Some Trees of Indiana.

By F. M. Andrews.

Some trees that are exceptional for size, or for some other facts, have been mentioned from time to time. A few of these, together with some facts, will be briefly referred to here.

One of our largest and most beautiful trees, Liriodendron Tulipifera L., has attained, as is well known, great dimensions both in height and in diameter. Britton[1] in his Illustrated Flora gives this tree often a height of 190 feet and a diameter of 12 feet. A tree of Liriodendron Tulipifera L. having a diameter of 11 feet was cut down, a good many years ago, about one mile north of Bloomington, Indiana. It divided into two large branches some considerable distance above the ground and probably attained a height of 175 feet. Sargent[2] states that this species of tree may sometimes attain a height of 200 feet.

In describing Liriodendron Tulipifera, Wood[3] says: "Near Bloomington, Indiana, we measured a tree of this species which had been recently felled. Its circumference four feet from the ground was 23 feet; 30 feet from the ground its dimension was five feet; the whole height was 125 feet. The trunk was perfect, straight and cylindric."

When in the lumber business a good many years ago, I cut into lumber many fine specimens of this species. I recall one specimen which was seven feet in diameter three and one-half feet from the ground. The trunk was straight and was free of all branches for a height of 90 feet, where it was three feet in diameter. Where this tree was cut off three and one-half feet from the ground, a cavity some inches in size was found about 10 inches from the circumference, which had been chopped out many years before. Evidently the party who had chopped out the block of wood concluded that it would not split easily enough for the making of fence rails, which was a necessary occupation in that day. The wound thus made had grown completely over in the usual manner and left no trace of its existence on the surface of the trunk. The Fifteenth Annual Report of the Indiana Board of Forestry shows on page 107 a partial view of a yellow poplar seven feet in diameter. No sawmills exist in this part of the country that would saw

[1] N. L. Britton and A. Brown, An Illustrated Flora of the U. S. and Canada, 1913. Second Edition, Vol. II, p. 63.

[2] C. S. Sargent, Manual of the Trees of North America, 1905, p. 325.

[3] Alphonso Wood, Class Book of Botany, 1868, p. 215.

into lumber without waste such logs as those of Liriodendron Tulipifera having a diameter of 12 feet as given by Britton,[1] or even a diameter of 10 feet as given for this tree by Sargent.[2] Therefore, in order to handle these large logs, they were often split or quartered by bursting with gunpowder, so that they could be handled in the mill on the saw-carriage. The large double saw rigs having both a large upper and lower circular saw would lack a good deal of being able to handle such sticks of timber without previous reduction. The waste even then and in logs of moderate size is great when it is remembered that the ordinary gauge of sawmill circular saws cut away one-fourth of an inch of timber for each "line" or board that is sawed. Therefore, in logs 12 feet in diameter and 12 feet long a large amount of good timber, if the log is sound, will be cut away in the form of sawdust and wasted. In proportion smaller logs, of course, lose in sawing. Band sawmills are more economical, since the kerf of most such saws is usually one-eighth of an inch. Trees of the yellow poplar seven feet in diameter are now, however, rarely found in Indiana, and no specimen 11 feet in diameter now exists. The scores of sawmills in Indiana have been one large agency in the removal of the timber. Most of these mills are equipped with circular saws and can cut from a few hundreds or thousands of feet of lumber daily up to many thousands of feet. Since, however, the strain on a circular saw is considerable, and this increases greatly with the increase in velocity of the "feed," a large circular sawmill cannot be safely operated when cutting more than 80,000 feet of lumber per day. Much timber is now being cut into lumber that thirty or forty years ago would have been rejected, or only used for fuel, if even that. A band sawmill, besides being more economical as to narrowness of kerf, will cut more lumber per day, and for the same capacity requires less power to operate than the circular sawmill. The large "stationary sawmill" in various parts of the country use "band" or "gangsaws" and often cut hundreds of thousands of feet. For example, the plant of the Great Southern Lumber Company, Bogalusa, Louisiana, has the largest sawmill in the world. It has cut 1,018,000 feet of lumber in a single day.[3] With such factors as the sawmill, consumption for railroad ties, etc., and the "proverbial forest fires," the forests are rapidly disappearing.

Near Worthington, Indiana, stands what is probably the largest tree in this State. It is Plantanus occidentalis, is 42 feet 3 inches in circumference and 100 feet high. Wood[4] also says of this species that,

[1] N. L. Britton and A. Brown, l.c.

[2] C. S. Sargent, l.c.

[3] American Forestry, 1918, June, Vol. 24, p. 338.

[4] Wood, Alphonso, i.c., p. 610.

"Along the Western rivers trees are found whose trunks measure from 40 to 50 feet in circumference." Britton[3] gives it a diameter of 14 feet, and Gray[4] gives it a diameter of 2 to 4.2 m. and calls it "our largest tree." A partial view of this tree is given in the Fifteenth Annual Report of the Indiana State Board of Forestry for 1915, page 109.

In my yard is a hickory, Cary ovata, which was formerly very tall. It is about three feet in diameter and at present only about 100 feet high. Formerly it was 170 feet high, but 70 feet of the top has been cut off.

There are still a number of areas of native forests containing good-sized trees in Indiana. Among these may be mentioned Turkey Run.[1] The farm of Mr. W. L. Jennings near Lexington, Scott County, Indiana.[1] This farm is reported to have 100 acres of fine forest.[1] The farm now belonging to Indiana University near Mitchell, Indiana, has about 80 acres of fine, large oak and poplar and some other kinds of trees. But these and other areas still exist only because the pony sawmill, the proverbial forest fire and other timber-devouring agencies have been thus far kept out.

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[3] Britton, l.c., Vol. 2, p. 242.

[4] Gray, New Manual of Botany, 7th Edition, p. 454.

[1] Fifteenth Annual Report of the State Board of Forestry, 1915.