

In low places and in shallow depressions where marshes are formed in spring, the soil is rich, much mixed with vegetable matter, and supports a very luxuriant growth of grass. If willows and aspens were permitted to grow over the prairies, they would soon be converted into humid tracts in which vegetable matter would accumulate, and a soil adapted to forest trees be formed. If a portion of prairie escapes fire for two or three years the result is seen in the growth of willows and aspens, first in patches, then in large areas, which in a short time become united and cover the country; thus retarding evaporation and permitting the accumulation of vegetable matter in the soil. A fire comes, destroys the young forest growth and establishes a prairie once more. The reclamation of immense areas is not beyond human power. The extension of the prairies is evidently due to fires, and the fires are caused by Indians, chiefly for the purpose of telegraphic communication, or to divert the buffalo from the course they may be taking."

Professor John Macoun in remarks made before a meeting of the Canadian Forestry Association in 1902 made the following statement:—

Prof. Macoun's Verdict.

"The whole of the land in the Northwest was made prairie by fire, with the exception of a few square miles. There is wood at Turtle Mountain, Moose Mountain, Wood Mountain, Cypress Hills, West Butte and Three Buttes. These hills are not high, but they are more or less covered with wood, and when you examine them you find the country is undulating, with ponds and lakes in the hollows. These ponds prevented the destruction of the timber, but when the fires got away from the hills on to the level land they could not be stopped. The fire burnt on and left a margin of burnt timber and grass, and next year the fires started afresh, and the result was when the fires were stopped two hundred miles north of the Saskatchewan, there was a margin of burnt trees always to the south, and outside of that margin a margin of young trees growing up out of the grass, and still

farther you would find little poplars of a year old which had sprouted from the roots of the dead ones, so that it is evident the whole of that country was covered with forests at one time, but through the agency of fires it became a prairie. What is to hinder it from being covered with timber again? What is needed is water. I make that statement—it may be contradicted, but in later years, after I am dead, it will be proved. The land is there and all that is required is water to make it grow anything."

While the geological record is not sufficiently complete, or has not been sufficiently studied with that object in view, to establish what condition or catastrophe is primarily responsible for the treelessness of the prairies, it would seem reasonable that, after the upthrust of the Rocky Mountains and the consequent interruption of moisture laden winds from the Pacific Ocean, the climate of the prairie districts became much dryer and this and subsequent forest fires gradually and steadily reduced the forest area and extended the prairie till finally it stretched unbroken for hundreds of miles from west to east.

The Example of C. S. Noble.

Mr. C. S. Noble, owner of the largest farm in Canada, 35,000 acres, at Nobleford, near Lethbridge, Alberta, is planning to put 82 acres into trees next Spring.

Mr. Noble has made a remarkable record. Twelve years ago he arrived at the site of Nobleford with \$1,000—and plenty of imagination and muscle.

This year, one field alone, planted to wheat, measured 9,000 acres, and averaged forty bushels to the acre. Fifty-six binders were cutting at one time. The total yield of the Noble farm this year exceeds in value \$1,250,000.

It is not surprising that Mr. Noble is likewise a leader in establishing small woodlands as a balance-wheel to his great estate.