PennState Extension

Oak Diseases

Informational table showing disease name, symptoms, pathogen/cause, and management of Oak diseases.

ARTICLES | **UPDATED: JULY 31, 2016**

Disease	Symptoms	Pathogen/Cause	Management
Anthracnose	During wet weather, young leaves are blighted as bud break occurs or large dead areas form between the leaf veins primarily on lower branches. Winter twig dieback may occur. Slightly raised, brown dots (fungal fruiting structures) form on the lower surface of leaves and on dead twigs. Often, these can be seen without a magnifying glass. However, magnification helps	*Apiognomonia*	Only highly valued trees should be treated with a fungicide to protect new twigs and leaves as they form. Otherwise, prune and destroy dead

	greatly in finding these small structures.		twigs and branches during dormancy. Apply a fungicide to protect new leaves and twigs.
Armillaria root rot	Branches die back. A fleshy, firm, honey-colored mushroom forms annually in the autumn in groups of a few to 100 or more in a cluster at the tree base. The cap of the mushroom is 1½ to 6 inches in diameter with a slightly depressed center and may have brown, scale-like spots. Although the cap is usually dry, it may be slimy after a rain. Its stem is ½ to 1 inch thick and may be 2 to 6 inches long. The spores are formed on flat, plate-like structures (gills) on the underside of the cap. A white fan of fungal growth is often found just under the bark at the base of the infected tree. Dark-brown rhizomorphs (very coarse shoestring-like threads) may be found under the bark or on the surface of the roots or trunk.	*Armillaria*	Remove infected trees. Protect healthy trees in the area from stresses, especially those that cause defoliation, such as insect feeding (gypsy moth larval feeding or leaf rollers).
Bacterial leaf scorch	Browning of the oldest leaves along their margins begins in mid to late summer on one branch or a few branches on inner and lower portions of the tree. A wavy, reddish-brown band sometimes	*Xylella fastidiosa*	Leafhoppers and spittle bugs carry the bacteria from tree to tree. Promote plant

	develops between the brown and green tissue of the leaf. The browning of leaves progresses to include more leaves toward the ends of branches. Branches and eventually entire trees die.		vigor by protecting the tree from stresses. Oxytetracyclin injections by a professional arborist can alleviate symptoms the year the tree is injected but this does not cure the tree of the disease. Symptoms will reappear years in which no injection is done.
Bacterial wetwood (slime flux)	Dark streaks of sap, usually foul smelling, ooze from holes or cracks in the bark. The heartwood is discolored dark brown. Pin oaks are especially prone to wetwood.	Various bacteria can be involved.	Avoid wounding the bark of affected trees. Care for the tree as normal, minimizing any stresses.
Ganoderma root rot	A butt rot may take several years to kill the tree but makes the tree very susceptible to wind-throw. A distinctive shelf-like fruiting structure forms singly on the wood at or near the soil line. It is brown to reddish brown on top with a cream to white margin. The brown	*Ganoderma applanatum* (formerly *Fomes applanatus*)	Although it may require several years for the tree to die, an infected tree poses a hazard. A tree

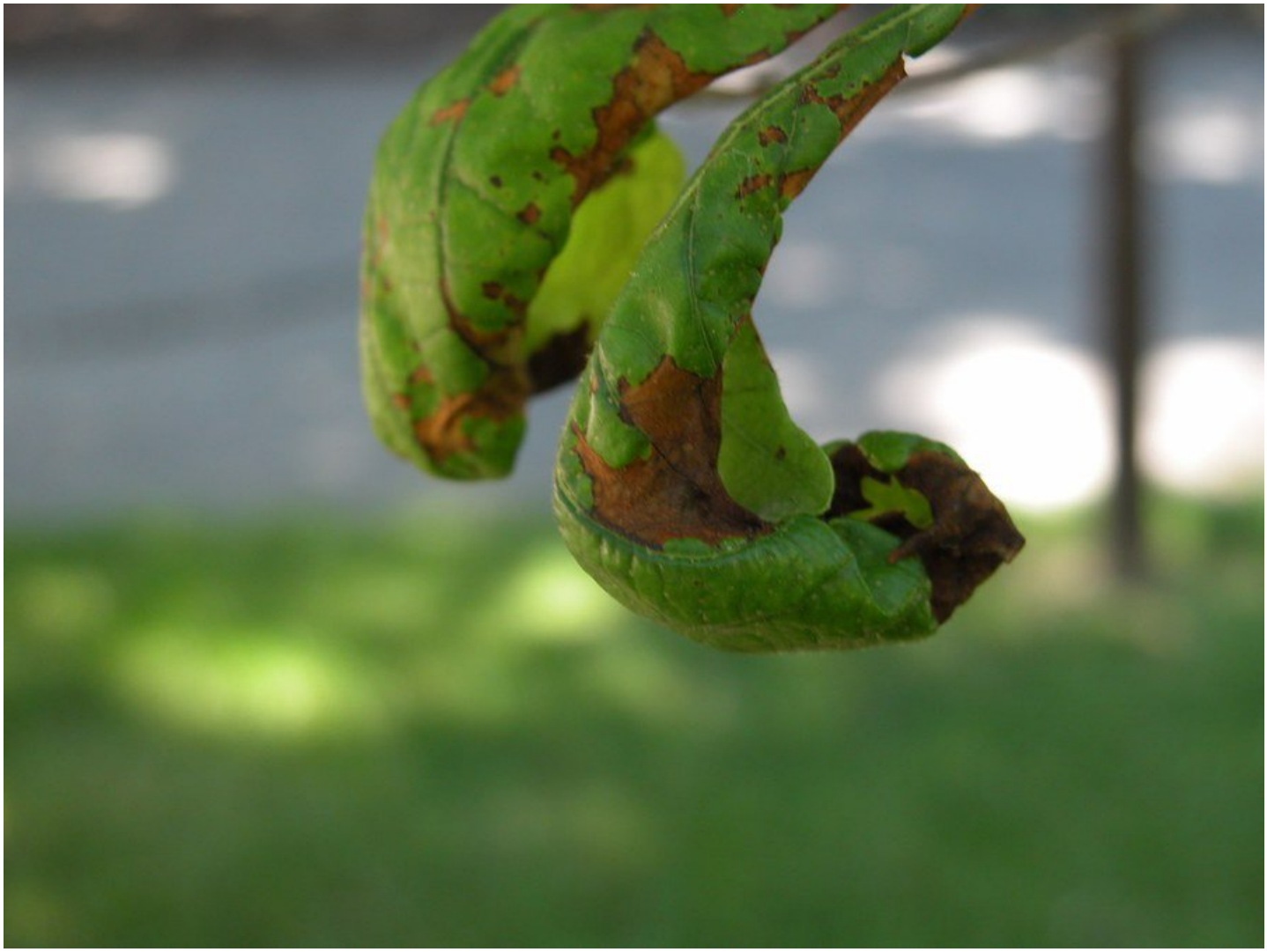
	portion appears to have been varnished. The shelf grows perennially for 5 to 10 years and may reach 8 to 12 inches across. The underside of the shelf is light colored with tiny pores in which the spores are formed. The underside turns brown where scratched and forms an interesting drawing surface, thus the common name "artist's conk." Infected trees slow in growth rate and have dying branches with small, yellowed leaves.		with fungal fruiting structures on it should be removed promptly if it is in a location where property damage may occur or where people or pets could be struck by falling limbs or the falling tree.
Inonotus root rot	A root and butt rot develops. Trees may topple before any obvious symptoms are noted. Infected trees often have branch dieback and fewer than normal leaves that are yellowed. Although the root rot begins well out on the root system, the fungus eventually reaches the butt of the tree where it forms large, tough, irregularly shaped, light- to dark-brown shelves at or just above the soil line. With age, these become very rough and dark brown to black. Cutting the shelf reveals a reddish-brown center. The underside of the shelf is brown with tiny pores in which the spores are formed. A sure sign of severe damage to the tree is the presence of the fruiting structures.	Inonotus dryadeus (formerly *Polyporus dryadeus*)	Infected trees should be removed immediately.

Laetiporus root rot	Massive clusters of bright sulfur-yellow to salmon to bright-orange, shelf-like fruiting structures that turn white with age initially form in the summer or autumn on the wood of the tree but fall off during the winter. The underside of the fruiting structure has tiny pores in which the spores are formed. New shelves form on the wood the following summer and autumn. The bark where the fruiting structure forms is slightly depressed and cracked.	*Laetiporus sulfureus* (formerly *Polyporus sulfureus*)	Fruiting structures form long after most of the damage has been done. Infected trees are very prone to wind breakage even before the fungus begins to form fruiting structures and should be removed at the first sign of infection.
Leaf spot	In mid- to late summer, irregular, dark-brown spots form between the leaf veins and enlarge up to 3/8 inch in diameter and become reddish brown, often with a yellow halo. Trees with iron chlorosis and those under other stresses are most severely affected.	*Tubakia* (formerly *Actinopelte*)	Little damage results from this disease, which does not cause defoliation. No control action is recommended for landscape situations. Apply a fungicide in the nursery beginning at bud break.
Oak leaf	Spots ¼ to ½ inch in diameter turn	*Taphrina*	Fungicide

blister	light green as young leaves expand. Leaf cells in the spots multiply more than surrounding cells, and a raised blister-like buckling of the leaf results. As the spots age, their upper surface becomes covered with a buff white coating of fungal growth that later turns brown. The leaves usually do not fall prematurely.	*caerulescens*	application in the landscape is not necessary because the leaves are seldom severely spotted and do not fall prematurely. Although infections may be extensive some years, little damage actually results. In the nursery, a fungicide must be applied late in dormancy prior to bud break to prevent spotting. Once bud break has occurred and symptoms are visible, it is too late to spray.
Powdery mildew	White fungal growth develops on the surface of leaves in the autumn.	*Microsphaera*	This disease develops so late in the year that no significant

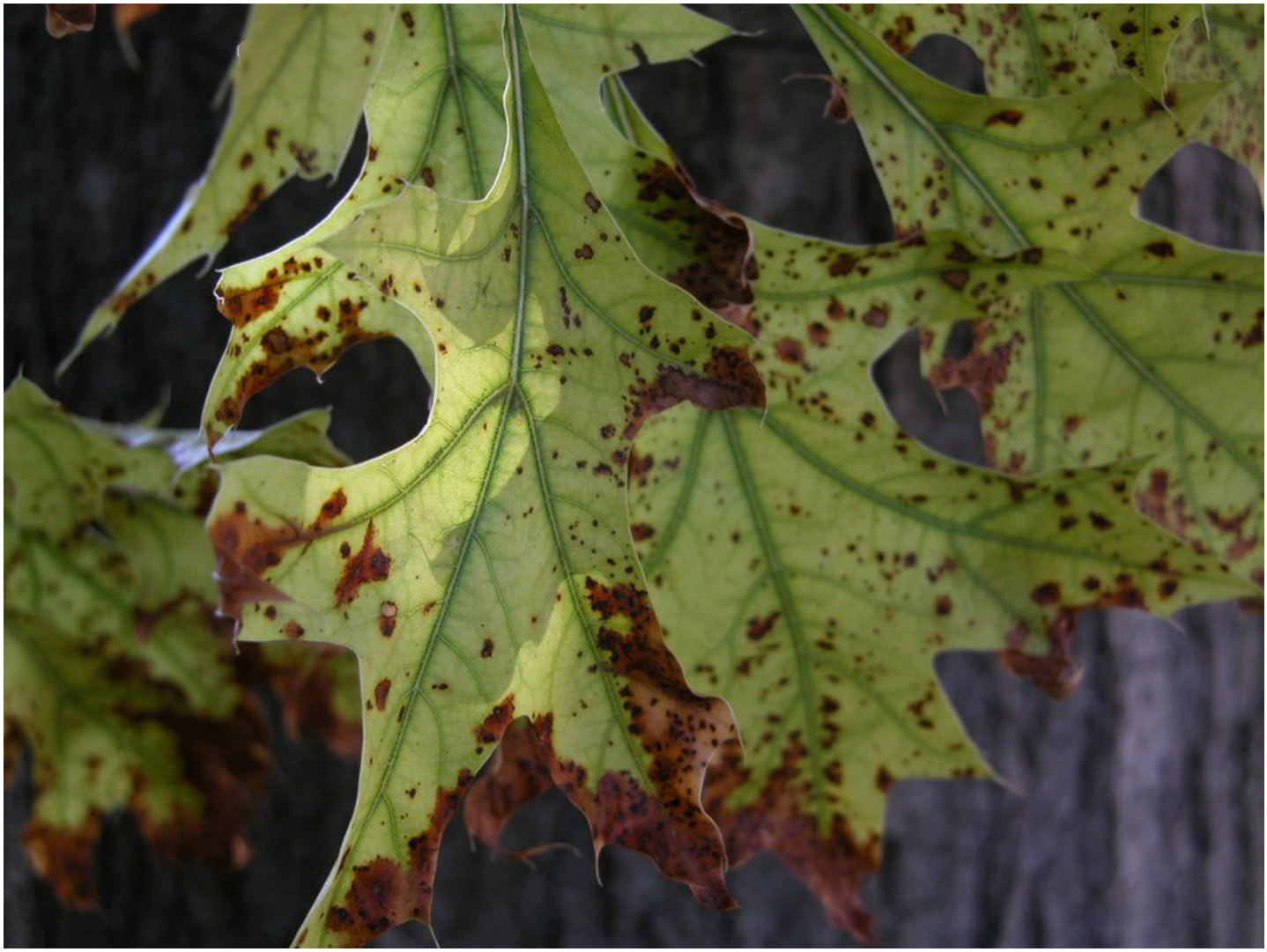
			damage occurs. No control is recommended. Where trees are being readied for fall sale, apply a fungicide.
Oak wilt	Most oaks but especially red oaks are susceptible. White oaks tend to be resistant. Leaves at the top of the tree turn brown along the tips and margins, wilt, and soon begin to fall while there is still some green color left in them. This damage progresses down the tree. Twigs and branches die. Brown streaks often observed in the outer sapwood are sometimes difficult to find. Trees usually die within a year after infection.	*Ceratocystis fagacearum*	Remove infected trees as soon as the diagnosis is made. Do not stack the wood since insects in it may leave and carry the fungus to neighboring trees. Cut root grafts first and then inject a mildly infected tree and neighboring oaks with a fungicide. This will not eliminate the fungus from root systems but will inhibit the fungus in twigs and branches.

Oak leaf blister early in the growing season and in the summer.



Anthracnose.

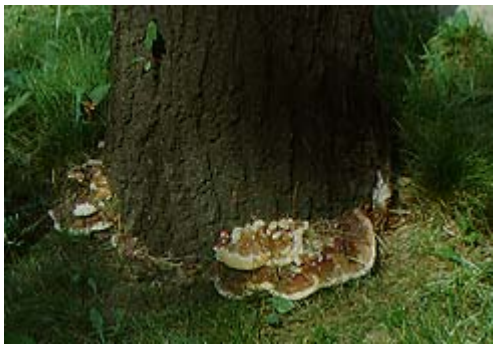
Bacterial leaf scorch.



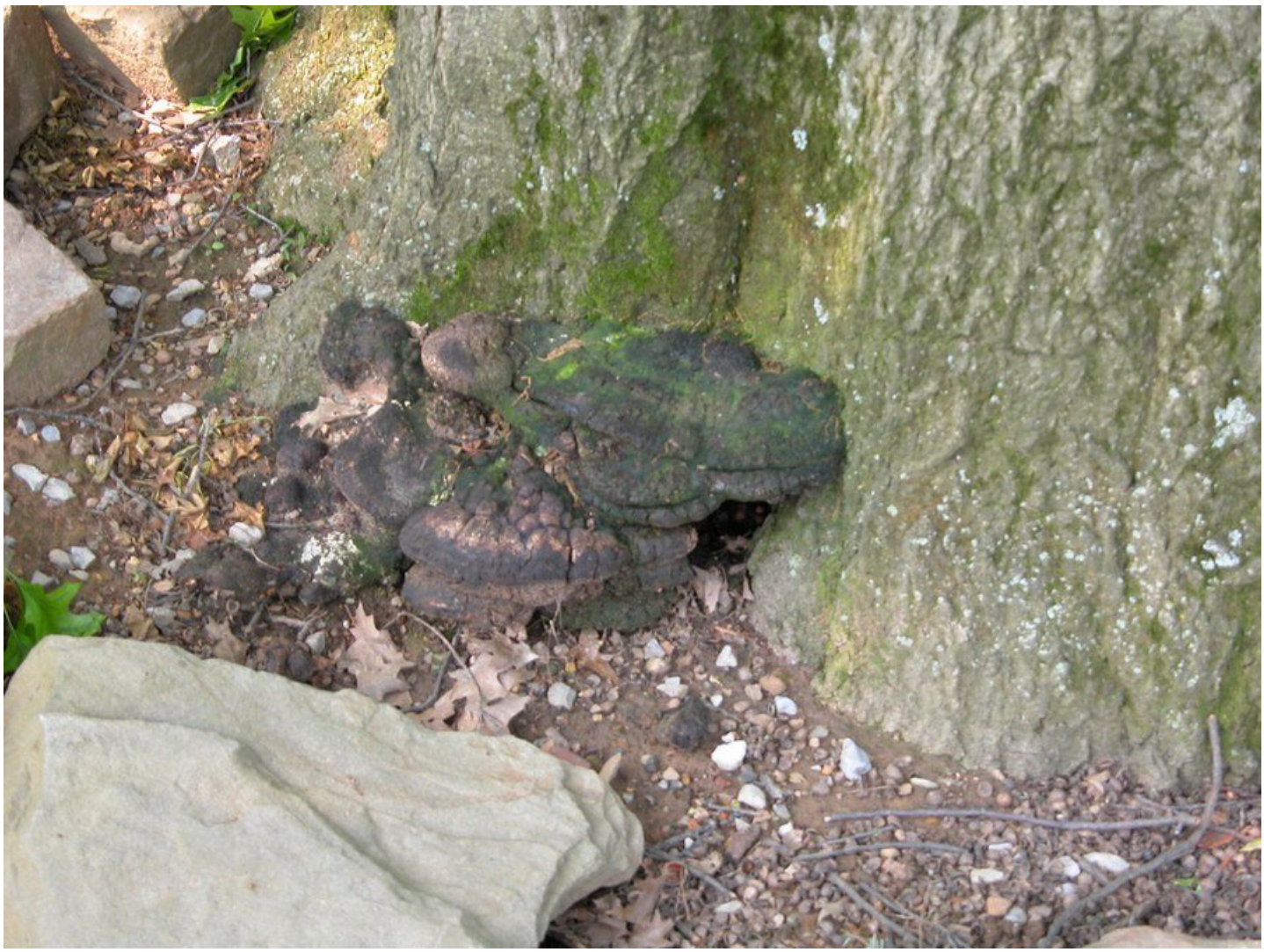
Tubakia (Actinopelte) leaf spot.

Laetiporus sulfurous.

Ganoderma on oak early in development.



Ganoderma on oak, well developed shelf.



Inonotus early in the fall...and late in the fall.