



## **Arkansas Plant Health Clinic Newsletter**

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### **Pine**

A common pest of pine in the United States is the Pine Tortoise Scale, *Toumeyella parvicornis*. The first indication that many homeowners notice is the blackened appearance of pine needles. This occurs because the scale insect feeding activity produces a sugary substance (honeydew) that is colonized by saprophytic fungi called sooty mold. The Pine Tortoise Scale has four or more generations per year in the southern parts of the country. Adult females on pine shoots are hemispherical, brown with dark markings. Females that settle on needles are elongate and light green with green stripes, eventually turning brown. Males are small, flat, whitish, and emerge from white pupal cases. The males die after mating. Up to 500 eggs are laid beneath the female's body. The crawlers are pinkish orange. Heavy infestations may kill trees, particularly young or weak trees. The best time to treat is when the crawlers are active as they are vulnerable to many insecticides. Fine horticultural oils and insecticidal soaps will kill crawlers. Bayer Advanced Insect Control for Trees and Shrubs applied in the fall will kill crawlers in the spring. Other products that are effective against crawlers are acephate, Sevin,

and pyrethroids, but these as well as the Bayer product can kill beneficial insects. The adults are protected by a waxy coating and are more difficult to kill. Insecticidal soaps or fine oils may be used to kill adults during the dormancy period.

### **Pino** by Keiddy Urrea

Uno de los insectos más comunes en pinos en los Estados Unidos es la escama tortuga del pino *Toumeyella parvicornis*. La primera señal de la presencia de estos insectos en los pinos es la apariencia oscura que toman los arboles, esta apariencia se debe a que a que estos insectos producen una sustancia azucarada que es colonizada por hongos saprofitos conocidos como moho fuliginoso. En la región sur del país la escama tortuga del pino produce cuatro o más generaciones al año. La hembra adulta se caracterizan por tener una forma de media esfera, de color marron y con manchas oscuras en el cuerpo. Las hembras que se ubican en las agujas de los arboles tienen una forma elongada de color verde, con líneas verdes en su cuerpo, al pasar el tiempo toman un color marrón. Los machos son generalmente más pequeños que las hembras, de color blanco, con forma aplanada y los cuales mueren luego de aparearse. Las hembras depositan aproximadamente 500 huevos debajo de su cuerpo. Las larvas migrantes de la escama tortuga son de color rosado. Una alta población de la escamas tortuga puede causar muerte de los pinos, particularmente de los arboles jóvenes o con algún tipo de daño causado por otros factores.



**Sherrie Smith**  
**Keiddy Urrea**

Las recomendaciones para el control de estos insectos están enfocadas en el control de las larvas migrantes, ya que el cuerpo de los adultos están compuestos de una cobertura de cera que los hace más difícil de controlar con el uso de insecticidas, y la única forma de controlarlos es en el estado latent. Para el control de larvas migrantes se recomienda el uso de aceites para uso agrícola, o insecticidas jabonosos. Insecticidas como Bayer Advanced Insect Control for Trees and Shrubs en el otoño también controlan las larvas migrantes. Otros productos como acephate, Sevin, y pyrethroids son eficientes para el control de las larvas migrantes pero controlan también insectos benéficos.

### **Pine Tortoise Scale-*Toumeyella parvicornis***



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Pine Tortoise Scale Adult Female-*Toumeyella parvicornis***



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Pine Tortoise Scale Male Pupal Cases- *Toumeyella parvicornis***



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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## **Pine Tortoise Scale Crawler- *Toumeyella parvicornis***



Photo by Sherrie Smith, University of Arkansas  
Cooperative Extension

## **Tomato**

Tomato spotted wilt virus, (TSWV), is appearing across the state. More than 176 plant species are susceptible to TSWV, including tomato and pepper. Symptoms include stunting, wilting, and sometimes a one-sided growth habit. Young leaves often turn a bronze or black color with numerous dark spots. Growing tips may die back. Young plants with these symptoms will usually not produce fruit. Older plants will fruit, but the fruit will have chlorotic rings and necrotic spots. Potatoes, peppers, and eggplant are among the many plant hosts that are vulnerable to TSWV. There is no cure or treatment for any viral disease. Pull up all affected plants and destroy or remove them to prevent the disease from spreading to new plants by thrips. A few

resistant tomato cultivars are available, but are mostly determinate:

## **Tomato varieties resistant to TSWV**

- **Amelia (determinate)**
- **Red Defender (determinate)**
- **Dixie Red (determinate)**
- **Health Kick (determinate)**
- **Mountain Merit (determinate)**
- **Sophya (indeterminate)**
- **Baby Cakes (determinate)**
- **Bella Rosa (determinate)**
- **Red Bounty (semi-determinate)**
- **Crista (determinate)**
- **Talladega (determinate)**
- **BHN 444 (determinate)**
- **Redline (determinate)**
- **BHN 602 (determinate)**
- **Top Gun (determinate)**
- **Tycoon (determinate)**
- **Tribeca (determinate)**
- **Mountain Glory (determinate)**
- **Fletcher (determinate)**
- **Finishline (determinate)**
- **Nico (determinate)**
- **Tribute (determinate)**
- **BHN 640 (determinate)**



## **Tomato Spotted Wilt Virus- Tospovirus**



**Photo by Sherrie Smith, University of Arkansas  
Cooperative Extension**

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## **Tomato Spotted Wilt Virus- Tospovirus**



**Photo by Sherrie Smith, University of Arkansas  
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## **Pepper with Tomato Spotted Wilt Virus-Tospovirus**



Photo by Sherrie Smith, University of Arkansas  
Cooperative Extension

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

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## **Pepper with Tomato Spotted Wilt Virus-Tospovirus**



Photo by Sherrie Smith, University of Arkansas  
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