

this prairie-level is wooded more or less densely, particularly that portion adjacent to the lakes. The southern part, extending southward from Lake Winnipeg, includes the prairie of the Red River valley with an area north of the 49th parallel of about 6,900 square miles.

The superficial deposits of this area are chiefly those of a former great lake, which has been named by Mr. Warren Upham Lake Agassiz, and which occupied it toward the close of the glacial period. In Minnesota the shore-lines and beaches of this lake have been carefully traced out by Mr. Upham, and it has been shewn by General Warren, the writer and the first named gentleman, that its outflow was southward to the Mississippi. The fine silty material now flooring the Red River plain and constituting its soil of unsurpassed fertility was laid down in its deeper waters. The Red and Assiniboine Rivers have not yet cut very deeply into these superficial deposits, having already nearly reached a base level of erosion, and the surface of the plain is level and little furrowed by denudation.

The second steppe of the plains is bounded to the west by the Missouri Coteau, and its northern continuation constitutes the edge of the third steppe. Its width on the 49th parallel is two hundred and fifty miles, and on the 54th about two hundred miles, though it cannot there be so strictly defined. Its total area between these two parallels is about 105,000 square miles, and includes the whole eastern portion of the great plains, properly so called, with an approximate area of 71,000 square miles. These occupy its southern and western portion, and are continuous westward with those of the third steppe. To the south, the boundaries of this region appear to be more indefinite, and in the southern part of Dakota the three primary levels of the country, so well marked north of the line, are probably scarcely separable. The present rivers have acted on this region for a much longer time than on the last, and with the advantage of a greater height above base level, and now flow with uniform though often swift currents, in wide trough-like valleys excavated in the soft material of the plains, and frequently depressed from one hundred to three hundred feet below the general surface. In these valleys the comparatively insignificant streams wander from side to side in tortuous channels, which they leave only at times of flood. The surface of this steppe is also more diversified than the last, being broken into gentle levels and undulations, partly due to the present denuding agencies, but in part also to original inequalities in the deposition of the drift material which constitutes the superficial formation. The average altitude of this region may be stated at 1,600 feet, and the character of its soil and adaptability for agriculture differ considerably in its different portions.

The third or highest steppe of the plains may be said to have a gen-