

nearly as many as the human beings on the globe. Formerly it was supposed that these animals were little more than simple particles of matter, endowed with vitality. But Ehrenberg has ascertained that they possess mouths, teeth, stomachs, muscles, nerves, glands, eyes, — and in short, all the important organs of the more perfect animals. Some species have from one hundred to two hundred sacs or stomachs connected with an intestinal canal; and the thickness of the membrane that lines these stomachs he estimates at one fifty millionth part of an inch.

The rate at which these animals multiply is prodigious. An individual of the *hydatina senta* had increased, in ten days, to a million; in eleven days, to four millions; and in twelve days, to sixteen millions. But this is moderate, compared with another species, which is capable of multiplying, in four days, to one hundred and seventy billions!

But perhaps the most remarkable facts remain yet to be mentioned. Minute as these animalcula are, they are covered with a case or shield, composed either of pure silex or oxide of iron; and when the animal dies, these shields are deposited at the bottom of the water. In this way, incredible though it may appear, have beds of silicious or ferruginous matter been accumulated, many feet thick, which has been sometimes changed in part into solid rock. The polishing slate, for instance, a kind of rotten stone near Bilin, in Germany, is entirely composed of these skeletons, 14 feet in thickness; and another bed of infusorial earth, near Lunenburg, is more than 28 feet thick. Yet it requires 41,000 millions of these skeletons to make a cubic inch, which weighs 220 grains. So that a single skeleton weighs the 187 millionth part of a grain. Many of the hardest minerals, such as flint and opal, have been found to be composed of the same re-