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Issue 14, May 29, 2018

# Arkansas Plant Health Clinic Newsletter

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## Oak

**Biscogniauxia canker**, caused by *Biscogniauxia atropunctata*, **(*Hypoxylon atropunctata)***, can attack oak, elm, hickory, pecan, sycamore, beech, and maple among others. Hypoxylon is weakly pathogenic and unable to attack and kill healthy trees. Trees stressed by factors such as drought, insects, leaf fungi, saturated soil, compacted soil, excessive heat, nutrient deficiency, and overcrowding are susceptible. The spores are air-borne, or rain-splashed, and enter through wounds in the bark. The first symptom of Hypoxylon canker is yellowing of the leaves, and a noticeable thinning of the crown along with branch dieback. The sapwood begins to decay rapidly, showing radiating dark lines of decay in cross-section. When a diseased limb or the trunk dies, mats (stroma) of spores form under the bark. The pressure of these mats forces the bark to loosen. Sections of bark slough from the trunk and branches, collecting at the base of the tree. On the wood where the bark has sloughed off, tan to olive green, or reddish powdery masses of spores may be observed. The color of the spores depends upon the species of tree. Within a couple of weeks or a few months, these areas become dark brown to black, eventually becoming silver-gray in color. When the canker girdles the main trunk, infected trees turn brown and die apparently overnight. Last year Arkansas suffered from prolonged drought and heat, two major stress factors favorable for Hypoxylon canker. Hypoxylon can grow at temperatures up to 104°F. The Plant Health Clinic is now receiving samples of dead and dying maples and oaks infected with Hypoxylon. There are no chemicals to treat this disease. Since it is a problem only where trees are stressed, the best defense is maintaining healthy trees. Even large trees need watering during prolonged drought. Dead and dying trees should be removed at ground level and burned or otherwise removed from the property to reduce spore production.

## Roble Hypoxylon by Keiddy Urrea

**Biscogniauxia cancro** (Hypoxylon cancro), causado por el hongo *Biscogniauxia atropunctata* (*Hypoxylon atropunctata*), puede atacar robles, olmos, nueces, sicomoros, hayas y arces, entre otros. El *Hypoxylon atropunctata* es un patógeno débil que no es capaz de atacar y matar arboles sanos. Sin embargo, árboles sometidos a condiciones de estrés como sequía, daños de insectos/patógenos, suelos compactados, altas temperaturas, deficiencias nutricionales, entre otros, son susceptibles. Las esporas producidas por Hypoxylon son producidas en la parte aérea del árbol y se dispersan por el viento y la lluvia, penetrando por heridas. El primer síntoma producido por esta enfermedad

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es amarillamiento de las hojas, defoliación hacia el centro del árbol y en muerte de las ramas laterales. La savia comienza a decaer rápidamente mostrando rayas oscuras en sección transversal del tronco. Cuando las ramas laterales o el tronco mueren, aparecen masas de esporas conocidas como estroma. La presión de los estromas provoca que la corteza se comience a desprender progresivamente acumulándose en la base del árbol. La corteza del árbol toma un color marrón o verde oliva y se pueden observar masas de esporas color rojizas. El color de las esporas depende de la especie de árbol. Después de algunas pocas semanas o meses las áreas afectas toman un color negro o café oscuro, y eventualmente toman un color grisáceo. Cuando el cancro tuerce el troco, los árboles afectados mueren repentinamente. El año pasado los robles en el estado de Arkansas sufrieron de prolongada sequía, lo cual conllevó a condiciones favorable para el Hypoxylon cancro. *Hypoxylon atropunctata* crece a temperaturas hasta 104°F. La clínica de plantas de la Universidad de Arkansas está recibiendo en estos días robles y arces con severos síntomas de Hypoxylon cancro. No hay productos químicos que puedan controlar esta enfermedad. La mayor recomendación para el manejo de esta enfermedad es evitar cualquier tipo de estrés en los árboles, garantizando un riego adecuado en las sequías prolongadas aún para los árboles grandes. Árboles que han muerto deben removerse y quemarse para evitar la cantidad de inoculo en la propiedad.

## Oak Hypoxylon Canker-
### *Biscogniauxia atropunctata*, (*Hypoxylon atropunctata)*

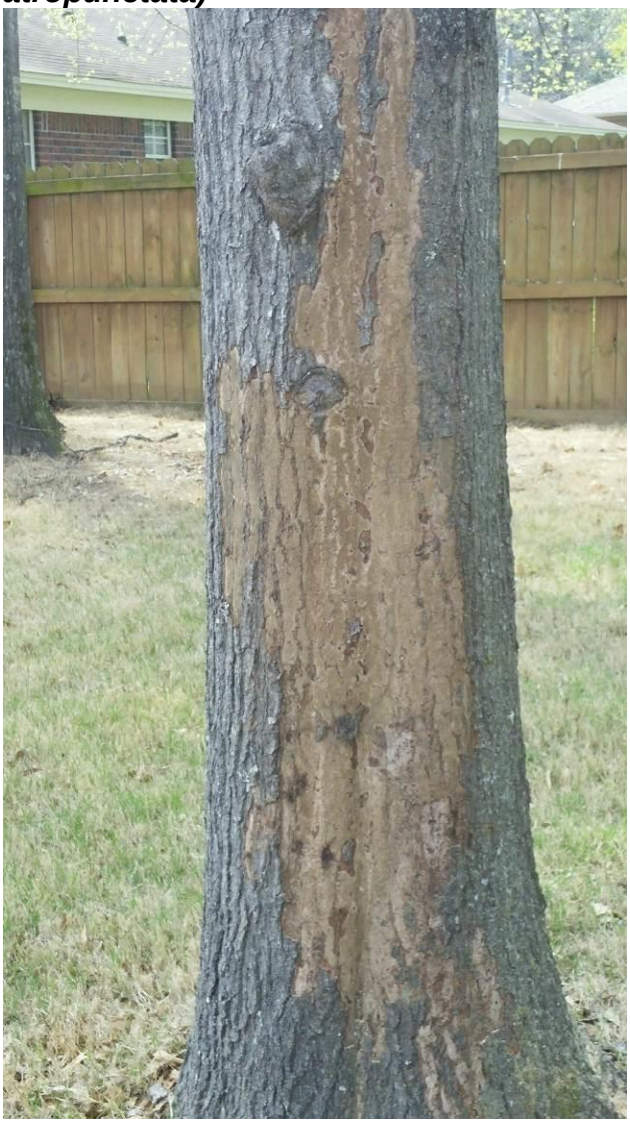

**Photo by Keith Perkins, University of Arkansas Cooperative Extension**

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## Oak Hypoxylon Canker-
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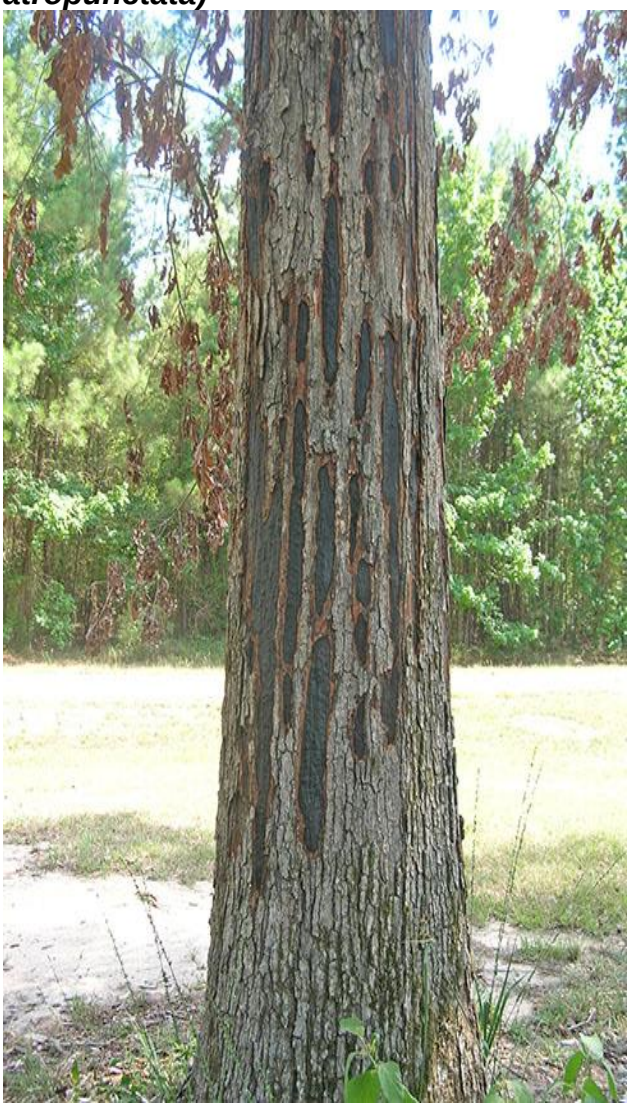

**Photo by Jerri Lephiew, University of Arkansas Cooperative Extension**

## Oak Hypoxylon Canker-
***Biscogniauxia atropunctata*, (*Hypoxylon atropunctata)***

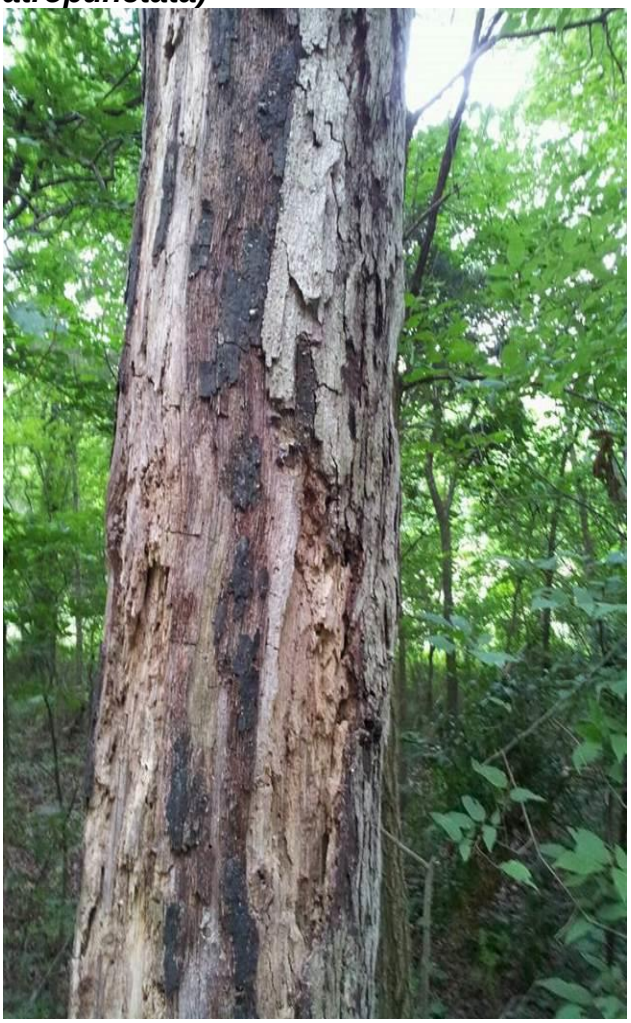

**Photo by Sherrie Smith, University of Arkansas Cooperative Extension**

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## Maple Hypoxylon Canker-

***Biscogniauxia atropunctata*, (*Hypoxylon atropunctata)***

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

## Peony

Peonies are one of our finest perennials. They are exceptionally long-lived, reaching ages of 50 years or more. They are also very healthy when planted with a minimum of 6 hours of sun in good garden soil with excellent drainage. Perhaps the most common disease we find on peonies is Red Spot (Blotch), caused by *Graphiopsis chlorocephala*, formerly *Cladosporium paeoniae*. This looks ugly but does not significantly damage the plant. Symptoms begin as small, circular, red to purple spots on the upper surface of young leaves. These spots become a burnished dark purple. The undersides of the leaves become a chestnut brown color. Later in the season, the lesions coalesce, becoming large, irregular purple blotches. Susceptibility to Red spot is quite variable, with many older cultivars being the most susceptible. It's important to clean up peony debris. In the fall, prune all spent top growth to ground level, and remove it from the garden. Begin spraying on a weekly schedule when new growth is just breaking the soil in the spring, continuing until the flowers begin to open. Fungicides containing mancozeb, thiophanate-methyl, or copper are effective.

## Peony Leaf Blotch-*Graphiopsis chlorocephala,* formerly *Cladosporium paeoniae*

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

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## Pear

Pear Blister mite damage can resemble herbicide injury. However, closer examination under magnification reveals the tiny mites. Outbreaks of the Pear Blister mite, *Eriophyes pyri*, can cause severe damage. The mites cause brown blisters on the undersides of leaves and depressed russet spots on fruit. Heavily damaged fruit may become deformed and distorted. The blisters begin as small green pimples on the lower leaf surface. As the blisters age, they become reddish, then brown in color. The mite is an extremely small sausage-shaped mite that overwinters at the base of buds or under outer bud scales. In spring, when buds begin to swell, females penetrate deeper into buds and lay eggs on the tissue. Development from egg to adult requires approximately 20 to 30 days during the spring. The feeding activity of the mites causes blisters on developing leaves. As the blisters form, leaf cells near the center of the blisters die and pull apart as surrounding cells enlarge, creating a hole. Several generations develop within blisters during a growing season. Subsequent generations require only 10 to 12 days to fully develop. Fruit damage is caused by feeding injury to buds before bloom. Overwintering blister mites are found beneath the outer bud scales in October and November. Begin scouting after harvest. Collect one shoot from the top and one from eye level from 20 healthy trees in a block. When three or more shoots show damage, fruit damage can be expected the following spring if treatments are not applied either postharvest or during dormancy. In early spring young leaves that are still furled will show light green to rough red spots where the mites have been feeding. Oils or applications of sulfur during the dormant season are control options.

## Pear Blister Mite-*Eriophyes pyri*

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

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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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