

into a mature tree. In 30 to 40 years it is capable of bearing flowers and producing seed, thus allowing the start of another germination. It is a long-lived and slow-growing tree. Some beech in the original woodlands of the Dunk were likely in excess of 300 years old.

There is an alternative to beginning life as a nut. Like many woodland plants, these trees can perpetuate their kind in an asexual manner. Saplings will rise readily from root suckers or from the stumps of young beech.

THE FALL

It is impossible to stand in one spot for almost a century and not accumulate some enemies. The beech is no exception. Initially it is young and vigorous. Growth slows down as it approaches maturity, and the tree begins to produce seeds and suckers. Death is a gradual affair. This continual aging is sometimes intercepted by elements which hasten the demise, and a beech becomes more susceptible to these as it grows older. Its thin bark and shallow roots make it highly vulnerable to injury by fire. Because beech is well adapted for cold weather, frost and ice cause little damage to the trunk or branches. However, when openings in the bark occur, it becomes susceptible to fungi which rot the sap and trunk. Beech wounds of any kind heal slowly.

The most severe enemy of the beech tree on the Dunk is the team of an insect and a fungus. They have been responsible for extensive mortality in most of eastern North America. The beech scale (*Cryptococcus fagi*) is a sucking insect which attacks the thin bark but seldom causes death directly. However, its activities provide openings and allow the entrance of a fungus (*Nectria coccinea*) which prevents healing and causes a deformity known as beech canker. These holes interrupt the flow of nutrients, water, and sap along the stem and leave the tree vulnerable to attack by many kinds of insects. The pock-marking result is equivalent to having many large patches of your skin removed.

Aging proceeds by natural events or accidental agents, until the beech loses some anchoring ability and trunk support. Bracket fungi begin to grow on the tree. Sticking out like beacons, they provide a natural awning to shelter insects during inclement weather. At this stage, the heart of the trunk is rotted by fungi, and the bark seems not to have the strength to cover the entire area of the tree's expansive girth. It separates in furrows, and the decomposition process accelerates. Ants make trails in the wood leaving sawdust in their wake. A woodpecker probes even deeper.

One day during a high wind, the Rose Valley beech falls. The sounds of creaking, straining, and splitting linger in the air. Surrounding maples help break the fall, as the aged tree comes down slowly and with dignity.

Once on the ground, the old beech is rapidly disassembled by a wide variety of worms, insects, plants, and decomposing bacteria. In death as in life, the tree supports a vibrant community. Nutrients trapped in the beech for almost a century are released into the woodland again and will be absorbed by living neighbours of the deceased. The decaying log is an ideal place for the germination of seeds of woodland flowers, shrubs, or trees. Plants of all levels compete vigorously for the space in the canopy. The opening is soon filled.

The Rose Valley woodland is now a richer place because the old beech has lived there.

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* Watershed Red is available from *
* Ragweed Press at \$6.95. *
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