

The Bluegrass Region is bounded by the Knobs on the west, south, and east, and by the Ohio River in the north. Bedrock in most of the region is composed of Ordovician limestones and shales 450 million years old. Younger Devonian, Silurian, and Mississippian shales and limestones form the Knobs Region. Much of the Ordovician strata lie buried beneath the surface. The oldest rocks at the surface in Kentucky are exposed along the Palisades of the Kentucky River. Limestones are quarried or mined throughout the region for use in construction. Water from limestone springs is bottled and sold. The black shales are a potential source of oil.

The Bluegrass, the first region settled by Europeans, includes about 25 percent of Kentucky. Over 50 percent of all Kentuckians live there an average 190 people per square mile, ranging from 1,750 people per square mile in Jefferson County to 23 people per square mile in Robertson County.

The Inner Blue Grass is characterized by rich, fertile phosphatic soils, which are perfect for raising thoroughbred horses. The gently rolling topography is caused by the weathering of limestone that is typical of the Ordovician strata of central Kentucky, pushed up along the Cincinnati Arch. Weathering of the limestone also produces sinkholes, sinking streams, springs, caves, and soils.

The Outer Bluegrass is mostly composed of interbedded Ordovician limestones and shales that are more easily eroded than the limestones of the Inner Bluegrass. It is less karstic, with fewer sinkholes and rolling hills. The shales impede the flow of groundwater, and there are fewer springs and wells.

Shale is more dominant in the Bluegrass Hills. The land is hilly, with limited agriculture. Slope stability may be a problem in development, particularly in the Greater Cincinnati area.

The Knobs consists of hundreds of isolated, steep sloping, often cone-shaped hills lying at the outer edge of the Bluegrass Region. The Knobs are associated with the outcrop belt of Silurian and Devonian black and clay shales. Streams that flow through the Knobs and Shale Belt, such as the Rolling Fork River and Red River in the east, carve wide valleys with fertile alluvium deposits.

The Kentucky River Palisades are cliffs in the gorge or canyon along the Kentucky River where it cuts through resistant massive limestones and dolostones (High Bridge Group). These are the oldest rocks exposed at the surface in Kentucky.