

to Canada. None are found west of Ontario and most are confined to the southern part of the province and south-western Quebec. The "pecan" of commerce is the fruit of *Carya illinoensis*, the southern species.

BITTERNUT HICKORY OR SWAMP HICKORY, *Carya cordiformis*. This is a tree which grows from 50 to 60 feet high, with a large spreading crown when growing in the open. It has slender twigs as compared with other species and its winter buds are sulphur-yellow. The leaves consist of seven to eleven leaflets. The tree prefers low, wet situations near streams, although it thrives well in good soil on higher ground. It is an important species on account of its relatively wide distribution.

SHAGBARK HICKORY, *Carya ovata*. This is one of the largest hickories, reaching a height of 50 to 80 feet. It has a straight and columnar trunk and in the open the crown resembles an inverted cone in outline. In the forest the crown is small and flat. It receives its name from the fact that the bark shags off in large plates free at both ends. The buds are yellowish-brown and large. The leaves consist of five to seven leaflets. It requires a good, rich soil, deep and well-drained on account of its long tap root.

MOCKERNUT HICKORY, *Carya alba*. A tall tree, 75 to 90 feet high in the forest, but shorter with a broad, round-topped crown when growing in the open. The buds are large and can be distinguished from the shagbark by their lack of persistent outer scales. Leaves consist of seven to nine leaflets. Prefers well-drained, rich slopes and is found in the counties of Ontario bordering the lakes.

PIGNUT HICKORY, *Carya glabra*. This is a smaller species with much-twisted and contorted branches. It reaches a height of 40 to 50 feet and the crown is narrow and long, reaching well down the trunk. Winter buds small and yellowish-brown. Leaves composed of seven to nine leaflets. Found in the Niagara Peninsula and the counties bordering Lake Erie. *Carya microcarpa*, the Little Pignut, is a variety of this species. One or two specimens of *Carya ovata* are hardy at Ottawa.

Carya illinoensis, "the pecan" is not hardy in Canada, except perhaps in parts of British Columbia. Several young trees planted at Sidney, B.C., have done well so far.

THE CHESTNUTS.

SWEET CHESTNUT, *Castanea dentata*. Only one of the four known species of true chestnuts is native to Canada. This species, however, is highly prized for both its wood and its fruit. It grows naturally in Canada only in a

restricted portion of Ontario from the Niagara river westward to the Detroit river and Lake St. Clair.

It is generally a large tree, about 75 feet high. The crown is spreading and usually rounded. The leaves are about six inches long, narrow and taper-pointed with toothed margins. A few specimens of this tree are hardy at Ottawa, but do not produce nuts. In the Niagara district the nuts are produced in large quantities and are collected as they fall from the trees in September and October. There is a good local market for the nuts and quantities are used by those who collect them from the woods. Large single trees growing in the open are very productive. The tree thrives in any good soil and is common in pastures and rocky woods. Unfortunately a parasitic bark disease, *Diaporthe parasitica*, is destroying it in large quantities. The tree bears fruit at the age of five years and is valuable for its timber at about 15 years of age. *Castanea sativa* is the European species and a variety of this known as Paragon is also planted for commercial purposes in the Niagara district.

THE HAZELNUTS.

The hazelnuts are mostly shrubs, rarely trees. There are eleven known species throughout Europe, Asia and America and many horticultural varieties are cultivated. The hazelnuts belong to the Beech Family and are therefore closely related to the chestnuts and oaks. Two species are native to Canada and many of the horticultural varieties succeed in southern parts of British Columbia and Ontario. Efforts have been made to make profitable plantings in certain parts. These efforts have been handicapped by the fact that the fungous disease, *Cryptospora anomala*, common on the native species, also attacks imported varieties. The hazelnuts require moderately rich, well-drained soil. Injury from frost is generally a possibility as both staminate and pistillate catkins develop in the autumn and quickly swell under the influence of mild weather in the late winter.

The Kentish Cob, or Filbert, derives its name "Filbert" or "Fullbeard" from its longer husk which extends beyond the nut. The generic name, hazel, is from the Anglo-Saxon "haesel", a hood, which the shorter husks of the hazel resemble.

HAZELNUT, *Corylus americana*. This species is a shrub growing from three to eight feet high. It furnishes the brown hazelnut of the market, which is gathered during August and September. It is common in thickets and hedge rows in the southern parts of Canada.

BEAKED HAZELNUT, *Corylus rostrata*. This species is also found in thickets and hedge rows. The fruit is covered by a bristly cup which terminates in a long tubular beak, hence its name.