Hiawatha National Forest

While there are no pure beech stands on the Hiawatha National Forest (HNF), many of the hardwood stands include a significant component of beech. HNF has included these areas in the BBD Project Environmental Analysis. These stands are within the advancing front of the BBD and many of the stands already have the beech scale present, particularly in the north and east portions of the project area. Areas that have not yet been infested will likely be infested within 1-3 years. Safety is the number one concern. Dying beech trees will need to be removed in all high use public areas to prevent them from becoming a safety hazard. The recreation team on the HNF is assessing these areas (including parking areas, campsites, trails, and day use areas) to determine what the potential hazards will be and the best way to deal with them.

Visitors to the Forest need to be prepared that the landscape of the Forest will be changing. This may be very difficult for many users who are very familiar with the Forest, and who have favorite spots to camp, hike, bike, fish, hunt, etc. In some extreme cases, there will be sites that will be permanently closed and/or moved to another area. Forest users will also need to develop a heightened awareness of their surroundings. Although the majority of hazardous trees will be removed, due to the sheer volume of beech trees, there may be some that are missed. Whether you are camping or just spending the day in the Forest, identify the beech trees in the area and avoid placing yourself in the path that the trees might fall. Use extreme caution in the woods on windy days.

WARNING!

Wind in the Trees

The Forest Service is making every effort to identify and remove hazardous trees from developed areas as quickly as possible. However, all visitors - but particularly hikers and overnight backcountry campers - should be alert for trees that are weakened, have large dead limbs or are completely dead, especially in windy conditions.

Be alert. Look up. Choose your campsites carefully.

Hiawatha National Forest
Munising Ranger District
400 East Munising Avenue
Munising Michigan 49862
(906) 387-2512 or
(906) 387-3700
TDD (906) 387-3371

3/2012

AMERICAN BEECH

A Tree in Trouble

The American beech (*Fagus grandifolia*) is a tall, stately tree with smooth grey bark and a graceful arching crown. Its dark green, shiny leaves, tapered at both ends, turn golden in the fall and cling to its branches throughout the winter.

The eastern Upper Peninsula of Michigan lies at the northwestern edge of the range of the beech and in some areas beech trees are a significant component of northern hardwood stands. In these forests, beechnuts are an important food source for wildlife, including black bear, squirrels, porcupines, whitetailed deer and various birds, such as ruffed grouse. Beech trees also provide homes for cavity dwellers like flying squirrels, pine martin, fisher, and some species of nesting birds.

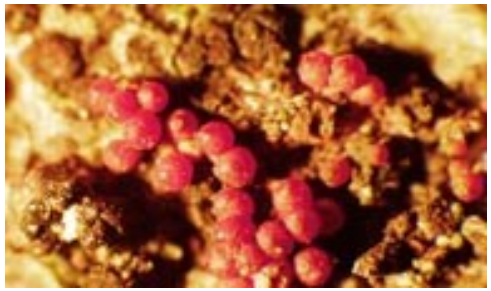
HIAWATHA National Forest

Beech Bark Disease

The beech is in trouble. Since its introduction from Europe to Nova Scotia around 1890, beech bark disease (BBD) has spread at a relatively slow, but steady, rate. BBD was first discovered in the U.S. in Maine in 1932 and was discovered in Michigan in 2000.

Joseph OBrian

BBD results from an interaction between three or more organisms (the tree, an insect, and a fungus). The non-native insect, called beech scale, causes a small wound on the tree. Scales have sucking mouthparts which are used to pierce the bark of the beech tree and suck out sap. These wounds weaken the tree and provide entrance ports for one or more of three fungal *(Nectria)* species which



Joseph O'Brien

cause bark cankers. Infection with the fungus usually happens about three to six years after infestation with beech scales. The fungus kills areas of woody tissue. If enough is killed, the tree may be girdled and die. Some trees linger for several years, then eventually succumb to the fungus or another disease. Infested trees are often attacked by other insects or diseases which hastens tree mortality.

Joseph O'Brien

To recognize beech trees affected by the disease, look at the bark which may have a waxy-white appearance, cankers or breaks in the bark may be evident. Some trees may have small fuzzy white bumps that look much like a piece of a cotton ball stuck to the bark. Upon closer inspection, you may even see the small scale insects. Trees may also have reduced leaf size, discolored foliage, dieback, reduced growth and reduced beechnut production.

Joseph O'Brien

USDA Forest Service - North Central Research Station Archive

Effects of BBD on the Forest

As BBD spreads through the forest, beech trees will begin to die. The dead and dying trees often suffer from a condition called beech snap, where part of the beech tree will snap off and fall to the ground, especially in high wind events. Beech snap poses a safety hazard to forest visitors. Anyone entering or camping in a forest should be aware of their surroundings and be cautious around infected beech trees.

Joseph O'Brien

When a tree is either removed or falls over a light gap is created. These gaps give other trees a chance to receive light and grow. In the case of the northern hardwoods forests, beech mortality creates a light gap, with the fastest growing saplings of a given tree species being the ones to replace the downed tree. Depending on management practices, the trees growing in these gaps may be any number of northern hardwood species, with sugar and red maple often the most common. It is not desirable to totally eliminate beech from forest as trees that appear resistant to the scale would be identified and saved in hope that someday they would repopulate the forest. Although the future sounds bleak for this magnificent tree, some will survive. These survivors may have been lucky enough to escape the BBD or they may be resistant trees. The offspring of resistant trees may help us restore beech to the forests someday. However, it will likely not be in the lifetime of any reader of this article.