

THE PURDUE LANDSCAPE REPORT

Southwest Damage, Scalding, or Frost Cracking

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We are now on the other side of the equinox, days are getting longer, and there are specks of green poking out on the plants in our life. If you're in Indiana or similar areas of the Midwest, you've probably experienced what I like to call *False Spring* and *Second Winter* and are looking forward to actual Spring setting in with more chances of spending time outside.

As you head outdoors though, you might notice signs of damage on some of your trees that include splits or cracks that could range in size from less than 1" to up the entire length of the main stem and/or sunken areas on the trunk (Figs. 1 & 2). What you're witnessing is winter stem damage known as sunscald or southwest damage (usually located on south to southwest facing sides of the tree).



Figure 1 - Southwest damage from the base of the tree up the trunk.



Figure 2 - Sunken wound from scalding damage.

So, what is southwest damage and why has your tree been affected by it? It's a wound that's opened during winter due to sudden drops in temperature. These drops can come from different instances like the change from day to night or even from sudden cloud cover on a sunny day. The sun warms the trunk on the south to southwest faces of the tree, then the temperature change causes the bark to split. Repeated instances eventually cause dehydration of the damaged area which causes scalding.

Southwest damage comes from a previously sustained injury and will likely be found on younger trees or species with thin bark including *Acer spp.*, *Betula spp.*, *Malus spp.*, *Platanus spp.*, *Prunus spp.*, and *Ulmus spp.* If these trees are also stressed, for example, from the dryer hotter summers we've been experiencing or other factors, they will be more vulnerable to damage moving into winter months.

As your trees grow and become more established, chances of damage decrease. Install white tree guards in Fall on trees less than 4" to help protect them during the winter. Those of you that are ahead of the game in your tree protection will have already done this last year to help prevent southwest damage (and damage from deer rub if you installed them in the fall before the

rut). I commend you on your efforts, but make sure not to leave them on year-round. As things begin to heat up those covers can be a source of moisture retention which can lead to rot on the trunk of your tree. Plan on removing them as Spring sets in and save them for next Fall.



Figure 3 - Use of white tree guards can protect the trunk from temperature changes that cause damage. Joseph OBrien, USDA Forest Service, Bugwood.org



Figure 4 - Callus tissue growth closing over southwest damage.

If cracking has already occurred, don't panic. It's not the end of your tree. Depending on the extent of the damage the tree may be able to seal off the damage with callus tissue called wound wood (Fig. 4). Healthier trees can produce this more quickly. Some things you can do to assist your tree include the following:

- Putting your tree on a watering schedule (especially in the summer) to reduce water and heat stress.
- Mulching your tree (no mulch volcanoes) can help stop mechanical damage from mowing and other lawn maintenance and can also help with water retention in the soil.
- Herbicide use should be limited and done on days with little to no wind to help reduce drift onto the tree.
- Plan on installing white tree guards mid to late Fall. I like the white corrugated drainpipes you can find at local home and garden stores. Make sure to get a diameter larger than your tree to provide airflow to the trunk.

If you are still worried about the health of your tree, you can always find an ISA Certified Arborist nearby using the [Trees Are Good website](#). They will be able to help assess any other issues and provide excellent professional help.

Works Cited

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