

United States Department of Agriculture,

FOREST SERVICE.

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SILVICAL LEAFLET 35.

ALPINE LARCH.

Larix lyalli Parl.

Alpine larch grows on the highest, most exposed mountain slopes, where it helps to hold the heavy snows and prevent snow slides. This one function makes it a valuable tree. It usually forms open stands of small trees which are of very little value either for fuel or protection of watersheds.

RANGE AND OCCURRENCE.

Alpine larch is found along the Continental Divide from eastern British Columbia and Alberta south to the Bitterroot Mountains and Mount Haggin, in Idaho and Montana; and in the Cascade Mountains as far south as Mount Hood, Oregon. It is a timber-line tree, and occurs only at high elevations on mountain slopes or high plateaus. In the north it occurs at from 6,000 to 7,000 feet, and ascends to 10,000 feet in the milder climate of southeastern Montana. It shows a general preference for northerly aspects, and usually for passes and sheltered sides of crest lines and divides. It occurs as scattered individuals, in small, pure groves, or in open mixture with other alpine species. It seldom forms forests, and generally occurs on open, grassy slopes or benches covered with bear grass and annual weeds.

CLIMATE.

It finds its optimum climatic environment where there is a heavy snowfall, beginning early and remaining on the ground well into the summer. The growing season is usually only about two months, and frosts may occur at any time. It is hardier than the other alpine species with which it associates, and in moist basins it ascends higher and shows more vigor than they. Its light foliage, compact, strong trunk, and firmly anchored root system prevent serious damage from wind or snow, and adapt it to withstand successfully the rigorous climate of high and bleak summits.

ASSOCIATED SPECIES.

Its usual associates at higher elevations are white-bark and limber pines, black hemlock, alpine fir, and Engelmann spruce. At its lower limit, however, it sometimes mingles with Douglas fir, lodgepole pine, and western white pine.

SOIL AND MOISTURE.

Alpine larch is very exacting in regard to moisture. It is usually confined to moist slopes with heavy snowfall and frequent rains. It will grow on the poorest, most rocky soils, however, if there is sufficient moisture.

TOLERANCE AND REPRODUCTION.

Like western larch, alpine larch is very intolerant, and can not endure shade. This fact, however, seldom affects reproduction, since there is practically no competition in the scattered growth where it occurs. Seed years are infrequent and reproduction is poor, mainly on account of the rigorous climate.

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