



## Effect of Beech Bark Disease on Black Bears

### Beech Bark Disease

Beech Bark Disease (BBD) has been spreading from New England since first being observed in the early 1900s. BBD first reached Pictured Rocks National Lakeshore in the early 2000s. The disease begins when the beech scale insect feeds on the inner bark of the tree, leaving the tree weakened and more prone to fungal growth. Larger trees (>7in diameter) are more susceptible to the disease. Beech trees do not begin to produce large amounts of beechnuts (hard mast) until they are around sixty years old.

### How will loss of beech trees affect black bear survival?

Recent studies show that loss of beech trees affect reproductive success and survival of black bears. Black bears' diet consists of a mix of soft mast (i.e. berries and vegetation) and hard mast (i.e. beechnuts and acorns). Prior to hibernation, bears need to nearly double their body weight if they are to survive. This is even more crucial for females, as they need to gain weight in order to reproduce successfully. In late summer and early fall, black bears can regularly spend up to 20 hours per day foraging. Their goal is to obtain more than 20,000 calories per day prior to heading into their dens. In fall, the main food source is hard mast that can consist of hazelnuts, mountain ash, and/or beechnuts depending on the local forest structure. Where beechnuts are a primary food item, studies have shown the number of female bears producing cubs decreases following a poor beechnut crop. This is due to the low body weight of the females. Therefore the loss of beech trees via BBD can have a noticeable effect on local populations of black bears.



### Shortage of beechnuts could create more nuisance bears

Nuisance bear activity increases in years with hard mast, berry, and other native food shortages. When natural food sources are not available or are limited, black bears will often turn to other sources in order to gain the needed weight for survival and reproduction. This regularly leads to bears getting into garbage and other human populated areas. Bears that routinely get our food become aggressive, and sometimes have to be killed as a result. Please remember a fed bear is a dead bear!