



Fig. 1 beech scale, showing white “wool” covering scales.

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Precautions to reduce the risk of moving beech scale

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Background

Beech bark disease, a disease of American beech (*Fagus grandifolia*), is caused by a scale insect (beech scale, *Cryptococcus fagisuga*) and one of several fungi in the genus *Neonectria*. In 2009, the scale (Fig. 1) was first detected in Wisconsin in Door County. As of 2013, beech scale has been found across most of the Wisconsin range of American beech but mortality from the disease has only been observed in Door County.

Beech bark disease occurs when *Neonectria* fungi enter the tree through beech scale feeding sites (tiny wounds) and produce cankers or areas of dead tissue (Fig. 2). Most beech trees in

Wisconsin are expected to eventually die or be severely deformed by beech bark disease. In other parts of the range of American beech, about 1-5% of beech are resistant to the scale and thus avoid infection by the disease. We hope that this will be the case in Wisconsin.

Because wounding by the beech scale is required before the disease can infect a tree, prevention of spread of the disease has focused on the scale. Beech scale is currently listed as Prohibited in Ch. NR 40, and its movement is regulated in Wisconsin. By following the precautions described in this guide, individuals possessing, moving or transferring beech wood will be taking reasonable precautions to prevent spread of the beech scale, as required by the law.



Fig 2. Cankered beech

Linda Haugen

Precautions to prevent spread of beech scale

Firewood

To avoid accelerating the spread of the beech scale and thus beech bark disease, inspect beech firewood before moving it and use the following guidance:

1. Does the firewood have white ‘wool’ on the bark? Beech scales are covered in white cottony fibers that are easily seen on the smooth, grey bark of beech. See Fig 1.
 - a. Yes – go to 2.
 - b. No - You may move beech firewood
2. Is the bark loose?
 - a. Yes – You may move beech firewood
 - b. No – Leave firewood to age near where it was cut for one year so the scale insects die.

Be aware of quarantines that limit where you may take firewood in the state. For up-to-date information on firewood quarantines in WI, visit <http://dnr.wi.gov>, keyword “firewood”.

Firewood is handled more cautiously than logs because firewood is usually moved to campgrounds or homes. If an infestation of beech scale is created in these high use areas, infested beech soon become a safety hazard as they are prone to snapping unexpectedly.

Logs

Because beech scale has been found across the range of beech in Wisconsin, precautions to prevent its long distance spread on logs bound for processing into non-firewood products are no longer significantly helpful and are not required.