

Indiana's Valleys

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Indiana has several kinds of valleys ranging greatly in size. Two small types are sinkholes in the limestone belt of unglaciated southern Indiana and "kettle holes" in the glacial terminal moraines, some of which valleys are only a few rods across. Other small valleys are water-worn rills, gullies, and creek valleys. These range in size from tiny rills to stream valleys which are conspicuous even from a distance. Famous are the Wabash, White, and Ohio River valleys, but there are scores of other river valleys which are locally prominent. Most of Indiana is, of course, part of the Great Mississippi Valley, although part of Northern Indiana is in the St. Lawrence Drainage System or Valley.

Indiana's valleys differ widely in depth. The deepest, measuring from the nearby upland to the lake bottom is Lake Michigan, which was gouged out by the ancient ice sheets. The highest sand dunes bordering Lake Michigan are more than 600 ft. higher than the bottom of Lake Michigan at the northern Indiana boundary. Measured from the upland to the valley floodplain, the deepest valley is the Ohio near Madison, and especially shortly below New Albany, where the altitude range within a mile or two is about 400 ft. In much of southern Indiana, the highest point in a county is 200 to 300 feet higher than the lowest. Indiana's deepest gorges, in Clifty Falls State Park near Madison and at Turkey Run and Shades in Parke County, are only 200-350 feet deep, which is shallow compared with the gorges in many parts of the world.

Indiana's valleys have been formed in varied ways; the sinkholes, by the solution of underlying limestone; the kettleholes and many other glacial depressions by irregular deposition of materials which were transported by the ancient glaciers; the water-worn valleys were created by the runoff following rains or melting snow. Another type of valley is found between sand dunes blow up by the wind. Depressions of another type have been caused by the slumping or downsip when wet, of part of a steep slope. Some of these, despite their small size, are locally significant in several ways, notably to the local fauna and flora. Some contain ponds.

Some of Indiana's valleys are ancient: this is true of many of those in the unglaciated part of the state, where some of even the smaller ones are many millions of years old—older than the Grand Canyon of the Colorado River. Another type of ancient valley is in the glaciated region where the glacial deposits did not entirely fill some pre-glacial valley.

Man-made valleys in considerable number have been created in the area of strip-mine coal mines, and tiny ones by the hundreds of thousands as basements for buildings. A rapidly increasing number of depressions

are dug out to create farm ponds, although most artificial ponds are created by constructing dams across valleys.

Valleys have had profound significance upon mankind in Indiana. Stream valleys are the chief natural drainage ways. The valleys and their streams have had varied significance, including interfering with transportation across them. Most of the larger valleys are followed by roads or railways at least locally. Many of the valleys in the recently glaciated part of the state contain locally marshes or lakes, which now are much appreciated. It is illegal now to drain a lake, or even to lower its level, and various marshes laboriously drained in the early years of this century have recently been restored to marshes because they are more valuable as marshes than as poor farm land. Numerous sinkholes are plugged up naturally with clay and hence contain ponds or small lakes. Most valleys have springs along their sides, at least in wet weather. Many pioneers located their homes so as to take advantage of such springs.

In brief, valleys have played an important role in Indiana and it is appropriate that they receive more attention than they have in the past.