Branching Out

An Integrated Pest Management Newsletter for Trees and Shrubs

Volume 32 No. 1 April 11, 2025

Contents...

Scouting Report

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.

Welcome to 2025!

Some things to keep in mind for this and future issues:

To those who haven't renewed yet: this complimentary issue will be the only one for this season. Don't miss out! Renew now at: https://tinyurl.com/487nvn8p

Scouting Reports list chemicals registered for control of specific pests. Recommendations are taken from the 2025 edition of *Pest Management Guide for Commercial Production and Maintenance of Trees and Shrubs*, available in May.

*** Recommendations in this guide change yearly and we strongly encourage you to have the newest edition. Recommendations are consistent with NY State pesticide regulations but are similar to those in most other northeastern states.**

Where a specific product is listed after a recommended pesticide, only that product is labeled for that use. Not all products listed are labeled for all uses, so be certain you are getting the right formulation [with the use(s) you want], before you purchase the pesticide.

Recommendations are not substitutes for pesticide labeling. Changes in pesticide regulations occur constantly; human errors are still possible. Read and follow the label directions before applying any pesticide!

Growing degree-days (GDD) are valuable guides to predict plant development and pest occurrence, and they've proven to be better indicators of season progression and many pests than calendar dates. Our GDD use a 50°F threshold. Note: a lower developmental threshold may apply for some insects.

Online access to issues will be emailed soon. Questions? Contact Shari Romar, at sr369@cornell.edu.

Scouting Report

Conifers

Arborvitae Damage—don't tie up trees! An extreme example of girdling injury to a tree in Onondaga Co.

Extreme girdling (Carol Bradford)

Balsam Twig Aphid (33)—damage on balsam fir, no evidence of stem mothers or eggs in Tompkins Co.

Cottony Taxus Scale (164)—overwintering cottony taxus (cottony camellia) scale nymphs on yew in Westchester and Rockland Cos. Horticultural oil at dormant stage (now) has worked well to control.

Cottony taxus scale (Amy Albam)

Diplodia Tip Blight (*64*)—Diplodia cankers noted on drought-stressed umbrella pine in Suffolk Co.

Diplodia tip blight (Mina Vescera)

Elongate Hemlock Scale (45)—overwintering adult females under hemlock needles in Westchester Co.

Cornell University Cooperative Extension

Gymnosporangium Rusts (*118, 119*)—no telial horns yet on eastern redcedar in Westchester Co. but a rust gall almost fully developed on a juniper in Suffolk Co. on April 6.

Gymnosporangium rust

Hemlock Rust Mites (54)—active in Westchester Co.

Hemlock Woolly Adelgid (32)—eggs present in Rockland and Westchester Co.

Hemlock woolly adelgid eggs (Hillary Jufer)

Needlecast or Winter/Drought Injury —observed for several years on Norway spruce in southwestern CT. Initially lawn irrigation was hitting lowest branches. Defoliation possibly caused by either *Stigmina lautii* or *Rhizosphaera kalkhoffii*. See CT fact sheet to distinguish the sporulation of the two pathogens: https://tinyurl.com/5yj9rdcr. Because Norway spruce has some resistance to these diseases, and because terminals are denuded, also possible that this injury is due to winter desiccation.

Needlecast damage (Don Gabel)

Norway Spruce, more issues—in Albany Co., streaks of sap running down trunk from holes in bark apparently from **sapsucker feeding (241)**. One large sap mass and heavy flow on trunk likely due to **pitch mass borer (29E-G)**, a type of clearwing moth affecting pines and some spruces (also noted in southwest CT). Trees typically thrive despite the alarming appearance. Small chambers at the base of newest growth of twigs from **Norway spruce shoot gall midge** (*Piceacecis abietiperda*). Adults emerge in April; infested twigs may die back. Factsheet at: https://tinyurl.com/yc6bysvx. Note this is a different species from **white spruce shoot gall midge**, *Piceacecis tsugae* (formerly *Mayetiola piceae*, **fig. 32, p. 114**) which affects red and white spruces.

Various issues on Norway spruce (Carole Henry)

Pitch mass borer damage (Don Gabel)

Seiridium Canker (*95*)—dieback noted on Leyland cypress in Suffolk Co. There are no fungicide treatments labeled for control of this disease. Use Leyland cypress in full-sun sites and protect from drought. See more in *Under the Scope*.

White Pine Weevil (20)—adults will be active as day temperatures reach 50°F. Leader applications should be made now to susceptible hosts including (among others) white, Scots, jack, blue and Norway spruces. Hemlock and Douglas fir are reported hosts attacked much less often. More including other hosts at: https://tinyurl.com/WhitePineWeevilUSDA-FS

Typical "crooking" of terminal from white pine weevil damage in previous season (Dan Gilrein)

Winter Injury (*244-248*)—on spruce, *Chamaecyparis*, and other evergreens in Tompkins and Suffolk Cos. Trees appear to be stressed by other abiotic factors as well.

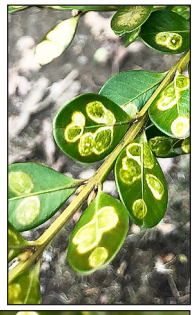
Winter injury and other stress on spruce (Karen Snover-Clift)

Broad-leaved Trees and Shrubs

Bacterial Galls on Forsythia (*189*)—Long attributed to a *Phomopsis* sp., research in Hungary now points to a new pathovar of the bacterial gall former *Pseudomonas savastanoi*. Similar bacteria cause galls on olive (*Olea europaea*) and oleander. Galls tend to form at leaf nodes from infections at leaf scars in fall. Prune out affected branches in dry weather, sanitizing between cuts which can serve as points of entry.

Bacterial galls on forsythia (Tuty Gunawan)

Boxwood Leafminer (94)—damage in Passaic Co. (NJ) associated with odd circular lesions or in Suffolk Co. with brown terminal leaves and spotting but no dieback More in *Under the Scope*.



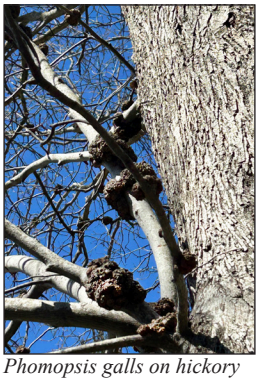
Top: boxwood leaf miner damage in NJ (Don Gabel); above: damage on left of sample in NY (Dan Gilrein)

Downy Mildew of Rose (*175*)—canker infections seen on rose canes in southwestern CT. Downy mildew is primarily a foliar disease; the causal oomycete overwinters in cane lesions.

Magnolia Scale (169)—overwintering 1st instars on twigs in Suffolk Co.

Magnolia scales (Marc-Eric Proferes, Jr.)

Phomopsis Galls (*173*)—likely reason for swellings noted on hickory in Suffolk Co. Northern red oak and maple may show similar symptoms from Phomopsis infection. Such galls do not generally lead to the demise of the tree; they often affect only one of a group.



Phomopsis galls on hickory

Rhododendron Borer (121)—wilting/dieback to rhododendron in Passaic Co. (NJ); holes and larvae in stems in Putnam Co.

Right: wilting from rhododendron damage (Don Gabel). Below: borer gallery and damage (Dom Zeppetella)

Rhododendron Root Rot (*162-164*)—diagnosis is underway, but failure of some large rhododendrons in Nassau Co. landscapes this winter possibly due to Armillaria root rot following drought stress last year.

Rhododendron root rot (Richard Weir III)

Sooty Mold on Alder (*7*)—*Scorias spongiosa* grows on aphid honeydew: it does not attack the tree. In Suffolk Co. it has formed a black mass on alder from past (2024) woolly alder aphid colonies. The sooty mold is also found on pine and beech associated with heavy aphid, adelgid (pine) or beech blight aphid infestations

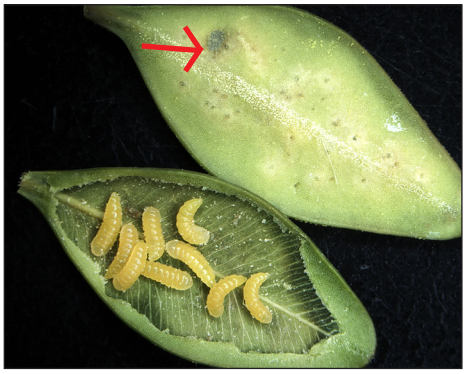
Sooty mold accumulation (Margery Daughtrey)

Volutella Blight—spots caused by *Coccinonectria pachysandricola* on Japanese pachysandra in southwestern CT, Suffolk and Westchester Cos. Snow cover may have made the disease more conspicuous than usual.

Volutella blight on pachysandra (Don Gabel)

Under the Scope:
Reports from Diagnostic Labs

Boxwood Leafminer (94)— larvae active in mines in Suffolk, will emerge through "window panes" later in spring.



Boxwood leafminer larvae and translucent "window pane" on leaf underside noted by arrow (Dan Gilrein)

Camellia Root Rot—Camellias wilting in a greenhouse were found to have root rot due to *Cylindrocarpon* sp. which is favored by wet soil conditions. Spores are cigar-shaped, unlike unlike those of Fusarium, which are crescent shaped.

Cylindrocarpon *(Margery Daughtrey)*

Colorado Blue Spruce Issues—spruce spider mite (52, 53) eggs on twigs, low level of past injury in Suffolk Co. Also **aphid (34, 35)** eggs, probably *Cinara* sp. conifer aphids.

Spruce spider mite eggs *(Dan Gilrein)*

Seiridium Canker (*95*)—Sporulation of both *Pestalotiopsis* sp. and *Seiridium* sp. found on Leyland cypress with many points of dieback. Drought stress in 2024 may have played a role in encouraging the cankers.

Seiridium *spores (Margery Daughtrey)*

Miscellany

CleanSweep Hudson Valley Region in May – free pesticide and chemical disposal. From DEC's Bureau of Pesticides Management, CleanSweepNY helps farmers, owners of former farms, and commercial pesticide applicators dispose of unwanted or unusable pesticides, fertilizers and other chemicals in a safe and legal manner at no cost. Locations: May 13 - Kingston (Ulster), May 14 - Fishkill (Dutchess), May 15 - Middletown (Orange), May 16 - Valhalla (Westchester). More info or request a registration form email cleansweep@dec.ny.gov or call 518-225-8146. https://tinyurl.com/mumaxuky

Birds and Bees Act - new requirements for landscape applicators in NY: Effective Dec. 31, 2024, commercial landscape pesticide applicators/arborists in NY using any dinotefuran insecticide (Safari, Transtect, Dinocide) for permitted landscape applications (treatment of invasive species affecting woody plants or under a DEC-issued

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Plant Pathology and Plant-Microbe Biology
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environmental emergency) must now complete and pass an approved "neonicotinoid training" course annually and keep a record of training for three years. Beginning Dec. 31, 2026, this training requirement will extend to applicators using a pesticide containing imidacloprid or acetamiprid in the same situations. Introduction to Neonicotinoid Insecticides, NYSDEC-approved (NY-25-435354), is at https://tinyurl.com/NYNeonicCourse. Pesticide applicator recertification credits (0.5 many NY categories; also approved CT, ME, MA, NH, VT) are available for the course (~40 minutes).

Ground-nesting bees active. Most likely "unequal cellophane bees," *Colletes inaequalis*, sometimes called plasterer or polyester bees for the plastic-like material used to line their burrows. Though solitary, nest sites in ground are often aggregated, sometimes with 1000s of small mounds favoring well-drained sunny areas with sparse or no vegetation and early pollen sources nearby. Very gentle and non-aggressive, most disappear by mid-May. More info: https://tinyurl.com/yx24r6f6

Phenology by County

Monroe: bloodroot, hairy bittercress

Onondaga: winter honeysuckle, common hazel 'Red Majestic', red maple, witchhazel, forsythia

Rockland: American elm, cornelian cherry, early flowering cherry/plum, forsythia, winter honeysuckle, star and saucer magnolia, red maple, andromeda, Korean rhododendron, yew, willows, witchhazel

Suffolk: forsythia, star magnolia, cornelian cherry, white forsythia, Bodnant viburnum, andromeda

Tompkins: pussy willow, Cornelian cherry, forsythia, star magnolia

Westchester: witchhazel, forsythia, willow

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

Growing Degree Days

As of April 8, 2025

Station	GDD_{50}	Station	GDD_{50}
Albany	33	Ithaca	25
Binghamton	29	New Brunswick,NJ	74
Boston, MA	19	Poughkeepsie.	44
Bridgeport, CT	20	Riverhead	36
Buffalo	38	Rochester	38
Central Park	74	Syracuse	40
Farmingdale	38	Watertown	25
Hartford, CT	16	Westchester	40
		Worcester, MA	9

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- And our other donors to be acknowledged in future issues

Red Pine Scale: Old Pest Gaining New Ground

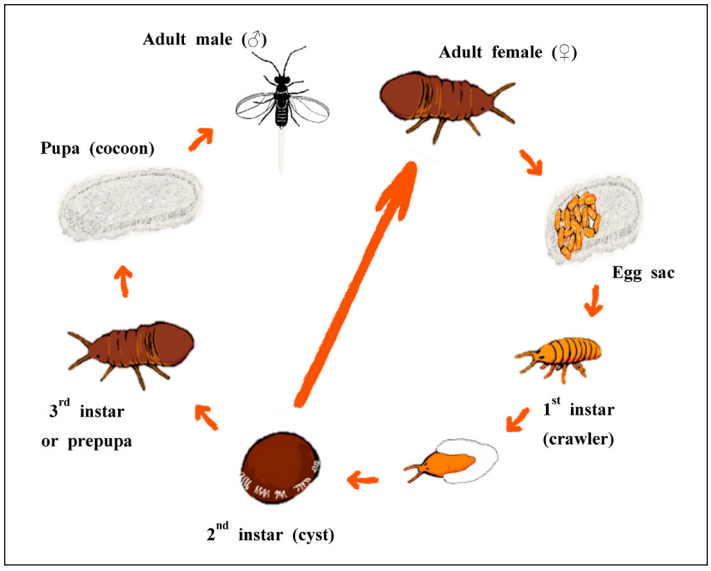
Amanda Dillon, Forest Health Research Lab Manager, and Liam Somers, Forest Health Research Entomologist, New York Department of Environmental Conservation's Bureau of Invasive Species and Ecosystem Health (all photos courtesy of the authors)

Introduction

Red pine scale (*Matsucoccus matsumurae*) is a scale insect native to Japan that feeds on red pine (*Pinus resinosa*) and eventually causes host mortality. It is believed to have been introduced on exotic pines brought to the 1939 New York World's Fair and subsequently planted in Connecticut where it was first detected in 1946. From there red pine scale has been responsible for killing hundreds of thousands of red pine trees across the Northeast. Much of that extent is unverified due to the difficulty of detection and identification, but the near complete loss of red pine in Maine and heavy damage to red pine in New Hampshire have been attributed to the scale.

Life Cycle

In the Northeast, this insect has two generations a year. Eggs laid in May hatch in June. These first instar (stage) crawlers move to appropriate feeding sites at the base of needle clumps or protected areas under bark scales on small branches. They enter a cyst stage in mid-July and development of females from this stage forward is very different from that of males. Females of this species are neotenic, meaning they retain many juvenile characteristics and molt straight from this cystic second instar into an adult female. In contrast, males enter a third instar or prepupal stage, before entering a pupal stage and finally hatching out as adult winged males.



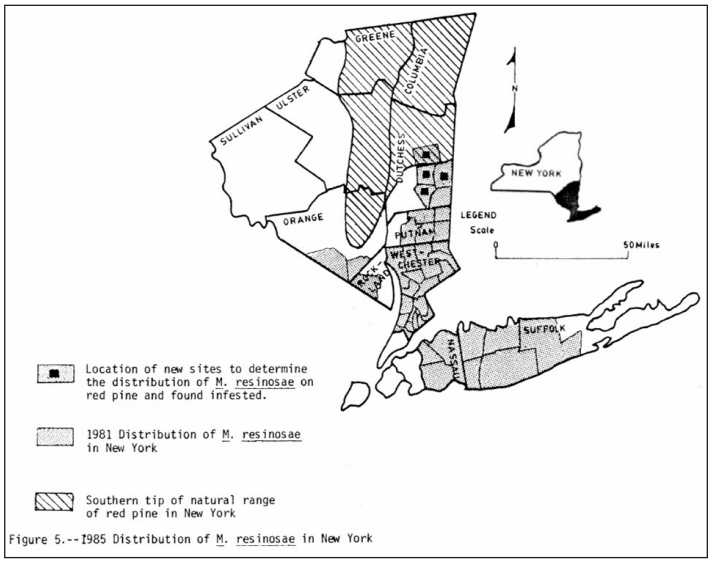
A generalized life cycle of species in the *Matsucoccus* genus from: Choi, J.; Cha, D.; Kim, D.-S.; Lee, S. Review of Japanese Pine Bast Scale, *Matsucoccus matsumurae* (Kuwana) (Coccomorpha: Matsucoccidae), Occurring on Japanese Black Pine (*Pinus thunbergii* Parl.) and Japanese Red Pine (*P. densiflora* Siebold & Zucc.) from Korea. Forests 2019 10(8) 639. https://doi.org/10.3390/f10080639

After mating, winged males die and females lay eggs in ovisacs from August through September. These eggs hatch in the fall and crawl to an appropriate feeding location before becoming dormant over the winter. During April, these overwintering crawlers feed and rapidly develop into adults and lay eggs that start the cycle again. It is the fuzzy white ovisacs that are most visible throughout the year, peaking in later summer when eggs are laid and again in early spring.

Detection

In New York, red pine scale was first detected in 1950 on Long Island where it's believed to have quickly wiped out all red pine south of Westchester County. In a 1977 article in the New York Times, Fred L. Gerty Jr., a New York State forester at the time, posited that if red pine scale continued to spread, "it will one day kill every red pine tree on the North American continent." Other reported hosts include Japanese black (*P. thunbergii*), Japanese red (*P. densiflora*), and Chinese red (*P. tabuliformis*) pines.

In 1969, there were detections again in Nassau, Suffolk, and Westchester Counties; the next most recent record we have been able to locate is from a Forest Service detection survey in 1985 that found red pine scale in Dutchess County, after which records for red pine scale go silent. We aren't sure if the insect went inactive for decades or if cold winter temperatures in the more northerly extent of red pine range in New York kept red pine scale populations low enough to remain largely undetected for nearly 40 years.



1985 Forest Service Report figure showing southern New York range of red pine scale and our last known distribution before locating scales in the Adirondacks in 2024.

The NYS DEC Forest Health Research Lab was contacted in June 2024 by a property owner in Hague, NY about dying red pine on Lenni-Lenape Island on Lake George. The property owner explained that the trees had died in under a year without any clear reasons as to why. Upon arriving to the Island, DEC staff noticed small, white clumps of white woolly material at the base of needles and along smaller branches on the symptomatic red pine trees. DEC staff also noticed numerous dead and dying red pine on shore across from the Island.

Close-up of white woolly material found on fallen dead branch with cone that had fallen to the ground.

In October, DEC visited a nearby red pine plantation in the Pharaoh Lake Wilderness Area. Many red pines appeared to be dead or dying, with wool around the base of needles suggestive of red pine scale. Those samples along with specimens from the Lake George infestation were sent to Cornell eDNA and Genomic Core Facility for DNA analysis. Interestingly, DNA analysis of these specimens suggests the red pine scale population may be a complex of species that diverged over the 80 years since the scale's introduction to North America or may be the result of multiple introductions.

This is the furthest north that red pine scale has ever been found in New York State. Compounding the issue is the decline of natural red pine due to mesophication (succession of less fire-tolerant species) and lack of disturbance. Red pine prefers well drained soils and is considered a fire-adapted species. The lack of fire in the landscape has likely limited its regeneration across the state.

Close-up of fuzzy white wool found where the insects are feeding at the base of live needles.

While it historically had a fairly broad distribution from the northern Great Lakes east to northern New England, including parts of NY's Southern Tier and northern Pennsylvania, red pine was extensively planted across the State as a part of the Civilian Conservation Corps in the 1930s and 40s. In many of these plantations, the trees are overstocked and stressed, making them especially susceptible to pathogens and pests like red pine scale. These plantations may assist in the proliferation of red pine scale, which could then go on to impact our native red pine resource.

Flagging and dieback on red pine on Lake George.

The Future

It's likely red pine scale is much more pervasive across NY's landscape than currently documented. And as our winters continue to get warmer, red pine scale could continue to expand its range northward and cause extensive red pine mortality in natural stands.

In 2025, DEC's Bureau of Invasive Species and Ecosystem Health will collaborate with partners and the public to conduct extensive surveys to map the scale's distribution, slow its spread, and protect native red pine in the Adirondack Park. Members of the public can help us in our efforts: if you encounter dead or dying red pine with signs of red pine scale, please send photos and location info to foresthealth@dec.ny.gov.