University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
February 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

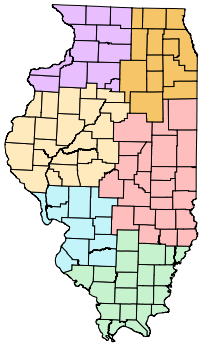
December 2017 General Summary

February finds invasive plants in Illinois on the verge of 'waking up' in the southern regions (Invasive shrubs, such as bush honeysuckle, multiflora rose, and autumn olive, all are breaking bud and leafing out) and still mostly slumbering in the northern regions. February, perhaps more than any other month, highlights how phenology varies across Illinois.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Thatch from last year's growth is still visible and still has a few seeds remaining on the stems, but no new growth observed
- Mimosa (*Albizia julibrissin*) – Plants still dormant
- Garlic mustard (*Alliaria petiolata*) - Rosettes green, but still small with no or little active growth this spring. New germinates observed
- Poison hemlock (*Conium maculatum*) – Rosettes small and still green with no or little active growth this spring
- Autumn olive (*Elaeagnus umbellata*) – Bud break and new leaves erupting on many plants. New leaves still small, only about 25% of full size.
- Wintercreeper (*Euonymus fortunei*) - Last year's leaves still green, but looking ragged. No new leaves observed but buds are swelling
- Sericea lespedeza (*Lespedeza cuneata*) - Plants dormant
- Japanese honeysuckle (*Lonicera japonica*) – Some leaves from last year still green and new leaves starting to expand
- Amur honeysuckle (*Lonicera maackii*) – Most plants have at least a few buds that have broken and small leaves present
- Japanese stiltgrass (*Microstegium vimineum*) – Plants dormant



Reporting Regions

- Paulownia (*Paulownia tomentosa*) - Flower buds expanding but not yet open.
- Multiflora rose (*Rosa multiflora*) – Small new leaves present on many plants
- Johnsongrass (*Sorghum halepense*) - Plants dormant

Southwest

- Japanese barberry (*Berberis thunbergii*) - Plants dormant
- Oriental bittersweet (*Celastrus orbiculatus*) - Plants dormant, some of last year's fruit still present
- Poison hemlock (*Conium maculatum*) – Last year's rosettes are full and actively growing. Plants are showing minimal signs of frost damage
- Autumn olive (*Elaeagnus umbellata*) – Plants dormant

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Wintercreeper (*Euonymus fortunei*) - Last year's leaves present dark green and purplish-maroon. Last year's fruit present with seeds dropping. No new growth observed
- English ivy (*Hedera helix*) - Shriveled clusters of last year's berries present. Leaves full and green
- Japanese honeysuckle (*Lonicera japonica*) – Bud break has occurred with new leaves emerging on most vines. 20% or more of last years leaves remain on most plants and are still actively photosynthesizing. About 10% of last year's fruit remain on some vines. Remaining fruit are all black and drying with a few still juicy
- Amur honeysuckle (*Lonicera maackii*) – Leaf buds are present on all sampled plants but not swelling. Tiny amount of green leaf material is present when buds are split
- Phragmites (*Phragmites australis*) - Plants dormant. Last year's seed heads present and still dropping seed
- Beefsteak plant (*Perilla frutescens*) - Plants dormant, brown, dead stems from last year's plants present with open seed capsules
- Multiflora rose (*Rosa multiflora*) – About 10% or more bud break has occurred on all sampled plants with small leaves emerging at one location, no new leaves observed at second location. Bud swell observed on most specimen plants. A few of last year's leaves (~10%) are still present and photosynthesizing on plants in protected areas

West Central

- Garlic mustard (*Alliaria petiolata*) - First year rosettes green, but no active growth this year
- Autumn olive (*Elaeagnus umbellata*) – Plants dormant
- Japanese hops (*Humulus japonicus*) - Thatch from last year's plants still present, but no new germinates observed
- Amur honeysuckle (*Lonicera maackii*) – Healthy buds present, but not actively swelling in two locations within region. An additional location had about 10% of buds showing some greening of tips, in preparation for swelling and bud break
- Reed canary grass (*Phalaris arundinacea*) - Plants dormant
- Multiflora rose (*Rosa multiflora*) – Plants dormant, some fruit from last year remain

East Central

- Amur honeysuckle (*Lonicera maackii*) – Buds swelling
- Multiflora rose (*Rosa multiflora*) – Buds opening and leaves just starting to erupt

Northwest

- Garlic mustard (*Alliaria petiolata*) – Rosette leaves from last year are wilted but still bright green
- Dames rocket (*Hesperis matronalis*) - Rosette leaves from last year are wilted but still bright green
- Bush honeysuckle (*Lonicera sp.*) – Some small specimens with a few fresh green leaves close to the ground, where the microclimate is apparently warm enough to trigger leaf emergence and protect leaves from frost damage

Northeast

- Garlic mustard (*Alliaria petiolata*) - First year rosettes green, but no active growth this year
- Teasel (*Dipsacus* sp.) - Dried stalks and empty seed heads present, dried rosettes on ground, but no new growth initiated
- Autumn olive (*Elaeagnus umbellata*) – Plants dormant
- Amur honeysuckle (*Lonicera maackii*) – Some plants dormant, other plants starting bud swell
- Tartarian honeysuckle (*Lonicera tatarica*) - Bud swell and just the start of bud break
- Phragmites (*Phragmites australis*) - Plants dormant. Dried stalks and leaves from last year's growth still present, but no new growth initiated
- Common buckthorn (*Rhamnus cathartica*) – Plants dormant

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower,

care should be taken to avoid accidentally spreading the seeds of these plants.

- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Debbie Bruce, Karen DePoister, Marge Evans, Carol Froeming, Bill Klunk, Melvin Konrath, Molly Lovelock, Mona Maas, Phyllis Shulte, Sharon Geil

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report February 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602. Urbana, IL. 3p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
March 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

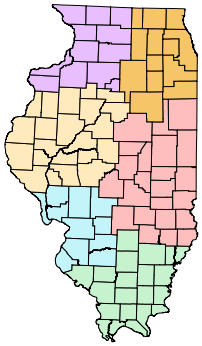
March 2017 General Summary

The gap in phenology between the northern and southern regions is readily apparent in March. Most of the woody invaders are actively expanding leaves in the south, and one, Callery pear, is even past bloom. At the same time, the woody invaders are dormant or just starting to initiate growth in the north. This transition period is a time for landowners and land managers to leave the woody invaders along and focus on controlling the early herbaceous invaders, particularly the biennial species such as garlic mustard and poison hemlock.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Thatch from last year's growth is still visible and still has a few seeds remaining on the stems, but no new growth observed
- Tree of Heaven (*Ailanthus altissima*) - Buds starting to swell
- Mimosa (*Albizia julibrissin*) – Plants still dormant
- Garlic mustard (*Alliaria petiolata*) - Rosettes robust and actively growing. Plants not bolting yet, no signs of flower stalk development
- Poison hemlock (*Conium maculatum*) – Rosettes robust, actively putting on new growth. Plants not bolting yet, no signs of flower stalk development
- Autumn olive (*Elaeagnus umbellata*) – Leaves 35-50% expanded, flower buds present
- Burning bush (*Euonymus alatus*) - Buds swelling, but no leaf emergence yet
- Wintercreeper (*Euonymus fortunei*) - Last year's leaves still green, but looking ragged. New growth starting, leaves actively expanding
- Sericea lespedeza (*Lespedeza cuneata*) - Plants dormant
- Privet (*Ligustrum* sp.) - 10% or less of last year's leaves remain. Newly expanding leaves ½" long
- Japanese honeysuckle (*Lonicera japonica*) – Leaves actively emerging. Most leaves 50%-75% emerged
- Amur honeysuckle (*Lonicera maackii*) – Leaves 50-75% expanded
- Japanese stiltgrass (*Microstegium vimineum*) – New germinates visible, still in cotyledon stage. Last year's thatch still present but starting to break apart
- Paulownia (*Paulownia tomentosa*) - Flower stalks elongated and flower buds expanded but not yet opened
- Reed canary grass (Phalaris arundinacea) - Plants actively growing, 6-8" tall
- Callery (Bradford) pear (Pyrus calleryana) - Plants past bloom, leaves actively expanding



Reporting Regions

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Multiflora rose (*Rosa multiflora*) – Leaves 50-75% expanded
- Johnsongrass (*Sorghum halepense*) - Plants dormant

Southwest

- Tree of Heaven (Ailanthus altissima) - Plants dormant, no signs of bud swell at this time
- Oriental bittersweet (*Celastrus orbiculatus*) - Bud swell and burst. Leaves starting to expand
- Poison hemlock (*Conium maculatum*) – Rosettes are enlarging, adding new leaves. Taller plants are about 20" in height
- Autumn olive (*Elaeagnus umbellata*) – Leaf expansion underway, Most larger leaves are currently ⅝" long. Leaf bud break first observed on 3/3/2017
- Wintercreeper (*Euonymus fortunei*) - New leaf expansion underway, new larger leaves are approximately ¾" long. ~25% of last year's fruit still on plants, actively dropping
- English ivy (*Hedera helix*) - Shriveled clusters of last year's berries present. Leaves full and green
- Japanese hops (*Humulus japonicus*) - Plants dormant, no germination observed at this time
- Sericea lespedeza (*Lespedeza cuneata*) - Plants dormant
- Japanese honeysuckle (*Lonicera japonica*) – Leaf expansion underway. New leaves are expanding rapidly. Larger new leaves are approximately 1-⅜" long. About 10% of last year's leaves are still present and actively photosynthesizing. Stems starting to elongate
- Amur honeysuckle (*Lonicera maackii*) – New leaf expansion underway. Larger new leaves are approximately 2" long. Leaf bud break first observed on 2/26/2017
- Phragmites (*Phragmites australis*) - Plants dormant.
- Beefsteak plant (*Perilla frutescens*) - New germination evident under last year's thatch
- Callery (Bradford) pear (*Pyrus calleryana*) - Full bloom. Blooms first observed on escaped trees the day of 3/5/2017 and on landscape trees the day of 3/10/2017. Leaves are expanding. Some leaves are completely unfurled and up to 1-¼" long
- Black locust (*Robinia pseudoacacia*) - Bud swell and break just starting in the top of only a few specimen trees. Most trees still dormant
- Multiflora rose (*Rosa multiflora*) – Rapid leaf expansion underway. Compound leaves about 2" long. Some leaflets are ¾" long
- Crownvetch (*Securigera varia*) - Plants are just starting to emerge. Compound leaves are 3-¼" long. Leaflets are ⅜" long
- Periwinkle (*Vinca minor*) - Plants are in full bloom. Large number of blossoms first observed on 2/24/2017. New leaf expansion also underway. Larger new leaves are approximately ⅝" long

West Central

- Tree of Heaven (Ailanthus altissima) - Plants dormant, no signs of bud swell at this time
- Autumn olive (*Elaeagnus umbellata*) – Leaf expansion underway. Nearly all plants have leaves approximately ½" long
- Amur honeysuckle (*Lonicera maackii*) – About half of the plants had buds swelling and the other half had active leaf expansion. Leaves were ¾"-1". A second location had nearly 100% of the leaves with active leaf expansion with leaves 1"-2" in length
- Multiflora rose (*Rosa multiflora*) – Leaf expansion underway on all plants observed. Leaves 2-3" long

East Central

- Garlic mustard (*Alliaria petiolata*) - Rosettes enlarging, not bolting
- Amur honeysuckle (*Lonicera maackii*) – Leaves nearly halfway expanded
- Multiflora rose (*Rosa multiflora*) – Leaves expanding

Northwest

- Garlic mustard (*Alliaria petiolata*) – Rosettes full and robust with active leaf growth. No flower stalks yet
- Japanese barberry (*Berberis thunbergii*) - Leaves starting to emerge at one site, dormant at another site
- Poison hemlock (*Conium maculatum*) – Rosettes robust, actively putting on new growth. Plants not bolting yet
- Russian olive (*Elaeagnus angustifolia*) - Plants dormant
- Autumn olive (*Elaeagnus umbellata*) – Plants dormant
- Burning bush (*Euonymus alatus*) - Leaves emerging
- Japanese knotweed (*Fallopia japonica*) - Plants dormant
- Dames rocket (*Hesperis matronalis*) - Rosettes green and wilted, no bolting yet
- Japanese hops (*Humulus japonicus*) - Plants dormant, no germination observed at this time
- Bush honeysuckle (*Lonicera sp.*) – Leaves starting to emerge, Buds are swelling and turning green on most plants with some bud break and leaf emergence

- Sweet clovers (*Melilotus* sp.) - Plants dormant
- White mulberry (*Morus alba*) - Buds swelling, sap moving
- Wild parsnip (*Pastinaca sativa*) - Plants dormant
- Reed canary grass (Phalaris arundinacea) - Plants in wetland or upland habitats dormant. Plants along seeps with flowing water have new shoots starting to emerge
- Common buckthorn (*Rhamnus cathartica*) – Plants dormant
- Multiflora rose (*Rosa multiflora*) – Plants still dormant at some sites, buds swelling on young canes at other sites

Northeast

- Garlic mustard (*Alliaria petiolata*) - Rosettes are expanding and are now above the leaf litter-no bolting. Most plants 2"-4" in height
- Teasel (*Dipsacus* sp.) - No new growth. Last year's dead stalks still visible
- Autumn olive (*Elaeagnus umbellata*) – Bud swell. Less than 10% have leaves starting to unfurl
- Bush honeysuckle (*Lonicera* spp.) – Buds are only swelling at one site, at another site leaf expansion has started, mostly on lower stems or small plants
- White mulberry (*Morus alba*) - Bud swell, no leaf emergence
- Reed canary grass (Phalaris arundinacea) - Green shoots are developing
- Phragmites (*Phragmites australis*) - Plants dormant. Last year's thatch falling over
- Common buckthorn (*Rhamnus cathartica*) – No bud swell as yet-still dormant at this site
- Multiflora rose (*Rosa multiflora*) – Plants dormant
- Hybrid cattail (*Typha xglauca*) - Plants dormant

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Debbie Bruce, Karen DePoister, Marge Evans, Carol Froeming, Bill Klunk, Melvin Konrath, Molly Lovelock, Mona Maas, Phyllis Shulte, Sharon Geil

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report March 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602. Urbana, IL. 3p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

UNIVERSITY OF ILLINOIS EXTENSION
College of Agricultural, Consumer and Environmental Sciences

University of Illinois • U.S. Department of Agriculture • Local Extension Councils Cooperating

University of Illinois Extension provides equal opportunities in programs and employment.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
April 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

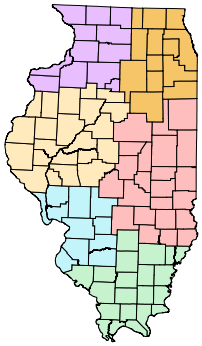
April 2017 General Summary

April moves us into the period of rapid change in terms of invasive plant phenology. Every week new species are breaking bud, coming into bloom, starting to bolt, or setting fruit. Large differences occur between the region and even from site to site within a region. Small differences in aspect, temperature and rainfall can really alter phenology at this time of year.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - New growth just starting. Plants under 4" tall
- Tree of Heaven (*Ailanthus altissima*) - Leaves 50-75% expanded
- Mimosa (*Albizia julibrissin*) – New leaves starting to expand
- Garlic mustard (*Alliaria petiolata*) - Full bloom with seed pods starting to develop
- Oriental bittersweet (*Celastrus orbiculatus*) - Full leaf expansion
- Poison hemlock (*Conium maculatum*) – Rosettes robust, with flowering stalks developing, 12-24" tall
- Autumn olive (*Elaeagnus umbellata*) – Past bloom, developing new fruit. Leaves fully expanded
- Wintercreeper (*Euonymus fortunei*) - New leaves fully expanded
- Sericea lespedeza (*Lespedeza cuneata*) - New growth ~12" tall
- Privet (*Ligustrum* sp.) - Full leaf expansion, flower buds just starting to develop
- Japanese honeysuckle (*Lonicera japonica*) – Leaves fully expanded, flower buds developing
- Amur honeysuckle (*Lonicera maackii*) – Leaves fully expanded. In flower bud early in observation period, in full bloom by end of observation period
- Birdsfoot trefoil (*Lotus corniculatus*) - Plants actively growing, no flower development observed
- Sweet clovers (*Melilotus* sp.) - Plants ~12" high
- Japanese stiltgrass (*Microstegium vimineum*) – Plants have developed 2-3 new leaves, still very small
- Paulownia (*Paulownia tomentosa*) - Full bloom
- Reed canary grass (Phalaris arundinacea) - Plants actively growing, 18-24" tall, no signs of flowering
- Phragmites (*Phragmites australis*) - Plants 2-4" high, no flower development yet
- Callery (Bradford) pear (*Pyrus calleryana*) - Plants past bloom, leaves fully expanded
- Black locust (*Robinia pseudoacacia*) - Full bloom



Reporting Regions

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Multiflora rose (*Rosa multiflora*) – Leaves nearly fully expanded, flower buds developing
- Crownvetch (*Securigera varia*) - Plants actively growing, no flower development observed
- Johnsongrass (*Sorghum halepense*) - Starting to grow, new shoots less than 12" high

Southwest

- Tree of Heaven (Ailanthus altissima) - Leaf expansion has just started. Compound leaves are < 2" long. Larger leaflets are < 3/4" long
- Oriental bittersweet (*Celastrus orbiculatus*) - Leaves just starting to open and expand. Average size of larger leaves less than ½". Flower buds present, but tightly closed
- Poison hemlock (*Conium maculatum*) – Plants are rapidly growing. Height of taller plants are 40". Stems 2-3' tall
- Autumn olive (*Elaeagnus umbellata*) – Leaves fully expanded. About 10% or less of blossoms are open. Most blossom buds are only expanding at this point at one site. At another site, shrubs were in full bloom
- Wintercreeper (*Euonymus fortunei*) - Plants actively putting on new leaves and stem shoots. Old fruits no longer present
- English ivy (*Hedera helix*) - Terminal buds expanding. 1st set of leaves separated and expanding on ~30%
- Japanese hops (*Humulus japonicus*) - Vines erect up to 4" tall. All specimen vines have not started to spread horizontally. No blossom buds observed
- Sericea lespedeza (*Lespedeza cuneata*) - Dormant. Emergence of plants not observed to date
- Japanese honeysuckle (*Lonicera japonica*) – Vines putting on new leaves and stem shoots. Early leaves are fully expanded. No flower buds observed
- Amur honeysuckle (*Lonicera maackii*) – Dual flower buds forming in leaf axils. Larger flower buds are approximately 1/4" long. Initial leaves are fully expanded. Plants are also putting on new growth at ends of branches
- Phragmites (*Phragmites australis*) - Stems growing, 1-3' high. Leaf blades expanding at top, ~80% have one small leaf on stalk, ~10% have two small leaves
- Beefsteak plant (*Perilla frutescens*) - Germinating around base of old stems. ~75% of germinates have first set of true leaves
- Callery (Bradford) pear (*Pyrus calleryana*) - All blossom petals have dropped at this time. Fruit have started developing. Average fruit size 1/16"-1/8" in diameter not counting the bract
- Black locust (*Robinia pseudoacacia*) - Leaf expansion underway on all trees. Average size of leaves about ¾"
- Multiflora rose (*Rosa multiflora*) – Full leaf expansion of initial leaves has occurred. New leaves and stem shoots emerging. No blossom buds observed at one site. Another site had some flower buds present
- Crownvetch (*Securigera varia*) - Plants actively growing. Compound leaves are up to 7" in length. Leaflets are 3/4" long. No blossom buds observed
- Periwinkle (*Vinca minor*) - Plants are past full bloom period. Blooms observed on 10% of plants at one site. Another site flowering has finished. New leaf expansion and stem elongation continues. Follicles are developing and < 1/16" in diameter

West Central

- Tree of Heaven (Ailanthus altissima) - Bud break and start of leaf emergence. Smaller trees further laong than larger trees
- Garlic mustard (*Alliaria petiolata*) – Second year plants are 10-12" high. Plants either starting to flower or are already in full flower
- Musk thistle (*Carduus nutans*) - Plants actively growing, no flowering observed
- Autumn olive (*Elaeagnus umbellata*) – Leaves fully emerged and flower buds developed
- Japanese hops (*Humulus japonicus*) - No germination observed. Thatch from last year's plants still visible
- Amur honeysuckle (*Lonicera maackii*) – All plants in bud break and leaf emergence. Plants in the sun are at full leaf out and have flower buds developing at one site. All plants have flower buds at another site
- Wild parsnip (*Pastinaca sativa*) - Plants actively growing, no flowering observed
- Reed canary grass (Phalaris arundinacea) - Plants actively growing
- Multiflora rose (*Rosa multiflora*) – – Lots of new green leaves. Leaves full expanded on ~60% of plants, still actively expanding on ~40%. No flower buds observed

East Central

- Garlic mustard (*Alliaria petiolata*) - Starting to bolt, some plants already in flower
- Canada thistle (*Cirsium arvense*) - Actively growing, flower stalks not yet developing

- Bull thistle (*Cirsium vulgare*) - Full rosettes, plants not yet bolting
- Poison hemlock (*Conium maculatum*) – Rosettes robust, plants not bolting
- Amur honeysuckle (*Lonicera maackii*) – Full leaf expansion, Flower buds developing
- Star of Bethlehem (*Ornithogalum umbellatum*) - Not yet flowering but active vegetative growth
- Wild parsnip (*Pastinaca sativa*) - Rosettes full and robust
- Multiflora rose (*Rosa multiflora*) – Leaves 50% expanded, no signs of flower bud development
- Crownvetch (*Securigera varia*) - New growth visible

Northwest

- Garlic mustard (*Alliaria petiolata*) – Heathy rosettes growing but no flowering stalks yet. Seeds have begun to germinate profusely in spots
- Japanese barberry (*Berberis thunbergii*) - Leaves emerging (75-100% of full leaf out). Flower buds starting to form
- Poison hemlock (*Conium maculatum*) – 2nd year leaves lush and green, no sign of bolting
- Russian olive (*Elaeagnus angustifolia*) - At bud break, with leaves just starting to emerge
- Autumn olive (*Elaeagnus umbellata*) – At bud break, with leaves just starting to emerge
- Burning bush (*Euonymus alatus*) - Leaves fully emerged
- Japanese knotweed (*Fallopia japonica*) - Shoots 12" above ground with several leaves each
- Dames rocket (*Hesperis matronalis*) - 2nd year leaves have emerged, green and lush. No sign of bolting yet
- Japanese hops (*Humulus japonicus*) - No germination observed
- Bush honeysuckle (*Lonicera sp.*) – Leafed out, formed dense green understory in woods. Plants 75-100% full leaf out
- Sweet clovers (*Melilotus* sp.) - Yellow 2nd year plants emerged, no bolting yet, white plants not yet emerged
- White mulberry (*Morus alba*) - Leaves emerging (25-50% of full leaf out)
- Wild parsnip (*Pastinaca sativa*) - 2nd year leaves emerging and lush; no bolting yet
- Reed canary grass (Phalaris arundinacea) - Leaves 12'18" in length
- Common buckthorn (*Rhamnus cathartica*) – Small green buds not opened yet at one site. Another observer reported leaves 25-50% emerged
- Multiflora rose (*Rosa multiflora*) – Leafing out, small bunches of leaves at one site. Another observer reported plants 75-90% of the way to full leaf out

Northeast

- Garlic mustard (*Alliaria petiolata*) - Rosettes expanding and found a small number of plants already had flower heads on them Plants 6-8 inches tall. Some plants started to develop flower buds
- Canada thistle (*Cirsium arvense*) - New plants are emerging from areas that had been burned clean from burning of brush piles this past fall. No bolting of plants in existing clones
- Bull thistle (*Cirsium vulgare*) - Rosettes expanding, no bolting seen as yet
- Poison hemlock (*Conium maculatum*) – Plants have leaves 6 to 12 inches long. Flowering stalks not developing yet
- Teasel (*Dipsacus* sp.) - New plants visible and rosettes expanding. No bolting seen as yet. Rosettes very green and are between 2 and 6 inches tall with leaves 3 to 6 inches long
- Autumn olive (*Elaeagnus umbellata*) – Half of the specimens viewed were just at bud break and the other half had leaf expansion starting
- Tawny daylily (*Hemerocallis fulva*) - Leaves 3-8 inches long. Plants are just now starting to green up
- Amur honeysuckle (*Lonicera maackii*) – Leaves about 1 inch long on plants in full sun or forest edges. Plants in dense shade not as far along yet
- Bush honeysuckle (*Lonicera* spp.) – Leaf expansion continuing. Leaf emergence increases on a daily basis, all bushes bright green and getting thicker. Some areas at 50%-80% leaf expansion others nearing full leaf expansion
- Reed canary grass (Phalaris arundinacea) - Blades emerging with some at a height of one foot. 2-3 leaves per shoot, multiple shoots per plant, no flower development yet
- Phragmites (*Phragmites australis*) - No new growth seen. Still appears dormant. – Blade emergence, thin new blades approximately 1 ft tall and appear thru old plant debris
- Callery (Bradford) pear (*Pyrus calleryana*) - Partial to full bloom

- Common buckthorn (*Rhamnus cathartica*) – Active and rapid leaf expansion at one site. Another site plants are just starting bud break at tops of plants
- Multiflora rose (*Rosa multiflora*) – Leaf expansion on most specimens while others are still at budbreak or bud swell
- Hybrid cattail (*Typha xglauca*) - Appear to still be dormant. Very heavy debris from last year and no sign of new growth at this point

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Debbie Bruce, Karen DePoister, Marge Evans, Carol Froeming, Bill Klunk, Melvin Konrath, Molly Lovelock, Mona Maas, Phyllis Shulte, Sharon Geil

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report April 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
May 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

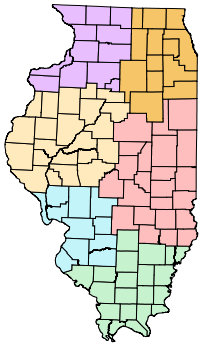
May 2017 General Summary

May marks the start of many of the summer invasive species. Teasels, poison hemlock, wild parsnip, musk thistle, crown vetch, and others are blooming (or nearly so) along roadsides in Illinois. Most of the woody invasive species have finished their spring flush of growth and are now vulnerable to herbicide treatments. Garlic mustard, while still in flower in northern Illinois, has moved beyond the point where herbicides are effective, necessitating hand pulling for control.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Plants 12”-18” tall, no floer development observed
- Tree of Heaven (*Ailanthus altissima*) - Just starting to bloom. Leaves fully expanded
- Garlic mustard (*Alliaria petiolata*) - Past flowering. Fruit full, but not yet starting to dry
- Oriental bittersweet (*Celastrus orbiculatus*) - Full leaf expansion, in bloom
- Poison hemlock (*Conium maculatum*) – Plants in full bloom
- Teasel (*Dipsacus* spp) - Starting to bolt
- Autumn olive (*Elaeagnus umbellata*) – Past bloom, developing new fruit. Leaves fully expanded
- Sericea lespedeza (*Lespedeza cuneata*) - Plants up to 18” tall, branching growth not observed
- Privet (*Ligustrum* sp.) - Starting to bloom
- Japanese honeysuckle (*Lonicera japonica*) – Full bloom
- Amur honeysuckle (*Lonicera maackii*) – Past bloom, immature fruit present
- Sweet clovers (*Melilotus* sp.) - Yellow sweet clover in bloom. White sweet clover not yet blooming
- Japanese stiltgrass (*Microstegium vimineum*) – Plants around 4 inches tall
- Paulownia (*Paulownia tomentosa*) - Just past bloom, leaves starting to expand
- Reed canary grass (Phalaris arundinacea) - Full bloom
- Multiflora rose (*Rosa multiflora*) – Full bloom



Reporting Regions

Southwest

- Tree of Heaven (Ailanthus altissima) - Flower panicles are forming. Compound leaves are up to 16” long and expanding
- Oriental bittersweet (*Celastrus orbiculatus*) - Stems rapidly growing and twining. About 5% of flowers left, blooming nearly done
- Poison hemlock (*Conium maculatum*) – Plants are bolting.

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

Height of taller plants are up to 7 ft. Umbels are formed and just starting to bloom with less than 10% plants are blooming at one site. At another site within the region, most of the plants are in full bloom

- Autumn olive (*Elaeagnus umbellata*) – Fruits are formed. Average fruit is approximately 1/16" – ¼" in diameter and ⅛" long without stem or bract
- Wintercreeper (*Euonymus fortunei*) - Plants continuing to put on new leaves and stem shoots. No flower buds observed at one site. Another observer noted flower buds present on ~30% of stems growing into trees. New germinates also observed
- English ivy (*Hedera helix*) - New growth expanding rapidly, No flower buds visible as yet
- Japanese hops (*Humulus japonicus*) - Vines rapidly growing. Longest vine observed about 30" in length. No blossom buds observed
- Sericea lespedeza (*Lespedeza cuneata*) - Plants are rapidly growing. Tallest plants are approximately 20" in height. No flower blossoms observed
- Japanese honeysuckle (*Lonicera japonica*) – Flower buds elongated up to 1.25". No open blossoms observed on any specimen plants with blossoms estimated to open within a few days at one site. At another location, about 10% of flower buds open
- Amur honeysuckle (*Lonicera maackii*) – Flower blossoms just starting to open at forest edge. 25% or less blooms open. Blooms elongated but not open on shrubs under heavy tree canopy
- Bush honeysuckle (*Lonicera* sp.) - Most past blooming with those in the shade with ~5% flowers still open
- White mulberry (*Morus alba*) - Full leaf expansion. Small fruits present, ¼"-1/2". Some fruit starting to ripen
- Phragmites (*Phragmites australis*) - Stalks 3-6' tall, taller in wetter soils. Plants actively growing
- Beefsteak plant (*Perilla frutescens*) - Plants 18-24" tall, no flowers observed yet
- Callery (Bradford) pear (*Pyrus calleryana*) - Leaves fully expanded. Average fruit size ¼" in diameter excluding bract
- Black locust (*Robinia pseudoacacia*) - Well past peak bloom, as most blooms are dropping. Widespread blooming first observed on April 30. Leaves 50-75% expanded
- Multiflora rose (*Rosa multiflora*) – Most plants are in full bloom. Some have not bloomed and others are just past bloom, with rose hips starting to develop
- Crownvetch (*Securigera varia*) - Flower umbels are starting to form. Average plants are up to 16" tall and growing
- Periwinkle (*Vinca minor*) - Actively growing new vegetation. Flowering finished, no visible fruit. Fruit are up to 1" in length at one site. No visible fruit observed at another site

West Central

- Garlic mustard (*Alliaria petiolata*) – Full bloom at one site, another site is just past peak bloom with seed pods forming
- Musk thistle (*Carduus nutans*) - Some plants starting to flower
- Poison hemlock (Conium maculatum) – Plants 18"+ tall, flower stalk developing. Rosettes robust
- Queen Anne's lace (*Dacus carota*) - Actively growing, no flowers observed
- Autumn olive (*Elaeagnus umbellata*) – Past bloom, full leaf expansion. Immature fruit present
- Amur honeysuckle (*Lonicera maackii*) – Full bloom. Leaves full expanded. Some plants starting to drop flowers and some plants still with flower buds developing
- Sweet clovers (Melilotus sp.) - Some plants just starting to flower
- Wild parsnip (*Pastinaca sativa*) - Actively growing, flowers just forming
- Reed canary grass (Phalaris arundinacea) - Lots of new growth, flower heads forming on a few plants
- Black locust (*Robinia pseudoacacia*) - most (80%) of trees have flowered. Trees under 20 ft are near full leaf expansiont, but still have new developing. Leaves on larger trees not as fully expanded
- Multiflora rose (*Rosa multiflora*) – Depending on plant, some full flower, some with buds but no flowers yet

East Central

- Poison hemlock (*Conium maculatum*) – Full bloom
- Teasel (*Dipsacus* spp) - Rosettes full, just starting to bolt
- Sweet clovers (Melilotus sp.) - Yellow sweet clover in full bloom. White sweet clover not yet blooming
- Wild parsnip (*Pastinaca sativa*) - Just starting to come into bloom
- Reed canary grass (Phalaris arundinacea) - in full bloom
- Phragmites (*Phragmites australis*) - Plants up to 4 feet tall, no signs of blooming yet
- Black locust (*Robinia pseudoacacia*) - In full bloom

Northwest

- Garlic mustard (*Alliaria petiolata*) – Second year plants on south slopes and ridge tops are greater than 95% done flowering and are starting to yellow. Seed pods well-developed. Plants on north slopes are passing peak bloom and are approx. 5-7 days behind south slope plants. Jo Daviess plants about 5-7 days behind Carroll plants
- Japanese barberry (*Berberis thunbergii*) - Full leaf expansion, no signs of blooming
- Poison hemlock (*Conium maculatum*) – Second year plants lush and green. No signs of bolting
- Exotic olives (*Elaeagnus* spp.) - Full leaf expansion, flower buds present
- Burning bush (*Euonymus alatus*) - Full leaf expansion
- Japanese knotweed (*Fallopia japonica*) - New shoots up to 36" tall
- Dames rocket (*Hesperis matronalis*) - Second year plants nearing peak bloom. New germinates present with most having only 1-2 leaves
- Bush honeysuckle (*Lonicera sp.*) – Full leaf expansion, many young blossoms forming with some opening at one site. In Carroll county – about 50% of mature plants in bloom. In Jo Daviess County, about 25% of mature plants in bloom
- Sweet clovers (*Melilotus* sp.) - Yellow sweet clover second year plants up to 24" tall. First year plants newly germinated with 1-2 leaves each. White sweet clover second year plants about 12" tall
- White mulberry (*Morus alba*) - Full leaf expansion
- Wild parsnip (*Pastinaca sativa*) - Second year plants robust but no bolting observed yet. First year plants present but small in size (leaves less than 10" in length)
- Reed canary grass (Phalaris arundinacea) - Leaves 18-24" in length, no signs of flower development
- Common buckthorn (*Rhamnus cathartica*) – Full leaf expansion, small green berries forming at one site
- Multiflora rose (*Rosa multiflora*) – Terminal flower buds formed at one site, no flower buds at other sites, Full leaf expansion at one site, another site leaves are still expanding

Northeast

- Garlic mustard (*Alliaria petiolata*) - Plants blooming, with seed pods starting to develop. Plants in shade just starting to bloom with no seed pods observed
- Yellow rocket (Barbarea vulgaris) - Full bloom
- Canada thistle (*Cirsium arvense*) - Plants expanding but no flower stalks seen as yet
- Poison hemlock (*Conium maculatum*) – Rosettes full, up to 3 ft tall, but no bolting observed yet
- Teasel (*Dipsacus* sp.) - Plants continuing to expand, rosettes full, but have not bolted as yet. Plants range in leaf length from 3" to 18". Old stalks from last year still upright
- Autumn olive (*Elaeagnus umbellata*) – Plants are in full bloom. Flower petals starting to fall. Leaves nearly fully expanded
- Amur honeysuckle (*Lonicera maackii*) – Flowers are formed but not yet opened at one site. At another site within region, plants in full sun are in full bloom and plants in shade have flower buds that are not yet opened
- Tartarian honeysuckle (*Lonicera tatarica*) – Most plants are in full bloom with some blossoms fading
- Moneywort (*Lysimachia nummularia*) - Plants are actively growing but no flower buds seen as yet
- Wild parsnip (Pastinaca sativa) - Rosettes expanding, but no bolting observed as of yet
- Phragmites (*Phragmites australis*) - More blades emerging. Plants expanding with heights at 1-4 feet. Last year's stalks falling over
- Multiflora rose (*Rosa multiflora*) – Full leaf expansion and a small percentage of plants are starting to show signs of flower heads forming
- Hybrid cattail (*Typha xglauca*) - Blades coming through last year's debris, approximately 2-3 ft tall

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted

- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Debbie Bruce, Karen DePoister, S. A. Fenwick, Carol Froeming, Sharon Geil, Bill Klunk, Melvin Konrath, Molly Lovelock, Mona Maas, Phyllis Shulte

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report May 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
June 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

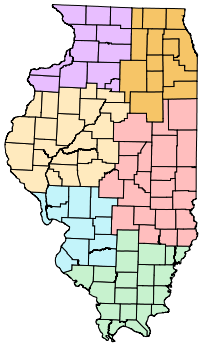
June 2017 General Summary

Many of our roadside invasive species are highly visible during the month of June. Teasels are staring to bloom in the southern regions. Poison hemlock and wild parsnip are either in bloom or just past in all regions. June marks the first month where the different bush honeysuckle species differ noticeably in phenology. Amur honeysuckle (L. macckii) still has immature, green fruit and is actually experiencing a small second bloom period in some areas. The other bush honeysuckles report (likely either Tartarian (L. tatarica) or morrows (L. morrowii) are being found with ripe fruit.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Plants 24-36 inches tall, no flower development observed
- Tree of Heaven (*Ailanthus altissima*) - full leaf expansion, finished blooming
- Mimosa (*Albizia julibrissin*) - Full bloom
- Garlic mustard (*Alliaria petiolata*) - Plants dry and starting to drop seeds
- Poison hemlock (*Conium maculatum*) – Past peak of bloom, many plants forming immature seed
- Chinese yam (*Dioscorea polystachya*) - Bulbils starting to form in leaf axils
- Teasel (*Dipsacus* spp) - Common teasel just starting to bloom, cutleaf teasel forming flower heads, but no blooming observed
- Autumn olive (*Elaeagnus umbellata*) – Fruit continuing to enlarge but not yet ripe
- Burning bush (Euonymus alatus) - Fruit ripening
- Japanese hops (*Humulus japonicus*) - Vines continuing to grow, some 5-6 feet or more in length, no flower development observed
- Sericea lespedeza (*Lespedeza cuneata*) - Plants nearing full height, no flowering observed
- Privet (*Ligustrum* sp.) - Immature fruit present
- Japanese honeysuckle (*Lonicera japonica*) – Green fruit present but many plants still blooming
- Amur honeysuckle (*Lonicera maackii*) – Immature fruit present. A couple plants observed with second flush of flowers
- Birdsfoot trefoil (*Lotus corniculatus*) - Full bloom
- Sweet clovers (*Melilotus* sp.) - Yellow sweet clover past peak of bloom. Many plants forming seeds. White sweet clover in full bloom
- Japanese stiltgrass (*Microstegium vimineum*) – Plants ~24 inches tall, no flower development



Reporting Regions

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Beefsteak plant (*Perilla frutescens*) - Blooming
- Reed canary grass (Phalaris arundinacea) - Full bloom, past peak
- Multiflora rose (*Rosa multiflora*) – Mostly past bloom, green rose hips present
- Crownvetch (Securigera varia) - Still blooming, but starting to form fruit
- Johnsongrass (*Sorghum halepense*) - Full bloom

Southwest

- Tree of Heaven (Ailanthus altissima) - Past peak bloom with ~20% of flowers remaining
- Poison hemlock (*Conium maculatum*) – About 35-40% of plants still with blooms. Most plants have fruit starting to form
- Autumn olive (*Elaeagnus umbellata*) – Immature fruit present, green and fleshy. Average fruit size is approximately 1/16" in diameter and 3/16" in length not including stem or bract
- Wintercreeper (*Euonymus fortunei*) - Flower buds present on arboreal vines. Plants still actively growing
- Japanese hops (*Humulus japonicus*) - Vine still rapidly growing. Longest vines observed about 8ft in length. Flower buds forming on 5% of less of plants observed
- Sericea lespedeza (*Lespedeza cuneata*) - Plants are rapidly growing, approximately 40" in height. Flower buds just starting to form
- Japanese honeysuckle (*Lonicera japonica*) – Blooming nearly complete, only scattered blooms observed. Fruit starting to form
- Amur honeysuckle (*Lonicera maackii*) – Green fruit present,1/16-1/8" in diameter. Some bushes in full sun with flower buds on new branches
- White mulberry (*Morus alba*) - Fruit matured and have either already fallen or been eaten
- Beefsteak plant (*Perilla frutescens*) - Plants 1-3' tall, actively growing
- Reed canary grass (Phalaris arundinacea) - Nearly past blooming, seeds beginning to ripen
- Phragmites (*Phragmites australis*) - Flowers beginning to emerge but not opened into full plumes yet
- Callery (Bradford) pear (*Pyrus calleryana*) - Immature fruit present – ¼" with brown freckling on green fruit
- Black locust (*Robinia pseudoacacia*) - Seed pods observed are 1-3 ½" long, green and growing
- Multiflora rose (*Rosa multiflora*) – Flower buds on one plant (in shade). Other sites had immature fruit present
- Crownvetch (*Securigera varia*) - Most plants in full bloom
- Johnsongrass (Sorghum halepense) - Flowering, ~30% with flowers still emerging
- Periwinkle (*Vinca minor*) - Immature fruit present, leaves are dark green and healthy

West Central

- Tree of Heaven (Ailanthus altissima) - Most plants in late stages of flowering. Some starting to form samaras (fruit). Trees were still actively forming new branches
- Garlic mustard (*Alliaria petiolata*) – Seed pods formed and beginning to dry out
- Musk thistle (*Carduus nutans*) - Full bloom. Some plants just past bloom
- Autumn olive (*Elaeagnus umbellata*) – Immature fruit present, fruit starting to swell and enlarge
- Japanese hops (*Humulus japonicus*) - Plants actively growing, vines 2-3 feet long
- Amur honeysuckle (*Lonicera maackii*) – Most plants with green immature fruit. A small amount of plants with sparse flowers present
- Bush honeysuckle (*Lonicera sp.*) – Bright red fruit abundant
- Sweet clovers (Melilotus sp.) - Yellow sweet clover in full bloom
- Wild parsnip (*Pastinaca sativa*) - Full bloom
- Reed canary grass (Phalaris arundinacea) - Full bloom, some beginning to turn to seed
- Multiflora rose (*Rosa multiflora*) – Past flowering, fruit beginning to form

East Central

- Garlic mustard (*Alliaria petiolata*) – Fruit maturing but not yet dropping seeds
- Canada thistle (Cirsium arvense) - Seed maturing
- Poison hemlock (*Conium maculatum*) – Full bloom
- Amur honeysuckle (*Lonicera maackii*) – Large bushes growing in open sun still with blooms
- Sweet clovers (Melilotus sp.) - Yellow sweet clover beginning to form seeds and some stems are just beginning to show black spots. White sweet clover is in full bloom
- Wild parsnip (*Pastinaca sativa*) - Still flowering but many flower heads have fruit forming in the center

- Multiflora rose (*Rosa multiflora*) – No fruit or flower buds on observed plants, but specimens were heavily browsed by deer
- Crownvetch (Securigera varia) - Still flowering but fruit are starting to form on some larger patches

Northwest

- Garlic mustard (*Alliaria petiolata*) – Full upright stems, past flowering, fruit present. Leaves starting to yellow. Fruit starting to dry
- Japanese barberry (*Berberis thunbergii*) - Full leaf expansion, no flowers or buds on plants observed
- Spotted knapweed (*Centaurea stoebe*) - Bolting, not yet blooming.
- Poison hemlock (*Conium maculatum*) – Full bloom
- Teasel (*Dipsacus* sp.) - Plants starting to bolt, no sign of flower heads yet
- Exotic olives (*Elaeagnus* spp.) - No signs of fruit production on Autumn or Russian olive
- Burning bush (*Euonymus alatus*) - Flower buds presents on most plants
- Japanese knotweed (*Fallopia japonica*) - Full leaf expansion. Shoots up to 60" above ground
- Dames rocket (*Hesperis matronalis*) - Past bloom. Seed pods starting to form
- Japanese hops (*Humulus japonicus*) - Plants actively growing
- Bush honeysuckle (*Lonicera sp.*) – Full leaf expansion, a few flowers remain. One observer noted many ripe fruit present. Another observer noted that fruits are 90% ripe in southern part of region
- Sweet clovers (*Melilotus* sp.) - Yellow sweet clover in full bloom. White sweet clover is bolting but not yet in bloom
- White mulberry (*Morus alba*) - Fruits ripe
- Wild parsnip (*Pastinaca sativa*) - In bloom
- Reed canary grass (Phalaris arundinacea) - Past bloom
- Common buckthorn (*Rhamnus cathartica*) – Full leaf expansion, small green berries present
- Multiflora rose (*Rosa multiflora*) – Full leaf expansion. Bloom peaked about 2 weeks prior to observation period. Past flowering at one site. Still blooming at another site
- Crownvetch (*Securigera varia*) - Full bloom

Northeast

- Canada thistle (*Cirsium arvense*) - Flowers are forming but not yet open at one site. Another site plants are in full bloom
- Poison hemlock (*Conium maculatum*) – Full bloom, plants from 2-7 feet tall
- Teasel (*Dipsacus* sp.) - Cutleaf teasel rosettes full and robust, some plants starting to form flowering stalks at two sites within region. Flower stalks full height and flower buds present at another site
- Autumn olive (*Elaeagnus umbellata*) – Full leaf out, no fruit observed on plants at two sites within region
- Tawny daylily (*Hemerocallis fulva*) - Most plants with flower buds, but some starting to bloom
- Amur honeysuckle (*Lonicera maackii*) – Past flowering, green, immature fruit present
- Tartarian honeysuckle (*Lonicera tatarica*) – Plants in shade have immature, green fruit present. Plants is full sun have some fruit already ripe and bright red
- Birdsfoot trefoil (*Lotus corniculatus*) - Plants just starting to flower with about 10% of plants with flowers present
- Sweet clovers (*Melilotus* sp.) - Yellow sweet clover in full bloom
- White mulberry (*Morus alba*) - Fruits ripening
- Wild parsnip (Pastinaca sativa) - Full bloom, some plants already starting to form seeds
- Reed canary grass (Phalaris arundinacea) - Full bloom, developing seed
- Phragmites (*Phragmites australis*) - Plants 3-4 feet tall, no flower development observed
- Callery (Bradford) pear (*Pyrus calleryana*) - Fruit just starting to form. It appears that many species had little fruit set, likely due to a late frost
- Multiflora rose (*Rosa multiflora*) – Plants in full sun past bloom with fruit developing. Plants in shade still at full bloom and flowers were just starting to lose petals
- Hybrid cattail (*Typha xglauca*) - Plants 3-4 feet tall, no flower stalks observed

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Debbie Bruce, Mike Davis, Karen DePoister, Marge Evans, S.A Fenwick, Carol Froeming, Sharon Geil, Melvin Konrath, Bill Klunk, Molly Lovelock, Mona Maas, Phyllis Schulte, and Ann Whitney

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report June 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
July 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

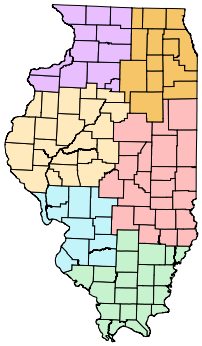
July 2017 General Summary

It seems that July is the month of immature fruit this year. All of the woody invasive plants are past bloom and, with the exception of Tartarian and Morrow's honeysuckles, have immature fruit. Cutleaf teasel is blooming along roadsides across the state but common teasel has pretty much finished blooming in southern Illinois. Wild parsnip and poison hemlock are dying back for the year and starting to drop seed. Keep an eye out moving forward for purple loosestrife to start blooming in ditches and riparian areas.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Flower buds forming, not yet opened
- Tree of Heaven (*Ailanthus altissima*) - Past bloom, fruit developing
- Mimosa (*Albizia julibrissin*) - Blooming, flowers starting to fade. Some green fruit present
- Garlic mustard (*Alliaria petiolata*) – Second year plants dry, seeds dispersed. First year rosettes present
- Poison hemlock (*Conium maculatum*) – Dry and dormant
- Chinese yam (*Dioscorea polystachya*) - Bulbils being produced, currently 1/2 — 3/4 full size
- Teasel (*Dipsacus* spp) - Common teasel past bloom, seeds developing and plants just starting to yellow. Cutleaf teasel in full bloom
- Autumn olive (*Elaeagnus umbellata*) – Most fruit still immature. Some plants with fruit starting to swell and ripen
- Burning bush (Euonymus alatus) - Immature fruit present
- Wintercreeper (*Euonymus fortunei*) - Vines climbing into trees in full bloom
- Sericea lespedeza (*Lespedeza cuneata*) - Plants actively developing side branches but no flower development observed



Reporting Regions

- Privet (*Ligustrum* sp.) - Immature, green fruit present
- Japanese honeysuckle (*Lonicera japonica*) – Green fruit present but some plants still blooming
- Amur honeysuckle (*Lonicera maackii*) – Immature fruit present.
- Birdsfoot trefoil (*Lotus corniculatus*) - Plants with a mix of blooms and immature fruit
- Sweet clovers (*Melilotus* sp.) - Both white and yellow have finished blooming. Secind year plants completely dry and dormant
- Japanese stiltgrass (*Microstegium vimineum*) – Plants actively growing and putting on a lot of biomass, no flower development

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Paulownia (*Paulownia tomentosa*) - Fruit green, not yet opened
- Reed canary grass (Phalaris arundinacea) - Seeds mature, most have dropped
- Phragmites (*Phragmites australis*) - Just starting to bloom
- Multiflora rose (*Rosa multiflora*) – Immature, green fruit present
- Crownvetch (Securigera varia) - Mostly in fruit but some plants with flowers remaining
- Johnsongrass (*Sorghum halepense*) - Seed ripe and actively falling

Southwest

- Tree of Heaven (Ailanthus altissima) - Unripe fruit present, fruit starting to turn red on most clusters from one observation site. Another observer reported fruit ripe and starting to dry
- Mimosa (*Albizia julibrissin*) - Full bloom
- Japanese barberry (*Berberis thunbergii*) - No fruits observed on plants in full shade
- Poison hemlock (*Conium maculatum*) – Most plants dried with seeds mature or nearly so. Some seed starting to release. Some plants in partial shade not fully dried yet
- Autumn olive (*Elaeagnus umbellata*) – Unripe fruit present, ¼" long, olive brown or rusty brown colored. Some fruit starting to turn red and mature
- Wintercreeper (*Euonymus fortunei*) - Flower buds present
- English ivy (*Hedera helix*) - Flower buds present on climbing branches of vines
- Japanese hops (*Humulus japonicus*) - Vines rapidly expanding, longest vine observed over 12 ft in length. No flower buds seen
- Sericea lespedeza (*Lespedeza cuneata*) - Plants up to 4 ft tall, no flower development observed
- Japanese honeysuckle (*Lonicera japonica*) – Fruit immature, still green and fleshy. Some plants (~5%) blooming, on new growth
- Amur honeysuckle (*Lonicera maackii*) – Immature fruit present (~1/8" green berries). Flowers and flower buds on new growth
- White mulberry (*Morus alba*) - Fruit absent, has already fallen or been eaten
- Beefsteak plant (*Perilla frutescens*) - Actively growing, no flowers
- Reed canary grass (Phalaris arundinacea) - Seed heads maturing
- Phragmites (*Phragmites australis*) - About 80% of plants are flowering with purple spikes. 50% with full length flowers. Stems are up to 12+ feet tall
- Callery (Bradford) pear (*Pyrus calleryana*) - Unripe fruit present, up to ½" dark olive green with tan freckling
- Black locust (*Robinia pseudoacacia*) - Seed pods around 4" long, present on upper branches. Ripe and starting to dry
- Multiflora rose (*Rosa multiflora*) – Rose hips green and up to ¼"
- Crownvetch (*Securigera varia*) - Fruit is forming. A few plants are still blooming
- Johnsongrass (Sorghum halepense) - Full bloom
- Periwinkle (*Vinca minor*) - Vegetative growth continues, stems upright. No visible fruit

West Central

- Tree of Heaven (Ailanthus altissima) - Immature fruit
- Garlic mustard (*Alliaria petiolata*) – Plants completely dry, seed dispersed
- Musk thistle (*Carduus nutans*) - Some still in flower. Some with mature, dispersing seed
- Poison hemlock (*Conium maculatum*) – Unripe fruit present, leaves browning and drying
- Queen Anne's lace (*Dacus carota*) - Full bloom
- Teasel (*Dipsacus* spp) - About 25-30% of plants in flower (cutleaf teasel), the rest are bolting and nearly in bloom. By the end of the reporting period, nearly 100% in bloom
- Bush honeysuckle (*Lonicera sp.*) – Fruit mature, red and plump
- Sweet clovers (Melilotus sp.) - Some yellow sweet clover still blooming, most plants have fruit. White sweet clover is still blooming
- Wild parsnip (*Pastinaca sativa*) - Mostly gone to seed. Some flowers remain on a few plants
- Reed canary grass (Phalaris arundinacea) - Seed mature, starting to disperse
- Multiflora rose (*Rosa multiflora*) – Immature fruit formed

East Central

- Canada thistle (Cirsium arvense) - Past flowering with mature, ripe seed actively dispersing
- Bull thistle (*Cirsium vulgare*) - Flowering

- Poison hemlock (*Conium maculatum*) – Going to seed. Leaves yellow and stems losing color
- Teasel (*Dipsacus* sp.) - Cutleaf teasel starting to flower
- Amur honeysuckle (*Lonicera maackii*) – Immature, green fruit
- Sweet clovers (Melilotus sp.) - Yellow sweet clover going to seed with many seeds now mature. White sweet clover with most plants still in flower but a few starting to form fruit
- Wild parsnip (*Pastinaca sativa*) - Going to seed, showing decline indicative of end of their growing period. A lot of variability in seed maturation. Some are darkened and mature. Others are still yellow and new
- Reed canary grass (Phalaris arundinacea) - Seeds mature, actively dropping
- Phragmites (*Phragmites australis*) - Full height but no flower development observed
- Crownvetch (Securigera varia) - Still showing some flowers in a few spots, but most of the plants are going to seed
- Johnsongrass (*Sorghum halepense*) - Full bloom

Northwest

- Garlic mustard (*Alliaria petiolata*) – 90% of plants fully yellowed and drying. Plants on south/west slopes with fruit fully open and seed dropping. Plants on north/east slopes just starting to drop seeds. First year rosettes growing
- Japanese barberry (*Berberis thunbergii*) - Past bloom, fruit developing
- Spotted knapweed (*Centaurea stoebe*) - Full bloom. First year plants fully developed
- Poison hemlock (*Conium maculatum*) – Almost all plants past flower stage. Some plants with mature seed that is actively dropping. Others with seed heads still greenish but actively drying
- Teasel (*Dipsacus* sp.) - Cutleaf teasel fully formed flower heads but no white blooms showing yet
- Japanese knotweed (*Fallopia japonica*) - Vegetative growth, shoots up to 72" tall
- Dames rocket (*Hesperis matronalis*) - Plants are dying back, seed pods nearly mature. First year rosettes fully developed
- Japanese hops (*Humulus japonicus*) - Vegetative growth continues, no flower development
- Amur honeysuckle (*Lonicera maackii*) – Immature fruit present
- Bush honeysuckle (*Lonicera sp.,* likely both *L. morrowii* and *L. tatarica*) – Ripe fruit present, some starting to dry
- Sweet clovers (*Melilotus* sp.) - Yellow - more plants actively drying. Some plants experiencing a second bloom period. First year plants actively growing, 8-10" in height. White – Peak bloom. Some early blooming plants starting to form fruit
- White mulberry (*Morus alba*) - Fruit absent, either dropped or been eaten
- Wild parsnip (*Pastinaca sativa*) - Fruit developing, some plants senescent with mature fruit
- Reed canary grass (Phalaris arundinacea) - Past bloom, seed is near full development
- Phragmites (*Phragmites australis*) - Plants full height but no flower heads showing yet
- Common buckthorn (*Rhamnus cathartica*) – Small green berries present
- Multiflora rose (*Rosa multiflora*) – Past flowering, small green fruits formed, approximately ¼" in size
- Crownvetch (*Securigera varia*) - Past peak bloom, still in flower

Northeast

- Canada thistle (*Cirsium arvense*) - Some plants are still in full bloom. About 50% of blooms have some ripe seeds that are starting to disperse
- Poison hemlock (*Conium maculatum*) – Plants nearly dry, maturing seed heads present. Rosettes present
- Teasel (*Dipsacus* sp.) - Mostly all plants are just starting to bloom (cutleaf)
- Autumn olive (*Elaeagnus umbellata*) – Fruit is just starting to form (few fruits were observed this year)
- Tawny daylily (*Hemerocallis fulva*) - Past peak for flowering, only a few flower buds left
- Amur honeysuckle (*Lonicera maackii*) – Fruit is just starting to form
- Morrow's honeysuckle (*Lonicera morrowii*) - Fruit is fully ripe with some already showing signs of drying
- Tartarian honeysuckle (Lonicera tatarica) - Fruit is fully ripe but not yet drying
- Birdsfoot trefoil (*Lotus corniculatus*) - Full bloom
- Purple loosestrife (*Lythrum salicaria*) - Full bloom

- Sweet clovers (*Melilotus* sp.) - Yellow - most plants past peak bloom and are setting seed. A small number of plants are just starting to bloom. White – Most plants are just starting to bloom or are at full bloom
- White mulberry (*Morus alba*) - Fruit absent, has either dropped or been eaten
- Wild parsnip (Pastinaca sativa) - Plants starting to dry, stems brown. Seed heads maturing and drying
- Reed canary grass (Phalaris arundinacea) - Plants have set and dispersed most of their seed at one site. Another site the seeds are just starting to disperse. Leaves still green, thought he stems are browning. First year plants are visible and ~12" tall
- Phragmites (*Phragmites australis*) - Actively growing, no flower formation observed
- Callery (Bradford) pear (*Pyrus calleryana*) - Fruit is developing but not full size yet
- Multiflora rose (*Rosa multiflora*) – Past flowering, rose hips just starting to form
- Common mullein (*Verbascum thaspus*) - Second year plants starting to bloom, first year rosettes expanding

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Mike Davis, Karen DePoister, Sharon Geil, Bill Klunk, Molly Lovelock, Pam Moriearty, Nick Seaton, Phyllis Schulte, Ann Whitney

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report July 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

University of Illinois • U.S. Department of Agriculture • Local Extension Councils Cooperating

University of Illinois Extension provides equal opportunities in programs and employment.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
August 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

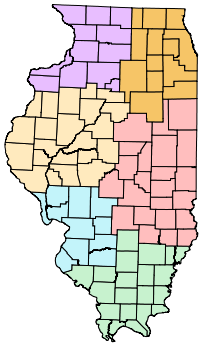
August 2017 General Summary

August starts the transition into fall for invasive plants in Illinois. Already, many summer flowering species, like teasel, are starting to show signs of senescence with leaves yellowing and seed heads drying. Not many invasive plants are still in full flower. Sericea lespedeza and purple loosestrife are notable exceptions with Japanese stiltgrass still to come As August moves us from late summer into early fall, watch for the continued ripening of berries on invasive plants and biennial plants shedding seeds and dying back.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Plants in flower, seeds starting to form on lower parts of flowering stems
- Tree of Heaven (*Ailanthus altissima*) - Fruit mature and dry
- Mimosa (*Albizia julibrissin*) - Fruit full size, starting to dry. Some plants still with blossoms
- Garlic mustard (*Alliaria petiolata*) – Second year plants completely dry with fruit open and seeds dispersed. First year rosettes growing
- Poison hemlock (*Conium maculatum*) – Second year plants completely dry. Rosettes presents
- Chinese yam (*Dioscorea polystachya*) - Bulbils formed. Some leaves starting to yellow
- Teasel (*Dipsacus* spp) - Both cutleaf and common teasel done flowering. Common teasel completely dry. Cutleaf teasel drying with seed heads maturing
- Autumn olive (*Elaeagnus umbellata*) – Ripe fruit present
- Burning bush (Euonymus alatus) - Immature fruit present
- Sericea lespedeza (*Lespedeza cuneata*) - In full bloom
- Privet (*Ligustrum* sp.) - Immature fruit present
- Japanese honeysuckle (*Lonicera japonica*) – Some plants still flowering. Most plants with green, immature fruit
- Amur honeysuckle (*Lonicera maackii*) – Some plants showing signs of yellowing leaves. Plants vary in fruit development, from actively turning red and ripening to still immature and green
- Birdsfoot trefoil (*Lotus corniculatus*) - most plants done flowering with mature seed. Plants that previously were mowed still have some flowers present
- Sweet clovers (*Melilotus* sp.) - Both white and yellow second year plants completely dry and dormant
- Japanese stiltgrass (*Microstegium vimineum*) – Plants full height, but no flowers observed



Reporting Regions

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Paulownia (*Paulownia tomentosa*) - Fruit green, not yet opened
- Reed canary grass (Phalaris arundinacea) - Seeds dispersed, flowering plants dying back. Plants with only vegetative growth still green
- Phragmites (*Phragmites australis*) - In full flower
- Multiflora rose (*Rosa multiflora*) – Immature fruit present
- Crownvetch (Securigera varia) - Plants that were previously mowed are still blooming. Most plants done blooming and starting to senesce
- Johnsongrass (*Sorghum halepense*) - Seeds actively dropping, plants starting to senesce

Southwest

- Tree of Heaven (Ailanthus altissima) - Samaras are light brown and drying
- Mimosa (*Albizia julibrissin*) - Scattered blooms still present. Fruit forming, numerous pods 5-6" long
- Japanese barberry (*Berberis thunbergii*) - About 5% of leaves yellowing
- Poison hemlock (*Conium maculatum*) – All observed plants are dead and completely dry. Plants easily drop seeds when touched
- Teasel (*Dipsacus* spp) - Seeds mature, flower heads completely dry and brown. Leaves are brown and dry or nearly so
- Autumn olive (*Elaeagnus umbellata*) – Fruits are reddish -brown and ripe. Average fruit size is approximately 3/16" in diameter and 5/16" in length not including stem or bract. Fruit are soft and juicy when squeezed between fingers. Leaves starting to yellow on ~5% of bushes. Especially those with western exposure
- Wintercreeper (*Euonymus fortunei*) - Full bloom. Immature fruits starting to form on some plants
- English ivy (*Hedera helix*) - Flower buds on branches within trees. Some plants with flowers or Immature fruits present
- Japanese hops (*Humulus japonicus*) - Flower buds formed and expanding on many plants. A few specimen plants were just starting to bloom
- Sericea lespedeza (*Lespedeza cuneata*) - Flowering has just started. Open blossoms observed on less than 5% of several dozen inspected shrubs
- Japanese honeysuckle (*Lonicera japonica*) – Most observed fruit are grey and drying. Average fruit is approximately 5/32" in diameter and hard when squeezed between fingers. Found unopened blossoms on new growth of one vine
- Amur honeysuckle (*Lonicera maackii*) – Fruit immature. Average diameter of fruit approximately 3/16". Fruit is green and fleshy when opened with fingernail. Some plants with fruit starting to turn red
- White mulberry (*Morus alba*) - Fruit already dispersed. About 15% of leaves starting to yellow
- Beefsteak plant (*Perilla frutescens*) - Buds forming for side branches in leaf axils
- Phragmites (*Phragmites australis*) - Purple plumes fully expanded and 25-75% spread fully open
- Callery (Bradford) pear (*Pyrus calleryana*) - Immature fruit present. Fruit are greenish-tan in color and hard. Pome was green and fleshy inside when broke open with fingernail
- Black locust (*Robinia pseudoacacia*) - Legumes are light brown and drying
- Multiflora rose (*Rosa multiflora*) – Ninety percent of observed fruit are grey and drying. Achenes are hard and have black seeds present when opened with a fingernail
- Crownvetch (*Securigera varia*) - Fruit immature. Pods are dark green and hard when pinched. Several younger plants observed are still blooming
- Johnsongrass (Sorghum halepense) - Blooms still present at tips of seed heads. Seeds fully formed and dispersing. Leaves near the ground starting to turn brown
- Periwinkle (*Vinca minor*) - Still green, but no longer actively growing

West Central

- Tree of Heaven (Ailanthus altissima) - Samaras ripening. Tops of trees loaded with ripening samara. Only about ~10% of samara on lower branches ripe
- Garlic mustard (*Alliaria petiolata*) – Second year plants totally dried out with seeds dispersed. First year leaves appearing
- Musk thistle (*Carduus nutans*) - Mix of flower and seed heads
- Poison hemlock (*Conium maculatum*) – Plants with ripe seeds and leaves actively dropping
- Queen Anne's lace (*Dacus carota*) - Many still full flower, with some going to seed
- Teasel (*Dipsacus* spp) - About half of cutleaf teasel plants still flowering, half with unripe seeds
- Amur honeysuckle (*Lonicera maackii*) – Fruit formed, small and green

- Sweet clovers (Melilotus sp.) - A few plants of both yellow and white sweet clover with flowers, mostly gone to seed or mowed down
- Wild parsnip (*Pastinaca sativa*) - Plants drying. Seeds actively dropping
- Reed canary grass (Phalaris arundinacea) - Gone to seed, partially disbursed
- Multiflora rose (*Rosa multiflora*) – Fruits formed, but relatively few fruit on most plants

East Central

No report from this region this month

Northwest

- Garlic mustard (*Alliaria petiolata*) – Second year plants dry, first year rosettes actively growing
- Japanese barberry (*Berberis thunbergii*) - Immature fruit present
- Poison hemlock (*Conium maculatum*) – Plants completely dried. Most dried seeds still on plants but fall easily when touched
- Teasel (*Dipsacus* sp.) - Cutleaf teasel past bloom with seed heads and leaves drying as plants start to senesce at one location. At another location blooms are half way up or near the top of the flower head
- Burning bush (Euonymus alatus) - Immature fruit present
- Amur honeysuckle (*Lonicera maackii*) – Green leaves, no berries on observed plants
- Bush honeysuckle (*Lonicera sp.,* likely *L. morrowii* or *L. tatarica*) – some dried fruit still present but most of the fruit has fallen or been eaten
- Phragmites (*Phragmites australis*) - 90% of plants blooming
- Common buckthorn (*Rhamnus cathartica*) – Fruit immature. Leaves still green
- Multiflora rose (*Rosa multiflora*) – Green leaves, no berries observed. Most approximately ¼" in size

Northeast

- Canada thistle (*Cirsium arvense*) - Seed is ripe and being dispersed. Some plants are just now starting to bloom
- Bull thistle (*Cirsium vulgare*) - Just starting to bloom
- Poison hemlock (*Conium maculatum*) – Most plants are entirely dry, but still upright. Seed heads are full and dried
- Teasel (*Dipsacus* sp.) - Half of cutleaf teasel plants are in full bloom, some are just starting to bloom. No seed is forming yet. Some plants have yellowing leaves at base. Some rosettes have large leaves
- Autumn olive (*Elaeagnus umbellata*) – Plants still green but no fruit found on plants observed
- Tawny daylily (*Hemerocallis fulva*) - No blooms, some seed pods forming but small. Leaves starting to turn brown at bases
- Amur honeysuckle (*Lonicera maackii*) – Fruit immature and green, about 1/8" to ¼" in diameter. Leaves still green
- Tartarian honeysuckle (Lonicera tatarica) - Fruit almost completely dry. Plants still green, no signs of senescence yet
- Purple loosestrife (*Lythrum salicaria*) - Plants are in full bloom, no seeds observed yet
- Sweet clovers (*Melilotus* sp.) - Most leaves have fallen, blooms drying into seed heads
- White mulberry (*Morus alba*) - Leaves still green and shiny. Fruit no longer present
- Wild parsnip (Pastinaca sativa) - Plants completely dry and seed is dispersing. Over half of seeds already fallen
- Reed canary grass (Phalaris arundinacea) - Seed has dispersed and plants are showing senescence
- Phragmites (*Phragmites australis*) - Most plants in full bloom. Plants 6-12 feet tall. Some leaves near bottom are browning
- Callery (Bradford) pear (*Pyrus calleryana*) - Fruit is forming, fewer fruits this year than previous years
- Hybrid cattail (*Typha xglauca*) - Stalks approximately 4-5 feet in height

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted

- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Bob Arevalo, Debbie Bruce, Karen DePoister, S.A. Fenwick, Carol Froeming, Sharon Geil, Caleb Grantham, James Hoyt, Bill Klunk, Molly Lovelock, Pamela Moriearty, Phyllis Schulte, Ann Whitney

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report August 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602-201708. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
September 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

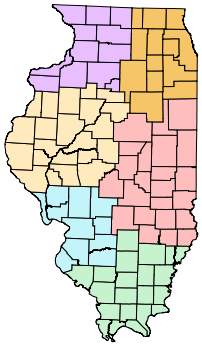
September 2017 General Summary

September is the official start of fall and the invasive plants are showing it. Many species have fruit that are either ripe, actively dropping from the plants, or completely dispersed already. Most of the invasive shrubs are starting to show signs of fall through their leaves changing color. We are still waiting on basically just one invasive plant to flower yet—Japanese stiltgrass.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Past flowering. Terminal spikes fully elongated with green, immature fruit laying plant against spike
- Tree of Heaven (*Ailanthus altissima*) - Leaves starting to yellow and drop
- Mimosa (*Albizia julibrissin*) - Fruit fully formed with about 50% brown. Leaves still dark green
- Oriental bittersweet (*Celastrus orbiculatus*) - Fruit ripe, leaves starting to turn yellow in color
- Poison hemlock (*Conium maculatum*) – Second year plants completely dry. Rosettes presents
- Chinese yam (*Dioscorea polystachya*) - Bulbils full size and easily falling from plants. Leaves starting to yellow
- Teasel (*Dipsacus* spp) - Both cut leaf and common teasel with second year plants completely dried, seeds dispersed
- Autumn olive (*Elaeagnus umbellata*) – Ripe fruit present, actively falling
- Burning bush (Euonymus alatus) - Fruit starting to ripen but not yet opened. Most of the leaves are still dark green but a few leaves at the tips of branches turning deep red
- Wintercreeper (*Euonymus fortunei*) - Fruit starting to turn white and ripen but not yet opened
- Sericea lespedeza (*Lespedeza cuneata*) - Past flowering. Green seed pods present



Reporting Regions

- Privet (*Ligustrum* sp.) - Immature fruit present. Leaves still dark green
- Japanese honeysuckle (*Lonicera japonica*) – Ripe fruit present on vines in sun. On plants in shade, only immature fruit observed. Some flowering still occurring
- Amur honeysuckle (*Lonicera maackii*) – Fruit fully ripe. Some plants showing yellowing of some leaves
- Sweet clovers (*Melilotus* sp.) - Second year plants completely dry
- Japanese stiltgrass (*Microstegium vimineum*) – Plants in sun mostly in 'boot' stage with flowers getting ready to open soon. Plants in shade not showing signs of imminent flowering

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Paulownia (*Paulownia tomentosa*) - Capsules starting to mature and turn brown, but not yet opened. Flower buds for next spring starting to form
- Beefsteak plant (*Perilla frutescens*) - Flower spikes fully elongated with some open flowers present
- Reed canary grass (Phalaris arundinacea) - Seed completely dropped and absent. Plants that had flowered are turning brown and drying. Plants with only vegetative growth still dark green
- Callery (Bradford) pear (*Pyrus calleryana*) - Starting to turn color. Many plants with the top 1/2 to 2/3 of canopy deep red color
- Multiflora rose (*Rosa multiflora*) – Most fruit ripe or nearly so. Foliage thinning and starting to yellow
- Crownvetch (Securigera varia) - No flowers observed. Plants nearly completely senescent with green leaves on at the tips of vines. Plants that regrew following mowing still dark green with an occasional flower
- Johnsongrass (*Sorghum halepense*) - Plants nearly fully senescent. Seeds dropped. Plants that regrew following mowing still with dark green leaves and some flowers and seeds present

Southwest

- Tree of Heaven (Ailanthus altissima) - Samaras fully brown. About 40% of samaras have already fallen on some trees. Other trees have already lost all samara. Leaves not yet starting to turn colors
- Mimosa (*Albizia julibrissin*) - 40-60% of seed pods mature and brown
- Japanese barberry (*Berberis thunbergii*) - About ~5% of leaves yellow
- Poison hemlock (*Conium maculatum*) – Second year plants dead and completely dry with a few dried flowering stalks still standing. Seeds actively dropping
- Teasel (*Dipsacus* spp) - Cut leaf teasel seeds mature with flower heads completely dry and brown. Black seeds fall out easily
- Autumn olive (*Elaeagnus umbellata*) – Fruit ripe, some plants with most of the fruit already fallen or been eaten. Other plants still loaded with ripe fruit. Some leaves just starting to yellow
- Wintercreeper (*Euonymus fortunei*) - Green berries present ¼" – ½". All leaves full length and dark green
- English ivy (*Hedera helix*) - Full bloom, about 70% of flowers open
- Japanese hops (*Humulus japonicus*) - Full bloom. Vines still growing so flower buds still forming. Fruit forming on older vines. Only a few vines show signs of leaves starting to turn yellow
- Sericea lespedeza (*Lespedeza cuneata*) - Slightly past full flower blossoming on larger shrubs. Fruit just starting to from where blossoms have expired. No seasonal senescence of leaves observed
- Japanese honeysuckle (*Lonicera japonica*) – Most fruit overripe and drying. Occasional flowers and flower buds still present at vine ends. No seasonal senescence of leaves observed
- Amur honeysuckle (*Lonicera maackii*) – Fruit ripeness variable. Some sites with most fruit fully ripe. Other sites with varying degrees of ripeness. A few leaves turning yellow at one observation site
- White mulberry (*Morus alba*) - About 40-90% of leaves yellowing
- Beefsteak plant (*Perilla frutescens*) - Flower spikes in leaf axils and branch tips with flowers starting to open
- Phragmites (*Phragmites australis*) - Flower plumes tan, fully expanded with only a tinge of purple left
- Callery (Bradford) pear (*Pyrus calleryana*) - Leaves dark green, showing no signs of turning color. Fruit in varying stages of ripeness. One site with immature fruits present and dark green in color. Another observer noted fruit ripe, olive-gray in color, with black seeds inside
- Black locust (*Robinia pseudoacacia*) - Fruit mature, actively dropping. Leaves starting to yellow at one site, showing no signs of yellowing at another site
- Multiflora rose (*Rosa multiflora*) – Fruit ripening, green to greenish orange. Plants actively senescing with ~50% of leaves gone and 80% of remaining leaves yellow
- Crownvetch (*Securigera varia*) - Fruit brown and dry, not yet dropping from plants. Several younger plants still blooming. No seasonal senescence of leaves observed
- Johnsongrass (Sorghum halepense) - Seed heads mature and tan. Seeds actively falling. Leaf blades yellowing
- Periwinkle (*Vinca minor*) - All leaves mature, no longer actively growing

West Central

- Tree of Heaven (Ailanthus altissima) - Fruit brown and dry, not dropping yet. Leaves starting to turn yellow
- Garlic mustard (*Alliaria petiolata*) – Second year plants totally dried out with seeds dispersed. Very few first-year plants seen
- Queen Anne's lace (*Dacus carota*) - Gone to seed, most seeds still on plant

- Teasel (*Dipsacus* spp) - Plants fully dried, including late blooming regrowth
- Autumn olive (*Elaeagnus umbellata*) – Fruit ripe, some leaves starting to yellow
- Amur honeysuckle (*Lonicera maackii*) – Fruit turning red. Leaves still green and shiny on some plants, other plants starting to yellow
- Wild parsnip (*Pastinaca sativa*) - Plants fully dry. More than 50% of seeds have dropped
- Reed canary grass (Phalaris arundinacea) - Most gone to seed with seed disbursed
- Multiflora rose (*Rosa multiflora*) – Fruit ripening. Leaves starting to turn yellow
- Crownvetch (Securigera varia) - Few flowers observed

East Central

- Garlic mustard (*Alliaria petiolata*) – Completely dry, seed dispersed
- Amur honeysuckle (Lonicera maackii) – Fruit mostly ripe or ripening. Leaves starting to turn on lower branches
- Multiflora rose (*Rosa multiflora*) – Leaves starting to turn on lower branches

Northwest

- Garlic mustard (*Alliaria petiolata*) – Second-year plants dry with seeds dispersed. Rosettes with larger green leaves. Now up to 5" tall
- Japanese barberry (*Berberis thunbergii*) - Fruit starting to ripen. Most fruits still yellow-green with a few starting to show orange. Some leaves starting to turn color
- Spotted knapweed (Centaurea stoebe) - Past peak bloom, with about 50% of plants still in bloom
- Poison hemlock (*Conium maculatum*) – Second-year plants completely dry. First-year rosettes still lush green
- Autumn olive (*Elaeagnus umbellata*) – Fruit ripening, full leaf out
- Burning bush (Euonymus alatus) - Fruit immature
- Japanese knotweed (Fallopia japonica) - Full bloom
- Dames rocket (*Hesperis matronalis*) - Second-year plants dropped nearly all seed. First-year rosettes fully developed and lush green
- Japanese hops (*Humulus japonicus*) - Fruits ripening, foliage still green
- Amur honeysuckle (*Lonicera maackii*) – Fruit ripe. Leaves still dark green
- Bush honeysuckle (*Lonicera sp.,* likely *L. morrowii* or *L. tatarica*) – Fruit ripe on all species. Plants in dry environments showing signs of drought stress with yellowing leaves. Plants in woodlands still with lush green foliage
- Sweet clovers (*Melilotus* sp.) - Second year plants dry and senescent. First-year plants 10-12" in height
- White mulberry (*Morus alba*) - Leaves still lush and green
- Wild parsnip (Pastinaca sativa) - Seeds mature and starting to drop. Second year plants senescent. Some first-year rosettes showing signs of senescence, may be due to drought conditions
- Reed canary grass (Phalaris arundinacea) - Seeds have dropped. Plants in partial senescence
- Common buckthorn (*Rhamnus cathartica*) – Fruits ripe, full leaf out, still lush and green with only a few leaves starting to turn yellow
- Multiflora rose (*Rosa multiflora*) – Ripe, red rose hips present at two sites, still ripening at another site. Leaves green with some turning yellow
- Crownvetch (Securigera varia) - Plants are starting to green up again after partially drying in August

Northeast

- Canada thistle (*Cirsium arvense*) - Plants with some flowers finished blooming and producing seed and other flowers still blooming. Plants with mix of dry and green leaves
- Bull thistle (*Cirsium vulgare*) - Plants in shade are still in bloom
- Queen Anne's lace (Dacus carota) - Upper flower heads dry and closed. Lower flowers still blooming. First year rosettes present
- Teasel (*Dipsacus* sp.) - Cut leaf teasel plants are starting senescence. Rosettes large. Some seed heads open and dispersing seeds and others not yet dropping seed
- Autumn olive (*Elaeagnus umbellata*) – Fruit mostly gone. Plants starting to show signs of senescence with some leaves starting to yellow
- Tawny daylily (*Hemerocallis fulva*) - Leaves brown at base, rest of plant still green
- Amur honeysuckle (*Lonicera maackii*) – Fruit ripening. Leaves still dark green
- Morrow's honeysuckle (*Lonicera morrowii*) - Fruit past

ripe and completely dried or fallen

- Sweet clovers (*Melilotus* sp.) - Second year plants dry. First year rosettes green
- Reed canary grass (Phalaris arundinacea) - Plants actively senescing. Most of the plants are 50% or more brown
- Phragmites (*Phragmites australis*) - Seeds are formed but are not yet ripe. Some leaves at base starting to dry
- Callery (Bradford) pear (*Pyrus calleryana*) - Leaves starting to turn red
- Multiflora rose (*Rosa multiflora*) – Fruit ripe, plants showing signs of senescence with leaves starting to yellow
- Crownvetch (Securigera varia) - Some plants are still showing some late blooms, from new growth
- Hybrid cattail (*Typha xglauca*) - Stalks from this year are drying out and lighter in color. Leaves are turning yellow

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Bob Arevalo, Debbie Bruce, Duane Ambroz, Karen DePoister, Marge Evans, S.A. Fenwick, Carol Froeming, Sharon Geil, Mel Konrath, Bill Klunk, Molly Lovelock, Pamela Moriearty, Phyllis Schulte, Ann Whitney

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report September 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602-201709. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

University of Illinois Extension Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
October 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

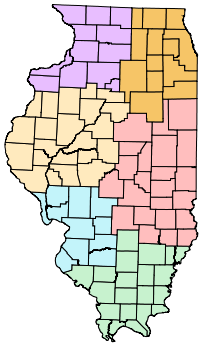
October 2017 General Summary

October moves us further into fall as we start seeing many plants lose their leaves and disperse their seeds. This marks the transition from the opportunity to foliar spray many invasives to using cut stump treatments on our woody invaders. October also starts the time of the year that our tardily deciduous invasive shrubs, like bush honeysuckle, really stand out with most of our native species already losing much of their leaves.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Seeds maturing, plants starting to yellow
- Tree of Heaven (*Ailanthus altissima*) - No fruit or flower remnants observed. Leaves yellowing and starting to drop
- Mimosa (*Albizia julibrissin*) - Leaves green, fruit dry and brown
- Japanese barberry (*Berberis thunbergii*) - Leaves still green, no signs of yellowing
- Poison hemlock (*Conium maculatum*) – Second year plants completely dry. Rosettes presents
- Teasel (*Dipsacus* spp) - Both cut leaf and common teasel with second year plants completely dried, seeds dispersed
- Autumn olive (*Elaeagnus umbellata*) – Fruit ripe, mostly dispersed. Leaves still green
- Burning bush (Euonymus alatus) - Leaves still green. Only a few are showing signs of turning red. Fruit ripening and starting to open
- Wintercreeper (*Euonymus fortunei*) - Fruit ripe, just starting to open
- Sericea lespedeza (*Lespedeza cuneata*) - Fruit ripe, leaves yellowing
- Privet (*Ligustrum* sp.) - Fruit ripe. Leaves still green



Reporting Regions

- Japanese honeysuckle (*Lonicera japonica*) – Leaves still dark green. Fruit ripe
- Amur honeysuckle (*Lonicera maackii*) – Fruit ripe, leaves starting to show signs of yellowing
- Sweet clovers (*Melilotus* sp.) - Second year plants completely dry
- Japanese stiltgrass (*Microstegium vimineum*) – In flower/ seed, plants starting to senesce
- Paulownia (*Paulownia tomentosa*) - Capsules drying, not yet opened. Leaves still green
- Reed canary grass (Phalaris arundinacea) - Seed completely dropped and absent. Plants that had flowered are turning brown and drying. Plants with only vegetative growth still

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

dark green
- Callery (Bradford) pear (*Pyrus calleryana*) - Some plants still with dark green leaves. Others turning red
- Multiflora rose (*Rosa multiflora*) – Fruit ripe, losing leaves
- Johnsongrass (*Sorghum halepense*) - Completely senesced

Southwest

- Tree of Heaven (Ailanthus altissima) - Samaras gone on most trees. Leaves ~20% yellow of those remaining at one site, still green and lush at another
- Mimosa (*Albizia julibrissin*) - Seed pods tan to dark brown, full grown. Many leaves gone, all those left green
- Japanese barberry (*Berberis thunbergii*) - Dormant, all leaves gone
- Poison hemlock (*Conium maculatum*) – Dead stalks still standing, seeds actively falling if still present, though most are gone
- Autumn olive (*Elaeagnus umbellata*) – Fruits gone on most bushes. A few individuals have plentiful ripe fruit. Plants with variable levels of yellowing, from about 5%-50%
- Wintercreeper (*Euonymus fortunei*) - Berries turning white, splits beginning to show on largest berries. Interior red-coated. ~5% leaves yellow, drooping
- English ivy (*Hedera helix*) - Berries green, but fleshy. Seeds greenish yellow. All leaves dark green
- Japanese hops (*Humulus japonicus*) - Most plants entering senescence with most leaves and vines turning yellow. About 75% of seed pods are turning brown
- Sericea lespedeza (*Lespedeza cuneata*) - Most seeds are now brown. Leaves just starting to turn yellow
- Japanese honeysuckle (*Lonicera japonica*) – Fruit maturing early have already dropped or been eaten. Other fruit starting to ripen. Leaves still green and lush
- Amur honeysuckle (*Lonicera maackii*) – Berries fleshy and red on most plants but some plants have dried fruit. Leaves up to 50% yellow, especially in sun at one site and still green at another site
- White mulberry (*Morus alba*) - Fruits gone, Leaves 80% yellow on plants in sun, ~10% of leaves yellow in shade
- Beefsteak plant (*Perilla frutescens*) - Finished blooming, with only a few plants with some flowers at tips of spikes. Seed capsules maturing from bottom up on flower spikes. Seeds actively falling. Some plants with leaves yellowing and drooping
- Reed canary grass (Phalaris arundinacea) - Less than 1% of seed heads still present. Leaf blades browning from base up, ~30-40% brown
- Phragmites (*Phragmites australis*) - Plumes gray and fully expanded. Seeds actively falling. Leaf blades browning from base up, missing on lower half of exposed stems
- Callery (Bradford) pear (*Pyrus calleryana*) - Most leaves still dark green and lush. About 2% of leaves turning various shades of red to orange. Fruits soft and olive green. Next year's buds in leaf axils up to ½" long
- Black locust (*Robinia pseudoacacia*) - The few remaining fruit are ripe and completely dry. Most fruit has dropped or been eaten. No yellowing of leaves observed
- Multiflora rose (*Rosa multiflora*) – Hips greenish orange to red hips. Some plants with hips ~50%-80% gone. Leaves yellowing or dropping on plants
- Crownvetch (*Securigera varia*) - Most fruit fallen. Few remaining pods are completely dry. No yellowing of leaves observed
- Johnsongrass (Sorghum halepense) - Seed heads mature, seed dropping. Leaf blades yellowing from bottom up
- Periwinkle (*Vinca minor*) - All leaves mature, no longer actively growing

West Central

- Tree of Heaven (Ailanthus altissima) - All samara are brown and dry. Leaves still green
- Garlic mustard (*Alliaria petiolata*) – Second year plants totally dried out with seeds dispersed. First year rosettes green and about 3" tall
- Teasel (*Dipsacus* spp) - All plants are dry and seeds dispersed. Many new rosettes growing
- Autumn olive (*Elaeagnus umbellata*) – All berries have dropped or been eaten. Leaves still green
- Amur honeysuckle (*Lonicera maackii*) – Fruit mostly ripe. Leaves still green and shiny on most plants with some leaves yellowing
- Wild parsnip (*Pastinaca sativa*) - Plants gone to seed and mostly dispersed
- Reed canary grass (Phalaris arundinacea) - Most gone to seed with seed disbursed. Lots of plants still green, especially near water
- Multiflora rose (*Rosa multiflora*) – Fruit mostly ripe. Leaves starting to turn yellow with some leaves already dropped

- Crownvetch (Securigera varia) - Plants still have a few flowers, leaves still green

East Central

No observations submitted for this region

Northwest

- Garlic mustard (*Alliaria petiolata*) – Rosettes with small to large green leaves with a few dried stalks still visible
- Japanese barberry (*Berberis thunbergii*) - Fruit ripe or ripening. Leaves starting to yellow
- Poison hemlock (*Conium maculatum*) – Second year plants dried with seeds all dispersed. First year rosettes 3-4" tall
- Teasel (*Dipsacus* sp.) - Plants totally dry and dead
- Russian olive (*Elaeagnus angustifolia*) - Fruits ripe, no signs of senescence
- Autumn olive (*Elaeagnus umbellata*) – Fruits ripe, no signs of senescence
- Burning bush (Euonymus alatus) - About 10% of plants with ripe fruit
- Japanese knotweed (Fallopia japonica) - Some stalks (~ 25%) appear to be starting to senesce. The rest still have green foliage
- Amur honeysuckle (*Lonicera maackii*) – Leaves still mostly green, most berries till bright red
- Bush honeysuckle (*Lonicera sp.,* likely *L. morrowii* or *L. tatarica*) – Fruit ripe. Leaves not yet yellowing
- White mulberry (*Morus alba*) - Trees still have lush green foliage
- Wild parsnip (Pastinaca sativa) - Most rosettes in non-mowed areas yellowing due to dry conditions. Rosettes in mowed areas have resprouted and are lush green
- Phragmites (*Phragmites australis*) - Plants still green, seed heads dried
- Common buckthorn (*Rhamnus cathartica*) – Female plants with ripe, black berries. Green leaves mostly though some leaves turning yellow
- Multiflora rose (*Rosa multiflora*) – Red rose hips present. Leaves starting to turn yellow and fall

Northeast

- Tree of Heaven (*Ailanthus altissima*) - Leaves turning color, a few have already dropped
- Queen Anne's lace (Dacus carota) - Plants are completely dry and seed is ripe
- Teasel (*Dipsacus* sp.) - Plant is entirely brown, but upright plants dormant. Seedhead shedding seeds. Large green rosettes present
- Autumn olive (*Elaeagnus umbellata*) – Small percentage of leaves are yellow
- Wintercreeper (*Euonymus fortunei*) - Plants still green, fruit immature
- Amur honeysuckle (*Lonicera maackii*) – Fruit fully ripe, some fruit starting to dry. Larger plants showing yellowing of leaves where smaller plants still green
- Morrow's honeysuckle (*Lonicera morrowii*) - Most fruit has already fallen from plants or been eaten. Very little fruit left on plant. Only a small percentage of leaves are starting to yellow
- Tartarian honeysuckle (*Lonicera tatarica*) - Fruit already dispersed. A small percentage of leaves starting to yellow
- Birdsfoot trefoil (*Lotus corniculatus*) - Some plants blooming, likely plants that were mowed or otherwise damaged earlier in the year
- Chinese silvergrass (*Miscanthus sinensis*) - Seed is present but not yet ripe. No senescence of grass blades
- Wild parsnip (Pastinaca sativa) - Plants completely dormant
- Reed canary grass (Phalaris arundinacea) - Blades continue to senesce, about 50% brown
- Phragmites (*Phragmites australis*) - Seed heads are still flowering at one site. Seed head fully open and mostly dried at another site. Only a small about of senescence seen on blades
- Callery (Bradford) pear (*Pyrus calleryana*) - Leaves turning red on smaller trees, but not on large trees. Fruit ripe
- Multiflora rose (*Rosa multiflora*) – About 40%-50% of leaves yellow. Hips are starting to dry on some plants
- Crownvetch (Securigera varia) - Some leaves still green

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing

the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted

- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Debbie Bruce, Karen DePoister, S.A. Fenwick, Sharon Geil, Karen Glynn, Bill Klunk, Melvin Konrath, Molly Lovelock, Mona Maas, Phyllis Schulte, Ann Whitney

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report October 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602-201710. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

UNIVERSITY OF ILLINOIS EXTENSION

Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
November 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

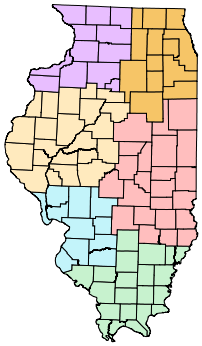
November 2017 General Summary

November finds us deep into fall. Most plants have lost their leaves (or nearly so). Most of the seeds have fallen and basal rosettes of our biennial invasive plants are getting established. The honeysuckles however, are still mostly green.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Plants completely dry and dormant. Dried stems remain standing with no leaves. Fruit dried, still on plant but easily falls off
- Tree of Heaven (*Ailanthus altissima*) - No fruit or flower remnants observed. Leaves dropped, plants dormant
- Mimosa (*Albizia julibrissin*) - plant completely dormant, fruit dry and brown
- Poison hemlock (*Conium maculatum*) – Second year plants completely dry. Rosettes presents
- Teasel (*Dipsacus* spp) - Both cut leaf and common teasel with second year plants completely dried, seeds dispersed. Rosettes present
- Autumn olive (*Elaeagnus umbellata*) – Fruit ripe, mostly dispersed. Foliage thinning and leaves yellowing
- Burning bush (Euonymus alatus) - Plants either bright red or with foliage significantly thinning. Fruit open with seeds dropping
- Wintercreeper (*Euonymus fortunei*) - Fruit ripe, open
- Sericea lespedeza (*Lespedeza cuneata*) - Fruit ripe. Plants dry and dormant
- Privet (*Ligustrum* sp.) - Fruit ripe. Leaves still green
- Japanese honeysuckle (*Lonicera japonica*) – Leaves still dark green. Fruit ripe
- Amur honeysuckle (*Lonicera maackii*) – Fruit ripe, some starting to dry. Leaves mostly still dark green but some showing signs of yellowing and thinning



Reporting Regions

- Sweet clovers (*Melilotus* sp.) - Second year plants completely dry
- Japanese stiltgrass (*Microstegium vimineum*) – Plants completely dry and dormant. Seeds have dispersed
- Paulownia (*Paulownia tomentosa*) - Fruit capsules mature, dried, and open. Actively releasing seeds. Plants nearly completely defoliated
- Reed canary grass (Phalaris arundinacea) - Vegetative growth still dark green
- Multiflora rose (*Rosa multiflora*) – Fruit ripe, leaves nearly completely fallen
- Johnsongrass (*Sorghum halepense*) - Completely senesced

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

Southwest

- Tree of Heaven (Ailanthus altissima) - All observed tees are dormant. Fruit still present in some trees
- Mimosa (*Albizia julibrissin*) - Seed pods are brown and dry. Leaves greenish-yellow. Top 10% and outer branches exposed to the wind are bare of leaves
- Japanese barberry (*Berberis thunbergii*) - Dormant, all leaves gone
- Oriental bittersweet (*Celastrus orbiculatus*) - Berries with yellow coverings, not yet opened. Leaves yellow-green, gone on some branches and mostly present on others
- Poison hemlock (*Conium maculatum*) – All observed plants are dead and completely dry. Most seeds have fallen. Ground covered with very small rosettes (1-3" tall)
- Autumn olive (*Elaeagnus umbellata*) – Most leaves are turning yellow. About 25% of leaves have fallen. Fruit has mostly fallen
- Burning bush (*Euonymus alatus*) - Leaves bright red. Fruits ripe and open to reveal red arils. Most fruit absent
- Wintercreeper (*Euonymus fortunei*) - Fruit ripe with seed coverings white and berries red. All leaves green
- English ivy (*Hedera helix*) - Berries tiny and green to black. Fallen from some vines. Leaves dark green
- Japanese hops (*Humulus japonicus*) - Vines are any remaining leaves are completely dry. All achene clusters are completely brown and most have dropped their seeds
- Sericea lespedeza (*Lespedeza cuneata*) - Most plants have entered senescence and are brown. Only a few plants in open areas have any remaining green leaves. Over 80% of seeds remain on stems. Seeds not easily releasing when stalks are tapped
- Japanese honeysuckle (*Lonicera japonica*) – Some fruit have dried and fallen. There is an abundance of ripe, juicy fruit still on vines growing in edge environments. At one site there is very little leaf color change observed as most leaves are still green and lush. At another site, 30% of leaves yellowing or reddish along the edges
- Amur honeysuckle (*Lonicera maackii*) – Some fruit has dried and dropped. More than 50% of fruit are still bright red and juicy. About 25%-30% of edge and open environment shrubs are pale green to yellow. All shrubs under forest canopy still have lush green leaves. No canopy thinning observed
- White mulberry (*Morus alba*) - Leaves mostly gone (60-90%). Remaining leaves yellow to brown
- Beefsteak plant (*Perilla frutescens*) - The majority of seed capsules are fully brown. Stems still purple on ~60% of plants
- Phragmites (*Phragmites australis*) - Plumes tan and fluffy. Seeds falling. At one site, leaf blades about 50% green and browning from base. At another site, plants fully brown some a slight greenish cast in leaf centers on some leaves
- Callery (Bradford) pear (*Pyrus calleryana*) - Fruit are olive -gray and larger fruit are ½" in diameter. Fruit continue to dry with black seeds present inside. Leaf color change observed with about 50% of leaves turning reddish-purple at one site. At another site only outer leaves yellow to red and inner leaves still green
- Black locust (*Robinia pseudoacacia*) - About 80% of leaves have dropped. Remaining leaves are frost damaged and drying
- Multiflora rose (*Rosa multiflora*) – About 10% of fruit remain attached at one site, 40% at another. At tone site, 90% of leaves have fallen from most shrubs with a few shrubs in protected areas still have most leaves, which are green. At another site, leaves green and mostly present on plants that did not produce fruit with fruit-producing plants having very few leaves remaining
- Crownvetch (*Securigera varia*) - All observed plants are still green ad now reclining. All fruit and some leaves have dropped
- Johnsongrass (Sorghum halepense) - Plants dormant. Seeds dropping with 90% of seeds already dispersed
- Periwinkle (*Vinca minor*) - All leaves mature, no fruit observed

West Central

- Garlic mustard (*Alliaria petiolata*) – First year plants still green
- Amur honeysuckle (*Lonicera maackii*) – Leaves predominantly green but starting to change color, curl, and drop. 80%-90% of leaves still present. Fruit shriveled
- Reed canary grass (Phalaris arundinacea) - Mostly dormant and brown, but still some significant amounts of green
- Multiflora rose (*Rosa multiflora*) – Leaves mostly dropped and remaining leaves are brown. Not many fruit left

East Central

- Garlic mustard (*Alliaria petiolata*) – First year rosettes present and green
- Amur honeysuckle (*Lonicera maackii*) – Plants still mostly green

Northwest

- Garlic mustard (*Alliaria petiolata*) – Most rosettes still lush and green (maybe 25% with some wilting) until hard freeze on 11/10/2017. Afterwards, about 50-60% showing signs of wilting/freeze damage
- Japanese barberry (*Berberis thunbergii*) - Fruit ripe. Some plants still had leaves up to hard freeze on 11/10/2017; nearly all plants dropped leaves after that event
- Spotted knapweed (*Centaurea stoebe*) - Rosettes starting to go into senescence before hard freeze on 11/10/2017. Event doesn't seem to have changed senescence timeline
- Russian olive (*Elaeagnus angustifolia*) - Fruit ripe. Plants not yet showing signs of senescence. Hard freeze on 11/10 had no apparent effect
- Autumn olive (*Elaeagnus umbellata*) – Fruit ripe. Plants not yet showing signs of senescence. Hard freeze on 11/10 had no apparent effect
- Burning bush (Euonymus alatus) - Leaves still lush green up to hard freeze on 11/10/2017. Plants did not show sign of immediate effects from event and leaves still lust 48 hours after
- Japanese knotweed (Fallopia japonica) - Some stalks (maybe 50-75%) were in senescence until hard frost on 11/10/2017. Plants completely wilted and yellow/brown within 48 hours of event
- Amur honeysuckle (*Lonicera maackii*) – Some leaves yellowing, canopy starting to thin. Fruit ripe and red
- Bush honeysuckle (*Lonicera sp.*) – About 30% of plants showing signs of leaves changing color. Fruits ripe and still on 50%+ of fruiting plants. Hard freeze on 11/10 caused some wilting but no leaf color change
- Sweet clovers (*Melilotus albus* and *M. officinalis*) - Many of the plants observed had firm leaves, but with mildew powder on them
- White mulberry (*Morus alba*) - Trees had green foliage up to hard freeze on 11/10/2017. All trees dropped green leaves within 24 hours
- Wild parsnip (Pastinaca sativa) - Some rosettes yellow, some still green
- Common buckthorn (*Rhamnus cathartica*) – Fruit ripe. At tone site, some leaves starting drooping in 1st week of November but little color change. Hard freeze on 11/10 had no apparent effect. At another site most leaves have already dropped and those that are left dull and limp
- Multiflora rose (*Rosa multiflora*) – All plants that bloomed have mature fruit, which is starting to drop. At one site, some plants in open areas showing signs of senescence with plants in the woods still green, esp. young canes. Hard freeze on 11/10 had no apparent effect. At another site, most leaves have dropped
- Crown vetch (*Securigera varia*) - Plants were still green up to hard freeze on 11/10/2017. When observed 2 days later, they were essentially dead for the season

Northeast

- Oriental bittersweet (*Celastrus orbiculatus*) - Leaves dropping and dried. Fruit still bright red, actively falling
- Canada thistle (*Cirsium arvense*) - Small specimens are fully green where taller/older specimens are dying back from frost-kill
- Autumn olive (*Elaeagnus umbellata*) – Plants are still mostly green, still very little yellowing of leaves
- Amur honeysuckle (*Lonicera maackii*) – Leaves are yellowing but at this time only about 25% yellow. Fruit is present and still ripe on some plants but about 50% have dropped all fruit
- Morrow's honeysuckle (*Lonicera morrowii*) - Leaves are just starting to turn yellow. Fruit is dried and gone
- Tartarian honeysuckle (*Lonicera tatarica*) - Most plants showing significant yellowing and dropping of leaves. Fruit has completely dispersed and is absent
- Reed canary grass (Phalaris arundinacea) - Plants are almost fully brown
- Phragmites (*Phragmites australis*) - Showing yellowing of blades at the top. Seed heads are drying but seed is not releasing yet
- Callery (Bradford) pear (*Pyrus calleryana*) - Fruit ripe. At one site, small escaped plants in full fall color, but ornamental trees just starting to show color. At another site leaves still green on all plants

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Bob Arevalo, Karen DePoister, Sharon Geil, Karen Glynn, Jim Hoyt, Bill Klunk, Molly Lovelock, Mona Maas, Phyllis Schulte

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report November 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602-201711. Urbana, IL. 4p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.

UNIVERSITY OF ILLINOIS EXTENSION

Technical Forestry Bulletin • NRES-1602

Invasive Plant Phenology Report
December 2017

Christopher W. Evans, Extension Forestry and Research Specialist
Department of Natural Resources and Environmental Sciences

This University of Illinois Extension Technical Forestry Bulletin series provides monthly reports on the development of invasive plant species in Illinois. Reports are summarized by region and produced from field observations collected between the 8th and 14th of each month.

Phenology is the study of seasonal natural phenomena. This observational project tracks the phenology of invasive plant species in Illinois throughout the growing season, noting when plants initiate growth, start flowering, ripen seeds, become dormant, etc. Data on the phenology of invasive plants is critical information for the development of effective management programs.

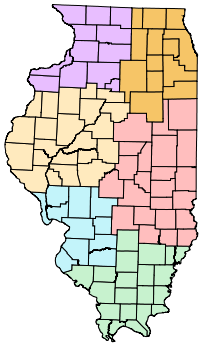
December 2017 General Summary

December moves us fully into the dormant season. Very few invasive plants have any green leaves remaining. Many have completely dispersed their seeds. However, first year rosettes can be found green and growing for several of the biennial invaders. In terms of management, cut stem or basal bark applications on woody invasive species is the most appropriate treatment for this time of year.

Regional Reports

South

- Japanese chaff flower (*Achyranthes japonica*) - Plants completely dry and dormant. Dried stems remain standing with no leaves. Fruit dried, Much of the fruit has dispersed
- Tree of Heaven (*Ailanthus altissima*) - No fruit or flower remnants observed. Leaves dropped, plants dormant
- Mimosa (*Albizia julibrissin*) - plant completely dormant, fruit dry and brown
- Poison hemlock (*Conium maculatum*) – Second year plants completely dry. Rosettes presents
- Teasel (*Dipsacus* spp) - Both cut leaf and common teasel with second year plants completely dried, seeds dispersed. Rosettes present
- Autumn olive (*Elaeagnus umbellata*) – Fruit nearly fully dispersed. Plants nearly completely defoliated. Only ~5% of leaves remain on some plants
- Burning bush (Euonymus *alatus*) - Plants leafless. Fruit open with seeds dropping
- Wintercreeper (*Euonymus fortunei*) - Fruit ripe, open
- Sericea lespedeza (*Lespedeza cuneata*) - Fruit ripe. Plants dry and dormant
- Privet (*Ligustrum* sp.) - Fruit ripe. Leaves still green
- Japanese honeysuckle (*Lonicera japonica*) – Leaves mostly dark green but 10-20% of leaves showing color change
- Amur honeysuckle (*Lonicera maackii*) – Fruit dispersing but some remains on plants. Larger plants and those growing in open areas nearly fully defoliated. Smaller plants in wooded environments have yellowing leaves with about 30% of leaves remaining
- Sweet clovers (*Melilotus* sp.) - Second year plants completely dry
- Japanese stiltgrass (*Microstegium vimineum*) – Plants completely dry and dormant. Seeds have dispersed
- Paulownia (*Paulownia tomentosa*) - Fruit capsules mature, dried, and open. Actively releasing seeds. Plants completely defoliated
- Reed canary grass (*Phalaris arundinacea*) - Vegetative growth still dark green
- Multiflora rose (*Rosa multiflora*) – Fruit ripe, leaves nearly completely fallen
- Crownvetch (*Securigera varia*) - Dormant



Reporting Regions

Interested in becoming an invasive plant phenology observer?

The University of Illinois Extension Forestry Program relies on observations from volunteers to produce the monthly invasive plant phenology report. Anyone interested in becoming a volunteer observer should contact Chris Evans, Extension Forester at (618) 695-3383 or cwevans@illinois.edu. Volunteers are asked to make monthly observations on three to four invasive species in their area.

- Johnsongrass (*Sorghum halepense*) - Completely senesced

Southwest

- Tree of Heaven (*Ailanthus altissima*) - Dormant. ~30% of fruit left on some trees. They are small and likely never matured. Full-sized fruit already dispersed
- Mimosa (*Albizia julibrissin*) - Fruit brown, dry. Leaves absent
- Japanese barberry (*Berberis thunbergii*) - Dormant, all leaves and fruit gone
- Oriental bittersweet (*Celastrus orbiculatus*) - Fruit open to revel red arils. Leaves absent
- Poison hemlock (*Conium maculatum*) – Dead stalks mostly gone. Rosettes actively growing. Larger specimen up to 12" wide
- Teasel (*Dipsacus* spp) - Dead second year plants upright and visible
- Autumn olive (*Elaeagnus umbellata*) – Fruit dispersed. Only a few leaves remain at the tips on some. Leaves completely absent on others and a few plants with abundant leaves
- Burning bush (*Euonymus alatus*) - Leaves absent. Berries mostly dispersed. Only ~20% remain, drying
- Wintercreeper (*Euonymus fortunei*) - Ripe fruit, open with red arils actively dropping. Leaves on climbing vines drooping, ~15% various shades of red or yellow. Leaves on ground vines with purple undersides and in good condition
- English ivy (*Hedera helix*) - Berries nearly fully dispersed. Leaves dark green
- Japanese hops (*Humulus japonicus*) - Plants dormant. Seed mostly dispersed
- Sericea lespedeza (*Lespedeza cuneata*) - Plants dormant, >505 of seeds remain on stems. Seeds drop when stems are tapped
- Japanese honeysuckle (*Lonicera japonica*) – Sites vary from nearly all leaves being green to leaves mostly purple/yellow in color. Most fruit has dried or fallen
- Amur honeysuckle (*Lonicera maackii*) – Some plants with abundant berries, other bare. Leaves gone on most plants. Some yellow/green leaves at tips, especially in shade. A few plants with numerous yellow/green leaves
- White mulberry (*Morus alba*) - Dormant
- Beefsteak plant (*Perilla frutescens*) - Fully dormant. Actively dropping seed
- Reed canary grass (Phalaris arundinacea) - Dormant. No visible seed heads
- Phragmites (*Phragmites australis*) - Plumes tan and fluffy, seeds falling though already gone from ~25%. Stalks brown and dry
- Callery (Bradford) pear (*Pyrus calleryana*) - Dormant with ½" buds present. Very little fruit left. Remainng fruit appears rotten, likely from freeze damage
- Black locust (*Robinia pseudoacacia*) - - Dormant, fruit dispersed
- Multiflora rose (*Rosa multiflora*) – Fruit ripe, ~30% or less remain on plant. Small green leaves present at branch tips
- Crownvetch (*Securigera varia*) - Plants found in deep grass along wooded edge still green and lush
- Johnsongrass (*Sorghum halepense*) - Dormant, seeds actively dispersing
- Periwinkle (*Vinca minor*) - Leaves still present, no fruit observed

West Central

- Garlic mustard (*Alliaria petiolata*) – First year rosettes still green
- Amur honeysuckle (*Lonicera maackii*) – Dormant, no leaves or fruit remaining
- Reed canary grass (Phalaris arundinacea) - Dormant, brown
- Multiflora rose (*Rosa multiflora*) – Dormant. Leaves absent. A few dried fruit still remain

East Central

No observations submitted for this region

Northwest

- Garlic mustard (*Alliaria petiolata*) – First year rosettes present and still green. Rosettes previously showing freeze damage has recovered somewhat
- Japanese barberry (*Berberis thunbergii*) - Dormant with all leaves fallen. Only a few berries remain
- Spotted knapweed (Centaurea stoebe) - some rosettes discolored but not yet wilted
- Poison hemlock (*Conium maculatum*) - Rosettes green
- Exotic olives (*Elaeagnus* spp.) - Leaves starting to curl but plants are still holding leaves. Most of the fruit has dropped
- Burning bush (*Euonymus alatus*) - Dormant, leafless at one site. Another observer reports that some plants with yellowing leaves
- Japanese knotweed (*Fallopia japonica*) - Dormant
- Dame's rocket (*Hesperis matronalis*) - Rosettes still lush and green
- Bush honeysuckle (*Lonicera sp.*) – Some plants still have fruits on them. At one site all plants dormant, all leaves fallen. At another site 50% of plants still have some green leaves
- Sweet clovers (Melilotus albus and M. officinalis) - Leaves

yellowing on first year plants

- White mulberry (*Morus alba*) - Dormant
- Wild parsnip (*Pastinaca sativa*) - Some rosettes yellow, others green
- Reed canary grass (*Phalaris arundinacea*) - Leaves still lush and green at one site. Another observer reported that leaves are drying up with only low-growing leaves in the center of clumps still green
- Common buckthorn (*Rhamnus cathartica*) - Most plants have dropped all leaves. Ripe fruit still present
- Multiflora rose (*Rosa multiflora*) - Older canes dropping leaves before younger canes. Many plants still with ripe fruit
- Crownvetch (*Securigera varia*) - Dormant

Northeast

- Garlic mustard (*Alliaria petiolata*) – Rosettes are green with no signs of frost damage
- Oriental bittersweet (*Celastrus orbiculatus*) - Leaves have dropped. Fruit actively dropping, 15-20% remain on vines
- Canada thistle (*Cirsium arvense*) - Plants dry and dormant. Seeds dispersed
- Teasel (*Dipsacus* spp) - Dead, dry stalks remain visible. Rosettes still growing, showing no signs of frost damage at one site and wilting at another
- Amur honeysuckle (*Lonicera maackii*) – – A few plants still holding on to some green leaves in protected areas. Sprouts also retaining some leaves
- Morrow's honeysuckle (*Lonicera morrowii*) - Dormant
- Tartarian honeysuckle (*Lonicera tatarica*) - Dormant
- Callery (Bradford) pear (*Pyrus calleryana*) - Leaves yellow with about 20% still on trees. Fruit ripe, actively falling
- Multiflora rose (*Rosa multiflora*) - Some plants still with green leaves. Most dormant

Using phenology data to inform invasive plant management

- Chemical treatments to annual or biennial plants should be applied before the plants start flowering
- Once annual or biennial plants have fruit forming, the most effective control measure is mechanically removing the plant, making sure to remove the fruits/seeds from the area. When the fruit start to mature and fall off of the plant, mechanical treatments should be halted
- When fruit mature on some invasive plants, such as garlic mustard Japanese stiltgrass, and Japanese chaff flower, care should be taken to avoid accidentally spreading the seeds of these plants.
- Chemical treatments on woody invasive plants should not be applied after bud swell/bud break until the plants have reached full leaf expansion
- Foliar chemical treatments should be applied to healthy, green, actively-growing foliage. When the foliage starts to turn its fall color, then foliar treatments are not effective

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Invasive plant observations used to produce this report were provided by the following individuals:

Duane Ambroz, Karen DePoister, S. A Fenwick, Sharon Geil, Bill Klunk, Molly Lovelock, Phyllis Schulte

About the author(s):

Christopher W. Evans, Extension Forestry and Research Specialist, Department of Natural Resources & Environmental Sciences, University of Illinois at Urbana-Champaign.

Recommended citation:

Evans, C.W. 2017. Invasive Plant Phenology Report December 2017. University of Illinois Extension Technical Forestry Bulletin. NRES-1602-201712. Urbana, IL. 3p.

The Dept. of Natural Resources and Environmental Sciences and Extension Forestry at the University of Illinois would like to thank and acknowledge the Renewable Resources Extension Act (RREA) and the USDA National Institute of Food and Agriculture for Extension Forestry program funding.