DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Sherrie Smith

SPDN
Southern Plant Diagnostic Network

Department of Plant Pathology

PLANT HEALTH

CLINIC NEWS

Issue 7, April 10, 2017

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.

Asparagus

Asparagus is a high value crop, prized for its succulent growing tips (spears). Infestations of the Common Asparagus beetle, *Crioceris asparagi,* or the Spotted Asparagus beetle, *Crioceris duodecimpunctata,* can cause serious injury to asparagus crops. Many growers don't realize they have an insect problem until their asparagus spears begin to develop a shepherd's crook bending dramatically to one side. Both the larvae and adults feed on the tender growing tips of newly sprouted asparagus. Overwintered adults emerge in the spring and begin feeding, causing a brown discoloration of the tissue. Eggs are laid by adults singly or in rows of two to eight. They hatch in seven to twelve days, and the grubs begin feeding on the tender tips and foliage, and in the case of the Spotted Asparagus beetle, the berries. The larvae are yellowish-orange with black legs and head. Shoots with eggs should be cut just below ground level and removed. Gathering and destroying the berries will help control the Spotted Asparagus beetle. Insecticides containing permethrins, or carbaryl (Sevin), or Malathion give chemical control.

Asparagus Beetle Feeding Injury- *Crioceris asparagi*

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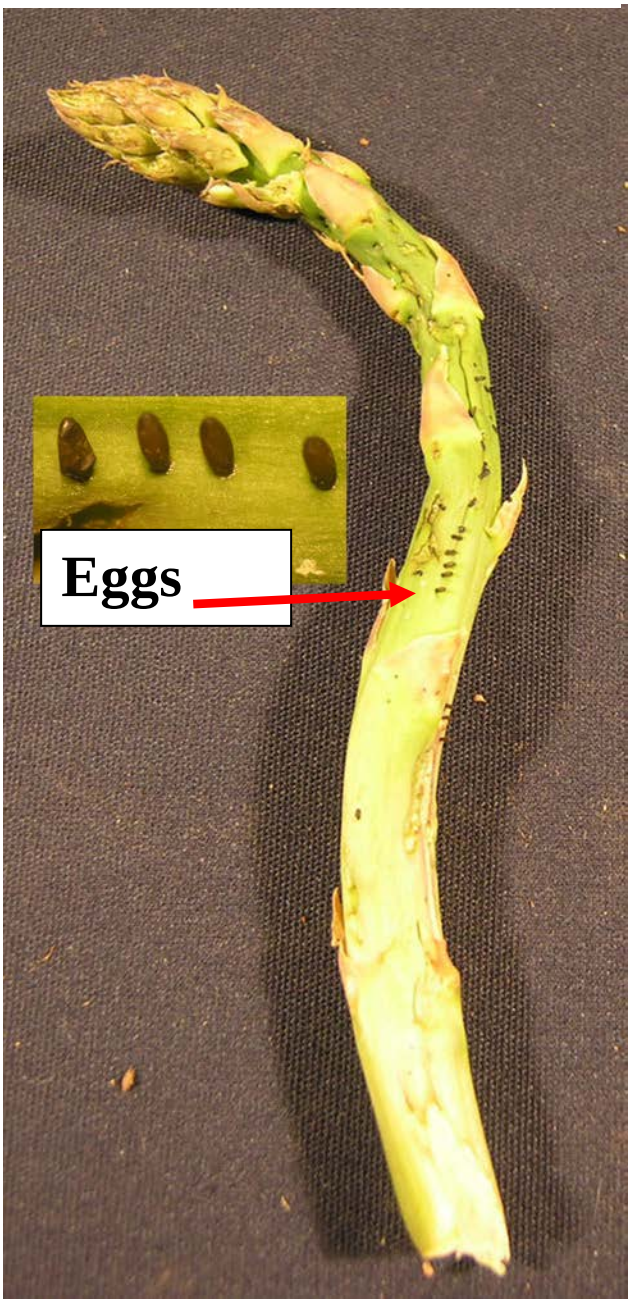
Asparagus Beetle Shepherd's Crook- *Crioceris asparagi*



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Common Asparagus beetle- *Crioceris asparagi*

Clemson University - USDA Cooperative Extension Slide Series,, Bugwood.org.

Spotted Asparagus beetle - *Crioceris duodecimpunctata*

Whitney Cranshaw, Colorado State University, Bugwood.org

Asparagus beetle larva- *Crioceris asparagi*

Clemson University - USDA Cooperative Extension Slide Series1, Bugwood.org.

Juniper

Cedar–quince rust, (*Gymnosporangium clavipes)* and Cedar-apple rust, *(Gymnosporangium juniperi-virginianae)* are two of the most common rusts we see at the Plant Health Clinic. Both rusts have a similar life cycle. In the spring the Cedar-quince rust fungus produces perennial, spindle shaped galls on cedars or junipers. These galls produce masses of gelatinous orange-brown teliospores. Cedar-apple rust galls are large gelatinous balls. In both types of rust, teliospores

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produce basidiospores which are carried to members of the rose family, such as pear, quince, apple, crabapple, and hawthorn. Both fungi stop producing the basidiospores about 30 days after the apples stop blooming. Galls on both cedar and the alternate host can cause stems to die if they are completely encircled. Cedar-quince rust is more likely to attack the fruit and stems than the leaves of the alternate hosts, whereas Cedar-apple rust commonly attacks leaves, often leading to defoliation. Aeciospores develop in the fruit, leaf, and stem lesions and are blown to cedars where the cycle begins again. Each year the perennial rust galls of Cedar-quince rust become larger and more noticeable, with older galls becoming dark brown to black in color. Fruit from the alternate host infected with Quince rust are covered with protruding off-white aecia of the fungus. Infected fruit eventually dry out and drop from the plant. Control begins with good sanitation. Prune out any galls found on alternate hosts junipers and cedars. During the winter, prune out all quince galls remaining on branches, and twigs of apples, crabapples, quince, hawthorn, and pears. Preventive fungicide applications are necessary in locations where apple and quince rusts are problems. Fungicide timing is similar for all the cedar rusts. Make the first application to valuable orchard and landscape plants when the orange telial galls on junipers become noticeable, (usually at flower bloom on apples and hawthorns), and make additional applications at regular intervals to protect newly developing growth. Applications of a triazole fungicide such as propiconazole, (Banner Maxx), myclobutanil, (Immunox), or triadimefon, (Bayleton, Strike), or Fertilome Liquid Systemic, or Bayer Advanced Garden Disease Control for Roses, Flowers, Shrubs are labeled for control of rusts on ornamentals. Begin applications shortly after bloom. Captan is labeled for fruit trees for homeowners.

Cedar-Quince rust on Juniper-
Gymnosporangium clavipes

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Cedar-Quince Rust on Juniper-
Gymnosporangium clavipes

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Cedar-Quince rust on Pear-
Gymnosporangium clavipes

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Cedar-Apple Rust-
Gymnosporangium juniperi-virginianae

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Cedar-Apple Rust-
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