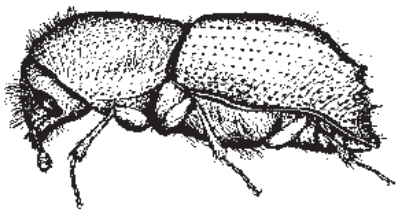
Spruce Ips Beetle Becoming More Destructive in Cheyenne



Adult Ips beetle (1/8 to 3/8 in. long), note the cavity and spines at rear end of body

Cheyenne Urban Forestry Division along with several local arborists have reported an increase in a bark beetle specific to spruce trees. The spruce ips beetle also known as the spruce engraver beetle appears to be increasing in population in Cheyenne. This beetle only infests spruce, such as Colorado Blue Spruce, Black Hills Spruce and Engelmann Spruce. Other evergreens, such as pines, junipers and firs are not affected. Spruce ips beetle prefers weakened or unhealthy trees and typically attacks the tops of trees and the branches first before moving into the main stem. Unlike mountain pine beetle which will attack and kill a tree in the same year, ips beetle usually takes multiple years to kill a tree.

Spruce tend to die from the top down when attacked by ips beetle

The increase in ips beetle is likely the result of the high number of declining spruce trees that are present in Cheyenne. This decline is the result of recent drought, the November 2014 hard freeze and multiple hail storms over the past several years. This combined with an ageing population of spruce has resulted in a tree population that is susceptible to beetle attack. Also, newly planted spruce trees and spruce that have incurred recent damage to the roots, stem or branches are more susceptible to attack.

Typically, an ips beetle attack occurs first in the upper portions of the tree which results in the needles turning red. Small round holes in the bark, boring dust in bark crevices or around the base of the tree and tunneling galleries beneath the bark indicate the presence of ips beetle. Woodpecker activity in the tree can also indicate a beetle infestation. If any of these conditions exist, an arborist should be contacted to confirm the presence of ips beetle.

Once ips beetles are detected, damage to the tree is usually too extensive to warrant efforts to save the tree. Instead, tree removal is generally the best option.

However, care must be taken to prevent the spread of beetles from the tree that is cut down to living trees. Infested spruce wood with ips beetle larvae has the potential to produce adult beetles that can infest new trees in the spring. Therefore, infested wood which can include larger branches and trunk sections should be chipped, debarked, burned over the winter, hauled to a remote location that is at least one

mile from any living spruce trees or hauled to the City Compost Facility (trunk sections larger than 12 inches in diameter are not accepted).

Homeowners with spruce trees, especially older or stressed trees, may consider hiring an arborist to spray a preventative insecticide to the trunk and larger branches to prevent ips infestations. Be sure the arborist has the proper equipment to apply the insecticide to the very top of the tree. Two insecticide treatments, one in early spring and one in mid-summer is generally recommended since ips beetles have multiple generations per year. Insecticides which contain the active ingredient permethrin, bifenthrin, or carbaryl have proven effective.

This is a typical tunneling pattern of the spruce ips beetle, also called a gallery.

There are also several steps homeowners can take to maintain healthy trees, which are less likely to be attacked by beetles, these include:

1. Mulch around the base of trees with wood chips or bark to a depth of 2-4 inches (especially important for young trees).
2. Slowly water the area from the trunk out to the end of the branches every 7-10 days during the summer and fall at a rate of 10 gallons per inch of stem diameter. Once freezing temperatures become frequent, water once per month during the winter months.
3. Hold off on pruning any branches until winter.

To get more information on the spruce ips beetle go to Colorado State University Extension: http://extension.colostate.edu/docs/pubs/insect/05558.pdf or contact the Cheyenne Urban Forestry Division at 637-6428. To download the most recent list of licensed arborists in Cheyenne go to: http://www.cheyennetrees.com/