

A TRAVERTINE DEPOSIT IN TIPPECANOE COUNTY, INDIANA.

BY GUY WEST WILSON.

On the west bank of the Wabash River, near the Indiana Soldiers' Home, a steep bluff skirts the stream. A short distance below the "Tecumseh Trail" the slope has been greatly modified by the action of the seep water which trickles down the bank and makes a small marsh near the level of the river. This region of a few square rods extent is the lodging place of the leaves and twigs from the forest trees above, thus materially impeding the flow of the small amount of seep water, which is highly charged with carbonate of lime, causing it to make a deposit. As this mass has been undisturbed for a number of years a considerable amount of travertine has been formed. The surface, and consequently the more recent, portion of the mass is quite soft, crumbling easily in the hand, while the deeper and older portion is hard enough to resist a sharp blow with a small hammer.

An examination of fragments of this travertine shows that at the present time our own flora is being preserved in fossil form. The deposit of lime is rapid enough to preserve the leaves and twigs of neighboring trees and of the herbaceous plants of the immediate vicinity. The former are principally oaks and maples whose leaves can be recognized both by their form and by the arrangement of their principal veins. The latter are chiefly grasses and sedges, although fragments of a few other swamp plants also occur. In the more moist portions of the region a sterile moss grows in abundance and is quickly encrusted with lime, forming a large bulk of the travertine at this point, and resembling certain of the chain corals (*Halysitidac*). Some of the moss noticed were growing at the tip while completely encrusted at the base.

A large area of this portion of the formation is covered by a luxuriant growth of one of the thalose liverworts, *Conocephalus conicus* Dumort. As the substratum upon which this plant grows is less compact than in other portions of the deposit its fossil remains, which are the most interesting of all those which were noticed, are not so perfect as might have been the

case had the plant grown on a firmer substratum. Those found were merely fragments of the tips of the thallus and were thin casts without the markings which are characteristic of the upper surface, and without the rhizoids of the under surface. There was, indeed, nothing to distinguish the casts from those which might have been formed by any member of the group, except the fact that they agreed in size and form with the unmixed colony of this species which grows immediately above them.

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