

must have lived on plants. Different kinds of the minerals containing the fossil infusoria have a preponderance of different species. The polishing slate or tripoli of Bilin, consists almost entirely of an aggregation of infusoria in layers, without any connecting medium; and of this stone about 50 cwt. are consumed annually at Berlin. The size of a single specimen of these infusoria is equal to 1-6th of the thickness of a human hair: as the stone is slaty, but without cavities, the animalcules lie closely compressed. About 23 millions of these creatures would make up a cubic line; and in a cubic inch there would be 41,000 millions, weighing 220 grains; the silicious shield of each animalcule weighs about 1-187 millionth part of a grain. The fossil animalcule of the iron ochre is only the 1-21st part of the thickness of a human hair; and one cubic inch of this ochre must contain *one billion* of the skeletons of living beings!

The *infusoria* rock of Bilin forms a bed fourteen feet thick, above a layer of clay which lies on chalk marl, beneath which are primary rocks. The upper beds of stone rest on a projected mass of basalt, which forms the Spitalberg; on the opposite side of which coarse limestone, with many crinoidea and other chalk fossils, lies on the gneiss. The harder masses, containing semi-opal, are situated in the upper part of the tripoli. A close microscopical analysis of the semi-opals from Bilin, which equal flint in hardness, shows that it consists partly of infusorial forms, held together by a small quantity of transparent silicious cement, and partly of single infusoria, but of a larger size, like insects in amber. From the power possessed by these animalcules, of secreting skeletons of iron, flint, and lime, the proverb, *Omnis calx e vermibus, omnis silex e vermibus, omne ferrum e vermibus*, seems likely to be verified in a very striking manner.*

Since the former edition of "The Wonders of Geology," a copy of Ehrenberg's splendid work on the infusoria† has been deposited by that illustrious naturalist in the library of the Royal Society. It is in one vol. folio, with

* Taylor's Scientific Memoirs, Vol. I. Part 3.

† Die Infusionsthierchen als Vollkommene organismen. Ein blick in das tiefere organische leben der Natur. Leipzig, 1838.