History of the Wea Creek in Tippecanoe County, Indiana.

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The Wea Creek has two principal forks, known as Big Wea and Little Wea. These both rise near the south line of Tippecanoe County and flow roughly parallel with each other five or six miles apart, first to the northeast through nearly half their course, then bending to the northwest, they gradually approach each other and unite.

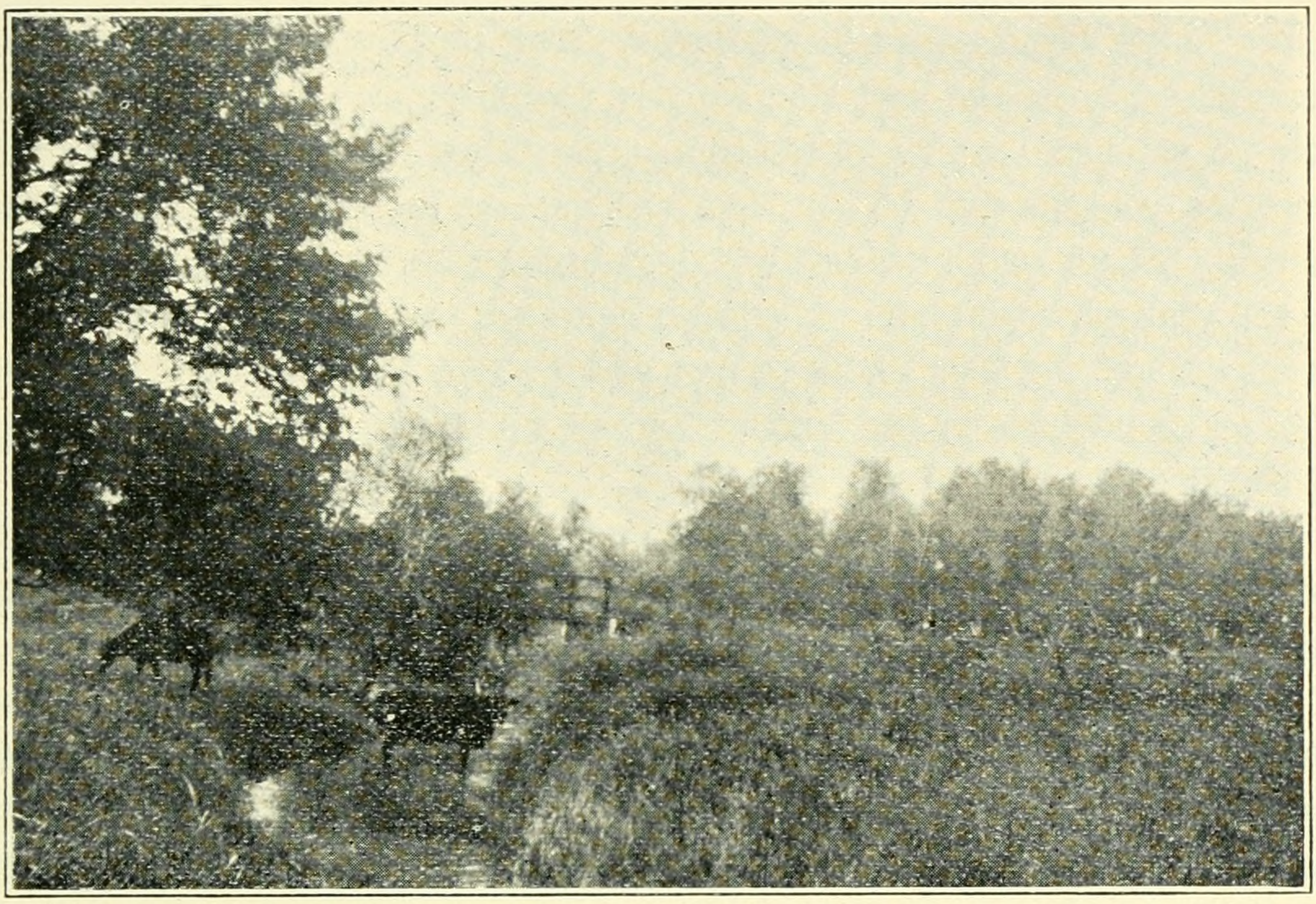
The course below the junction continues northwest to the Wabash. The Big Wea receives a tributary which joins the main stream near the elbow-like bend, coming from the southeast near the south line of the county.

These branches all rise in marshy meadows or prairies now generally drained. These marshy tracts are usually long, narrow sags or shallow valleys extending across the divide.

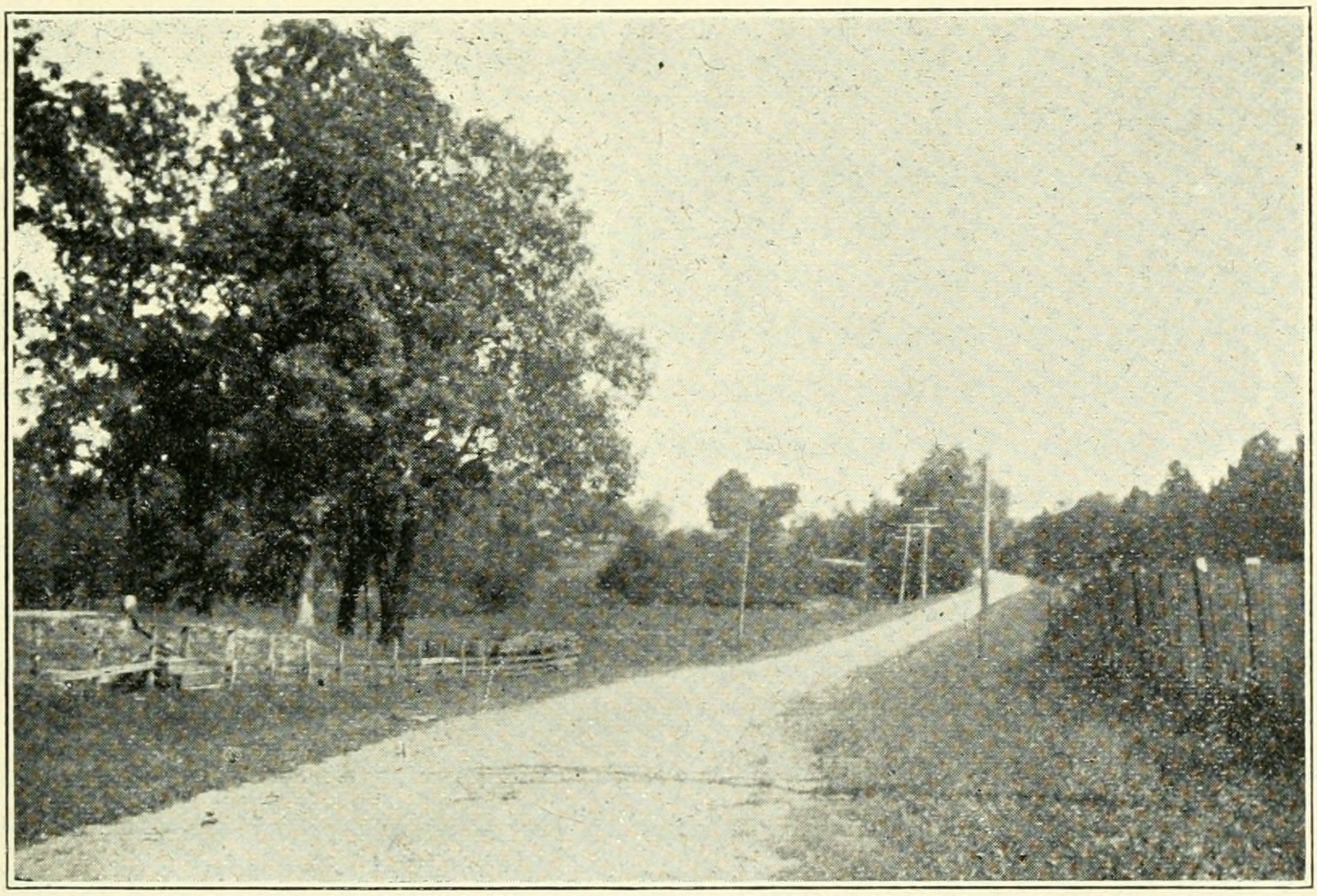
Streams flowing to the south and southwest rise near the heads of the Wea Creeks. In the map of Tippecanoe County, on page 238, it will be noticed that Shawnee Creek rises near the source of Little Wea Creek, Coal Creek near the head of Big Wea Creek and a tributary of Sugar Creek near the source of the east fork of Big Wea Creek.

The upper course of Little Wea Creek follows a valley with gently sloping sides twenty to thirty feet in depth and one-fourth of a mile wide. Just below where it is crossed by the Chicago, Indianapolis & Louisville Railroad, near its abrupt bend, this valley widens out and comes to an end. For two or three miles the creek flows through a flat prairie with a channel just large enough to carry its flood waters. This channel is forty or fifty feet wide and five or six feet deep. For two or three miles above its junction with the Big Wea Creek it again follows a valley of about the same width as its upper valley but having much steeper bluffs and a more level bottom.

The upper seven or eight miles of the Big Wea Creek flows in a channel three or four feet deep and ten to twenty feet wide, over the smooth, gently sloping prairie. Near Romney it flows from the smooth prairie into a valley one-fourth of a mile wide and twenty to thirty feet deep. The tributary from the southeast joining the Big Wea near its abrupt bend has its upper course without a notable valley, but enters one of considerable size near its mouth. After the main stream bends to the northwest, its valley within



Channel of Wea Creek, one mile south of Romney, Ind. The stream here flows through an old lake bed.



Valley of Wea Creek, one mile north of Romney, Ind. The stream has cut this part of it valley deep and drained the lake bed shown above.

a few miles becomes much shallower. The bluffs become low and for some distance on the east side entirely disappear at a wide gap opening into an extensive prairie to the east. Just below this the northeast bluff becomes considerably higher than the one on the opposite side of the stream. About two miles below a deep broad valley begins and continues to the Wabash flood-plain. The lower course of the Wea for several miles, is cut through the Wea Plains terrace and the Wea Valley itself is terraced. The levels of parts of the terrace farthest up stream conform apparently to the surface of the Wea Plains.

The peculiarities of valley and course noticed in these streams invite an attempt at explanation. This is found in the interpretation of the glacial features of the region.

By reference to the map it will be noticed that several moraines cross the county south of the Wabash River. The one forming the divide between the Wea system and the streams to the southwest extends southeastward across the southwest corner of the county. Another extends east along the south side of the Wea Plains terrace to a point nearly south of LaFayette, where it bends to the southeast and continues to the southeast corner of the county. Between these ridges others trend east and west. All the ridges together thus form a complex network. Enclosed by the ridges are tracts of level prairie formerly marshy over large areas but now generally drained.

The creeks cross these flat prairies, cut through some of the ridges and follow along the sides of others. The Wea streams are entirely postglacial in their origin and history. Their channels are cut in the beds of glacial drift that overlies the country, the underlying bed-rock being reached and exposed for a distance of a few rods in only one place in all the Wea system. This is in the bed of Little Wea Creek where it enters the Wea Plains terrace.

The retreat of the ice sheet from this region uncovered the basin of the Wea Creeks before it did the present course of the Wabash River. It may be that melting of the ice between the Michigan and Erie lobes occurred across the course of the Wabash River and along the Tippecanoe River, while the Wabash, farther west, was still obstructed to a much later period. This caused the waters of the melting ice to gather along the front of the ice border until they covered the whole Wea basin and flowed out at the sags across the divide where the heads of the Wea Creeks are so near the heads of Shawnee, Coal and other creeks. This would

have made a lake of all of southern Tippecanoe County. This lake would have been about one hundred and fifty feet deep at Dayton, in the east part of the county. Some of the moraines were entirely covered with water. The broad upper valley of Little Wea was probably made by a stream flowing in the opposite direction to that of the present stream from where it is crossed by the Chicago, Indianapolis & Louisville Railroad. Some part of the valley of the Big Wea below Romney may have been made by a stream afterward reversed. When the Wabash was uncovered the lake covering nearly the whole south part of the county fell to a much lower level and the general course of the present Wea streams was laid out. As the water fell the tops of the moraines appeared and the waters flowed across their crests at the lowest places. But the streams were not continuous as now. The region was nearly covered by several smaller lakes held in by bordering moraines and the streams connected the lakes and formed the outlet of the lowest. The deep valleys show the parts of the streams that flowed across the moraines from lake to lake. As the streams deepened their valleys, the lakes were gradually drained, leaving their smooth, muddy bottoms exposed to become the level marshy prairies found at the settlement of the country. As the lakes fell to lower and lower levels, the streams were extended across the lake beds, where they now meander in sluggish courses in narrow, shallow channels.

Paleontology of Bartholomew County, Indiana, Mammalian Fossils.

J. Jep. Edwards, M. D.

1. *Mastodon americanus* (Blum.).

This animal is represented in this county by two specimens.

a. *Os sacrum.*

Weight of fossil, eight pounds and nine ounces. Found in 1898 upon a sand-bar in White River, one mile east of Wailesboro; identified by Dr. M. N. Elrod. It is in a fair state of preservation, with foramina and tuberosities well defined. In possession of the writer. A brief account of the find appeared in the *Indianapolis News* of January 15, 1901, and the Columbus (Ind.) *Daily Herald* of same date.

b. Tooth. Found in Ohio Township, Bartholomew County, in 1900. Have been unable to see it.