

ORNAMENTALS

• H O T L I N E •

INSECTS

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Issue 13

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Ornamental IPM Specialist

BAGWORM egg hatch has occurred throughout the state so closely observe host plants to notice the early instars. Bagworms are caterpillars (Lepidoptera: Psychidae) preferring to feed on juniper, arborvitae, and Leyland cypress, but will eat a variety of other deciduous and coniferous plants. Eggs typically hatch at 364 - 710 GDD₅₀ (peaks at 580) and larvae are found feeding in the "dunce cap" stage. Larvae feed 519 - 3041 GDD₅₀ (1453 peak) or when *Viburnum dentatum* is in full bloom and begin to pupate around mid-August to early September. Eggs will frequently hatch until around the middle of June, depending on oviposition and microclimate effects. Search plants closely when looking for this stage and be sure to search interior sections of trees too.

Bags carried by early instars have the 'dunce-cap' appearance whereas older larvae have bags that hang down. Do not forget to scout plants near plants infested last year because the hatchlings disperse by ballooning on the wind to nearby plants.

Applications in mid- to late-June target both early and late hatching larvae and provides sufficient control often with little damage. If you applied control in May, you may not get the later season hatch. The amount of damage caused by small bagworms can vary depending on their ability to disperse away from their hatch site and the quantity of early instars.

Physically removing bagworms is one method of control; however this be labor intensive or impractical depending on the size of the plant or population. Companion plants encourage parasitoids to remain in the area to attack bagworm pupae. Previous research found that late season applications of Acelepryn (chlorantraniliprole) controlled bagworms as well as Orthene (acephate). Dipel (*B. thuringiensis* 'kurstaki'), Conserve (spinosad) and Acelepryn (chlorantraniliprole) are excellent products to apply around mid to late June for bagworm control while conserving the natural enemies such as wasps and parasitoids.

(Continued)

DISEASES

Nancy Gregory
Plant Diagnostician

CERCOSPORA LEAF SPOT ON HYDRANGEA is one of our summer leaf spots. Infected leaves turn brown and drop, the fungal spores stay in debris on the ground and can re-infect year after year. Rain and humidity favor growth and infection by the fungus *Cercospora* and the fungus *Septoria*. Hydrangeas can get very dense in a few years, leaves don't dry very well, and damp conditions favor growth of the leaf spotting pathogens. To manage, clean up old diseased leaves and spent flowers, and

(Continued)

What's Hot!

Also seen in the landscape: *Phyllosticta* fungal leaf spot on *Hamamelis* and *Phyllosticta* on river birch. No control needed.

Clover is at peak flowering. Clover does not respond to 2,4-D, the most common broadleaf lawn herbicide; use an herbicide containing MCPP for clover control. Or you could convince homeowners that the nitrogen fixation and pollinator attraction of clover is a good thing and peak flowering will be over soon.

Insects (Continued)

Pesticide applications targeting early instars are generally more effective than targeting larger bagworms. Other products available include Confirm, Tempo, Permethrin Pro, or other pyrethroids. Dinotefuran and clothianidin (less than dinotefuran) have demonstrated some bagworm mortality when applied as a soil application.



Bagworm in the 'dunce cap' stage. Photo credit: B. Kunkel

For more information

on pests & practices covered in this newsletter, call your County Extension Office

Helpful numbers to know:



Garden Line	831-8862
(for home gardeners only)	
New Castle County Extension	831-2506
Kent County Extension	730-4000
Sussex County Extension	856-7303

View more pictures at <http://sites.udel.edu/ornamentals/>

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COOPERATIVE EXTENSION

Diseases (Continued)

improve air circulation through your plants. A good time to trim and thin out is right after the plants flower. Early spring is a good time to remove up to one-third of the old stems from throughout plants, depending on the cultivar. Fungicides are preventative, so it is too late for chemical control this season.

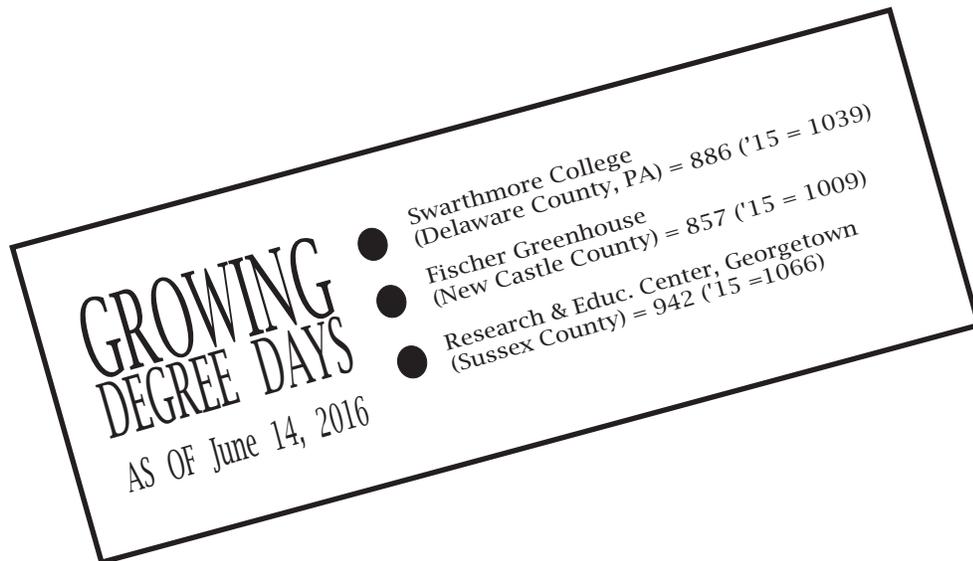
PRUNE TO REJUVENATE RHODODENDRONS AND AZALEAS now. Prune out dead and diseased branches, and re-shape.

PLANT PATHOGENS ON WEEDS OR INVASIVE PLANTS are seen, but rarely offer any realistic option for biological control. It is interesting from a pathologist's viewpoint to take notice of downy mildew on wild grape, leaf spot on Virginia creeper, and rust fungi on various weeds. Rust fungi may offer the best possibility for biological control, due to the very specific nature of most rust fungi. Several of our colleagues at Virginia Tech have been working on a few of these pathogen biocontrols.



Septoria leaf spot on hydrangea. Photo credit: N. Gregory

Editor: Susan Barton
Extension Horticulturist



Bagworm in the pendulous bag stage. Photo credit: B. Kunkel