

THE TREES OF THE GREAT SMOKIES

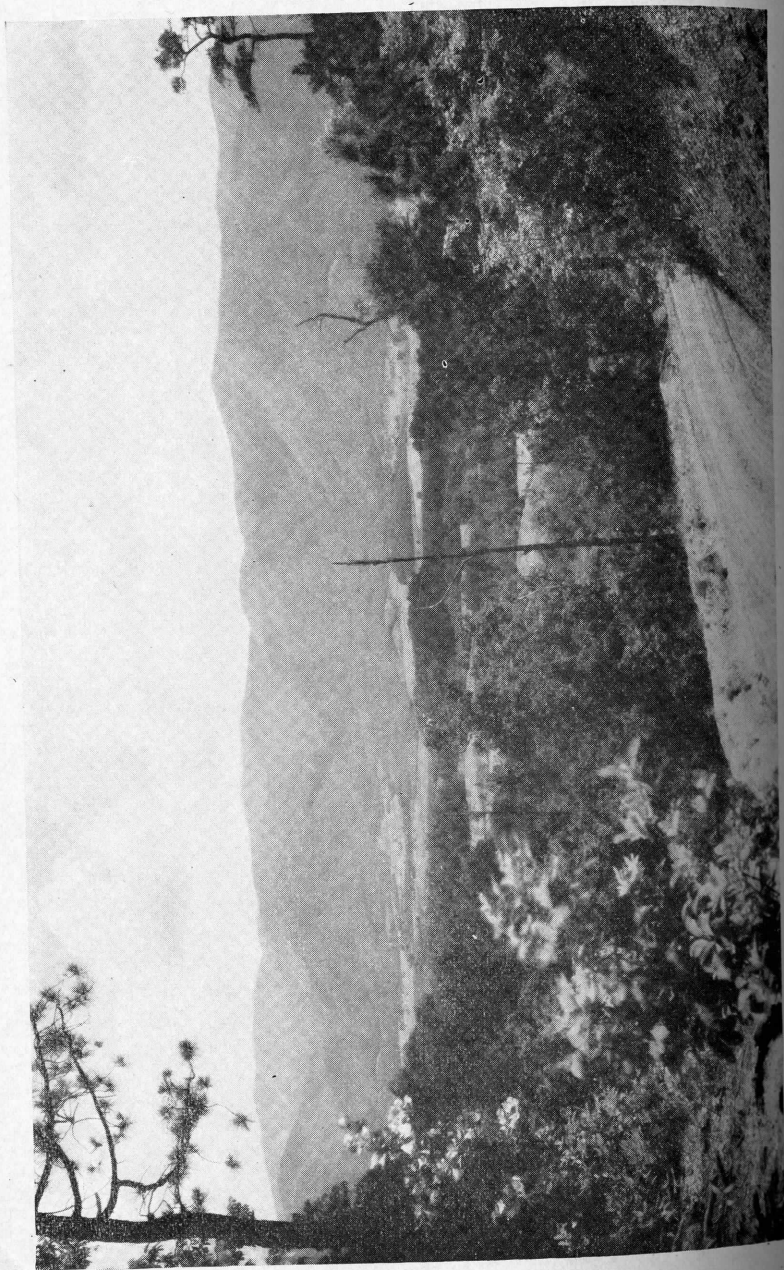
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The area included in the Great Smokies embraces the entire mountainous section of East Tennessee along the Tennessee-North Carolina line, from Georgia on the south to Virginia on the north. It is the most rugged and scenic section of the State, both in its varied topography, the steepness of its slopes, and in its altitudes, which range from about 1,500 feet to around 6,600 or 6,700 feet on a few of the highest points. It contains a great number of swift mountain streams, among the largest ones being the Little Tennessee, Hiwassee, Pigeon, Little River, French Broad, Nolichucky and Watauga. Unlike many of the western mountains with their steep, bare, craggy cliffs, this area is practically covered with some form of tree growth, the one remarkable exception being what is known as "balds" on some of the highest knobs or points, which are covered with grass.

In discussing the forests of this section, it is well to understand that "forest" means not only the trees themselves, but that it includes young reproduction, undergrowth of various kinds, leaf litter, and even the soil itself, and that in land management the motto should be "Use it for the greatest good to the greatest number of people for the longest time." In other words, if land serves its purpose best in producing forests, then it should produce forests. The Smoky Mountain area is almost wholly forest land, that is, land which, because of its steepness and ruggedness, should be kept continuously in tree growth.

The forest cover is composed largely of hardwoods, the remainder being softwoods. The hardwoods include many species, chief of which are poplar, red oak, white oak, black oak, chestnut, basswood, birch, cherry, sugar maple and beech. The softwoods consist of white pine, shortleaf yellow pine, hemlock, spruce, fir, Virginia scrub pine and pitchpine. The hardwoods here mentioned are quite similar to those growing in the New England states and in the North Central states, but in these mountains (the Smokies) they grow more rapidly. It is quite interesting to note that the black and yellow birch, both of which are distinct Northern species, occur quite abundantly on the upper altitudes of the Smoky Mountains.

These upper slopes, because of their height, correspond to the latitude of the New England states in temperature. The black and yellow birch being distinct Northern species, do not occur anywhere else in the State, but the other trees just mentioned are found in all other sections of Tennessee. People accustomed to seeing beech grow in the bottom lands and low-lying hills of Ten



TUCKALEE COVE, WITH LOW OUTLYING RANGES OF THE GREAT SMOKY MOUNTAINS. The distant mountains are partly owned by the Little River Lumber Company, while in the foreground is a view of the scenic Tuckalee Cove, which is owned by the Little River Lumber Company. Mountains into Carder Cove.

nessee might be surprised to see dense stands of it on top of some of the high points such as Silers Bald, at an elevation of over 5,000 feet. Here, however, they take on a stunted appearance nor do they ever come to a vigorous growth such as is their habit in the lower altitudes of Tennessee. The softwoods, or coniferous trees, rarely occur in pure stands in the Smoky Mountains; they are found nearly always in mixture with the hardwoods. The white pine and the Virginia scrub pine grow in the foothills and lower altitudes. The pitchpine occurs on poorer sites, such as dry south slopes, particularly on the low altitudes, while the hemlock is found at elevations from around 600 to 5,500 feet, growing in mixture with the various hardwoods within that range. The spruce and fir develop in pure stands at elevations above 5,000 feet, but in mixture with birch, sugar maple, beech and others, from approximately 5,000 to 4,000 feet. They are found in pure stands on Clingmans Dome, LeConte and Mt. Guyot. All these softwoods, however, are much less both in volume and area than the hardwoods in this section. The spruce, fir and hemlock are used largely as pulpwood.

It is evident from the virgin stands in these mountains that the forests do not attain the age, nor the trees the size of the great redwood and cedars of the West, some individual trees of which are more than 3,000 years old. The one outstanding feature, however, of this entire area is the unbroken forest cover so far as the intrusion of bare crags and rock steeps are concerned. It is worth noting that however precipitous the sides of the Smoky Mountains may be, they are so uniformly covered with tree growth of some kind or other vegetation that such areas as do appear bare, are so small as to be almost negligible.

The potential value of this section in timber production is vast. Its area is estimated at around 1,250,000 acres. Reckoning the annual growth at an average of 150 board feet per year on the basis of a 75 year rotation, this area would produce 188,000,000 board feet annually. This amount of lumber at an average price of only \$25.00 per thousand F. O. B. the mills, would be \$5,000,000. This means that many thousands of people would receive their daily bread through employment in preparing this timber for the market. It means also that the many wood-using industries throughout the State and in other states would be supplied with needed raw material to keep them alive. Then in turn many thousands of people would be supported through factories that use rough lumber in preparing manufactured articles which the public needs and must have.

The value of this section just above mentioned can be made possible only through proper management which includes protection. Its best forest cover can be secured only through the prevention of forest fires, fire being the greatest enemy to these lands, as it is to almost all other forested areas. Although the

enormous losses from fire can be readily seen in actual timber burned, it is quite impossible to estimate in dollars and cents the entire loss which comes through them. For example, we cannot measure the damage to soil because of burned humus; the damage to trees because of their being stunted or their growth retarded, the damage to scorched trees from insects; the loss through the heavy run-off of rainfall whereby streams are swollen beyond their ordinary height, thus washing away valuable soil and other properties along their courses; the damage caused from increased evaporation; the continued prevention of young trees from arriving at merchantable size because of their being periodically burned.

In addition to these there are other serious losses not readily computed, such as that of stream reduction in water content by which the capacity of the stream is reduced both in producing fish and in developing water power; the wreckage which befalls woodlands as homes of wild life when game and birds are driven out and destroyed. In fact in summing up various injuries and losses which always follow in the wake of forest fires, it is readily seen that the sum total in this one and one quarter million acres is annually enormous beyond belief. This is a loss to the State that should be prevented. If the cut-over land in this section had been properly protected from fires they would today be covered with dense, young, vigorous stands. Instead, as a rule, they are suffering annually from forest fires, failing thus to promise even in the distant future any valuable returns.

The major portion of this section has been cut over; the virgin timber at present thus covering the lesser acreage. It would be of inestimable value to future generations for historic and scenic study of both flora and fauna, if a part of the primeval forest could be kept intact. In making such a provision, the area preserved should be at least large enough to perpetuate itself in its pristine condition.

The management of the cut-over areas should include the prevention of fires, the encouragement of the best tree species and their proper harvesting.