

It would not be wonder had been still more augmented, had the specimen been taken from among those little curiosities of the Western Hemisphere, called Humming-birds; with the addition, that its beak is pointed like a needle, its claws not thicker than a common pin; that its beak is about half an inch deep, its egg about the size of a small pea; and that, nevertheless, this diminutive bird is adorned with a plumage of the richest hues, and covered with a down that makes it resemble a velvet flower: But indeed, the structure of the smallest insect, or the minutest animal, in the creation of God, carries along with it the most indisputable evidence of Divine originality; namely, that it is beyond the possibility of art to imitate, or the utmost stretch of human ingenuity to comprehend!

MOTION is one distinguishing characteristic of an Animal from the Vegetable Kingdom of nature, and this peculiarity will be found to be absolutely necessary; for if the food or nutriment of animals is not brought to them as to plants, by means of roots or other conductors, they must needs go in search of it; and how wisely are they furnished with instruments for the purpose, some in the form of limbs, some of wings, some of scales, and some of the reptile tribe are enabled to move by the disposition of the muscles and veins of their bodies; but what would this power of motion and means of performing it have signified, had these creatures been left to grope in the dark, without ability to distinguish the good from the bad;

"To shun their poison, and to choose their food." Might they not as well have remained perpetually at the spot which gave them birth, as to have ranged only to get their frames shattered by every intervening obstacle; or the vital spark extinguished by mistaking the baneful plant for the wholesome herb. To remedy such evils, however, Nature, or rather the God of Nature, or in this sense I wish always to be understood), has not only provided them with senses, but has taken the utmost precaution to guard them from external injury these wonderful pieces of exquisite skill, as well as that seat of all sensation, whence the ramifications of the nerves take their rise.

Without breathing, to put the wheel in motion of the cistern, no animal could exist, and how admirably situated and guarded also are the organs of respiration, and that mysterious movement that faints not, neither is weary," but by night and by day, asleep or awake, in motion or at rest, pulsations, with greater regularity than a watch, in the breast of some animals for 60, in some 70, and in others upwards of 100 years. I might also notice the admirable structure and wise disposition of the other organs in the animal country, but this would be inconsistent with my present limits and design; must, however, observe on the whole, that each will be found most conveniently situated to its respective uses, and formed in the wisest manner for its various purposes;—that while nothing is wanting to render the structure complete, there is nothing superfluous or made in vain. The feeler's of the Butterfly are no less essential to her well-being, than the prospect of the Elephant; and the leg of the Fly can no more say to its wing, than the eye of the Human Body to its hand, "I have no need of thee." But if the right consideration of the structure of animals as well as the wise provision made

for their lodgment and subsistence, must convince the most sceptical that all are the doings of a Being infinite in power, and fearful in working, and inspire the religious philosopher with such sentiments as DAVID expressed when contemplating the formation of the human frame, must we not also adopt such language as he made use of on another occasion, and say, when reflecting on the manner in which these creatures are reproduced, and the wonders of that procreative power by which a continued succession is kept up, *Thine eyes saw them when they were made in secret, and curiously wrought in the lower places of the earth.* Whether they come into the world in the shape of animals completely formed or through the medium of eggs, still the business of generation must remain a mystery, and be reckoned amongst the number of the dark things of God!

The provision for keeping the number of creatures within due limits, is no less remarkable than that for bringing them into being.—The most formidable monsters are thinly scattered, or confined to particular spots. Long lived animals are observed to have few young at a time, while those of the greatest utility, or such as are used for animal food, abound in every climate, and the short in duration are uncommonly prolific!

The instinct displayed by many of the irrational creation for the preservation of their young, is also astonishing, and in some instances has been referred to as example of the strongest proofs of affection. "How often," says our Saviour, "would I have gathered the children together as a hen gathereth her chickens under her wings, and ye would not!"—but there are some of this order who stand not long in need of parental protection and instruction, for the newly calved Hippopotamus on the death of his dam, will, at the sight of danger, betake himself to a place of safety in his natural element at the bottom of the river. This might bring me to speak more fully of those particular instincts by which animals are distinguished; but as I shall have occasion to notice a few of these in considering some peculiarities in the different orders as I go along I shall here drop my general survey, and proceed in next number to that of Quadrupeds.

POETRY.

From the Cheap Magazine.
THE DISTINCTION OF AGES.

The seven first years of life, (man's break of day)
Gleams of short sense, a dawn of thought display;
When fourteen springs have bloom'd his downy cheek,
His soft and blushful meanings learn to speak:
From twenty-one proud manhood takes its date,
Yet is not strength complete till twenty-eight;
Thence to his five-and-thirtieth, life's gay fire
Sparkles, burns loud, and flames in fierce desire;
At forty-two his eyes grave wisdom wear,
And the dark future dims him o'er with care;
On to the nine-and-forty, coils increase,
And busy hopes and fears disturb his peace;
At fifty-six, cool reason reigns entire,
Then life burns steady, and with temp'rate fire;
But sixty-three unbinds the body's strength,
Ere th' unwearied mind has run her length;
And when from seven'y Age surveys her last,
Tir'd she stops short—and wishes all were past.

Hall.

THE ACCOMPLISHED YOUTH.

EXPERIENCE TO BE ANTICIPATED BY REFLECTION.

It is to be observed, that the young and the ignorant are always the most violent in pursuit. The knowledge which is forced upon them by longer acquaintance with the world, moderates their impetuosity. Study, then, to anticipate, by reflection, that knowledge which experience often purchases at too dear a price. Inure yourselves to frequent consideration of the emptiness of those pleasures which excite so much strife and commotion among mankind. Think how much more of the true enjoyment is lost by the violence of passion, than by the want of those things which give occasion to that passion. Persuade yourselves that the favour of God and the possession of virtue, form the chief happiness of the rational nature. Let a contented mind and a peaceful life, hold the next place in your estimation. These are the conclusions which the wise and thinking part of mankind have always formed. To these conclusions, after having run the race of passion, you will probably come at the last. By forming them betimes, you will make a reasonable escape from that tempestuous region, through which none can pass without suffering misery, contracting guilt, and undergoing severe remorse.

Blair.

DAWN OF GENIUS.

FERGUSON—This eminent practical philosopher and astronomer, was born in a humble station at Keith, a small village in Scotland, in the year 1710. He learned to read by merely listening to the instructions which his father communicated to an elder brother. He was afterwards sent for about three months to the grammar school at Keith; and this was all the scholastic education he ever received. His taste for mechanics appeared when he was only about seven or eight years of age; by means of a turning lathe and a knife, he constructed machines, that served to illustrate the properties of the lever, the wheel, and the axle. Of these machines, and the mode of their application, he made rough drawings with a pen, and wrote a brief description of them. Unable to subsist without some employment, he was placed with a neighbouring farmer, and occupied for some years in the care of his sheep. In this situation he commenced the study of astronomy, devoting a great part of the night to the contemplation of the heavens, while he amused himself in the day time with making models of spinning wheels, and other machines which he had an opportunity of observing. By another farmer, in whose service he was afterwards engaged, he was much encouraged in his astronomical studies, and enabled by the assistance that was afforded him in his necessary labour, to reserve a part of the day for making fair copies of the observations which he roughly sketched out in the night. In making these observations, he lay down on his back, with a blanket about him, and by means of a thread strung with small beads, and stretched at arm's length between his eye and the stars, he marked their positions and distances. The master who thus kindly favoured his search after knowledge, recommended him to some neighbouring gentlemen, one of whom took him into his house, where he was instructed by the butler in decimal arithmetic, algebra, and the elements of geometry. Being afterwards deprived of the assistance of his preceptor, he returned to his father's house, and availing himself of the information derived from Gordon's Geographical Grammar, he constructed a globe of wood, covered it with paper, and delineated upon it a Map of the World; he also added the meridian ring, and horizon, which he graduated; and by means of this instrument, which was the first he had ever seen, he came to solve all the problems in Gordon.