MINUTENESS OF ANIMALCULES—THEIR ORGANIZATION AND FUNCTIONS.

The globules of blood, small as they are, are exceeded in minuteness by innumerable creatures whose existence the microscope has disclosed, and whose entire bodies are inferior in magnitude to the globules of blood. Microscopic research has disclosed the existence of animals, a million of which do not exceed the bulk of a grain of sand, and yet each of these is composed of members as admirably suited to their mode of life as those of the largest species. Their motions display all the phenomena of vitality, sense, and instinct. In the liquids which they inhabit they are observed to move with the most surprising speed and agility; nor are their motions and actions blind and fortuitous, but evidently governed by choice and directed to an end. They use food and drink, by which they are nourished, and must therefore, be supplied with a digestive apparatus. They exhibit a muscular power far exceeding in strength and flexibility, relatively speaking, the larger species. They are susceptible of the same appetites, and obnoxious to the same passions as the superior animals, and though differing in degree, the satisfaction of these desires is attended with the same results as in our species. Spallanzani observes, that certain animalculæ devour others so voraciously that they fatten and become indolent and sluggish by over-feeding. After a meal of this kind, if they be confined in distilled water so as to be deprived of all food, their condition becomes reduced, they regain their spirit and activity, and once more amuse themselves in pursuit of the more minute animals which are supplied to them. These they swallow without depriving them of life, as by the aid of the microscope, the smaller, thus devoured, has been observed moving within the body of the greater. The microscopic researches of Ehrenberg have disclosed most surprising examples of the minuteness of which organized matter is susceptible. He has shown that many species of infusoria exist which are so small that millions of them collected into one mass would not exceed the bulk of a grain of sand, and a thousand might swim side by side through the eye of a needle. The shells of these creatures are found to exist fossilized in the strata of the earth in quantities so great as almost to exceed the limits of credibility. By microscopic measurement it has been ascertained that in the slate found at Bilin, in Bohemia, which consists almost entirely of these shells, a cubic inch contains forty-one thousand millions; and as a cubic inch weighs two hundred and twenty grains, it follows that one hundred and eighty score millions of these shells must go to a grain, each of which would consequently weigh the 187,000,000th part of a grain. All these phenomena lead to the conclusion that these creatures must be supplied with an organization corresponding in beauty with those of the larger species.—*Lardner's Hand-Book of Natural Philosophy.*

WONDERFUL AND TRUE.

With a very near approach to truth, the human family inhabiting the earth has been estimated at 700,000,000; the annual loss by death is 18,000,000. Now, the weight of the animal matter of this immense body cast into the grave is no less than 624,400 tons, and by its decomposition produces 9,000,000,000,000 cubic feet of gaseous matter. The vegetable productions of the earth clear away from the atmosphere the gases thus generated, decomposing and assimilating them for their own increase. This cycle of changes has been going on ever since man became an occupier of the earth. He feeds on the lower animals and on the seeds of plants, which in due time, become part of himself. The lower animals feed upon the herbs and grasses, which, in their turn, become the animal; then, by its death, again pass into the atmosphere, and are ready once more to be assimilated by plants, the earthy or bony substance alone remaining where it is deposited; and not even these, unless sufficiently deep in the soil, to be out of the absorbent reach of the roots of plants and trees. Nothing appears to me so cannabalising as to see a flock of sheep grazing in a country churchyard, knowing it to be an undeniable fact that the grass they eat has been nurtured by the gaseous emanations from my immediate predecessors; then following up the fact that this said grass is actually assimilated by the animal, and becomes mutton, whereof, I may, perhaps, dine next week. "Truth is stranger than fiction," and here is a truth that exemplifies the proverb. It is not at all difficult to prove that the elements of which the living bodies of the present generation are composed, have passed through millions of mutations, and formed parts of all kinds of animal and vegetable bodies, in accordance with the unerring law of nature and consequently we may say with truth that fractions of the elements of our ancestors form portions of ourselves. Some of the particles of Cicero's or Æsop's body, peradventure, wield this pen. Thus saith the chemist; now listen to the words of the poet, "To what base uses may we return, Horatio!" Why may not imagination trace the noble dust of Alexander till he find it stopping a bung-hole? To follow him thither with modesty enough, and likelihood to lead it, as thus:—Alexander died—Alexander was buried—Alexander returneth into dust—the dust is earth—of earth we make loam, and why of that loam, whereto he was converted, might they not stop a beer barrel?

"Imperial Cæsar, dead, and turned to clay,
Might stop a hole to keep the wind away;
Oh, that that earth, which kept the world in awe,
Should patch a wall to expel the winter's flaw!"

SIR ROBERT GILLESPIE'S HORSE.—The General possessed a horse which has become almost historical. This was a favorite black charger, bred at the Cape of Good Hope and carried with him to India. When the noble soldier fell at the storming of Kalunga, this charger was put up for sale, and after great competition, was knocked down to the privates of the 8th Dragoons, who actually contributed their prize money to the amount of £500, to retain this memorial of their beloved commander. This beautiful charger was always led at the head of the regiment on a march, and at the station of Cawnpore, took his ancient post at the colour stand, where the salute of passing squadrons was given at drill, and on reviews. When the regiment was ordered home, the funds of the privates running low, he was bought by a gentleman, who provided funds and a padlock for him, where he might pass the remainder of his days in comfort; but when the corps had departed, and the sound of the trumpet was heard no more, the gallant steed pined away, refused his food, and on the first opportunity, being led out for exercise, he broke from his groom, galloped to his ancient station on parade, neighed loudly again and again, and there, on the spot where he had so often borne his master, he dropped down and died.—*Bentley's Miscellany.*

TRAVERSING THE EARTH.—The circumference of the earth measures 25,000 miles: if it were begirt with an iron railway, a train carrying 240 passengers would be drawn round it by the combustion of thirty tons of coke, and the circuit would be accomplished in five weeks.—*Lardner on the Steam Engine.*