

Tree Injury From Deer Antler Rubbing

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Problem

Any healthy tree in a landscape or tree nursery can be susceptible to destruction of the cambium tissues. The problem encountered is damage characterized by vertical scrapes and shredded bark on the saplings, exposing underlying wood often having the xylem, phloem, and cambium tissues removed (5). If the injury has happened recently, a couple of days to a couple of weeks, the tree can still have a healthy appearance depending on how much of the tree is injured, the time of year, and temperature. The only visual injury at that time is the ugly scar on the surface of the trunk. This is serious injury to a tree because the amount of injury can determine if the plant lives or dies. If the injury is only on one side of the tree, the tree has a good chance of survival, although it will be weak in that spot, and have an ugly scar. If the injury is all the way around the tree, it will most likely die.

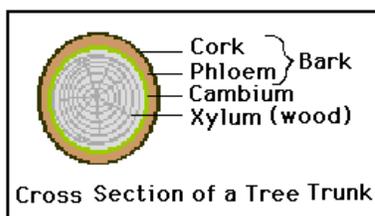
Cause

The causal agent of this injury is from deer (bucks) rubbing their antlers on the stem, or trunk, of the tree. The time of year that this is most likely is early fall to late winter. In early fall bucks rub their antlers against small trees, usually one to three inches in diameter. Bucks do this to remove the velvet that has been growing on the antlers throughout the summer. Rubbing intensifies during the rut, which is the time of year when bucks compete with each other to "win"

does. Bucks make “rubs” by rubbing their antlers on the base of the trees (1). They do this to mark their territory, show their dominance and intimidate other bucks. Rubbing intensifies again in late winter to help bucks shed their antlers.



When bucks rub their antlers against a tree, it scrapes the surface of the xylem and removes the cambium at the base of the tree trunk. Xylem carries water and minerals from the roots to the leaves (3). Phloem carries manufactured food, like sugars, from the leaves to the roots. The cambium layer is the generative layer that gives rise to both xylem and phloem. If the phloem is severed all the way around the tree (girdling the tree), food cannot be carried to the roots and they will eventually die, causing the whole tree to die. The most destructive time for a tree to be rubbed is at a time of rapid growth like in the spring. During this time, the bark can slip easily which causes the phloem and cork layer to easily peel free, leaving cambium and xylem. Because the tree is actively growing, the roots use up any stored food source and quickly starve because the phloem is removed. Then as leaves begin to form, water and minerals cannot move from the dead/dying roots, and the top of the tree starves. If the cambium remains intact it can heal. If not, the tree can die within one to three years depending on the time of year, and severity of the injury.



Remedy

There are many methods used to control deer. Deer control methods include odor repellents such as predator urine to treat the area, contact repellents to make plants distasteful, ultrasonic repellents and other scare

devices, water spraying devices activated by a motion sensor, strobe lights and noise making devices, dogs inside visible or invisible fences, perimeter fences and meshes 8-10 feet tall, electric fences and meshes, baited electric fences and meshes, and electric deer shocking devices (2,4).

Most of these deer control methods are ineffective or are effective for only a short time until deer adapt to them. Many deer, especially whitetail, are smart enough and adaptable enough to quickly figure out that these things will not harm them (2). Things like a tall fence is effective, but has limited applications. Not everyone wants to, or can afford to put an 8-10 foot fence around their land. Dogs in the yard are always effective. Other than dogs, some people believe a baited electric fence or an electric deer shocking devise is the most effective because they have the ability to permanently train deer to avoid the area.

A strategy for reducing the damage to your trees might include different methods at different times of the year. Wrapping plants in chicken wire or netting when bucks are most aggressive may prevent most of the damage.

References

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2. <http://www.wirelessdeerfence.com/wdf/index.htm>
3. <http://www.csuchico.edu/~pmaslin/Cr.Manag/girdle.html>
4. <http://ohioline.osu.edu/for-fact/0012.html>
5. <http://www.muextension.missouri.edu/xplor/miscpubs/mp0685.htm>

