

plan. The nutritious substances baffle calculation, and embrace the utmost diversity of kinds, adapted to every variety of climate, circumstance or habit. While the living organism, on the one hand, can build up a solid frame from liquid materials, on the other, it can pour iron through its veins, and reduce the hardest textures into blood. There is a squirrel in Africa that feeds on elephant's tusks; and the mark of his teeth is a welcome sight to the ivory-collector. The cunning creature selects—for there is scope for epicurism even in this hard fare—the tusks which are richest in animal matter, and which are therefore, the most valuable. But under what diversity of form it may be presented, food is in its essential nature always the same. To give us active bodies, it must be an active substance; that is, it must consist of elements which tend to change through the operation of their chemical affinities. To furnish food for animal life is in one aspect a simple problem, though wrought out in infinite complexity. It is to provide matter in unstable equilibrium, as it is said, or constantly tend to assume new forms, like waves raised in water by the wind. Yet it must not be utterly incapable of retaining its existing form, but should be delicately balanced, as it were, so that it will admit of being transferred and moulded in various way, unaltered, and yet will undergo change immediately when certain conditions are fulfilled. Given a substance thus composed, and there is food. For we must not limit our ideas here to that which happens to be food for us, or for the creatures likest to ourselves. Food is found by some creature or other in circumstances the most widely diverse. There is hardly a poison known that does not afford sustenance to some form of life. Corrosive minerals in solution afford nutriment to peculiar kinds of mold or cell plants. Even the gastric juice—the ‘universal solvent’—will sustain, without losing its properties, special fungus. The fable of Mithridates, who accustomed himself to eat all deadly things with impunity, is more than realized in nature. Life in its widest sense almost refuses to recognize a poison. What is death to one organism supports another. Thus many diseases—an ever-increasing number of them indeed—are found to consist in the development of parasites; a new and hostile life invading the old, and flourishing in its destruction. And some of the most virulent vegetable poisons differ but slightly in composition from perfectly wholesome substances.—*Cornhill Magazine*.

A MICROSCOPIC AGE.—A correspondent of *St. James' Magazine* says:—“If I were to point out what is the most striking characteristic of the present century, I do not think that I should dwell upon it as a scientific age, or as a literary age, or as a missionary age (by all which epithets it has been described), but as a microscopic age. Nothing appears to be so

wonderful as the changes which has occurred in the common doctrine of magnitudes. Little things have become great and great things have become small. As the modern science of chemistry could not spring into existence until an accurate balance was invited, so the modern science of physiology and the following theory of mortal life, as we now comprehend it, has grown out of the microscope. This is a literal fact, and it is symbolic of a much wider one,—that all modern research has become microscopic. Painting has become microscopic, and gives us details of mosses and lichens, which a half century ago would be laughed at as a useless waste of time. History has become microscopic, and enlivens the descriptions of courts and senates with a minute account of carpet and cakes, dresses, dinners, and other trivialities. Poetry has become microscopic and tells us that the meanest flower that breathes can give to the hard thoughts that do lie too deep for tears.”

A NEW USE FOR APPLES.—A country paper says—“We are threatened with a cider famine, not from failure of the apples, although a partial crop, but because they are likely to be applied to a more profitable purpose (so far as the growers are concerned) than in making a household beverage. It seems that the Manchester calico dyers and printers have discovered that apple juices supply a desideratum long wanted in making fast colours for their printed cottons, and numbers of them have been into Devonshire and the lower parts of Somersetshire, buying up all the apples they can get, and giving such a price for them as in the dearest years hitherto known has not been offered. We know of one farmer in Devonshire who has a large orchard, for the produce of which he never before received more than £250, and yet he has sold it this year to a Manchester man for £360. There can be no doubt that the discovery will create quite a revolution in the apple trade.”

LIGHT IN THE SEA.—A paper on the nature of the Deep Sea Bed, by Dr. Wallich, was lately read at a meeting of the Royal Institution of Great Britain. The following passage occurred in it:—“Light, or rather the absence of it, can hardly be said to determine, in any important degree, the distribution and limitation of the lower forms of animal life. Light is not essential even in the case of some of the lower orders. A large class of creatures, both terrestrial and marine, possess no true organs of vision, although there is good reason for believing that they do possess some special sensory apparatus susceptible to the influence of light; whilst certain creatures, whose habitation is in subterranean caves or lakes, as in the Magdalena near Adelaideburg, and the Great Mammoth caves in Kentucky, either possess them in so rudimentary a state, as to prove clearly that the absence or imperfect development of the sense may be compensated for by the higher development of other