

phenomena are presented which are very similar to those suggestions and promptings of Instinct which guide animals in the choice of the means which serve for the support and preservation of their own lives, for the welfare of their young, and for the weal of the great whole, of which every individual animal is a part.

Besides, the animal cannot be guided in its action, like man, by intelligent consideration, and as little by experience, because it plays the part which Instinct assigns it, immediately upon its entrance into life with perfect promptitude. A chicken, which had been hatched, not by a mother, but in a little artificial brooding-oven, deserted, just as it had broken out from the shell of the egg, a spider, which it sprang at and seized as skilfully as if it had been long practised in the art of catching insects. When the young of the sea-tortoise in the bed of sand, which is their birth-place, have crawled out of the egg, they hasten immediately in a straight line to the sea. You may turn them from this course any way you please, you may obstruct their way with stones and sand-hills, which cut off their path, still they will always turn straight towards the sea. On the other hand, the young of the land-crab, which first come out of the egg under water, soon after their birth make for the land, and there seek out for themselves the situation best adapted to their subsistence. Scarcely has the ant crawled out of its chrysalis, or pupa state, (commonly called the antegg) when, if it is of the sex of the workers, it immediately joins its elder associates in the business of gathering and carrying food for the helpless little larvae of the community, and assists with all diligence in the work of building, as well as in transferring hither and thither the pupæ and the eggs. And it is not, as might be thought, only a blind imitation of the activity of the rest, which leads the novice on the path of his natural destination, for which the new-born ant is not of the sex of the workers, but is a male, or one of the more perfect females, then it does not permit itself to be hurried away by the busy stream, it goes directly the way of its own calling, through the troops of the rest, out into the open space, where it rises into the air on the tender wings which are furnished to the males and the perfect females for the purposes of swarming.

That it is not the imitation of the instinctive actions of others of the same species, which directs each individual to its own mode of proceeding, is evident in every way. Nightingales and thrushes, which have been taken from the nest young, and reared far from their species, when they are let loose in the spring, build just such nests for their young as other birds of the same kinds. A beaver, which had been taken from its parents before its eyes were open, and which had been supported by a woman's milk, until it was large enough to take the usual food of its race, arranged the broken twigs, from which it had eaten the bark, in a corner of its cage, one over the other, and when some earth was given it, it formed it with its fore-feet into little balls, laid these upon one another, pressed them together with its nose, and inserted into them a piece of wood. In this instance, the art of building, observable in other beavers, manifested itself independently of any possible influence of imitation.

It is their inborn instinct which, when animals are transported to countries and amidst vegetables and other animals entirely new, informs them what may be conducive, and what injurious to their subsistence. Horses, carried from Europe to Southern Africa, that had never been near a living lion, trembled for terror in every limb, when they for the first time heard the lion's roar. Ferrets, which have been born and reared under the care of man, and have never seen a poisonous viper, attack a reptile of this class with great caution, aiming first of all to crush its head, while they have often won an easy victory over snakes not poisonous, which they seize, without a moment's hesitation, by any part of the body. Every animal, in conflict with another, instantly knows the weakest and most vulnerable side of its opponent, and also, on the other hand, how to guard that part of its own body which is most liable to injury. Thus the tiger, doing battle with the elephant, springs first at the trunk of his foe, which the elephant guards against attack with the greatest care, in order, at the right moment to use it with effect: the wild horse, assailed by the beast of prey endeavours to guard his head and breast while he meets the enemy all the more vigorously with the hoofs of his hinder feet. The American domestic swine takes care to present his bristly neck to the bite of the springing reptile, in fighting with the rattle-snake, but at the same time to guard his snout, and at the right moment to trample upon the head of his dangerous enemy.

Even in a country new to the animal and to its progenitors, the sheep and the goat know how to find wholesome fodder, and to avoid that which is hurtful. The ape digs for roots, of which it has never eaten, guided by the scent, and never lets itself be allured by the innocent looks of what is poisonous. Certain cows of

European breed, which an emigrant had taken with him to his new possessions in America, were, through the unexpected duration of the first winter, in great danger of starvation, and reduced to living skeletons. It was remarked that, as often as the barn door was opened, they all turned their heads out to a particular quarter, and, with loud lowings, endeavoured to make their longings to be understood. At last they were let loose and permitted to go out into the open fields, although not a single green thing was visible above the surface of the snow. The hungry animals instantly ran with the greatest haste down into a valley, where, in swampy ground, on the borders of a stream, stood a plant which none of the colonists had distinguished as calculated for fodder, for it exactly resembled our ordinary shavegrass or horsetail. But the kine, guided more surely by their instinct than man by his comparing and calculating reason, eat eagerly of this plant, and, by the continued use of the same, were soon restored to flesh and strength.

Mightier still, and in much more striking ways does instinct show itself in connection with parental love. When excited in the defence of their young, animals disregard every danger which threatens their own lives; maternal tenderness leads even the clumsy whale always into the vicinity of the spot where she has been robbed of her young, and where she is then easily caught, and the same maternal love, faithful unto death, is observed in the sea-otter and several others of the mammalia of the waters.

When in the case of the prolific female ant, the time has come in which its eggs must be laid, then the instinct, which a few days before, led it out into the free air to dance merrily in the warm sunshine, takes a quite different and opposite direction. The troops of dancers with their partners, that a little while previously were seen, on many a plain near the seacoast ascending like clouds or pillars of smoke, now sink down to the earth, the males die, or become with many thousands of the troop, a prey to insect-devouring animals, but the surviving females, as if they were ashamed of their mad merry-makings, crawl away to some ant hive of their own species. Whether it be the one in which they were born and brought up, or another, they now bear, in the hope of a new race which they bring with them, the insignia of a majesty and royal authority, revered by all beings of their kind, and received with loving homage; every where, in such a place, they are sure of a cordial reception and liberal support. But the tender, finelywoven wings, in the possession of which a little while before, the highest joy of life consisted, have now become, at the present stage in the little creatures destination, instead of a delight, a burthen. The monitions of instinct teach her this, and by her own efforts and limbs she tears the brilliant ornament from her back, and creeps wingless, in among the class of unwinged workers, never again to leave them in the hive.—*To be continued.*

## FINE ARTS.

### MUSIC.

What is so calculated to refine, purify, and exalt the feelings, as music, that heavenborn gift, bestowed by God upon man to enable him to express his love and gratitude to the Giver, in a manner which must be most pleasing to him?

Oh! who that is blessed with a talent for inspiring sweet strains of melody, would neglect to cultivate it, when he thinks that he could thereby contribute to the happiness of his fellow-creatures, and bring upon himself an approving smile from heaven?

Who has not felt the sweet etherealizing charms of melody, and been filled with better, holier thoughts, whilst listening to some gentle, plaintive strain of music?

Do we not read of the passion-stilling power of music, from the earliest annals of time? And from the period when the harp of the sweet shepherd-minstrel of Israel drove the evil spirit from the bosom of King Saul till now, has music exerted its magic influence in calming the fury of the wild beasts of the forest, as well as in stilling the passions of men. How oft has a wretch who was treading near the awful verge of ruin, been drawn from his dangerous position, and lured to retrace his steps to forsaken blessings, by hearing some wellremembered air, which had been sung for him in other days, by the loved and now lost or forsaken!

Music is sweet at all hours, but at no other time does it exert such a soothing charm, as when the noisy and busy cares of the day are ended, and the mind and heart seek for calm and refreshing enjoyments. 'Tis then that the ear can best receive sweet sounds, while the soul bathes itself in a world of harmony.

And how can we describe those sensations which come upon us when awakened from slumbers by a midnight-serenade? As the fairy-like music steals over the senses, does it not seem like our