Indiana's Geographic Regions

STEPHEN S. VISHER, Indiana University

Those who know Indiana recognize that it has sufficient regional contrasts to justify subdivision into at least a few regions. There is disagreement, however, as to how many merit distinctive names and as to boundaries. The present writer has made numerous maps which reveal contrasts in Indiana in respect to various environmental conditions and of responses partly there to. ("Climate of Indiana," 1944 has more than 300 maps: and more than two hundred additional original maps of other aspects of the state are presented elsewhere.) A detailed discussion of regionalization in Indiana appears elsewhere. (Annals of the Association of American Geographers.)

A study of the regions of Indiana has been made on the basis of numerous criteria, including geologic stratigraphy, glaciation, physiography, average elevations, local topographic relief, average amount of ruggedness, amount of soil erosion, types of soil, climatic contrasts, native vegetation, agricultural land use, average population density, urbanization and population changes. Maps are given elsewhere showing the regions which are discernable on these bases. Here, however, the major regions only are briefly described.

The three regions which are generally recognized are Northern, Central and Southern Indiana. These are based on a combination of differences in topography, soil, climate, land use, and historical development. Nearly three-fifths of the state is known as Central Indiana. It is generally a gently undulating glacial till plain, with poorly developed natural drainage and with numerous but mostly inconspicuous remnants of former glacial lakes. Its elevation is fairly close to 800 feet, on average about 650 at the west and about 900 at the east. The local relief is generally less than 100 feet. It's soil is largely a clay loam, and the sub-soil is scores of feet thick nearly everywhere. Central Indiana is part of the Corn Belt, one of the choice farming regions of the world. Much of it has been classed by the U. S. Department of Agriculture as Grade 1 farm land. Indiana possesses more acres of such very choice land than 30 other states combined. It comprises some of the best of the Corn Belt, with many thousands of officially recorded corn yields of more than 100 bushels per acre, and with a heavy production of tomatoes, and soybeans, and with numerous economically successful farms, many of them as small as 80 acres.

The northern one sixth of the state differs from Central Indiana partly in being less generally level, in having poorer natural drainage, in still possessing numerous glacial lakes and in having much more sandy soil. It also has numerous small areas of muck. It has less excellent farm land, on the average, partly due to the climate. Repeatedly in Northern Indiana, the frost-free season is not quite long enough for

corn to thrive as well as it does in Central Indiana. The Corn Belt's northern margin is in Northern Indiana. Cold spells are more numerous and colder than in Central Indiana; snowfall normally is heavier. Northern Indiana was glaciated recently, by the Late Wisconsin Ice Sheet, and the glaciers left more conspicuous moraines, more lakes, more glacial boulders, and much more wide-spread deposits of sand than in Central Indiana. Northern Indiana was the last of the three great regions of the state to be extensively populated and it has grown most rapidly in population in the last forty years. Northern Indiana surpassed Southern Indiana in manufacturing about 1900, and recently has surpassed Central Indiana, despite the importance of Indianapolis, which contains about as many people as the three chief northern cities combined. Dairying is extensive in Northern Indiana, and the growing of truck crops, especially potatoes and onions.

Southern Indiana, approximately the southern fifth of the state, contains most of the state's hilly land, although parts of Northern Indiana are moderately hilly, as are small parts of Central Indiana. About half of Southern Indiana was not glaciated and the remainder was glaciated mostly relatively long ago (by the Illinoian Ice Sheet). The contrast in elevation is locally the greatest in the state (400 to 600 feet for a few counties). The soils of Southern Indiana average poorer than in Northern and especially poorer than in Central Indiana. Soil erosion has been notably greater, partly because of the greater average slope, the thinner soil, and the longer period of settlement. (Southern Indiana was the first region settled.) Significant also are certain regional climatic contrasts. Southern Indiana has more precipitation, especially in the cooler months, it has more torrential rainfall, much more in winter; it also has less snowfall and frost protection of the soil. Most of the people of Southern Indiana are supported by agriculture, though manufacturing is extensive in Evansville and, considerable, in proportion to their population, in several smaller cities. Coal mining is significant in several western counties. Nearly half of Southern Indiana is woodland or prospective woodland. Most of the counties of Southern Indiana have fewer people now than they had in 1890; several have declined in population since about 1870. This decline has been due partly to the general depletion of lumber, and also of top-soil. Very significant however, have been the improved opportunities available in Central and Northern Indiana and elsewhere, and the desire for more income than could be obtained from most of the farms of Southern Indiana. Of not least importance in causing the decrease in population has been a general reduction in the size of the average family.

Despite the fact that the cores of each region differ significantly, no distinct line of demarkation is observed when crossing from one region to the next. Hence the boundaries are drawn in different places, depending on what criteria are deemed of special importance. The most important basis for these regions has often been considered to be glacial. Northern Indiana was most recently and most strikingly glaciated, Central Indiana was notably affected by an earlier ice sheet, but most of the glacial effects are less obvious. The core of Southern

Indiana was not glaciated, and the rest was glaciated relatively long ago, with most of the effects not inconspicuous.

Subdivisions of Northern, Central and Southern Indiana

Each of Indiana's three major regions can advantageously be subdivided. Northern Indiana is distinctly different at the west than at the east. In the west, sand is widespread, and there are numerous sand dunes, including the fine ones along the shore of Lake Michigan and several rows of lesser ones along the former shores of the ancient enlargement known as Glacial Lake Chicago. In the east, by contrast, there is almost no sand, but instead relatively high morainic hills and deep hollows, with numerous lakes. Marshland is extensive at the west, including the Calumet and Kankakee marshes, but lakes are few. Western Northern Indiana differs climatically from eastern partly in having dryer winters, more drouths and more frequent sub-zero temperatures. The middle part of Northern Indiana, the area just east and southeast of the end of Lake Michigan, receives notably more snowfall than the rest of the state. The Northwestern corner of Indiana also differs from the northeastern industrially, as it is an eastern extension of Chicago, while little manufacturing is done north of Fort Wayne or east of Elkhart.

In Central Indiana, the contrasts between the eastern and western parts are less than in Northern Indiana, as much of the region generally is almost level, with relatively little soil contrast, except that part of the west has black prairie soil. However, partly due to differences in elevation, there are perceptable climatic contrasts. As the eastern third of central Indiana averages nearly 300 feet higher than the western third, the nights are appreciably cooler, especially during the warmer months, there is a shorter growing season, the clouds hang lower in winter, and the snow-cover remains longer. Eastern Indiana also receives more precipitation in winter, has less frequent drouths and fewer intense thunderstorms. In the development of the state, the discovery of extensive gas and oil in the eastern part of Central Indiana in the late 1880's, and 1890's, but only locally elsewhere, was significant. It led to the rapid growth of several towns in the "gas belt" into manufacturing cities. Conversely, coal is extensive in much of the western counties of Central Indiana but not elsewhere in the state, except in western Southern Indiana. Coal has been a significant influence in the development of the areas where it has been extensively mined.

In Southern Indiana, there are notable contrasts. The western fourth, approximately, is the Wabash Lowland, with extensive, fairly level tracts and the lowest average elevation in the state (much of it 400 to 500 feet above sea level). The growing season is the state's longest, the night temperatures highest, snowfall least, rainfall heaviest, and there is most winter sunshine. That section is also mostly underlain with coal, and numerous scattered small areas have yielded oil or gas or both. Most of the Wabash Lowland is good farming land

where corn growing is extensive and melons locally important. The soil is partly loessial, partly lacustrian and extensively alluvial.

To the east of the Wabash Lowland is a broad zone of steep hills developed on sandstone, with generally poor soil. It has few people and much wasteland. Next east is a "limestone valley" averaging about 15 miles wide, notably less rugged than the zone just mentioned but by no means flat. It contains myriads of limestone sinkholes and some sharp hills; indeed some of it has a mild "karst topography." There are numerous caverns, one glamorized as "Lost River." Its soil and topography are, however, better than in areas adjacent to the east and west. The Monon Railway follows this "Valley," which contains several small cities, including Bloomington, Bedford, Paoli and Salem. This is the "Indiana Limestone Belt," yielding much of the nations cut building limestone. The next zone east is a hilly upland developed on shale, with generally rather poor soil. The eastern margin of this upland forms "The Knobs," a picturesque line of high hills and bluffs as seen from the lowland just east. This lowland is the western margin of a gently sloping belt which extends from near the eastern margin of the state. This eastern slope was glaciated, but so long ago that any morainic clay remaining has been badly leached, and erosion has proceeded extensively. Indeed soil erosion is severe in all of southern Indiana but the small flat areas

Thus, in brief, despite Indiana's small size (36,000 square miles) and slight range in elevation (from 313 to 1285 feet) it possesses clearly discernable regional contrasts. Hence a summary of the average characteristics of the various subdivisions of the state contributes to understanding.