Roses are also hosts. Rose blister gall wasp (*Diplolepis rosaefolii*) produces almost spherical 1/8" galls protruding from both leaf surfaces. A heavy infestation on *Rosa rugosa* strangely disappeared the next year – a phenomenon not uncommon among gall wasps. It was also found on *R. virginiana* nearby. Roseroot gall wasp (*Diplolepis radicum*), mainly seen on *R. rugosa*, prefers stem bases.



Roseroot gall wasp (top) and *Diplolepis rosaefolii* on *rugosa* rose (bottom).

Gall Midges

Flies in the *Cecidomyiidae* family produce fantastic structures like “spangle galls” under white oak leaves made by *Phylloterax poculum*. *Polystepha pilulae* galls (to 1/2") on the upper side of many oaks are often mistaken for those made by gall wasps. The willow pinecone gall midge (*Rabdophaga strobiloides*) creates cone-like terminal galls. *Dasineura aceris* distorts silver maple leaves and may kill foliage, though rarely seen. Douglas-fir needle

midge (*Contarinia* spp.) is a frustrating Christmas tree pest; distorted needles may turn off-color and drop (slight swelling distinguishes it from Cooley spruce gall adelgid on Douglas-fir). Norway spruce shoot gall midge (*Piceacecis abietiperda*) distorts and can kill terminals. First reported in the US in 1983, it is spreading throughout NY and New England. Rhododendron gall midge (*Clinodiplosis rhododendri*) attacks expanding leaves of *R. maximum* and *R. catawbiense* causing distortion and pale green or yellow raised spots on affected leaves.



Clockwise from top left: Phylloteras poculum midge galls on white oak; Polystepha pilulae gall midge on pin oak; Dasineura aceris injury on silver maple; Norway spruce shoot gall midge; rhododendron gall midge; Douglas-fir needle midge; Rhabdophaga strobiloides on willow.

Adelgids, Aphids, Phylloxerans

Spruce gall adelgid galls on Colorado blue and Norway spruces are familiar. Elm cockscomb galls are created by aphids *Colopha graminis* and *C. ulmicola* on American and slippery elm; some grasses are secondary hosts. Grape phylloxera, largely controlled now by selected rootstocks, is notorious in winemaking history. Hickory leaf stem gall phylloxera (*Phylloxera caryaecaulis*) may be seen on pignut hickory (*Carya glabra*) creating spherical ¼”–1” galls under leaf midveins, petioles or twigs. Many other phylloxerans are seen on other *Carya* spp.

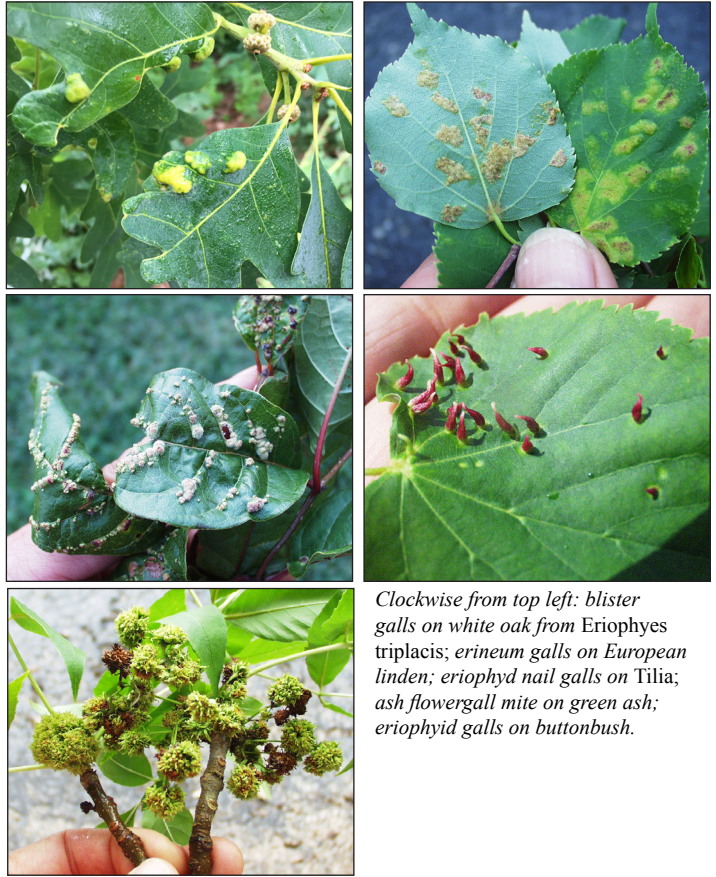
Eriophyid “Gall Mites”

Some eriophyids induce odd growths in hosts. Erineum (felt) galls are one distinctive type. *Eriophyes triplacis* produces blister galls on white oak similar to *Taphrina* galls, but distinguished by felt-like structures beneath the blisters where mites reside.



Cockscomb on elm from *C. graminis* (left); hickory leaf stem gall phylloxera (right).

European linden is host to a yet to be named mite we often see. Another species, *Phytoptus tiliae*, produces distinct “nail galls” on basswood leaves. A different leaf gall is produced by *Eriophyes cephalanthi* on buttonbush. *Eriophyes fraxiniflora*, aka ash flowergall mite, converts male ash flowers into ball-like masses.



Clockwise from top left: blister galls on white oak from *Eriophyes triplacis*; erineum galls on European linden; eriophyid nail galls on Tilia; ash flowergall mite on green ash; eriophyid galls on buttonbush.

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