

this purpose they are endowed with the power of transporting themselves from one region to another widely distant.

When the purpose for the attainment of which they were conveyed to one country has been fulfilled, they instinctively seek another, regardless of all opposing difficulties. The chief object accomplished by the migration of birds appears to be the destruction of innumerable myriads of insects and worms of all sorts, which, but for this check to their multiplication, would increase to so awful an extent as to threaten the earth with famine and desolation. He who cannot perceive the hand of God in this wise and merciful arrangement must be blind indeed. We need no longer marvel, then, to see the little shadow or the house-martin return to our land with such faithful exactness; and not only to the same country, but to the same place—the same window or the same hole; for we know that the power by which they are guided is given to them by their Creator, and that it is his hand which directs their movements.

It is well known that birds kept in a cage, though fed with an abundance of food, become restless at the period in which they would, if at liberty, migrate—an indication that the propensity to transport their bodies to some other clime is not attributable to external causes alone—such as food, temperature, and the like; but is an innate feeling, given them by their Maker.

The Camel.*

Of all animals, the camel perhaps is most exactly adapted both to those peculiar regions of the earth in which it is principally, if not exclusively, found; and to those purposes for which it is usually employed by men, to whose wants indeed it is so completely accommodated, and apparently so incapable of existing without his superintendence, that while, on the one hand, we find the camel described in the earliest records of history, and in every subsequent period, as in a state of subjugation to man, and employed for precisely the same purposes as at the present day; on the other hand, it does not appear that the species has ever existed in a wild or independent state. With scarcely any natural means of defence, and nearly useless in the scheme of creation (as far as we can judge,) unless as the slave of man, it forms a remarkable parallel to the sheep, the ox, and other of the ruminating species, which are also rarely, if ever, found but under the protection of man, and to that protection alone are indebted, indeed, for their existence as a distinct species. Let us compare, then, the form and structure, and moral qualities of the camel, with the local character of the regions in which it is principally found; and with the nature of the services exacted of it by man. The sandy deserts of Arabia are the classical country of the camel; but it is also extensively employed in various other parts of Asia, and in the north of Africa; and the constant communication that exists between the tribes which border on the intervening sea of sand could only be maintained by an animal possessing such qualities as characterize the camel—"the ship of the desert," as it has emphatically been called. Laden with the various kinds of merchandise which are the object of commerce in that region of the world, and of which a part often passes from the most easterly countries of Asia to the

extreme limits of western Europe, and from thence even across the Atlantic to America, this extraordinary animal pursues its steady course over burning sands during many successive weeks. And not only is it satisfied with the scanty herbage which it gathers by the way, but often passes many days without meeting with a single spring of water in which to slake its thirst. In explanation of its fitness, as a beast of burden, for such desert tracts of sand, its feet and its stomach are the points in its structure which are principally calculated to arrest our attention: and its feet are not less remarkably accommodated to the road over which it travels, than is the structure of its stomach to the drought of the region through which that road passes. The foot of the camel, in fact, is so formed, that the camel would be incapable of travelling with any ease or steadiness over either a rough or a stony surface; and equally incapable is it of travelling for any long continuance over moist ground, in consequence of the inflammation produced in its limbs from the effect of moisture. It is observed by Cuvier, that these circumstances in its physical history, and not the incapability of bearing a colder temperature, account for the fact, that while the sheep, the ox, the dog, the horse, and some other species, have accompanied the migrations of man from his aboriginal seat in central Asia to every habitable part of the globe, the camel still adheres to the desert. And now observe how its interior structure meets the difficulty of a region where water is rarely found. As in the case of all other animals which ruminate or chew the cud, the stomach of the camel consists of several compartments, of which one is divided into numerous distinct cells, capable of collectively containing such a quantity of water as is sufficient for the ordinary consumption of the animal during many days. And, as opportunities occur, the camel instinctively replenishes this reservoir; and is thus enabled to sustain a degree of external drought, which would be destructive to all other animals but such as have a similar structure: nor is any other animal of the old world known to possess this peculiar structure. But if we pass to the inhabited regions of the Andes in the new world, we there meet with several species of animals, as the lama, the vicugna, and the alpaca, which, though much smaller than the camel, correspond generally in their anatomy with that animal, and particularly with reference to the structure of the stomach: they resemble also the camel in docility; and, to complete the parallel, they were employed by the aboriginal inhabitants in the new world for the same purposes as the camel in the old.

Of the two species of Camel, the Bactrian and Arabian the latter is that with which we are best acquainted; and though there is reason to believe, that whatever is said of the qualities of the one might with truth be affirmed of the other also, on the present occasion whatever is said is referable to the Arabian species.* The camel, then, not only consumes less food than the horse, but can sustain more fatigue. A large camel is

capable of carrying from seven to twelve hundred weight, and travelling with that weight on its back, at the rate of above ten leagues in each day. The small courier-camel, carrying no weight, will travel thirty leagues in each day, provided the ground be dry and level. Individuals of each variety will subsist for eight or ten successive days on dry thorny plants; but after this period require more nutritious food, which is usually supplied in form of dates and various artificial preparations; though, if not so supplied, the camel will patiently continue its course, till nearly the whole of the fat of which the boss on its back consists is absorbed; whereby that protuberance becomes, as it were, obliterated. The camel is equally patient of thirst as of hunger; and this happens, no doubt, in consequence of the supply of fluid which it is capable of obtaining from the peculiar reservoir contained in its stomach. It possesses, moreover, a power and delicacy in the sense of smell, (to that sense at least such a power is most naturally referable,) by which, after having thirsted seven or eight days, it perceives the existence of water at a very considerable distance; and it manifests this power by running directly to the point where the water exists. It is obvious that this faculty is exerted as much to the benefit of their drivers, and the whole suite of the caravan as of the camels themselves. Such are some of the leading advantages derived to man from the physical structure and powers of this animal. Nor are those advantages of slight moment which are derived from its docile and patient disposition. It is no slight advantage, for instance, considering the great height of the animal, which usually exceeds six or seven feet, that the camel is easily taught to bend down its body on its limbs, in order to be laden; and, indeed, if the weight to be placed on its back be previously so distributed as to be balanced on an intervening yoke of a convenient form, it will spontaneously direct its neck under the yoke, and afterwards transfer the weight to its back. But it would be found, upon pursuing the history of the camel, that while under the point of view which has been just considered, this animal contributes more largely to the advantages of mankind than any other species of the ruminating order, it is scarcely inferior to any one of those species with respect to other advantages on account of which they are principally valuable. Thus the Arab obtains from the camel not only milk, and cheese, and butter, but he ordinarily also eats its flesh, and fabricates its hair into clothing of various kinds. The very refuse indeed of the digested food of the animal is the principal fuel of the desert; and from the smoke of this fuel is obtained the well-known substance called *sal ammoniac*, which is very extensively employed in the arts; and of which, indeed, formerly, the greater part met with in commerce was obtained from this source alone, as may be implied from its very name.*

INTERESTING EXTRACTS.

Sabbath Dress and Appearance.

As the Christian religion is cheerful, and peaceful, and pure, so should everything connected with it be of the same character. I note

* The Bactrian species, which has two bosses on its back, is more peculiar to Tartary and northern Asia. The Arabian, which has only one boss, is not confined to the country from which it is named but is the same species with that which prevails in northern Africa. As in the case of all domesticated animals, the varieties of these two species are numerous. And it is a variety of the Arabian species, of a small height, to which the ancients gave the name of *brochodæra*, from its employment as a courier; but in the magnificent work of St. Hilaire and Cuvier (*Hist. Nat. des Mammifères*), the term *brochodæra* is adopted, to a specific sense, for all the varieties of the Arabian camel.

* *Ammoniac*, an ancient name of that part of the African desert situate to the west of Egypt, supplied formerly much of the *sal ammoniac* of commerce.

* From Dr. Kidd's *Bridge-water Treatise*.