

GOUTY & HORNED OAK GALLS

MFS Oak Gall Program



The oak gall problem in St. Louis is a serious one. We have been watching and treating this problem for the past 10 years. Guidance initially given by experts (MO Dept of Conservation, MO Botanical Garden) was that treatment is not necessary, as the galls are not harmful to the tree. However, we are now seeing many, many mature oaks being overtaken by the galls and are dying out rapidly. We have had some success in slowing infestations in trees, but as more information is learned about these insects and their complex lifecycle, we are getting more aggressive with our treatment protocol. The problem is that these insects are inside the gall for 33 months, and so by the time the galls are visible - the damage has been done. Each gall can house up to 160 wasps, so subsequent infections are likely. Any treatment option will NOT reduce or eliminate existing galls.

At MFS, our philosophy has always been to treat any problem with as little negative impact to the tree and the environment as possible. Drilling into a mature tree, is a harmful process that should be done only if there are no other options. Anytime you wound a tree, the tree must divert energy and resources to healing or sealing off that wound. Any open wound also allows entry for insect and disease pathogens. Our approach is using soil injected systemics that will be taken up by the tree and not cause unnecessary damage. The goal with our program is to keep the tree as healthy

as possible while preventing new galls from forming. Our goal is to minimize stress and allow the tree to build up reserves and continue living. If the tree doesn't have leaves on its branches or has too many galls, the flow of nutrients is inhibited.

WHAT CAN YOU DO?

As a concerned tree owner there are many things you can do to minimize stress to your trees:

- Maintain proper care in watering during hot dry periods – especially the mature trees.
- Make sure the tree stays mulched – but keep away from the trunk.
- Keep lawn mowers and string trimmers away from the trunks and root flares of the trees.
- Do not trim more than 10% live green tissue from any oak or any mature tree for that matter.
- Do NOT ever strip or trim out inner the foliage from the branches to “get more light to the lawn” or to improve air flow, or to “thin out your oak”. This will ensure your tree will not survive. See our website about lion-tailing.
- Trees need leaves on them to make food for themselves and to survive.
- Trimming out large, dangerous dead branches is acceptable
- Performing minimal weight reduction to reduce the weight burden on limbs heavily laden with galls is also permissible
- Keep your trees fertilized – they will need extra nutrients to build up reserves to make it into dormancy.
- CALL the Arborists and Plant Health Care Specialists at MFS if we can help in any way.

Gall Life Cycle:

Twig galls appear as slight swellings about 10 months after egg hatch. They contain small, white larvae. Irregular tissue growth continues and individual swellings combine to form large, irregular woody galls with individual chambers for each developing larva. Galls increase in size for about 24 months and may house as many as 160 developing wasps. The hollow horns begin to project from galls that are about 2 years old and ultimately serve as escape tunnels. Galls harden and dry after their residents leave and the horns break off. The stem gall generation takes about 33 months from egg hatch to adult emergence. These females move to leaf buds to lay eggs for the leaf gall generation. Consecutive generations of horned oak gall wasps alternate between developing in small blister-like leaf galls and large, communal, woody twig galls. The unsightly, golf ball-size woody growths on oak twigs are caused by a tiny wasp (*Callirhytis comigera*). Lightly infested pin oaks can live for many years without apparent harm but outbreak infestations can disfigure trees causing extensive branch dieback and even tree death.

Infographic by Dennis Duross – University of Kentucky

