



# North Carolina Pest News

Departments of Entomology and Plant Pathology

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### CAUTION !

*The information and recommendations in this newsletter are applicable to North Carolina and may not apply in other areas.*

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## FIELD AND FORAGE CROPS

From: Dominic Reisig, Extension Entomologist

### Unusual Hessian Fly Symptoms Presenting in Wheat

Hessian fly symptoms from spring infestations are still presenting in Beaufort County south of the Pamlico River and in Pamlico County (see previous <http://www.nccrops.com/?p=484>). I snapped some pictures of unusual symptoms that I have not seen described elsewhere (Fig. 1-3). Furthermore, these symptoms have been observed in portions of Pasquotank County, located in the northeast part of the state.



**Fig. 1.** Lodging, resulting from spring Hessian injury, is a common symptom. Image from D. Reisig.



**Fig. 2.** At the base of many lodged stems, you can see browning, from dead necrotic tissue. Image from D. Reisig.



**Fig. 3.** An unusual symptom that I haven't seen before is the growth of adventitious roots. It looks like the Hessian fly feeding interfered with the normal vascular system of the plants. The growth of the roots is likely a response of the plant to shuttle more water and nutrients up to the growing tissue. Image from D. Reisig.

### Get Field Crop Entomology Updates on Twitter

Follow me on Twitter @DominicDReisig.

### Distinguishing Between Rice and Sugarcane Beetle

I learned the difference between these two Scarab beetles a few weeks ago. Recently, I discovered that it is not common knowledge that these beetles are two separate species. From a field crops perspective, the

rice beetle, *Dyscinetus morator* (Fabricius), is not an important pest in North Carolina, while the sugarcane beetle, *Euethola rugiceps* (LeConte), can be a pest of corn and cotton (see <http://www.nccrops.com/?p=467> for sugarcane beetle information). To monitor sugarcane beetle emergence, entomologists use light traps; both rice and sugarcane beetle are readily attracted to these, with the most caught on warm nights (above 60° F). The sugarcane beetle is also a pest in turf, and according to North Carolina State University graduate student Terri Hoctor, the rice beetle emerges about two weeks earlier than sugarcane beetle. We have been catching a mixture of both species in our light trap for about a month.

I snapped some pictures of both beetles (Fig. 4-6) and thought that this might be useful for those who might be monitoring light traps.



**Fig. 4.** A big difference between these two beetles is size. Note that the wing casings (elytra) of the rice beetle on the right are about 1/3x larger than the sugarcane beetle on the left. Also notice that the rice beetle on the right has a smoother body surface, while the sugarcane beetle is more "sculpted". Finally, notice that the legs of the rice beetle on the right have less pronounced hairs on the leg (spurs and tarsal claws) than the sugarcane beetle on the right. The legs of the sugarcane beetle are highly adapted for digging (see video for digging beetles). Image from D. Reisig.



**Fig. 5.** The rice beetle has very visible eyes on the side of its head. Image from D. Reisig.



**Fig. 6. Notice the bottom portion of the head just before it reaches the mouthparts (the circled portion, or frontoclypeal sulcus). The rice beetle on the left is smooth where the head meets the mouthparts, while the sugarcane beetle is jagged. Image from D. Reisig.**

From: Steve Koenning, Extension Plant Pathology, and Randy Weisz, Small Grains Specialist, Crop Science

### **Stripe Rust on Wheat – April 19, 2012**

Stripe rust has been found on several farms across North Carolina. It is unusual for us to see this disease. However, stripe rust is a serious threat to our wheat crop. It can do a lot of damage very quickly and may require steps for management including fungicide application.

Stripe rust often gives a yellow look to the field. So you may look out across a green field of wheat and see a small area that looks yellow. Looking closer the leaves will have small yellow rust pustules usually in a line. That is why it's called stripe rust!

Pictures are attached (Fig. 7). I've also attached the North Carolina Guide to Leaf, Stem, and Stripe Rust to help.

The following varieties are the most likely to be infected and are the ones growers should check: C9436, DG Shirley, NC Cape Fear, NC Neuse, NC Yadkin, P26R12, SS520, SS560, USG3209, USG3592, USG3665 and SS8404.

If stripe rust is found it should be sprayed as soon as possible. Wheat that is heading has only four labeled products available for application: Tebuconazole (Folicur and generics), Metconazole (Caramba), Tebuconazole + Prothioconazole (Prosaro) and Prothioconazole (Proline). These fungicides can be applied up to 30 days before harvest. Tebuconazole is limited to 4 ounces per crop season, so if tebuconazole was used earlier for rust or powdery mildew, tebuconazole or Prosaro cannot be used now.



Fig. 7. Stripe rust of wheat.

### Making the Decision to Apply Fungicides

The decision to make a fungicide spray is often difficult. If the fungicide application is made too late in the epidemic, disease control may be minimal. Conversely, if conditions favorable for disease do not persist, management may no longer be beneficial.

## ORNAMENTALS AND TURF

From: Steve Frank, Extension Entomologist

### Elm Pests Get Going

Right now a lot is happening on elm trees. For those of you who still have elm trees you can look for elm leaf miner, *Fenusa ulmi*, and woolly elm aphid, *Eriosoma americanum*. Elm leaf miner is a sawfly that lays eggs in elm leaves. The larvae mine tissue creating blotchy, brown translucent areas on the leaves (Fig. 8). In late spring the larvae exit leaves, drop to the ground and borrow an inch down to pupate. Affected leaves will remain on the trees and become brown as mined tissue dies. They may drop prematurely. This time of year you can find a few adults left but mostly you will find larvae in various stages of development. Mines are small so far but expand rapidly. Imidacloprid and orthene can be used to kill larvae in mines but they are protected from contact insecticides such as bifenthrin. If adults are present in your area, foliar applications of these products can reduce oviposition.



**Fig. 8. Small leaf miner larvae in a new leaf mine and (right) adult elm leaf miner sawfly.**  
Photos: S. D. Frank.

Woolly elm aphids are an interesting aphid that manipulates host foliage to create a shelter. The foliage is not altered into a true gall like those on witch hazel but as you can see in the picture that are pretty snug and protected from the elements. These aphids use serviceberry (*Amelanchier* spp.) roots as alternate hosts. They overwinter as eggs on elm bark. A female aphid emerges as elm leaves are expanding. She feeds on the underside of a leaf and at maturity produces 200 eggs. The infested leaves begin to curl and accumulate waxy debris that makes the aphids look woolly (Fig. 9). Mid-summer a winged generation develops that migrates to *Amelanchier* trees. These colonies of twisted leaves can be easily pruned out. In the case they are over abundant or there are other pests present an insecticide application may be warranted. A recent blog post contains other information and pictures <http://ecoipm.com/>.



**Fig. 9. Woolly elm aphids in curled elm leaves.**  
Photo: S. D. Frank.



**Fig. 10. Lady beetle eggs positioned next to a family of tulip poplar aphids.** Photo: S. D. Frank.

## Tulip Poplar Aphids in the Landscape

Tulip poplar aphids are becoming abundant in their annual cycle of boom and bust (Fig. 10). They start to boom in spring since natural enemies are not very active or abundant. As aphids become abundant, predators and parasitoids home in on them and tend to keep numbers under control. However, trees in highly urban areas or those tended by fire ants may become more abundant since nature predation and parasitism will be limited. General information about managing aphids in the landscape may be found at <http://www.ces.ncsu.edu/depts/ent/notes/O&T/flowers/note38/note38.html>. Other aphids to watch out for soon are crape myrtle aphids and rose aphids.

## Fire Ant Mounds Abound

Fire ants seem to be extra abundant this year with larger than normal mounds. I think this is due to the mild winter. Fire ants are usually relatively inactive in winter months. They rely on resources within the mound to survive and reproduction slows down. I witnessed fire ants foraging throughout the winter meaning they could gather more food and maintain mound size. A frequent location for fire ant mound is in the mulch around landscape trees. Particular when too much mulch is applied as in this video (<http://www.youtube.com/watch?v=PK5W5WItcbs&feature=youtu.be>). General information on fire ant management is available at <http://www.ces.ncsu.edu/depts/ent/notes/Urban/ifa.htm>. Help choosing insecticides is:

<http://www.ces.ncsu.edu/depts/ent/notes/Fire%20Ant%20Chemical%20Chooser/key/Fire%20Ant%20Insecticides%20In%20Ornamentals/Media/Html/opening.htm>.

## Azalea Lacebugs

Azalea lace bugs (*Stephanitis pyrioides*) are one of the most damaging pests of evergreen azaleas (Fig. 11). They overwinter as eggs in azalea leaves and begin hatching around now. Control is best targeted early in the season when nymphs are present for two reasons. First, nymphs are easier to kill than adults and if you kill nymphs before they mature and lay eggs you have a better chance of clearing up the infestation. Second, the longer azalea lace bugs are on your plant the more damage they do. On evergreen azaleas this damage sticks around for a long time so plants may be permanently damaged. So scout your azaleas and get those lace bugs cleared up before damage occurs. For more information and control options, click [here](#).



Fig. 11. Azalea lacebug damage from last year indicates eggs are present this year. Photo: S. D. Frank.

## National IPM Webinar Series from North Carolina State University

The National IPM Webinar series is coordinated by Kelly Ivors (<http://www.cals.ncsu.edu/plantpath/people/faculty/ivors/>) and Steve Frank (<http://ecoipm.com/people/steve-frank/>) in the Departments of Plant Pathology and Entomology at North Carolina State University. The webinar series is designed to provide timely information to the green industry through monthly seminars on the production and maintenance of ornamental plants. We invite extension specialists from around the county to speak on topics (<http://ecoipm.com/ipm-webinar/ipm-webinar-archive/>) important to the nursery greenhouse, and landscape industry with particular emphasis on issues relevant to the Southeast. This provides an opportunity for green industry professionals to learn in-depth information from the specialists conducting research on a particular pest or horticultural issue.

Webinars are typically scheduled for the first Thursday of each month starting at 11 a.m. EST. Announcements are sent out via a listserve. This is not a discussion list. It is only used to send out information about the webinar series. You can sign up for the listserve by going to [http://go.ncsu.edu/IPM\\_webinar\\_signup](http://go.ncsu.edu/IPM_webinar_signup).

To participate in a webinar click on the link sent out via the list serve. You will be able to enter the session starting at 10 a.m. EST on the day it occurs but the actual webinar will not start until 11 a.m. EST. You do not need any special software just an up-to-date browser and internet connection. In order to test that your system requirements are acceptable, visit the Configuration Room linked on [http://go.ncsu.edu/illuminate\\_config](http://go.ncsu.edu/illuminate_config).

You can view previous presentations by clicking on links on our IPM Webinar Archives page (<http://ecoipm.com/ipm-webinar/ipm-webinar-archive/>).

From: Emily Meineke and Steve Frank, Department of Entomology

### Assassin Bugs Hatching

Assassin bugs are members of the diverse, predatory family *Reduviidae*. They use their long stylet to pierce and liquefy caterpillars, aphids, and other pests. Several of these beneficial species live in North Carolina, including but not limited to the lurid assassin bug (*Zelus luridus*), the colorful assassin (*Rhiginia cruciata*), the masked hunter (*Reduvius personatus*), and the wheelbug (*Arilus cristatus*). Some species of assassin bug nymphs (Fig. 12) look similar to herbivorous true bugs, such as the leaf-footed bugs, that use their stylets to suck plant juices. Assassin bugs like varied plant structure to hunt within, and also high humidity. To encourage their populations on the lawn or beside the garden, you can plant tall native grasses and flowers. This time of year assassin bugs are just beginning to hatch and can be found in congregations around their egg masses. From here they will move out on their own as solitary



Fig. 12. Assassin bug nymph on dogwood leaf. Photo: S. D. Frank.

hunters. It is important to avoid spraying these while trying to manage other pests. They do not reproduce quickly so if you kill them this time of year they will not be around to help out the rest of the summer.

### Twitter

If you are not on twitter, you missed the emergence of azalea lacebugs, several scale insects, cane borer, tulip poplar aphids, boxwood leaf miners, ambrosia beetles and many others. Visit <http://ecoipm.com/> or [Twitter.com](https://twitter.com/OrnaPests) to follow @OrnaPests.

Can't wait for *North Carolina Pest News*? Check out our blog posts for the most up-to-date information: <http://ecoipm.com/>.

*Recommendations for the use of chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina State University, North Carolina A&T State University or North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact an agent of North Carolina Cooperative Extension.*

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