

I submitted some of this matter to Mr. A. Henfrey, of London, for microscopic examination, and he informs me that it consists of pieces of small twigs of a coniferous tree of the Cypress family, probably the young shoots of the white cedar, *Thuja occidentalis*, still a native of North America, on which therefore we may conclude that this extinct Mastodon once fed.

Another specimen of the same quadruped, the most complete and probably the largest ever found, was exhumed in 1845 in the town of Newburg, New York, the length of the skeleton being 25 feet, and its height 12 feet. The anchylosing of the last two ribs on the right side afforded Dr. John C. Warren a true gauge for the space occupied by the intervertebrate substance, so as to enable him to form a correct estimate of the entire length. The tusks when discovered were 10 feet long, but a part only could be preserved. The large proportion of animal matter in the tusk, teeth, and bones of some of these fossil mammalia is truly astonishing. It amounts in some cases, as Dr. C. T. Jackson has ascertained by analysis, to 27 per cent., so that when all the earthy ingredients are removed by acids, the form of the bone remains as perfect, and the mass of animal matter is almost as firm, as in a recent bone subjected to similar treatment.

It would be rash, however to infer from such data that these quadrupeds were mired in *modern* times, unless we use that term strictly in a geological sense. I have shown that there is a fluviatile deposit in the valley of the Niagara, containing shells of the genera *Melania*, *Lymnea*, *Planorbis*, *Valvata*, *Cyclas*, *Unio*, *Helix*, &c., all of recent species, from which the bones of the great Mastodon have been taken in a very perfect state. Yet the whole excavation of the ravine, for many miles below the Falls, has been slowly effected since that fluviatile deposit was thrown down.

Whether or not, in assigning a period of more than 30,000 years for the recession of the Falls from Queenstown to their present site, I have over or under estimated the time required for that operation, no one can doubt that a vast number of centuries must have elapsed before so great a series of geographical changes were brought about as have occurred since the entombment of this elephantine quadruped. The freshwater gravel which incloses it is decidedly of much more modern origin than the drift or boulder clay of the same region.*

Other extinct animals accompany the *Mastodon giganteus* in the post-glacial deposits of the United States, among which the *Castoroides ohioensis*, Foster and Wyman, a huge rodent allied to the beaver, and the *Capybara* may be mentioned. But whether the "loess," and other freshwater and marine strata of the Southern States, in which skeletons of the same Mastodon are mingled with the bones of the Megatherium, Mylodon, and Megalonyx, were contemporaneous with the drift, or were of subsequent date, is a chronological question still open to discussion.

* See Travels in N. America, vol. i. chap. ii., and Principles of Geol. chap. xiv.