The Plant Doctor's LANDSCAPE TIPS

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Photo 1. Deer cause some of the most common and severe injury to landscape plants. Arborvitae, commonly utilized as a screen and windbreak, is a preferred food for deer, particularly in the winter months when food is scarce.

Photo 2. This nice arborvitae, pruned as a hedge, has so far escaped ravaging by deer on a golf course in northern Michigan. Plant protection is undoubtedly provided during the winter months.

Photo 3. Many people love their hosta plants but are intolerant of the elimination of the foliage by deer browsing.

Photo 4. In the foreground, deer have decimated this bed of pachysandra.

ANIMAL INJURY TO PLANTS

INTRODUCTION:

Herbaceous and woody plants are valuable components of any landscape. Various pests and diseases can harm or destroy our plants and cause us much distress and economic and aesthetic losses. Although not necessarily considered pests in the sense of insect pests, animal pests sometimes exceed the losses from pests and diseases. Among the most common animal pests that cause plant injury or losses are deer, dogs, porcupines, some birds, rabbits, squirrels, and other assorted rodents such as voles, moles and mice.

TYPES OF ANIMAL INJURY AND SYMPTOMS:

Deer are perhaps the number one cause of plant losses from animal damage. Deer feed on the foliage and twigs of plants (Photo 1 and 2). The loss of foliage and twigs not only disfigures our landscape plants, but may cause them to become stunted and lack plant vigor. As deer feeding continues on twigs, the loss of buds and stem tissues may prevent smaller plants from becoming established in our landscape. Deer also love many herbaceous plants as summer or winter food; their feeding can be especially damaging to perennial plantings (Photos 3 and 4). In some situations, mice and rabbits may cause more severe damage than deer, especially when large numbers of plants are at risk, such as in nurseries or fruit farms. Rodents strip the bark from woody plants in order to feed on the often sweet sap material beneath the bark (Photos 5, 6 and 7). Unfortunately, the removal of this bark also destroys the nutrient and water-conducting cambial tissues that are necessary for plant survival; subsequently, the girdling of the twig or branch may cause death of all tissues external to the damage. Squirrels also seek the nutrient-rich and sweet sap material beneath the bark (Photo 8) of plants. Or they may remove twigs, for example, on spruce, to obtain a tasty morsel and subsequently dispose of the twigs, often noticed by plant owners at the base of their tree. Porcupines may strip significant amounts of bark (Photo 9). Dogs may injure plants with urine or excrement applied during their frequent visits (Photo 10, 11 and 12). Some birds such as woodpeckers bore into bark in search of insects to eat (Photos 13 and 14). In some cases, trees attacked by woodpeckers are already in decline and in some cases not. Sapsuckers often create holes arranged in fairly precise patterns to attract insects to trees for later harvesting. A prime example of woodpecker attack is the extraction of larvae from ash trees (Photo 15) infested with the Emerald Ash Borer; generally, the red-headed, hairy and downy woodpeckers are responsible (Photo 15 Inset).

ANIMAL INJURY MANAGEMENT:

Managing animal injury to plants can be quite difficult. In brief, there are several strategies that can be employed. Effectiveness of these strategies will depend on the target organism. Monitoring landscapes may assist in animal management because much of the damage by animals occurs during the winter when they are particularly hungry. Barriers such as high fences offer perhaps the best defense against large animals such as deer. For large commercial businesses, electrified fencing may be practical. In some cases, wraps may help protect some plants from not only desiccation and winter deicing salt injury, but also from large animal feeding (Photos 16 and 17). However, barriers will generally not be practical for small animals such as rodents. Various chemicals are marketed that may act as repellents. There are also a variety of new electronic gadgets that purport to repel animals but their effectiveness has often not been proven. Companion planting with non-desirable plants may help reduce the damage to plants desired by animals. Selecting the best approach for animal management may incur a significant amount of research and trial and error. If all else fails, try the "shoo" method.

For more information, please feel free to email me at robertsd@msu.edu or contact a professional plant health-care provider. The author, MSU or MGIA do not endorse any particular products. If using pesticides, be sure to read and follow label directions.

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Photo 5. Rodent or rabbit feeding, probably the winter before, has girdled the base of this burning bush (Euonymus), effectively killing it.

Photo 6. The death of individual branches or stalks of this juniper may be misdiagnosed as disease but is in fact due to rodent girdling at the base of the branches.

Photo 7. The removal of bark at the base of this valuable Japanese Maple has effectively killed the tree. This rodent injury probably occurred under snow during the winter months but was not revealed until the following summer season when branches began to decline.

Photo 8. Squirrels love the sweet bark and cambial tissues on sugar maple. Extensive damage such as this large canker can lead to branch decline and death.

Photo 9. Living in porcupine infested areas can wreak havoc on many species of woody plants.

Photo 10. The brown area on this shrub was caused by urine toxicity from frequent dog visits.

Photo 11. Brown spots in lawns are often blamed on diseases when in fact they are frequently caused by dogs.

Photo 12. This baby Norwegian Elkhound is not yet capable of causing the plant injury in Photo 10 but may contribute to the symptoms observed in Photo 11.

Photo 13. The regular pattern of holes on this tree indicates Yellow-bellied sapsucker (woodpecker) injury.

Photo 14. These large holes were caused by the Pileated woodpecker, the largest woodpecker in most of North America. Luckily, this bird primarily attacks declining or dead trees in search of insects.

Photo 15. The Red-headed, Hairy and Downy woodpeckers (Inset) attack ash trees to extract EAB larvae as food. The birds' activities cause bark to be sloughed off; successful extractions of larvae are evidenced by the larger jagged holes while surviving EAB adults have successfully emerged through smaller D-shaped holes.

Photo 16. These plastic-wrapped arborvitae will be somewhat protected from wind and salt spray while discouraging deer feeding. A disadvantage of plastic is that on dense foliaged plants, molds may develop on foliage and branches during the winter months.

Photo 17. Burlap offers good protection from wind, salt spray and large animal browsing while allowing sufficient air circulation to prevent mold development.