should be conflicting opinions on this point. The situation chosen, and the character of the work, seem sufficient to place this conclusion beyond doubt. Yet there are few, if any, satisfactory indications, aside from the character and extent of the work, that any portion of the enclosed area was occupied for any considerable length of time as a village site. That a work of such magnitude and extent could have been hastily cast up for temporary protection by a savage, or even by a semi-civilized people, is incredible. Moreover, there are reasons for believing that the whole fort was not built at one period of time, but was progressive. The southern part was apparently built first, the northern section being a subsequent addition, made possibly because of increase in the population, most likely by the incoming of parties or clans seeking protection.

On the other hand, the evidences of long-continued occupation, such as are seen in and about other works, — as, for example, the Etowah and Messier groups in Georgia, the Cahokia group in Illinois, and several of the works in south-eastern Missouri, — are wanting. This is also singularly true of several other noted works of Ohio. The refuse and *débris* of a populous village, occupying for a long time a comparatively limited area, could not, as is proven by the instances referred to, be entirely dissipated by sixty years of cultivation, even though carried on continuously. The areas forming the sites of some of the mound-builders' villages of south-eastern Missouri, are yet, after half a century of constant cultivation, a foot or more above the surrounding level.

What is the explanation of this singular fact? I can think of but one which seems at all satisfactory, and that is, that these works were built by a populous tribe, which was being pressed step by step before a victorious foe.

The defensive works of Ohio present to me no evidences of great antiquity: indeed, the indications are in the opposite direction; and, in my opinion, we are not warranted in assigning to them an age antedating the latest possible period which we are justified in fixing upon as that at which the Indians first entered this territory.

I give herewith a figure, from a sketch by Mr. Holmes, showing that part of the wall which crosses the field near the two mounds at the north-eastern corner, including the part where the turnpike cuts through, marked *d* by Squier and Davis.

There is evidently a very great mistake in Dr. Locke's estimate as to the amount of earth in the embankment. If we take the length of the wall at four and one-half miles, the average height at ten feet, and the average base at thirty-five feet, the volume is about 154,000 cubic yards, or less than one-fourth the amount given by Dr. Locke, his estimate being 628,800 cubic yards. If there is any error in my figures, it is such as will overrun the true amount, rather than fall below it. CYRUS THOMAS.

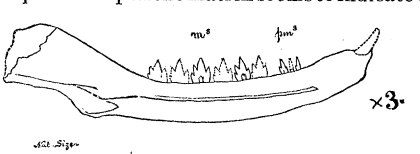
Milk-sickness.

In the milk-sickness district, referred to in my letter in *Science* of Nov. 26, the belief prevails, and assertions are made, that the disease disappears so soon as the land is cleared and cultivated, and some cite instances where denuding the land of its forest-growth has caused the disease to cease: so it may be set down as a fact, with considerable credibility, that, as a general rule, clearing and cultivating the land removes the cause of the disease, and any thing to the contrary will be an exception to the rule. I can refer definitely to only one of these exceptions, yet I have heard of a few others. Dr. W. S. Sims of this place tells of a farmer in Hamburg township, Jackson county, N.C., who has a half-acre lot enclosed with his dwelling. In this enclosure are fruit-trees and some of the native grasses, and the place has been under cultivation for twenty years or more, and yet whenever cattle are turned upon that lot during grazing season they are sure to die with the disease in a few days. From what I learned in Macon county, N.C., if they were not practising on my credulity, I am satisfied that that section will afford isolated exceptions to the general rule. In the lot above referred to, there is no water obtainable except from a large creek of swift-running water, that bounds one side of the lot. In that immediate vicinity there is no milk-sickness outside the enclosed half-acre. J. W. WALKER.

Pine Mountain, Ga., Dec. 2.

A new mammal from the American triassic.

In 1857, Professor Emmons (American geology, part vi. p. 93) described the left lower jaw of a small mammal from the Chatham coal-field in North Carolina, naming it Dromatherium sylvestre. His description was based upon one nearly perfect jaw and two fractured specimens. The first, or type specimen, is now in the geological museum of Williams college, and one of the others is in the collection of the Philadelphia academy. Through the kindness of Prof. Samuel F. Clarke, I have recently had an opportunity of comparing these rare specimens, and find that the Philadelphia fossil belongs to a genus quite distinct from Dromatherium, and unlike any thing hitherto described by Professors Owen or Marsh. The jaw is two thirds as long as that of Dromatherium, and much more slender. The symphysial and angular portions are broken away. A faint impression upon the matrix seems to indicate that



the coronoid process was low. The lower border has a downward process like that in Peramus. It is uncertain whether the inner or outer aspect is uppermost. The teeth are represented by two molars, probably the second and fourth, and two so-called premolars. The series as a whole occupy a greater linear space than those of Dromatherium. The premolars are simple, erect cusps, with a posterior basal cusp. The molars give the principal character to the jaw. Each has a central cone supporting two smaller cones on its anterior and posterior slopes. Hence, together with the slender character of the jaw, the fossil may be called Microconodon tenuirostris. In the drawing the dotted lines indicate the probable shape and position of the four missing molars. HENRY F. OSBORN.

Princeton, N.J., Dec. 1.