

FIRS AND THEIR RELATIVES.

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A GROVE or forest of firs has a beauty all its own. While each individual tree has a marked personality, yet all possess a family likeness. Every fir, allowed to grow according to its own bent, is a distinct cone, as this form best sheds the winter's load of snow and ice, the firs belonging to regions of intense cold. Every branch helps those above, but every fir grows in its own form as well. The fir balsam (*Abies balsamea*) is a long-pointed cone, and the trees are inclined to crowd one another in their growth, so that very often the lower limbs die and leave the trunk naked. The spruce is a much shorter cone; only when growing very large or when crowded close together, do the lower limbs perish, so that this cone is complete. The hemlock occupies a medium place between the others.

Firs blossom and fruit exactly like other conifers. The spruce (*Abies picea*, *nigra*, *alba*, etc.) has long, slender cones that hang in clusters of threes and fours from the lower side of the limbs. The blossoms appear in the early spring, both staminate and pistillate resembling those of the pine, except that as the cones start they are intensely purple; but soon they turn green, and they do not become dark-colored until they ripen. The hemlock (*Abies Canadensis*) grows very short cones at the end of the tiny twigs; these open considerably as they mature, so that the seeds fall out readily. All firs produce seeds in great abundance and young trees constantly starting around those of larger growth, the young saplings growing vigorously wherever sufficient light reaches them. Hence forests of firs become dense and difficult to penetrate.

Probably the most common of the firs is the hemlock (*Abies Canadensis*). When small this is one of the most beautiful of northern trees, as it forms a complete cone, though its branches are somewhat open. But the tree lives many years, losing its lower branches as it matures, while its bark becomes very rough and scaly. Its height varies from fifty to eighty feet, and it chooses a rocky, rather moist soil.

The three spruces, double, single and Norway (*nigra*, *alba* and *picea*), stand next in abundance and range to the hemlock. In their general appearance the three species closely resemble one another, though the first grows to the largest size. The Norway spruce is the most beautiful of all firs when grown singly or in small groves, because its dense branches form almost perfect cones. Its range also is wider than either of the other spruces; but it does not grow to as great a height as the others, nor is it as long-lived.

The balsam fir (*Abies balsamea*) is in many ways unique. Unlike its relatives whose outside bark is rough, the bark is smooth, but about half the surface is occupied by small blisters filled with the sap of the tree balsam. When a blister is punctured, this juice flows out, and it is sold in the market as Canada balsam. The tree has a very strong odor, and the dried leaves give off their peculiar scent for a long time. The wood is soft and rather brittle, so that it is valueless for the timber. Indeed, the only use to which this tree is now put is for decoration at Christmas. Nearly all the Christmas trees offered for sale in the eastern cities are either firs or spruces, the firs being more commonly used.