FOREST CONDITIONS OF NORTHERN WISCONSIN.

The preliminary forest survey of Wisconsin, the principal results of which are here presented, was necessarily made in the form of a census or canvass, collecting the knowledge of the woods, and the experience in actual logging operations of several hundred men, and securing a better interpretation of this information as well as a proper insight into the forestal conditions, not usually observed by woodsmen, by personal inspection of typical localities in every county.

From this it follows that all estimates of areas and yields represent the knowledge of the best informed men, and a fair degree of correctness may be claimed for the same for the reason that each district, at least every county, is represented by a number of competent men, the writer being enabled by personal inspection to weigh, verify, or harmonize conflicting statements. The greatest help came from the practical woodsmen, who, in all parts of the territory, kindly assisted both by verbal information and by the use of their exhaustive "minutes," many of which fill volumes, and represent an amount of detail information such as exists for but few parts of our country.

In this connection it gives the writer pleasure to express his sincerest thanks to all these gentlemen, whose help alone could insure reasonable success to so hasty reconnaissance. The journey through the State occupied over three months, involved one or more trips over nearly every mile of railway passing through this section, besides several hundred miles of travel by wagon. The county-seat of every county was visited and no county received less than two days' attention.
During the first part of the journey the writer was accompanied and greatly assisted by Prof. L. S. Cheney, of the State University.

Hearty thanks are due to J. T. Cleveland, Land Commissioner of the Chicago and Northwestern Railway, W. H. Killen, Industrial Commissioner of the Wisconsin Central Lines, and especially to L. Jackson, Industrial Commissioner of the Chicago, Milwaukee and St. Paul Railway, whose courteous assistance did so much to facilitate this work.

**Physiography of the Area.**

The territory covered is that part of the State lying north of a line from Green Bay to the mouth of the St. Croix river, with the counties of Portage, Wood, and Jackson as southern projections; it involves 27 counties with a total land area of about 18.5 million acres or about 53 per cent. of the entire State, and contains almost all of the present supplies of lumber sized timber of both pine and hardwoods remaining in Wisconsin.

*Topography.*—Over 90 per cent. of this territory is a broad slope, which rises gently from the southeast, south, and southwest to a flat divide running near to and parallel with the south shore of Lake Superior; about 9 per cent. is occupied by the more abrupt slope from this divide to the lake.

In going from east to west, the divides between the several large rivers which drain the larger slope, are very gradual, almost imperceptible, and in some cases are entirely lost in labyrinths of lakes and swamps. Hills over 300 feet high from their base are scarce; a few "mounds," or isolated steep hills with extremely narrow bases, rise out of the sandy plains of Jackson and Clark counties and a few larger, more massive hills occur in the valleys of the Wisconsin, Chippewa, and St. Croix rivers and a range of low, broad hills form the crests of the Iron and Copper ranges. On the whole, however, the hills and hilly tracts do not occupy over 5 per cent. of the total area, while about 45 per cent. is level upland, and about 50 per