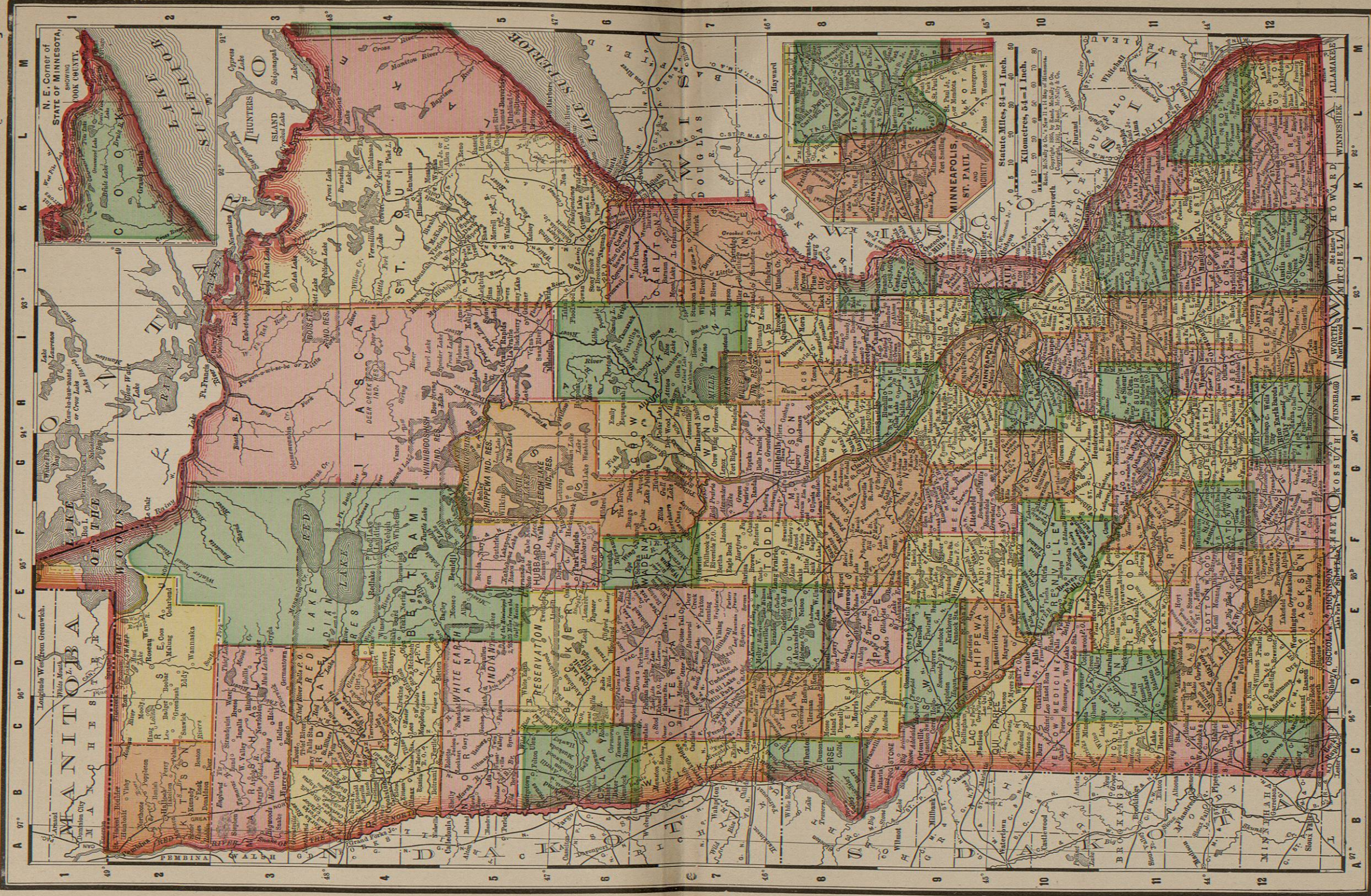


[Minnesota.]



Mississippi, at the falls of St Anthony, 14 miles by river above St Paul. The east side was first settled, under the name of St Anthony, which was incorporated as a city in 1860. The west side settlement, named Minneapolis, was incorporated as a city in 1867, and soon surpassed St Anthony in population. In 1872 the two cities were united under the name of Minneapolis. The chief industries are the manufacture of flour and of lumber, for which the falls supply abundant water-power. The Mississippi here flows over a limestone bed resting upon a friable white sandstone; hence erosion is rapid, and the river banks show that the falls have receded from a position at the mouth of the Minnesota river. In 1851 90 feet of the limestone gave way at once; and, as the rock bed extends but 1200 feet above the present site of the falls, the destruction of the water-power was threatened. This has been averted by the construction of an apron, or inclined plane, of timber, with heavy cribwork at the bottom, and the building of a concrete wall in the bed of sandstone behind the falls and underneath the channel of the river. For this work the United States Government appropriated \$550,000 and the citizens of Minneapolis contributed \$334,500. The city has twenty-seven flour-mills, which can produce 29,272 barrels a day. The total product for the year ended September 1, 1882, was 2,301,667 barrels. The shipments of lumber for 1880 were 164,620,000 feet. The population in 1870 was 18,079; and in 1880, 46,887.

MINNESANGER. See GERMANY, vol. x. p. 525.

MINNESOTA, one of the north-western States of the American Union, extending from 43° 30' N. lat. to the British Possessions (about 49° N. lat.), and from Wisconsin and Lake Superior on the east to Dakota on the west, between the meridians of 89° 39' and 97° 5' W. long. Its area, including half of the lakes, straits, and rivers along its boundaries, except Rainy Lake and Lake of the Woods, amounts to 83,365 square miles.

The surface of Minnesota is diversified by few elevations of any great height. In general it is an undulating plain, breaking in some sections into rolling prairie, and traversed by belts of timber. It has an average elevation above sea-level of about 1000 feet. The watershed of the north (which determines the course of the three great continental river systems) and that of the west are not ridges or hills, but elevations whose inclination is almost insensible. The southern and central portions of the State are chiefly rolling prairie, the upper part of which is crossed from N.W. to S.E. by the forest belt known as the Big Woods,—a stretch of deciduous forest trees with an area of about 5000 square miles. North of the 47th parallel, the great Minnesota pine belt reaches from Lake Superior to the confines of the Red River valley, including the region of the headwaters of the Mississippi and its upper tributaries, as well as those of the Superior streams. North of the pine region there is but a stunted growth of tamarack and dwarf pine. In the north-east are found the rugged elevations of the granite uplift of the shores of Lake Superior, rising to a considerable height; while in the north-west the surface slopes away to the level prairie reaches of the Red River valley. The surface elevation of the State varies from 800 to 2000 feet above sea-level. A short line of hills in the north-east reaches the latter altitude, while only the valleys of the Red River, the Mississippi, and the Minnesota fall below the former.

Geology and Soil.—The geology has not yet been mapped out with the precision attained in other States. The great central zone, from Lake Superior to the south-western extremity of the State, is occupied by granitic and metamorphic rocks, succeeded, in the south-east, by narrower bands of later formation. Within the great Azoic area lies the central watershed of the continent, from which the

St Lawrence system sends its waters towards the Atlantic, the Mississippi towards the Gulf of Mexico, and the Red River of the North to Hudson's Bay. These primordial rocks carry back the geologic history of Minnesota to pre-Silurian times. They form in the north-east, in the neighbourhood of Lake Superior, an extremely rough and hilly country, but as they reach the central and south-western portions of the State they for the most part disappear beneath the surface drift. This central belt is succeeded, on the south and east, by a stretch of sandstone, partially the true red Potsdam and partially a similar but lighter-coloured stratum, which some have proposed to designate the St Croix Sandstone. Isolated beds of sandstone are found in various parts of the State. The north-western corner, stretching east from the Red River valley, is believed to be Cretaceous; but the great depth of drift and alluvium, disturbed by no large rivers, prevents a positive conclusion. The Lower Magnesian limestone underlies the extreme south-eastern portion of the State, and extends along the west side of the Mississippi to a point a little below St Paul; thence it takes a course almost semicircular, and finally passes out of the State at the south-western boundary. The Trenton limestone occupies a large field in the south and south-east; it comes to the surface in long irregular bands, and an island of it underlies the cities of Minneapolis and St Paul with the adjacent districts. The Galena limestone, the Masquoketa shales, the Niagara limestone, and the rocks of the Devonian age in turn prevail in the other counties of the south and east; while the existence of the St Peter sandstone would scarcely be known but for its outcropping along the bluffs of the Mississippi, and at the famous waterfall of Minnehaha. From these various formations numerous kinds of stone valuable for building purposes are obtained. The grey granite of St Cloud is extremely hard and enduring. The Lower Magnesian furnishes two especially handsome building stones,—the pink limestone known as Kasota stone, and the cream-coloured stone of Red Wing, both easily worked, and hardening by exposure to atmospheric changes. Naturally, from its location underneath the principal cities of the State, the Trenton limestone is the most widely used. Sand suitable for glass-making, and argillaceous deposits abound. The clays which make up so large a portion of the surface drift of the State are almost wholly of glacial origin. Overlying the deposits of sand, gravel, boulders, and clay is, in most portions of the State, a sandy loam, very finely divided, rich in organic matter, deep brown or black in colour, and of the greatest fertility. It is this soil which has given to the State its reputation for productiveness. Its depth varies from 2 to 5 feet in various parts of the State, and it has been described by Dr Owen as "excellent in quality, rich as well in organic matter as in those mineral salts which give rapidity to the growth of plants, while it has that durability which enables it to sustain a long succession of crops."

Rivers and Lakes.—The State holds a unique place with reference to the great water systems of the continent. The Mississippi takes its rise in Lake Itasca, north of the centre of the State. Before it leaves the State limits it becomes a great river, half a mile wide, and from 5 to 20 feet deep. It drains with its tributaries all the southern and central portions and a large area of the northern part of the State. It is navigable as far as St Paul, and at Minneapolis the falls of St Anthony afford unrivalled facilities for manufacturing. Of the many affluents of the Mississippi the most important is the Minnesota, which after a course of about 440 miles flows into the main stream at Fort Snelling, 3 miles above St Paul. The source of the Minnesota is but 1 mile from Lake Traverse, the origin of the Red River of the North, and it is navigable during the high-water season for about 233 miles. Its principal tributaries are the Blue Earth, Chippewa, Redwood, Lac qui Parle, and Pomme de Terre. The Red River system drains the north-western part of the State, and its waters