

Teays River coursed through Central Illinois eons ago

With no major navigable bodies of water, McLean County and much of east-central Illinois are landlocked. Yet that was decidedly not the case several million years ago when a great river—mightier than the mighty Mississippi even—ran through this part of the state.

The ancient waterway, known as the Teays River, formed long before 2 million years ago. It drained the midsection of the eastern half of the U.S. before it was altered and then buried by a series of advancing and retreating continental ice sheets.

Over many eons the Teays (pronounced “taze”) shaped and reshaped the landscape on a monumental scale and then disappeared long before human beings ever arrived in North America—so its deep, cool waters and wide valleys are known to us only through the geologic and hydrologic record.

The river’s headwaters were in what’s now western North Carolina, near the village of Blowing Rock on the Blue Ridge Parkway. The Teays flowed north through Virginia and West Virginia, continuing into Ohio before taking a turn west through Indiana and Illinois.

The river entered present-day Illinois near the Vermilion County community of Hoopston. It headed east past what’s today Paxton in Ford County and then ran southwest through Champaign-Urbana, Mahomet and Monticello (see accompanying map). From there it tacked northwest to Clinton, its valley spanning some 15 miles at that point in its long journey. It then crossed the southwestern corner of McLean County and the Village of McLean before heading west to Delevan in Tazewell County, where it met the ancestral Mississippi River—which was then well east of its present-day course.

The Mississippi was but a major tributary of the Teays, which then continued east and south until reaching the Mississippi Embayment, a finger of the Gulf of Mexico that once followed the current Mississippi River valley all of the way into Illinois.

Subsequent glacial advances and meltwater during the ice ages of the Pleistocene Epoch marked the end of what was one of North America’s truly great waterways.

The first of perhaps three glaciations, or glacial periods, blocked the Teays River and created Tight Lake, a massive body of water covering large sections of southern Ohio and parts of Kentucky and West Virginia. This long-gone “Great Lake” (about 70 percent the size of Lake Erie) was named for geologist William G. Tight, who in the early 20th century began piecing together the many clues left behind by the river. Tight, who taught at Denison University in

Granville, OH, is also credited with naming the river, which comes from an unincorporated community in Putnam County, W. Va. This village sits in an unglaciated, now “riverless” valley that millions of years ago would’ve been the main channel of the Teays.

As the massive Pleistocene ice sheets, measuring a mile-thick or more, scoured the Midwestern landscape, the mighty river’s valley and those of its tributaries were filled with ground-up rock, gravel, clay, sand, silt and sediment. Thus the bedrock valley of the Teays in much of the Midwest is still there, it’s just buried under several hundred feet of glacial “drift.”

Today, the Teays is much more than a geological curiosity. The river’s buried bedrock valley is one of the largest and most important sources of ground water in the state of Illinois. The Mahomet Aquifer, as it’s known today, provides more than 200 million gallons of water every day to communities, industries, commercial enterprises and farmers across 15 counties in east-central Illinois.

Aquifers, contrary to popular belief, are not true underground rivers or lakes. Rather, water in the Mahomet Aquifer resides between the granular deposits of sand and gravel and flows in a trickle, generally a few feet a day. Water pulled from this aquifer does not date to the Teays River, however. Rather, it started as rainfall or snowmelt that seeped through the ground until it collected in the ancient river bed.

Nonetheless, the Mahomet Aquifer would not exist if not for the titanic geologic forces of rock, ice and water that gave birth to this colossal, now-buried river valley.

Discovery of the Mahomet Aquifer helped geologists piece together the route of the Teays through Illinois. As early as the 1880s, a shaft sunk by a coal mine outfit in the Urbana area inadvertently hit the great aquifer—a discovery that led to the operators to “mine” not coal but water.

Yet it wasn’t until later, in the mid-20th century, that scientists with the Illinois State Geological Survey and Illinois State Water Survey began examining in detail hundreds of well logs spanning the Illinois-Indiana state line westward to the Illinois River, enabling them to map the aquifer.

Dr. Leland Horberg of the University of Illinois geology department discovered that wells above this area had to penetrate deeper than elsewhere to reach bedrock, and that the rock itself sloped downward to create a V-like shape, evidence of a buried riverbed millions of years old. Horberg named this formation the Mahomet Valley because it was near that Champaign County community that three wells reached one of the deepest points of the buried channel. It was only a matter of time before scientists concluded with certainty that the Mahomet Bedrock Valley (as it was formally known) was actually the lower section of the Teays River.

“Although there is nothing in the present landscape to suggest the existence of a prehistoric and long-buried valley,” noted a newspaper account from 1952, “the river is gaining increasing notice from scientific prospectors engaged in a new gold rush—the search for precious water for the homes, the agriculture, and the industry of Central Illinois.”

And indeed, that’s just what has happened in the ensuing decades. Today, the Mahomet Aquifer is the primary source of drinking water for some 120 municipalities and 750,000 people. Communities that rely on the aquifer range in size from the cities of Champaign and Urbana to the small village of McLean.

Much of the water pumped out of the aquifer is used for industrial, commercial and agricultural purposes. The sweeping pivot irrigation systems one sees in Mason and Tazewell counties (and even in southwestern Mclean County) are dependent on the aquifer.

In the coming years this aquifer will likely become more important as large communities currently relying on surface water reservoirs, including Bloomington, Danville, Decatur and Springfield, look to it as a means to improve water quality and meet increased demand.

Today, the Mahomet Aquifer Advocacy Alliance, an informal association of local governments and interested parties, works to protect this invaluable natural resource through monitoring and research, legislative advocacy and public education.