The Physiography of Indianapolis.

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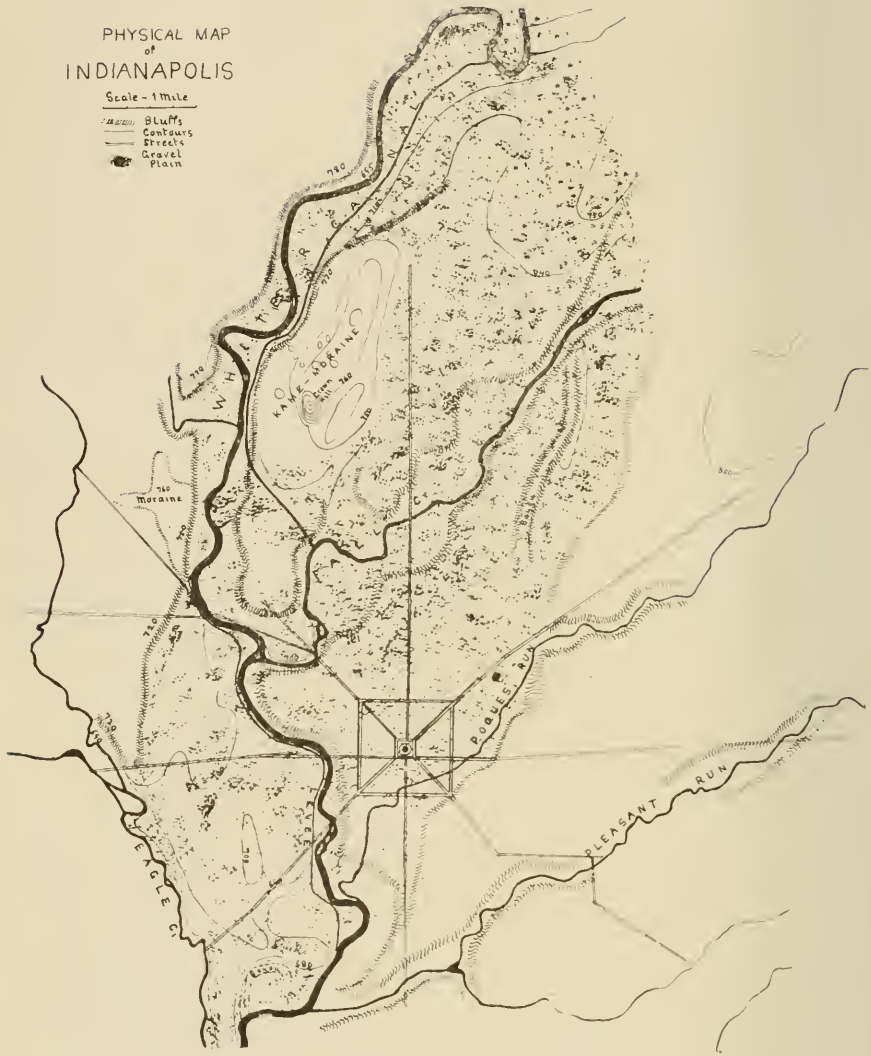
In 1820, the Indiana Commissioners fixed upon a point in the uninhabited wilderness, "on White river at the head of navigation" and within ten miles of the geographical center of the State for the location of the future capital. Congress had granted to the State four square miles for use as a seat of government, and in 1821 a plat of one square mile was surveyed which now comprises the official and commercial center of the city. The area was situated near the eastern border of the flood plain of White River and a few feet above it, but was traversed by Pogues Run, a small tributary. Fall Creek, a much larger stream, entered the river from the northeast just above the city and Pleasant Run a short distance below. On the opposite side of the river, Eagle Creek came in from the west.

The present metropolitan district would be enclosed by a parallelogram 8 by 10 miles, of which about 35 square miles are built up. The underlying bed rocks are Devonian limestones and shales too deeply buried beneath glacial material to influence topography. The Illinoian drift sheet of compact blue clay, varies from 20 to 80 feet in thickness. A few feet of sand and gravel separate it from the usual bouldery till of Wisconsin age, the whole forming a mantle 70 to 170 feet thick. This glacial subtratum has been eroded and replaced by gravel to an extent presently to be described.

In the absence of a topographic map relief can be described only in approximate terms. Central Marion County is crossed from northwest to southeast by a belt of undulating drift in part morainic about ten miles wide, its surface lying about 800 feet A. T. It is bordered on the south by massive gravel ridges and other morainic features.* Through this belt nearly at right angles, White River and Fall Creek cut a trench about 200 feet deep, having its bottom on or near bed rock. During the period of glacial retreat this trench was filled half full of gravelly outwash. A readvance of the ice margin, accompanied by the

* Leverett, Frank. U. S. Geol. Surv. Monograph LIII, p. 96.


PHYSICAL MAP
of
INDIANAPOLIS
Scale - 1 Mile
Bluffs
Contours
Streets
Gravel Plain
WHITE RIVER
KAME MORAINE
Kame 760
Hill 760
Moraine
POGUES RUN
PLEASANT RUN
EAGLE CR.
760
740
720
700
680
660

escape of subglacial streams, deposited near the western border of the outwash plain a belt of sand and gravel hills three miles long and rising in the sharp knob of Crown Hill 90 feet above the plain and 150 feet above the river. White River passes through this kame-moraine in a gorge three miles long and half a mile wide, bordered by steep bluffs 40 to 80 feet high. The gravel plain about three miles wide is bounded on the east by a gentle rise or bluff 15 to 30 feet high, which parallels Fall Creek and touches the river at the mouth of Pleasant Run, below which the plain lies on the west side of the river. Its surface slopes from about 740 feet A. T. in the north to 680 feet in the south, or about six feet to the mile and is cut by the high water channels of the river, Fall Creek and Eagle Creek, into a series of low but well defined terraces. The city occupies the gravel plain, the kame-moraine and the gorge, bluffs and flood plain of White River, and extends on the east and south several miles beyond the bluff over the more elevated undulating drift.

The physical features have influenced the development of the city, favorably and unfavorably, in various ways. White River is a commercial obstruction, too small for navigation, inadequate for sewerage and entailing large expense for bridges and levees. It pays some compensation in water supply and picturesque sites for parks and residences. The gravel plain makes grading and excavation inexpensive and surface drainage rapid; but this credit account is balanced by a debit of 25,000 wells subject to serious contamination. Pogues Run has cost untold sums in damage to health and property by floods and the expense of conversion into a covered sewer, but furnishes a route by which several railroad lines enter the city. The low bluffs and terraces of Fall Creek and Pleasant Run are utilized for boulevards and parkways. The Crown Hill kame-moraine, the most striking and attractive natural feature of the area, is admirably suited for the abode of the living or the dead and forms the beautiful site of Crown Hill Cemetery. The smooth surface of the surrounding drift plain is a prime factor in the accessibility which makes Indianapolis the largest center of exclusively land transportation in the United States.