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SP630 Bark Splitting on Trees

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UT Extension
SP630

Bark Splitting on Trees

Jennifer Franklin,
Assistant Professor
Forestry, Wildlife & Fisheries

Wayne K. Clatterbuck,
Associate Professor
Forestry, Wildlife & Fisheries

Bark splitting and sloughing results from a number of environmental factors. Sloughing or peeling of the bark is a normal process, especially in the spring when the tree begins to grow, and is more noticeable in some species than in others. The outer layers of bark are dead tissue and cannot grow, so the outer bark must split in order for the tree to grow in diameter. The inner bark is living, and forms a new protective coat as the outer bark pulls apart. If you look closely at normally furrowed bark, you will not be able to see the wood below. Bark may peel or fall off the tree in sheets (river birch), plates (white oak, sycamore, pine), strips (shagbark hickory, cedar) or blocks (dogwood).

Under some conditions, rapid expansion of the living inner bark can form a vertical crack in the bark, or a "split." If you look closely at a new split and you are able to see the wood below, this is likely a "frost crack" or the result of sunscald.

Sunscald most often occurs on the southwest side of young trees with thin bark. On a warm winter day, direct sun can heat exposed bark substantially. If this heating is closely followed by freezing temperatures, often at night, death of the inner bark may occur. The injury will not likely be visible until spring growth resumes, and then appears as sunken or discolored bark. The bark may then split or fall off in patches. Wrapping the trunks of young trees with a commercial tree wrap made of insulating paper in November can prevent sunscald. Trunk wraps must be removed by early spring. Tree trunks may also be painted white to reflect sunlight and prevent winter heating; this method is used most often in commercial orchards. Sunscald can also occur on trunks and branches of older trees following heavy pruning. Gradual pruning of limbs over a number of years is preferable for susceptible species.

Frost cracks are caused by conditions similar to those responsible for sunscald. In late winter and early spring, water in the inner bark and in the wood expands and contracts under fluctuating temperatures. Rapid expansion and contraction of water within the wood and bark, particularly under freezing night temperatures, can result in a crack. Recent evidence suggests frost cracks develop as a result of a previous trunk injury. Frost cracks may be up to several feet long and are often found on the southwest

Sunscald on young red maple.

Normally sloughing bark on birch.

side of the tree. Rapid expansion of the inner bark can also occur as a result of other fluctuating growth conditions. Dry weather followed by wet weather can result in sudden growth that may cause splits. Avoiding fertilization late in the growing season can reduce the incidence of splits. Instead, wait to apply fertilizer until after the leaves have dropped in the fall.

Splits and sunscald are usually not fatal, although they may allow the entry of insects or disease. The tree will normally heal by itself through growth of the living inner bark on the sides of the split. Research has shown that commercially available wound paints are not helpful to this healing process, and so are not recommended for treatment of splits or sunscald. Tracing around the wound with a sharp knife to remove loose bark may stimulate growth of the cambium and speed healing. Ensure the knife is sterilized before use, and carefully remove no more than ½ inch of bark from around the wound. Applying fertilizer in the spring may also help the healing process.

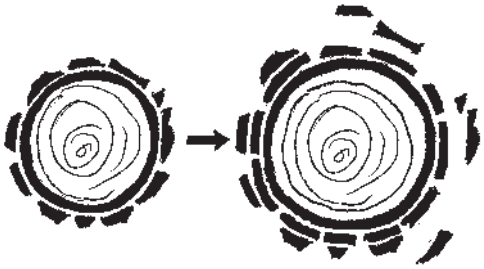
The exposure of large areas of underlying wood or noticeable insect activity in the wound may be signs of a more serious problem that requires further evaluation. Both sunscald and frost cracks are localized bark injuries that often occur on the southwest side of younger trees, and normally heal on their own. The development of deep furrows and sloughing of outer layers of bark are normal signs of growth in older trees.

Species susceptible to:

Sunscald	Frost cracks
Honey locust	Crabapple
Fruit trees	Beech
Ashes	Walnut
Oaks	Oaks
Maples	Maples
Birch	Sycamore
White pine	Yellow-poplar
Beech	Horsechestnut
Willow	Willow
Linden	Linden

Frost Crack

Looking at a frost crack (arrow) you can see the wood below. This appears as a long vertical crack.



Bark Slough

Each year a new layer of bark grows beneath the outer layers, and the outermost layers may slough off.

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