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ON THE STUDY OF NATURE.

(By Dr. Carey.)

THE great Author of nature has filled the world with so great a variety of objects that something presents itself, at every step, to the view of the most incurious observer, and either from its utility, its beauty, its singularity, or some other obvious property, forces itself upon his notice. Where, however, a superficial observer sees only the most prominent beauties or singularities of an object, or only recognizes it from the virtues popularly attributed to it, the philosopher examines it with greater minuteness, reduces it to its proper class, and assigns it a place in the general arrangement of organized bodies. If it be an animal, he examines its form, makes himself acquainted with the different forms or colours it assumes in the different stages of its growth, and studies its habits and peculiarities. Whether it belong to animated nature, or to brute matter, he inquires whether it be useful or injurious, and in what respects. If it have useful properties, he inquires how they may be more extensively made known, or placed more universally within the reach of man; if it be injurious, he inquires how its pernicious qualities may be prevented from doing harm, or how they may, if possible, be employed to the advantage of man, or, at least, he suggests hints which others may possibly improve to that end. It is thus that the Elephant and Buffalo, so mischievous in a state of nature, have been made highly useful in carrying heavy burdens, or in ploughing the soil; that the corrosive quality of the blistering Meloe and of some other insects has been made subservient to the restoration of health; and that the most poisonous plants or minerals have been ranked among the most valuable articles of the materia medica.

The inanimate parts of creation furnish us with numerous sub-

stances which are of great value to man. The vegetable kingdom presents us with different kinds of timber, some of them valuable for their durableness, others adapted for furniture and other works of an ornamental nature, while others, though only calculated to serve for the most common purposes, are no less recommended by their cheapness and abundance, than by their fitness for those useful and necessary purposes which every day occur. It also furnishes us with grain and fruits in rich variety, with esculent herbs, with active medicines, with fibres for cloth or cordage, with colouring drugs, and with a great number of other substances, useful in domestic economy. The great variety of ornamental trees and plants delight us with their beauty and fragrance, or afford us an agreeable shade; so that from the lofty timber tree to the humble argil, or the half concealed mushroom, every thing contributes to the benefit of man, or may by industry be made to do so.

The various productions of the mineral and fossil kingdom have, hitherto, returned to man a bountiful reward for his researches into their nature and properties; some of the most valuable medicines of the physician, and some of the most potent agents employed in the arts are taken from the bowels of the earth. Diligent research will, doubtless, discover many more useful substances, and the labours of chemists, and other experimental philosophers, will prove that the substances already known, possess properties not yet thought of by those who are best acquainted with the secrets of nature.

Animals being of more value in the scale of being than any of the parts of inanimate matter, every thing relating to them is of the highest importance. Many of them have been domesticated by men, and form a constituent part of his riches; among these the bulky elephant, and the camel, the stately horse, and the unjustly despised ass, the ox, the buffalo, and the rein-deer, are used to carry burdens, or to draw the plough or the wheeled carriage; while at the same time, the three last furnish his table with butter, cheese, and milk, and with the

sheep and goat contribute to the support and comfort of human life. The Lama and Paca of South America, the Yak of Tartary, the swine, in every country, and various other animals in different parts of the world, may be added to the list, whilst the faithful dog and the domestic cat naturally attach themselves to the habitations of man, and guard his property, destroy noxious animals, and seem obsequiously to offer him all the services in their power. Our list of domestic birds is far from small, and might, doubtless, be considerably enlarged; that division of the feathered race called by naturalists Gallinæ, furnishes us with several species which are now become the property of man; to which may be added several species of ducks, and the pigeon. Every species of the order Gallinæ, of the genus Anas, and Columba, is accounted a wholesome article of food. Nor, while the hives of bees adorn the cottage garden of the peasant, and the silkworm prospers under the management of the industrious villager, can we exclude the insect tribes from a place among the riches of mankind.

Wild animals, too, contribute much towards supplying the wants of mankind; great numbers of the labouring poor gain a livelihood by hunting or fishing, and by their industry we are furnished with the flesh, the skins, the fat, and the horns of those creatures which acknowledge no subjection to us: by this means the families of the poor are supported, and the table of the rich spread with luxuries; while a number of useful articles are procured which are of great use in manufactories and the arts. These animals which are noxious in one respect, are often of great value in others, and even those which do nothing but mischief, should be well known, that we may guard against the evils to be dreaded from them, or provide adequate remedies from them.

The application of the various productions of the earth, and of the inhabitants of its forests and deserts, to useful purposes must be gradual, and will, in a great measure, depend upon the experiments which may be made by manufacturers, che-

mists, physicians, and others who apply themselves to such pursuits; yet the opinions recorded by writers on the science of medicine, and even some of those current amongst the common people, respecting the virtues of vegetables and other articles of *the materia medica* may have some foundation in truth, and afford useful hints to men of science, and therefore should have the advantage of repeated and fair trial; some of them may be found useful in chemistry and the arts, and others in agriculture or domestic economy. And even should the opinions entertained concerning them be mere prejudices, and they prove of no utility, yet the history of human prejudices may be made subservient to the general good of mankind.

The works of God are confessedly calculated to raise the mind to sublime meditation upon and admiration of their Maker. A superficial observer of nature or art will feel little interested in either, but the more closely they are investigated the more interesting they appear; and the works of creation, especially, will convince us that every part of them is the work of that Divine Being who "spake and it was done, who commanded and it stood fast;" and the admirable adaptation of every animal and vegetable to the station it is intended to occupy, proves incontestibly the wisdom and goodness of the universal Parent of all creatures, who openeth his hand and filleth every living creature with plenteousness.

SCIENCE IN AMERICA.—There is a class of visitors to India, who appear to deserve a greater share of attention than they generally receive: we mean, the Surgeons of American ships. These young gentlemen undertake their voyage, very frequently, for the sole purpose of prosecuting the study of Nature, and in some cases which we have known they have displayed a noble enthusiasm, and reaped a considerable harvest. We have been favoured with the sight of a letter from one of them, after his return to America, to a friend in Calcutta, and shall be happy if the publication of a few paragraphs from