

commanding. The wood of the trees grown near the sea-coast has been found the hardest and most durable.

The leaves are of a dark gloomy green, about four lines long, firm, numerous, and attached singly over the surface of the branches. The flowers appear at the extremity of the highest twigs, and are succeeded by small, reddish, oval cones, pointing towards the earth, and varying in length from eight lines to two inches. The cones are composed of thin scales, slightly notched at the base, and sometimes split for half their length on the most vigorous trees, on which, also, the cones are the largest. They are not ripe until the end of autumn, when they open for the escape of the seeds, which are small, light and surmounted by a wing, by means of which they are wafted abroad by the wind. In the meagre spots known as "poor black lands," the Black Spruce has shorter, thicker leaves, of a still darker color, with cones only half as large, but similar in form, and ripe at the same period with those upon trees growing in a better soil.

The trunk, unlike that of the Pines, is smooth, and is remarkable for its perpendicular ascension, and for its regular diminution from the base to the summit, which is terminated by an annual shoot, twelve or fifteen inches long. The summit is a regular pyramid, and has a beautiful appearance on insulated trees, which are frequently observed in the distance like a black minaret, or spire, towering twenty or thirty feet above the other forest trees. This agreeable form is owing to the spreading of the branches in a horizontal, instead of a declining direction, like those of the true Norway Spruce, which is a more gloomy tree.

In New Brunswick, as in the North of Europe, great ravages are committed among trees of the Fir tribe by several insects, of which the most destructive is the *Bostrichus Piniperda*. This little animal introduces itself into the cellular integument of the bark, and succeeds in dividing it from the trunk. The separation of the bark prevents the circulation of the sap, and hence results the inevitable death of the tree. These insects have of late years been very injurious to the Black Spruce in several districts in New Brunswick where that tree abounds, and their ravages have also extended to the Cedar, the Larch, and the Hemlock Spruce. In dense groves of trees of the Fir tribe, where a few only are felled, these insects multiply rapidly on the tops and branches which are left after the removal of the trunk, and they thence extend to the standing timber, attacking generally the oldest trees, and those which have any defective part. Young and thrifty trees resist their attacks; and the best mode of preventing or avoiding the ravages of these destructive little insects is worthy of inquiry.

Properties and Uses.—The inhabitants of these Colonies, and the mechanics who work in wood, notice only the striking appearances in Forest Trees, such as the quality of the wood, its color, and that of the bark; and from ignorance of the Botanical character, they give different names to the same tree, according to certain variations arising from local circumstances. To this cause must be attributed the popular distinction of *Black* and *Red* Spruce.

The wood of the Black Spruce is white, and that of the other variety reddish, produced only by the influence of soil; it is said, however, that the red variety unites, in the highest degree, all the good qualities which characterize the species; is superior in size, and less liable to be crooked.

The distinguishing properties of the Black Spruce are strength, lightness, and elasticity. It furnishes as fine yards and topmasts as any in the world, for which it has been long and extensively used.* It is much used for the knees of vessels, which are formed of the base of the trunk and one of the principal roots, and these knees possess great strength and much durability. By many, the wood of

* Josselyn, in his History of New England, published in London in 1672, speaks of the Black Spruce of America as furnishing the best yards and spars for shipping ever known.