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CLINIC NEWS

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Red Tip Photinia

Photinias are no longer one of the landscape plants we recommend. They are extremely prone to a debilitating and unsightly leaf disease Entomosporium Leaf Blight caused by *Entomosporium mespili*, synonym *E. maculatum*, and *Diplocarpon mespili*. New infections first appear as tiny red specks on either surface of the leaf. The bright red spots may coalesce into large maroon blotches. Older spots may have gray centers with dark purple halos. Infection can spread to twigs causing cankered areas on branches. Severe infections may result in heavy leaf drop and weakening or death of the plant. Cultural controls consist of avoiding overhead irrigation, improving air circulation, and cleaning up fallen leaf/stem debris.

Homeowners may use Ortho Garden Disease Control, or Bonide Fung-onil, or Garden Tech Daconil Concentrate, or Hi-Yield Vegetable, Flower, Fruit and Ornamental Fungicide, or Monterey Fruit Tree, Vegetable, and Ornamental Fungicide, or Fertilome Broad Spectrum Lawn and Garden Fungicide, or Bonide Mancozeb FL with Zinc, or Ferti-lome F-Stop Lawn and Garden Fungicide, or Spectracide Immunox Plus Insect and Disease Control for Gardens, or Spectracide Immunox Multi-Purpose Fungicide Spray for Gardens, or

Bio Advanced Science-based Solutions All-In-One Rose and Flower Spray, or Bio Advanced Garden-Disease Control for Roses, Flowers, Shrubs.. Organic growers may use Serenade Garden Disease Control, or GreenCure, or Kaligreen, or Milstop, or Actinovate Biological Lawn and Garden Fungicide.

Photinia Entomosporium Leaf Spot- *Entomosporium mespili*



Photo credit: Sherrie Smith, University of Arkansas Cooperative Extension



Photinia Entomosporium Leaf Spot- *Entomosporium mespili*



Photo credit: Jennifer Carraway, University of Arkansas
Cooperative Extension

Photinia Entomosporium Leaf Spot- *Entomosporium mespili*



Photo credit: Sherrie Smith, University of Arkansas
Cooperative Extension

Indian Hawthorn

Unfortunately, Indian Hawthorn is also very susceptible to Entomosporium infections. Indian hawthorn, *Raphiolepis* spp., is a mainstay in the southern landscape. They are low-growing evergreen, flowering shrubs with a dense mounded growth habit. They are ideal low-maintenance plants for use in small gardens and foundation plantings. The most popular cultivars grow between 3 and 6 feet tall by 3 and 6 feet wide, although there are cultivars that grow to small tree size. The attractive flowers, berries, and overall hardiness make Indian Hawthorn deservedly popular. They are not particular about soil but require good drainage and full sun to thrive. The most common problem we see in



Hawthorn is fungal leaf spot caused by *Entomosporium mespili*. Entomosporium leaf spot also attacks Photinia, Pyracantha, quince, rose, blackberry, loquat, crabapple, pear, peach, and mountain ash among others. Symptoms are numerous, small, reddish-purple spots that develop on leaves and fruit. As the season progresses the entire leaf surface may become discolored with large patches of purplish-brown blotches. Tiny black structures inside the lesions, resembling pimples can be observed with a hand lens. Heavy infections cause the leaves to turn yellow and drop prematurely. Highly susceptible varieties may completely defoliate, weakening the plant. The fungus overwinters on plant debris such as fallen leaves, and twigs. Rainfall in the spring splashes the spores onto the new foliage. Cultural controls include raking up and disposal of fallen leaves, avoiding overhead irrigation, and adequate spacing to ensure good air circulation. Apply ornamental fungicides such as Ortho Garden Disease Control, or Bonide Fung-onil, or Garden Tech Daconil Concentrate, or Hi-Yield Vegetable, Flower, Fruit and Ornamental Fungicide, or Monterey Fruit Tree, Vegetable, and Ornamental Fungicide, or Fertilome Broad Spectrum Lawn and Garden Fungicide, or Bonide Mancozeb FL with Zinc, or Ferti-lome F-Stop Lawn and Garden Fungicide, or Spectracide Immunox Plus Insect and Disease Control for Gardens, or Spectracide Immunox Multi-Purpose Fungicide Spray for Gardens, or Bio Advanced Science-based Solutions All-In-One Rose and Flower Spray, or Bio Advanced Garden-Disease Control for Roses, Flowers, Shrubs.. Organic growers may use Serenade

Garden Disease Control, or GreenCure, or Kaligreen, or Milstop, or Actinovate Biological Lawn and Garden Fungicide.

Applications should begin as soon as plants begin to leaf out and continued through the season. Unlike Photinia there are cultivars with resistance to Entomosporium leaf spot. The best line of defense is to plant resistant cultivars. Olivia, Eleanor Tabor, Indian Princess, Gulf Green, and Georgia Petite are resistant. Susceptible varieties include Bay Breeze, Cameo, Springtime, Pinkie, Enchantress and Heather. The selection of a resistant cultivar avoids repetitive applications of fungicides.

Indian Hawthorne **Entomosporium leaf spot-** *Entomosporium mespili*



Photo credit: Sherrie Smith University of Arkansas Cooperative Extension



Indian Hawthorne Entomosporium leaf spot- *Entomosporium mespili*



Photo credit: Sherrie Smith University of Arkansas Cooperative Extension

Physocarpus (Ninebark)

Physocarpus is a native shrub with lovely exfoliating bark. They prefer sunny to lightly shaded locations with a slightly acidic soil and adequate moisture. They grow three to 12 feet tall depending on cultivar. Leaf color ranges from green to purple to copper to gold, also depending on cultivar. Ninebarks have attractive bloom and fall color. They are deer and drought resistant and require little maintenance once established. We see few disease problems, but some cultivars are susceptible to Powdery Mildew. Symptoms begin as small powdery white spots on leaves, stems, and flower structures. The spots spread to cover the surface of the affected tissues. Light pink to white colored, thickened shoots with stunted leaves (Witches' brooms) may also occur. Powdery Mildew infections may lead to leaf death and premature defoliation. High humidity and poor air circulation favor disease development. The best defense is to plant resistant cultivars. Susceptible cultivars include Dart's Gold, Morning Star, Nugget, Center Glow, and Coppertina. Witches' brooms and infected stems and leaves should be removed. Fungicide sprays containing myclobutanil, or thiophanate-methyl, or sulfur, or triadimefon, or Triticonazole are labeled for control of Powdery Mildew in Ornamentals. Homeowners may use Spectracide Immunox Plus, (myclobutanil & permethrin), or Bonide Rose Rx Systemic Drench, (tebuconazole), or Bio Advanced Garden-Disease Control for Roses, Flowers, Shrubs, (tebuconazole), or Bio Advanced Garden-All-in-One Fungicide/Insecticide/Fertilizer, (tebuconazole



& imidacloprid), or Fertilome 2-N-1 Systemic Fungicide, (tebuconazole & imidacloprid), or Bonide Infuse Systemic for Turf and Ornamentals, (thiophanate-methyl), or Ortho Rose and Flower Disease Control, (triticonazole).

Ninebark Powdery Mildew- *Podosphaera aphanis* var. *physocarpis*



Photo credit: Sherrie Smith, University of Arkansas Cooperative Extension

Persimmon Grape

Native persimmons, *Diospyros virginiana*, are a common sight in woodlands and along fence rows. Persimmon forms a multi-trunked or single-stemmed deciduous tree to 25 ft. high and at least as wide. They make a handsome small ornamental tree in the landscape. Although native persimmon fruits are edible, most of the persimmons grown for their fruit are Oriental persimmons, *Diospyros kaki*.

Oriental persimmons can be divided into two classes—astrigent and non-astrigent. Astrigent varieties have tannins that disappear as the fruit ripens and softens. They will make your mouth pucker and give you a “dry mouth” feeling. Non-astrigent persimmons, however, can be eaten when still firm and crisp, without any astringency. Our native persimmon is astrigent. Whichever variety of persimmon is selected, persimmon fruit are an excellent source of vitamins A and C. They are consumed raw and in cookies, cakes, breads, puddings, and jams among others.

A significant fungal pathogen that may affect yield is leaf spot caused by *Pseudocercospora diospyricola*. Symptoms begin as small necrotic spots that develop into angular lesions. Lesions may coalesce to form larger blotches on the leaf. Leaves turn yellow and fall from the tree prematurely. Severe infections can cause trees to defoliate in late August as the fruit begin to ripen. Problems related to defoliation include failure for fruit sugar to properly accumulate, and poor fruit ripening, biennial bearing tendencies with low overall yields, and increased vulnerability to freeze damage. Infection occurs at shoot expansion at shoot expansion, leaf formation, and flowering in the spring. Control can be obtained by applying a fungicide cover spray during full bloom and again 3 to 4 weeks later. Abound and Daconil Weather Stik are both labeled for control of *Cercospora* leaf spot in persimmon. *Alternaria* sp., *Gloeosporium* spp. and *Phyllosticta* sp. are three additional aggressive pathogens found on persimmon fruit and leaves.



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Persimmon Cercospora leaf spot-*Pseudocercospora diospyricola*

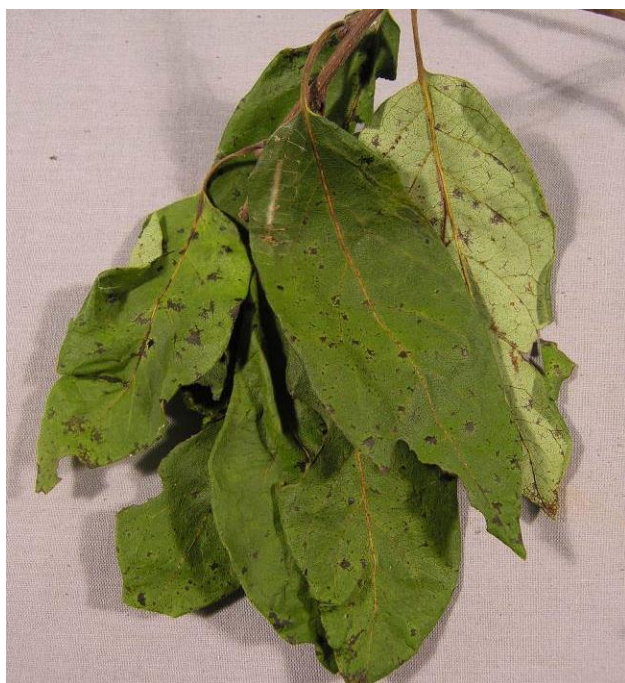


Photo credit: Sherrie Smith, University of Arkansas Cooperative Extension

Persimmon Cercospora leaf spot-*Pseudocercospora diospyricola*



Photo credit: 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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