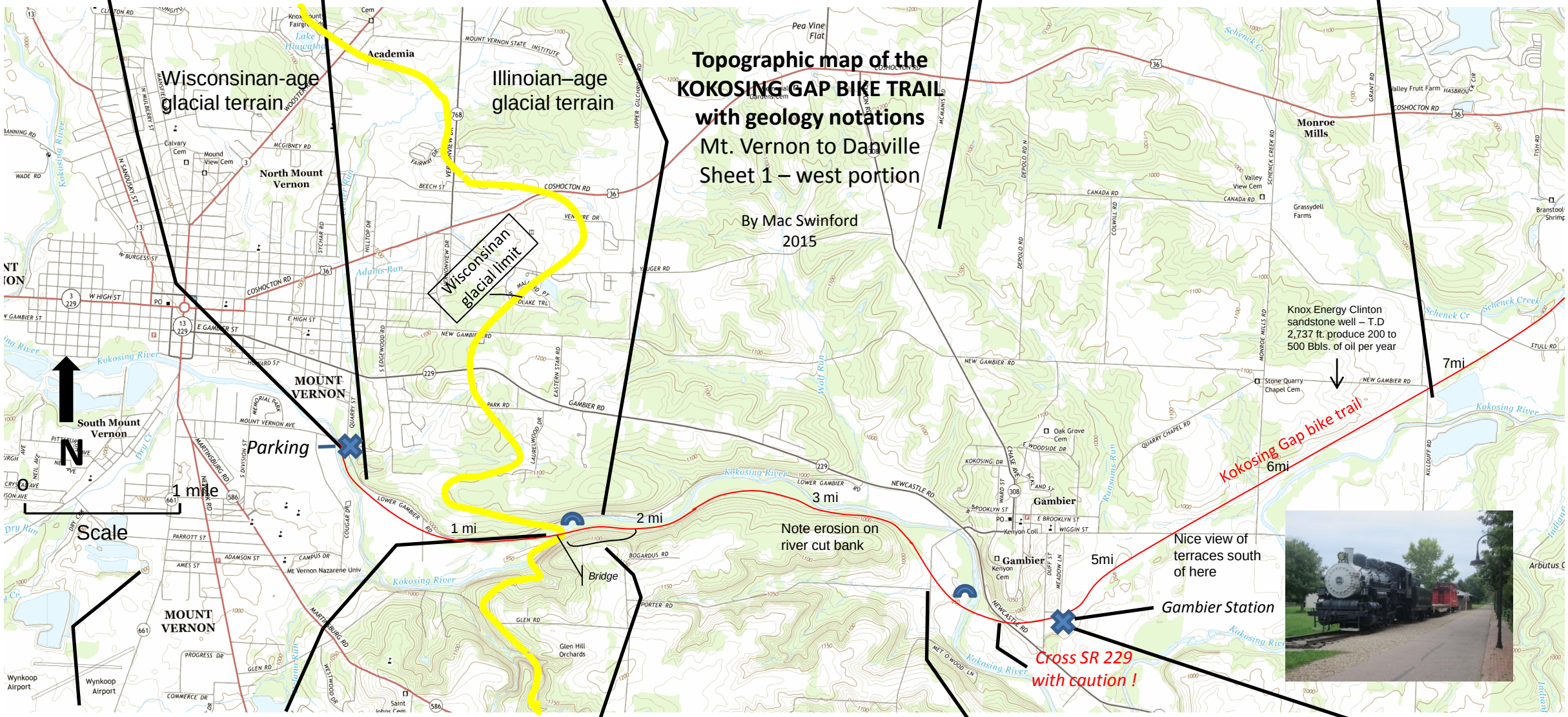
Kokosing Gap Trail Parking is located on Mt. Vernon Avenue immediately east of Kokosing River. Bathrooms available 400 feet north of Mt. Vernon Avenue at a baseball field.

Mississippian-age sandstone of the Black Hand Member of the Cuyahoga Formation is poorly exposed along Lower Gambier Road above the trail to the north. Bedrock exposures are rare along the bike trail.

Crossing east into Illinoian glacial terrain, there are large jagged sandstone layers in the bottom of the Kokosing River indicating that the stream flows near or on bedrock. Bedrock has been continuously cut from this gorge since Wisconsinan time.

Illinoian glacial terrain is commonly more steeply rolling than Wisconsinan glacial terrain west of the yellow line. Illinoian terrain has undergone 125,000 years of erosion, while the Wisconsinan terrain has only 15,000 years of erosion.

Small's Sand and Gravel, Inc. extracts from a Wisconsinan-age high-level terrace deposits formed by torrents of sediment laden water from melting glacial ice once located to the north and west. A total of 211,000 tons of sand and gravel was mined at this operation in 2013 and used mostly for construction.



Looking south through the trees, the broad flat lowland is a Wisconsinian outwash terrace. This terrace is the latest deposit of many that filled the large, south flowing preglacial valley that passed through Mt. Vernon and Utica is now filled with glacial drift.

At the old R.R. bridge, note the rounded gravel of the modern bedload and floodplain. Most of the gravel is reworked outwash. This is in contrast to the bedrock stream bottom just downstream beyond the Wisconsinan glacial boundary. The trail is entering a gorge east of here.

The gorge area was once a continuous highland or divide which separated streams to the east and west. Wisconsinan glaciation disrupted local stream flow and caused lakes to form. The rising water level in the lakes found a new outlet at this gorge and formed the modern Kokosing River valley. Colluvium covers the steep hillsides here.

The Brown Family Environmental Center at Kenyon College is a 480 acre preserve built mostly on Wisconsinan-age outwash terrace of sand and silt. The terrace indicates that the water level and velocity were both higher as massive quantities of water melting off the Ice-Age glaciers to the north and west flowed to the south and east.

The bike trail passes south of Gambier, home of Kenyon College. The train display is worth a look. Bathrooms and water are available here. The broad flat area is a Wisconsinan-age low level constructional terrace while the area immediately to the south is an erosional "cut" terrace. The notch in the hillside to the south is the valley of a south flowing pre-glacial river of considerable size that was blocked by advancing Wisconsinan ice.

Topographic map of the KOKOSING GAP BIKE TRAIL with geology notations

Mt. Vernon to Danville

Sheet 2 – east portion

References

Camp, M.J., 2006, Roadside Geology of Ohio: Mountain Press Publishing Company, Missoula, Montana, 410 p.

Root, S.I., Rodriguez, Joaquin, and Forsyth, J.L.,1961, Geology of Knox County: Ohio Division of Geological Survey Bulletin 59, 232 p., 6 plates.

Transportation History Sources, Cleveland, Akron, & Columbus Railroad, Rails and trails. Com. http://www.railsandtrails.com/PRR/CA&C/default.htm

Many oil and gas wells have been drilled near the trail into the Knox Dolomite, Clinton Sandstone, or Berea Sandstone. There are numerous gas fields in the Silurian-age Clinton Sandstone extending east from Mt. Vernon. An oil and gas field in the Devonian-age Berea Sandstone is located at Howard and continues south.

The Danville Feed Supply Inc. well was drilled in 1995 to the Clinton Sandstone and TD'ed at a depth of 2,659 feet. Since 2014, this well has produced 32 barrels of oil, 25,354 MCF of natural gas, and 532 barrels of water.

Dr. Jane Forsyth mapped Illinoian kames in upland areas near Danville.

Illinoian-age high level terrace

Parking

13 mi.

12 mi.

11 mi.

10 mi

9 mi

8 mi

Kokosing Gap bike trail

Near the eleven-mile mark, the trail leaves the Jelloway Creek valley and follows the East Branch of Jelloway Creek. Here, the trail traverses on or near recent alluvium, Wisconsinan outwash terraces, and at higher elevations, Illinoian-age terraces.

Portions of the old railroad date back to 1851 and changed ownership many times. The rail line was built to access the coal fields near Millersburg and to connect Columbus and Cleveland for passenger service which started in 1873 and ended in 1950. The railroad traversed through Delaware to the south and Millersburg, Orrville and Akron to the north. Abandonment began in 1968 although the Howard portion was open into the Conrail era.

Between the sand and gravel pit and Howard, the bike trail rests on stream alluvium. Some higher level terraces are preserved on the hillsides.

Here is the start of a 4 mile-long railroad spur built from Howard south to Millwood to provide access to a Black Hand Sandstone quarry containing 98.6% pure silica sand for glass making. The Black Hand is pure only in the local area around Millwood.

At Howard in Rotary Park, the trail passes through a tunnel beneath U.S. 36. The tunnel is constructed of local stone most likely the Black Hand Sandstone. Eastward , the trail leaves the Kokosing River valley and proceeds up Jelloway Creek.

N

0 1 mile

Scale