Branching Out

An Integrated Pest Management Newsletter for Trees and Shrubs

Volume 32 No. 4 May 23, 2025

Contents...

Thank You to Our Scouts and Diagnosticians

Amy Albam, Carol Bradford, Dawn Dailey O'Brien, Don Gabel, Sandra Jensen, Hillary Jufer, Karen Klingenberger, Elizabeth Lamb, Jen Lerner, Jessica O'Callahan, Zaidee Powers, Alice Raimondo, Mina Vescera, Mike Voss, Sandra Vultaggio

Scouting Report Notations:

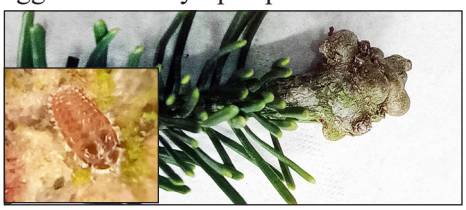
(#) Numbers in regular type note plate(s) in *Insects that Feed on Trees and Shrubs* (2nd edition) by W.T. Johnson and H.H. Lyon.

(#) Numbers 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

Balsam Woolly Adelgid (30)—on balsam fir in Steuben Co. Galled twigs and thinning in lower third of canopy; eggs and few nymphs present.

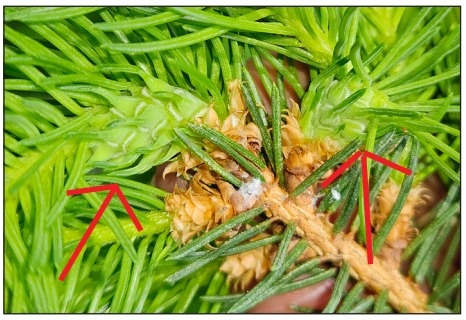


Balsam woolly adelgid galled twig and (inset) nymph (Sandra Jensen)

Bifusella Needle Blight—caused by *Bifusella linearis*, this is one of the players in the complex known as White Pine Needle Disease/ Decline. Wet, mild weather as new growth expands on pines favors this disease: symptoms develop on current season's needles months later (Steuben Co.). See *Under the Scope* for more.

Bifusella *signs and symptoms (Sandra Jensen)*

Eastern Spruce Gall Adelgid (50)—galls forming on Norway spruce in Rockland and Westchester Cos.



Eastern spruce gall adelgid galls (Amy Albam)

Elongate Hemlock Scale (45)—crawlers in Westchester Co. Treat late May to mid-June for crawlers.

European Pine Sawfly (2)—groups on mugo pine in Cayuga Co. Just one generation per season; prune off or remove larvae by hand. Spinosad and several insecticides work well for larger-scale infestations.

European pine sawfly larvae (Marjorie Witty)

Broad-leaved Trees and Shrubs

Andromeda Lacebug (204)—*Stephanitis takeyai* nymphs on andromeda in Westchester Co.

Andromeda lacebug nymphs (Hillary Jufer)

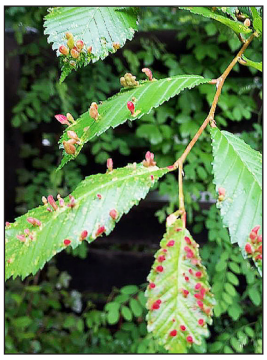
Anthracnoses (*47-56*)—appear to be on many trees in Putnam Co.; on dogwood in Rockland Co. Not surprising to see damage due to very wet spring.

Aphids, aphids, everywhere—on 'Kwanzan' cherry in Suffolk Co.: "**cherry gall aphid**," *Tuberocephalus sakurae,* is fairly new to the region; reportedly summer host is *Artemisia* (roots). Galls resemble leaf blister disease but check inside rolled leaf for evidence - cast skins or aphids which

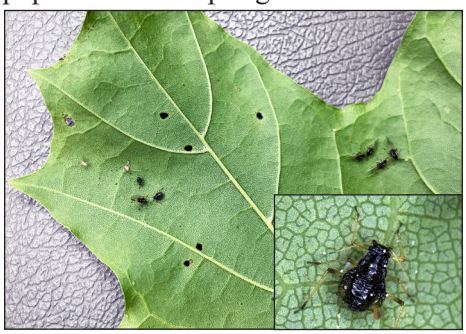
Cornell University Cooperative Extension

disappear by early June. More: https://tinyurl.com/CherryGallAphid. On Norway maple in Suffolk Co.: *Periphyllus testudinaceus*, sometimes called "**common maple aphid**," feeds on several maples. Several odd scale-like green nymphs with flat marginal hairs were present that "hibernate" through summer, develop into males and females in fall. More: https://tinyurl.com/CommonMapleAphid. On elm in Rockland Co.: elm aphid galls likely caused by *Tetraneura nigriabdominalis*, which forms bladder-like galls on certain elms; alternates with roots of some grasses. Open galls to see aphids within. More: https://tinyurl.com/ElmGallAphid1. On apple in Fairfield Co. (CT): probably **spirea aphid** (*Aphis spiraecola*, formerly *A. citricola*), which generally replaced **green apple aphid (141)** in Eastern North America as most common "**green apple aphid**" on apple & other hosts. Biocontrols often reduce populations late spring.

Top: cherry gall aphids (Dan Gilrein); above: damage (Margery Daughtrey)



Elm aphid galls (Amy Albam)



Common maple aphids (Margery Daughtrey); nymph under magnification (Dan Gilrein)

Azalea Bark Scale (160)—crawlers in Westchester Co.

Azalea Sawfly (59 D,E similar)—defoliating flame azalea in Suffolk Co. At least 3 sawflies feed on azaleas *Euura lipovskyi* here (1 generation/year) has been expanding its range north & west.

Azalea Whitefly (151)—adults active in Westchester Co.

Black Spot of Rose (*39*)—on leaves in Rockland Co.

Boxelder Gall (234H)—on boxelder in Monroe Co. Pouch galls with white felty areas beneath are from an eriophyid mite, likely *Aceria negundi*.

Boxwood Leafminer (94)—adults active in Rockland and Westchester Cos.

Bristly Roseslug (58 similar)—on rose in Suffolk & Rockland Cos. Common, leaves holes and brown "windowpanes" where it chews away leaf undersurface. Damage accumulates from multiple generations. Spinosad insecticides work well; check for larvae before deciding to treat.

Bristly roseslug larva and damage (Dan Gilrein)

Brittle Cinder (*102*)—earliest beginnings of *Kretzschmaria deusta* growths are showing now on silver maple in Suffolk Co. Fungal tissue will blacken with time.

Brittle cinder near trunk base (Margery Daughtrey)

Brown Rot (*37*)—caused by *Monilinia* spp., this fungus infects via blossoms and causes shoot wilting and twig dieback 3-4 weeks later. Symptoms becoming evident now on Kwanzan cherry in Suffolk Co. Treatment during bloom is essential for protection. Sporulation may be seen on killed tissues with some magnification. See *Under the Scope* for spore photo.

Brown rot (Riley McKenna)

Cedar-Apple Rust (*129*)—spots on crabapple leaves in Westchester Co., on *Amelanchier* in Rockland Co.

Cottony Scale (163-165)—egg masses on wall near hydrangeas in Rockland Co. Adult female cottony scales sometimes wander or blow off host plants and continue to produce egg masses off the plant (decks, patio furniture, pots, etc.)

Cottony scale egg mass on wall (Amy Albam)

Cottony Taxus (Camellia) Scale (164)—on Japanese holly in Suffolk Co. Females on twig soon move onto foliage and produce white cottony egg masses.

Cottony taxus (camellia) scales (Dan Gilrein)

Fall Cankerworm (64H)—light injury on scarlet and other oaks in Suffolk Co. An "inchworm" with 3 sets of prolegs, frontmost pair reduced in size.

Leafhopper—on hydrangea in Rockland Co. Appears to be *Agalia* sp., possibly, four-spotted clover leafhopper.

Leafhopper Amy Albam)

Leafminer—on honeysuckle in Tompkins Co. These may be from the fly *Aulagromyza cornigera*, reported on *Lonicera sempervirens* and other species.

Leafminer damage (Zaidee Powers)

Leafroller (99-101)—on weeping cherry, pin oak, and hickory in Rockland Co.; various leafrollers are common in spring.

Leafroller (Don Gabel)

Maple Bladder Mite Gall (232A)—from eriophyid mite *Vasates quadripedes* on silver maple in Rockland Co.

Maple bladder mite galls (Don Gabel)

Mealybug (155)—on *Hydrangea quercifolia* in Suffolk Co. We're not sure but these may be Comstock mealybugs, *Pseudococcus comstocki*.

Possible Comstock mealybugs (Kim Simmen)

Noxious Oak Gall—on swamp white oak in Suffolk Co. *Neuroterus quercusbatatus* sexual stage creates leaf midrib galls (here); asexual generation produces woody stem galls.

Noxious oak galls

Privet Thrips (208)—nymphs on privet in Rockland Co. Lilac also a host.

Rose Leafhopper (198)—white nymphs, stippling on leaves of landscape roses in Suffolk Co. Minor injury often overlooked.

Spindle (Nail) Gall—on basswood from eriophyid mite, *Eriophyes tiliae*, in Suffolk Co. The bright red galls attract attention but appear to have little impact on tree health.

Spindle (nail) galls

Spongy Moth (61, 62)—large caterpillars in Westchester Co.

Tar Spot (*37*)—*Rhytisma* sp. on silver maple in Rockland Co.

Tubakia Leaf Spot—red oak in Suffolk Co. seen with scattered tiny brown leaf spots, plus some larger dead areas and leaf distortion. Caused by various *Tubakia* spp. Spores are produced on the upper surface of the lesions in a daisy-like array.

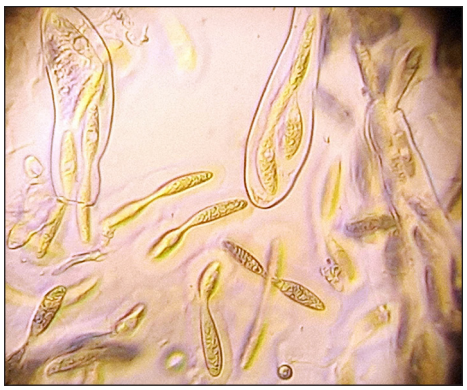
Tubakia on oak (Margery Daughtrey)

Woolly Beech Leaf Aphid (140A, B)—on European beech in Fairfield (CT) and Suffolk Cos. Reports of light infestations so far.

Woolly beech leaf aphids (Don Gabel)

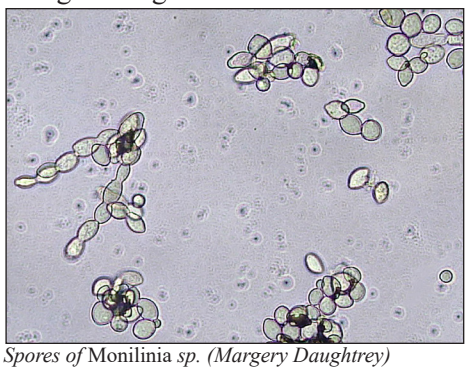
Under the Scope:
Reports from Diagnostic Labs

Bifusella linearis—this fungus causes a needle blight of eastern white pine following wet springs. Asci and ascospores are shown here, much magnified.



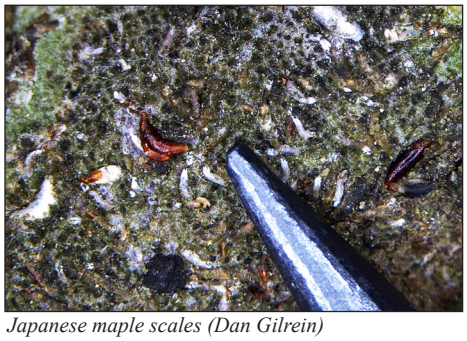
Bifusella linearis *asci & ascospores (Sandra Jensen)*

Brown Rot (*37*)—sporulation of *Monilinia* spp. appears with a hand lens as tiny beige-gray tufts (sporodochia) on the surface of infected tissue; seen here at higher magnification.



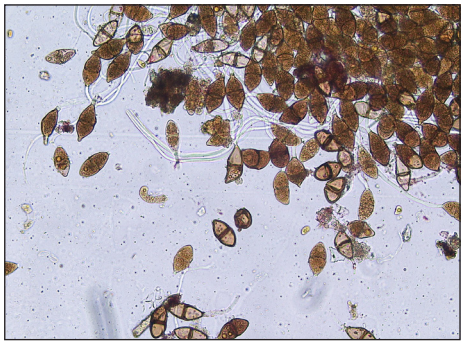
Spores of Monilinia *sp. (Margery Daughtrey)*

Japanese Maple Scale—on crabapple in Suffolk Co. Heavy infestation on bark, many scales obscured by algae and dust. Small, thin oystershell-like scales with a white waxy cover, when rubbed off reveals the shiny brown cast "skin" remnants of the second instar beneath.



Japanese maple scales (Dan Gilrein)

Pear Trellis Rust—teliospores and basidiospores of *Gymnosporangium sabinae* as seen at high magnification.



Pear trellis rust spores (Margery Daughtrey)

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

Miscellany

NY Birds and Bees Protection Act, enacted in 2023, is phasing out many uses of neonicotinoid insecticides including some seed treatments and uses on outdoor ornamental plants and turf. For ornamental plants: as of 12/31/2024 the law limits outdoor ornamental uses (except agricultural production) of dinotefuran-containing insecticides to invasive species control on woody plants or under a written order from the DEC to address an environmental emergency. (Dinotefuran products include Safari, Transtect, Dinocide, Zylam, all allowed in NY only for certain uses under 24(c) labels.)

More details plus link to DEC-approved neonicotinoid course: https://branchingout.cornell.edu/general-news/ny-birds-and-bees-protection-act-important-information/

Phenology by County

Monroe: mayapple, lilac, horsechestnut

Onondaga: redbud, flowering dogwood, apple, lilac, jetbead, honeysuckle, horsechestnut

Rockland: Carolina silverbell, horse chestnut, fringe tree, Kousa dogwood, linden, black locust, Catawba rhododendron

Suffolk: black locust, flame azalea, rhododendron 'Roseum Elegans', American fringetree, bridalwreath spirea, beauty bush, black cherry, weigela

Tompkins: lilac, flowering dogwood, honeysuckle, azalea, horse chestnut, viburnum

Westchester: black locust, horse chestnut, weigela, rhododendron, hawthorn, kousa dogwood, snowball viburnum

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

Growing Degree Days

As of May 20, 2025

Station	GDD_{50}
Albany	349
Binghamton	252
Boston, MA	349
Bridgeport, CT	367
Buffalo	285
Central Park	554
Farmingdale	397
Hartford, CT	408
Ithaca	253
New Brunswick,NJ	520
Poughkeepsie.	425
Riverhead	301
Rochester	269
Syracuse	289
Watertown	192
Westchester	416
Worcester, MA	294

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Crabapple Diseases: A Crablandia Primer

Jim Chatfield, Faculty Emeritus, Ohio State University (all photos courtesy of the author)

First Things First

What is a crabapple? The definition we commonly use is from the International Ornamental Crabapple Society is, "an apple in the genus *Malus* that is under two inches in diameter at maturity". So, small apples. Most ornamental crabapples are smaller than the limit, in the 3/8 - 5/8" range – not likely to be messy on the lawn. Like pears (*Pyrus*) and eating apples in the genus *Malus,* they are pome fruits.

'Strawberry Parfait'

Which brings us to this ditty, from the First Earl of Pome-roy:

> There was a young wormling from Rome
> Who yearned to make *Malus* his home
> He searched and he searched for a perch to besmirch—
> Crabapple was too small a pome.

Thus, codling moths and apple maggots and such are not that interested in these mini-apples. But infectious pathogens and the diseases they cause are another story, and the one we tell here, as we share lessons learned over years at Ohio State University's Crablandia plot in Wooster, OH.

Scene from Ohio State University's Crablandia.

But first, please appreciate that there is a true magic to micro-*Malus*: they encompass fine form, foliage, and fruit. Crabapples include true weepers, spreading weepers, uprights, and those with rounded habits. Flowers range from snow-white to coral pinks, to parfaits of reddish-pink and vanilla-white, not to mention doubles. Fruits range from deep red to oranges and yellows. Foliage can be entire to trifoliate and some show reddish and purple hues. While we have studied the diseases of crabapples, we have come to appreciate certain ones for their combination of beauty and health (see inset).

When Sorrows Come - Did Shakespeare Know About Crabapples?

Scab Across the Country. One of the reasons that the International Ornamental Crabapple Society was organized in the 1980s was to evaluate for infectious diseases, especially the fungal disease apple scab (*Venturia inaequalis*). Scab will not kill crabapples but may make them very unsightly. Plots were set up nationwide to allow assessment of trees exposed to pathogen variants in different environments (spring moisture levels often being the key variable).

Apple scab on leaves

As we monitored these plots, a crabapple that we irreverently labeled a "scab dog" in moist Ohio might be lovely in southern Idaho; even 'Hopa' could be a spring and summer beauty in drier spring sites, while derogated maliciously as "No Hopa" in Wooster, OH. Our data helped nursery growers fine-tune choices of crabapple taxa for different areas of the country.

Long-term plots also teach other lessons. In our Crablandia plots, 'Prairifire' demonstrated no scab for several decades, even though in other National Crabapple Evaluation Program plots it was starting to show some moderate scab by the late 1990s. As the millennium changed, we started to notice a trace and then moderate scab on 'Prairifire' at Crablandia. What changed? A new strain of the scab fungus had found our location. Change is the law of life.

Fireblight. Caused by the bacterium *Erwinia amylovora*, fireblight is arguably the most deadly of crabapple diseases, since the "shepherd's crook" shoot diebacks may devastate the entire tree.

Shepherd's crooking from fireblight.

Relatively warm, wet conditions during crabapple bloom favor epidemics. In fact, predictive monitoring programs for fireblight on apple are predicated on whether or not precise temperature, moisture, and duration conditions occur.

The Fire and the Frog. Fireblight is a bacterial disease; frogeye leafspot is a fungal disease (*Botryosphaeria* spp.). How do they deserve double billing? One year we had a

bad fireblight year – warm, wet weather during bloom of many crabapples. We did not prune out the fireblight strikes, presuming most homeowners wouldn't either. The next year, though, there were clusters of leaves sporting dense frogeye speckling adjacent to the fireblight strikes. What was up? It turns out that *Botryosphaeria obtusa* infects stems (and fruits) as well as leaves of *Malus*. Spores produced on stems killed by fireblight the previous spring, summer and fall were ready and able to infect leaves adjacent to the colonized stems the next spring. My crabapple buddy Erik Draper and I were thrilled at our discovery of the interconnectedness of plant diseases. So brilliant. Soon after, however, while perusing Riker mounts of diseases for Dr. Wayne Ellett's classes in Columbus, I noted one from 40 years earlier with the caption: "Botryosphaeria following fireblight on apple". Lesson learned and relearned.

Frogeye leaf spotting

Rust Never Sleeps. The Gymnosporangium rust diseases have as their primary hosts members of the rose family such as apple/crabapple, hawthorn, quince, serviceberry and also alternate hosts: junipers and other members in the cypress family. There are dozens of species of *Gymnosporangium*, but we have usually focused on three: *Gymnosporangium juniperi-virginianae* (causing cedar-apple rust), *G. globosum* (causing cedar-hawthorn rust), and *G. clavipes* (causing cedar-quince rust). In recent years, however, we have seen a number of others, including *G. yamadae* (Japan red rust on *Malus*) and *G. sabinae* causing pear trellis rust on pear.

Crabapple red rust

I have always thought that an amazing feature of Gymnosporangium rusts is that they parasitize two wildly disparate, genetically-different hosts in the intimate relationship of a disease. Five spore stages and a back and forth between a gymnosperm and an angiosperm is quite a feat. These diseases form a curious bond between the genetically distant rose and cypress families. Efforts at control may be directed at either host but are usually timed to block infection of the rose family host.

Crabapple Phenology. Our peak crabapple bloom at Secrest Arboretum now.averages about 2-3 weeks earlier than 45 years ago. The number of heat units in a given year differs, but the number of heat units is highly correlated and physiologically connected to when flowers bloom on trees. This is why data sets from Thoreau and Aldo Leopold and others are so interesting relative to warming. It used to be a big deal at Secrest that the crabapple peak generally coincided nicely with Mother's Day, the second Sunday in May. Hordes of people came. It's still a great time to come to Secrest, but the crabapple peak is typically the third week of April – indeed so this year.

There is about a 3-week difference between the first-blooming crabapple types, such as 'Strawberry Parfait', and the last blooming crabapples such as 'Silver Moon' and 'Golden Raindrops'. Our latest blooming crabapples show the highest incidence of fireblight, in part because they bloom when it is generally warmer.

Top: 'Prairifire'; above: 'Candymint'

Enough of these tales of woe, Shakespeare told many, not just of Juliet and her Romeo. But he likewise looked at the bright side of "roasted crabs in a (wassail) bowl." Mini-apples forever. Seek their beauty and their health.

Dr. Chat's Crabapple Faves & Facts

'Strawberry Parfait' - great flowers, interesting form & seeds were in space as part of a **NASA shuttle mission experiment**!

'Candymint', **'Firebird'** & other Sargent cultivars

'Raspberry Spear' & **'Adirondack'** - upright form

'Prairifire' & **'Cardinal'** - coral-pink flowers

'Louisa' - a pink-flowered weeper

'Coralburst' - great initial flower burst

'Royal Raindrops' - trifoliate and purple leaves

'Molten Lava' - spreading weeper plus fall foliage & fruit combo

'Zumi Calocarpa' - in Central Park's Conservatory Garden

And **'Dolgo'** for crabapple butter (right) and the Canadian cultivar '**Rosseau'** for magnificence at Secrest after 70 years.