

Eastern or Canadian Hemlock *Tsuga canadensis*

Eastern or Canadian Hemlock *Tsuga canadensis* The Canadian Hemlock, a medium-sized evergreen tree about 100 ft high has a broad pyramidal crown composed of thin branches with pendulous tips. The buds are ovoid. The needles are flattened, comparatively short (1/4 to 1/2 in.), tapering towards the tip and arranged in two opposite rows on the twigs. They are dark green above with two broad greyish bands of stomata beneath. The male and female flowers appear at the end of April, the latter after fertilization producing small ovoid cones 1/2 to 1 in. long. The small yellowish winged seeds are shed in the autumn and early winter. The Canadian Hemlock covers a wide range in eastern North America, extending from Georgia to Canada (latitude 50° North), where it grows in mixed forests. It thrives on the cool moist soils near rivers and streams or on shady northern slopes; dry, warm situations are not particularly suitable for it. It was introduced into Europe in 1736; in western and central Europe it is cultivated as an ornamental tree in parks. It grows very slowly but is resistant to frost. The Western Hemlock *Tsuga heterophylla* is more common in cultivation in the countries of western Europe with mild winters. It is a native of the moist coastal region of western North America, where it grows from California to Alaska. It attains a greater height than the Canadian Hemlock, and has a rapid growth rate. The buds are globose. The whitish bands of stomata on the underside of the needles are much broader than in the Eastern species and the seed scales of the cones are very long. It was introduced into Europe in 1851 and is being widely cultivated in western Europe, in forest stands, where it gives abundant yields. The wood is pale yellow-brown, fairly strong, and the bark is rich in tannin. In central Europe the Western Hemlock suffers from severe frost. The Mountain Hemlock *T. mertensiana* is an attractive ornamental tree which attains a height of only 50 to 65 ft. It is a native of mountain districts in western North America, where it is found even at altitudes of more than 8000 ft. The needles are rounded or slightly keeled above, with stomata on both sides, and the cones are cylindrical-oblong, 1 1/2 to 3 in. long.



