

to Lake Winnipeg. It ascends the Assiniboine to its source. It passes by the way of Lakes Manitoba and Winnipegosis to Red Deer River which flows into the last named lake where it ceases to grow in latitude 53°. On the Saskatchewan it ascends to near Cumberland House in latitude 54°.

Trees grown from seed produced in the east are more or less tender and unsatisfactory, while those grown from seed ripened in Manitoba or the Territories are quite hardy. Young seedlings may usually be found in abundance growing under or near by mature elms in river valleys in the North-west, and if dug up and transplanted into good soil will grow rapidly, and soon develop into vigorous and shapely trees. (See plate IV, fig. 4.)

U. racemosa, D. Thomas. Cork or Rock Elm. North America.

This tree is common in some parts of eastern Canada, but has not been found native in the North-west. A large number of young trees of this species were planted in 1889 both at Brandon and Indian Head. Those planted at Brandon all died within a year or two, while a few of those planted at Indian Head in a small nursery where they had much shelter, survived, and several of them are still living. These have now attained a fair size and seem quite hardy. As soon as these trees bear seed it is probable that a hardy race of Rock Elm can be produced.

VIBURNUM. ARROWWOOD.

The Viburnums deserve a place among our most esteemed ornamental shrubs. They are decorative when adorned with their clusters of white flowers, also when in fruit. The foliage is handsome and assumes warm tints of brown in the autumn. Several of the species are hardy in the Canadian North-west, and all can be raised from seed, but this is slow to germinate. It seldom grows in the second year, and instances are known where germination has been delayed to the fourth and even the fifth year after sowing.

Viburnum lentago, L. Sheepberry, Nannyberry.

This species is found in many parts of eastern Canada, and also in the North-west in the valleys of the Red, Assiniboine and Saskatchewan rivers. It varies in height from 6 or 8 to 15 feet or more. The leaves are ovate, pointed, from 2 to 4 inches long, and the flowers are in flat clusters, varying from 2 to 5 inches across. The fruit is oval and of a bluish black colour. This is a handsome shrub, which is quite hardy in most parts of the North-west.

V. opulus, L. High-bush Cranberry.

This species is found in the east as far as Anticosti Island; it is also a native of the North-west, and is very generally distributed throughout the northern parts of Canada. The High-bush Cranberry attains a height of from 6 to 10 feet or more and makes a handsome ornamental shrub, which is interesting when in flower and very decorative when adorned with its bright scarlet fruit. The berries grown on the eastern form of this shrub are very bitter, while those grown in the North-west are pleasantly acid, without bitterness, and are used by the settlers for the making of pies, preserves, &c. This difference in the fruit is so marked as to lead one to suspect that they may belong to different species.

V. Opulus sterile. Snow-hall or Guelder Rose.

This is a well-known form of *Viburnum opulus*, which has been long in cultivation, in which the fertile flowers are nearly all changed to sterile, showy ones. When this shrub is in full bloom the flowers, which are a snowy white, form numerous large globose heads, which are very attractive. On this sterile variety it is seldom that any fruit is formed, and it is propagated from suckers, layers or cuttings.