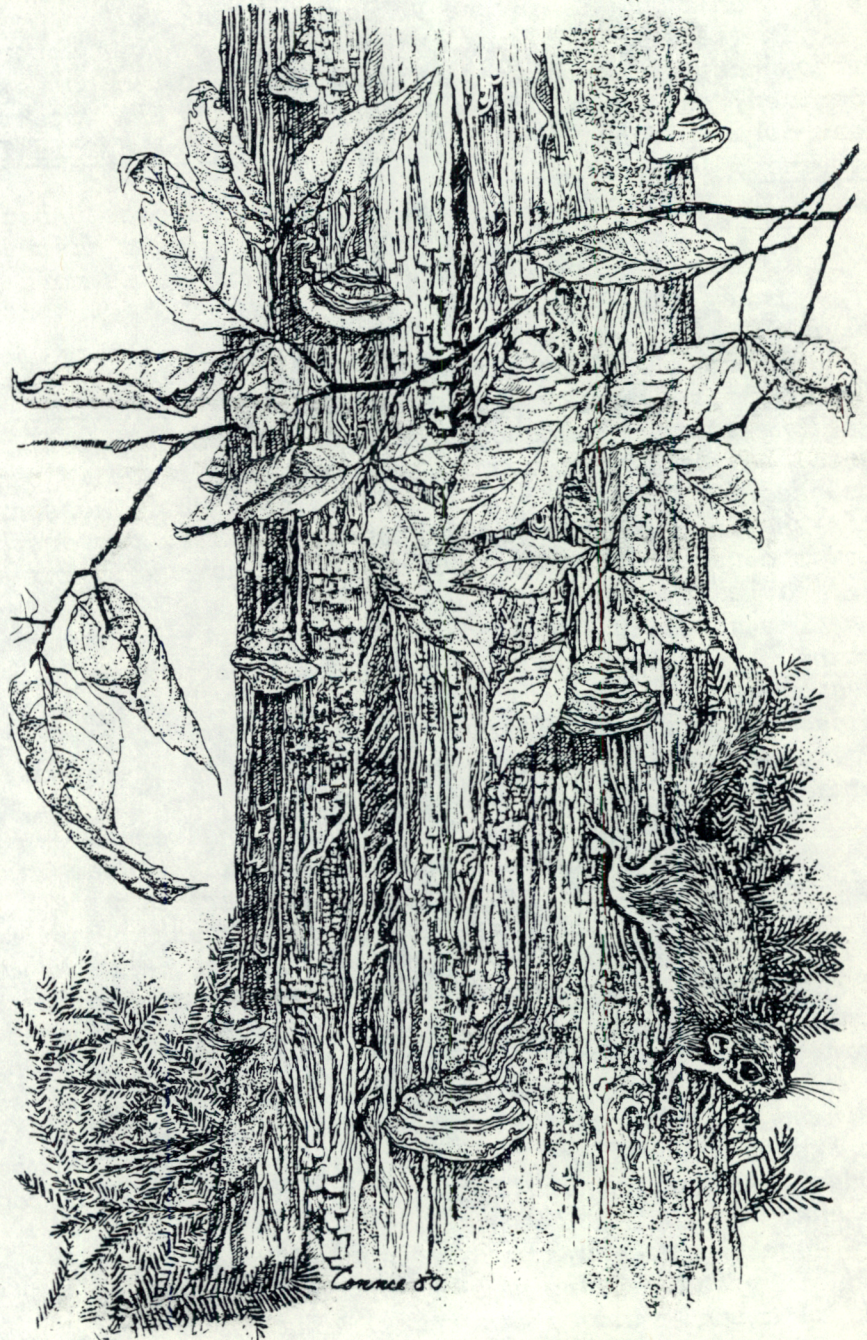


tree. Above ground, a beech grows up and extends outward as well. Ninety per- cent of the annual increase in height occurs between mid-May and mid-June. The rate of extension of branches outward appears to be influenced by available soil moisture. This radial growth is usually completed in a three-month period prior to mid-July. For the remainder of the green season, food produced is used for maintenance or stored as sap in the roots. In late fall when photosynthesis stops, the leaves change color and drop to the ground. Occasionally a small beech retains all its leaves, but they are dead and of little use to the plant. During winter the tree enters a period of dormancy. Next spring the stored sap reserves are summoned to the branches. At each new bud, new leaves develop and another period of growth begins.

The size and health of a tree are directly related both to the genetic quality of the seed and the physical and chemical characteristics of the site where it happens by chance to germinate. Beech seedlings develop best on damp leafy humus under a moderately dense canopy, or in small protected openings. The species thrives in a reasonably moist climate with an annual precipitation between 75 and 125 centimeters. The Dunk River watershed has an average rainfall which occurs in the upper range of this moisture preference.

The eventual form of the tree depends on the amount of space it has to spread. In most woodlands, lack of light and crowding cause the lower branches to drop off, and the result of this natural pruning is a tall, streamlined trunk with a top knot of slender branches. In open areas, beech develop short, thick trunks with large, low, drooping limbs.

If the regular annual cycle is main- tained, the beech grows



Flying squirrel and ancient beech