

FOREST HEALTH ALERT

From the Missouri Department of Conservation

Jumping Oak Gall

MO Dept. Conservation

Tree species affected: White oak (*Quercus alba*) primarily, and some other white oak group species.

Concerns: Leaves on entire crowns of white oak trees turning brown in late spring. In some areas, whole hillsides appear brown.

Description: High populations of a very tiny, native, stingless wasp (*Neuroterus* sp.) cause pinhead-size galls (abnormal plant growths) to form on the undersides of leaves. Each round, button-like gall contains one wasp larva. Starting at the margins, brown, scorch-like areas appear on leaves where many galls are present. In more severe cases, leaves curl up, turn black, and drop early from trees. Effects of the damage become noticeable in late spring or early summer and remain visible until fall.

Most galls drop from leaves in early summer. Brown pockmarks remain where galls had been attached. Fallen galls are sometimes observed to “jump” due to vigorous movements of larvae within, much like moth larvae of “Mexican jumping beans.” This behavior allows galls to fall deeper into grass and leaf litter where they are sheltered throughout the coming winter.

Many species of gall wasps have two generations per year. It is assumed that the jumping oak gall wasp in Missouri has a similar life history with one generation lasting only a few weeks in early spring and rarely being noticed. The second generation extends from spring through the following winter and causes most of the leaf damage. Outbreaks typically last for one or two years and then fade away as natural controls reduce gall wasp numbers again.

Similar Leaf Issues: In years with cool wet springs, fungal diseases can be abundant on trees and may also cause leaf browning. **Anthracnose** is common on white oak foliage in those conditions. **Botryosphaeria twig canker** causes leaves on infected small branches to wilt and turn brown, which results in “flagging” in the canopy during the summer. Typically, twig bark shrivels and turns brown where the canker occurs, near the junction with healthy tissue.

Recommendations: Galls and fungi that affect oak leaves rarely have a significant impact on tree health. Nearly all trees will recover, even if all leaves are brown. Controls are not warranted. By the time the damage is observed, any opportunity to treat has already passed for that year, and populations are likely to decline naturally. However, severe leaf damage stresses trees, particularly if most leaves on a tree are killed which results in a second flush of leaves emerging in summer. The best tactic is using good tree care practices that reduce stress (mulching, watering during drought, avoiding wounds due to lawnmowers and trimmers).



White oak leaves damaged by jumping oak galls.



Questions? Contact your local forester with the Missouri Department of Conservation.

Find contact information for your county and more at mdc.mo.gov.

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