

into His works, the more insuperable become the difficulties in conceiving or understanding them! It will lessen our wonder at the various transformations of insects some, by considering that by a process of nature, the same body we occupied seven years ago, is since then entirely renovated. The body we occupy now, in seven years from this time, will have entirely changed its materials, and new flesh and bones will be substituted in its place; although the operation of nature is so gradual that we are unconscious of it. The Pythagorean doctrine of the Metempsychosis or transmigration of souls into other bodies, would bear some resemblance to the transformation of insects. Pythagoras strenuously supported the belief, that he was the same person with Euphorbus, one of the Trojan warriors; and said that he was conscious of having done, when that person things imputed to him.

Thus butterflies, although they chiefly delight in skimming the flowery meadow, or sporting among the scented blossoms, still retain a consciousness apparently, of a former state of being, as we frequently see them sitting on mud, and sometimes on putrid animal or vegetable matter.

BRITON.

ESSAYS.

"The soft amusement of the vacant mind."

FOR THE CANADIAN CASKET.
INSTINCT IN ANIMALS.

The influence—the principle called instinct exercises over the animal creation, is truly wonderful. We indeed feel often constrained by a strict scrutiny into, and careful observation of the actions of animals, to admit a certain degree of rationality, reflection and intelligence in them.—Instinct in its primary sense, seems to be an essential and accompanying property, or quality of the living principle, or an impulsive principle attached to the animal creation and in an imperfect degree to vegetable creation, inseparable from life and a law resulting from the action of the living principle on passive matter. In the growth of vegetables there are indications of instinct: thus, place a plant in any dark place, hidden from the sun, and admit but a small degree of light through some hole; in this situation you will find its head or direction of growth, instinctively tend towards the rays of light. Again, place a seed in any direction or position, and the germ will grow towards the sun, and it is impossible to direct it in any other way. Dumb brutes often evince in their conduct, what according to the above description of instinct, can hardly be reconciled with it. Instinct cannot be construed into intelligence or reflection; for the moment these are added to it, it is no more an impulse of nature, but an acquired attribute. When the dog leaps into the water after his master and drags him out—defends him when abused; or directs to some lamentable scene his unsuspecting master: Can such conduct be called an impulsive instinct?—We must hesitate to own it. It surely betrays the action of intelligence or reflec-

tion. The instances of intelligence in the elephant—the monkey tribe, and the beaver, are equally striking and remarkable. Elephants are known to harbor revenge for years, and have even been detected in acts of humanity. It cannot be from instinct that the beaver knows the direction of the stream, and builds his dam accordingly. Indeed the actions of animals at various times are unaccountable for, in any other way than by the immediate direction of an invisible Providence, or the endowment of a certain degree of intelligence and reflecting faculty. I have seen a female pigeon leave her nest, for the purpose I supposed of feeding, when the cock pigeon, as if by some previous understanding, would regularly occupy the nest in her absence, without having any apparent communication with the female. Were this to occur every time she left the nest, it might be called instinct; but it is only at stated times that they thus exchange places. For curiosity I have removed a worm or caterpillar from a hop vine, and have returned and found it occupying the same place or vine. Such a thing might occur by accident once; but when having repeated the same thing several times, and removed the worm some rods from the place, to find it repeatedly return to the same stem, argues strongly for some superior directing power; or at any rate, a remarkable acuteness of smell, as they are incapable of seeing. In the migration of birds and fishes, we find the same invisible directing power; but this power, whether it is instinct, an immediate directing Providence, or intelligence is not general or confined to one line of action. Thus many birds never leave us at all, but are stationary the year round; and it appears not to be a choice in those that do leave us that impels them to migrate, but a foresight of necessity which does not necessarily belong to animal life, but seems rather a substitute for the reflecting power in us. And in the torpid state of animals there is an entire exception again, to the general impulse for migrating; yet we call all this instinct, a term in itself quite vague. This conduct of birds cannot necessarily proceed from the action of the living principle, or an undeviating instinct. Why should one species of swallow remain torpid in the banks of lakes and rivers, more than another, having at the same time the same means of escape? not certainly from instinct, but rather say intelligence, or the guidance of Providence. BRITON.

THE PRINCIPLE OF LIFE—

WHAT IS IT?

"This invisible and long-sought-for principle is in the blood of animal."—Briton. Casket Vol. I. No. 10.

The above question has given rise to many plausible theories, which after all the ingenuity of the most learned philosophers to support, have failed; and its answer yet remains beyond our ken. The answer quoted is so positive that I hardly dare offer any comment; but a few remarks will, I

think, make apparent that the principle of life is not "in the blood of animals."

Animals are organized bodies, whose organs have functions belonging to each separably; and it is plain that FUNCTIONS do not precede their organs, no more than an effect can precede its cause. Now, as functions are the effects of which organs are the cause, and effects do never precede their cause, it follows evidently that functions do never exist without organs. Life depends on organization and there is no substance which has life without it possesses organization.—Life is an assemblage and a series of functions, but it would be absurd to say that one of its functions precedes all of its organs. As well might it be said that digestion can exist without digestive organs; respiration without respiratory organs; circulation without circulatory organs; vision, hearing, tasting, smelling, touch, without visuals, auditory's, olfactory, tactiles, &c. as to say that an animal's blood is its life; because, blood is only the *product* of certain organs, and continually depending upon these organs for its existence. Blood exists where there is no life, which it could not do if it were itself the principle of life—all the blood must be withdrawn from a body, if this were true, to produce the absence of life. But organs may exist without life and it would be an abuse of reason to say that life and they have no necessary dependence, since they are able to exist separately. As well might we say that the movement of a clock is independent of the clock itself, since the clock can exist without a movement. It is only organization ceasing to be fit for moving itself by a modification which has happened to some of its parts, and not any necessary independence. I infer from this that life is nothing else than organic disposition necessary to movement. We receive this disposition at birth. The machine is then wound up; it goes on till something either naturally or accidentally gets out of order; so that the principle of life emanates from the hand of the Creator, and is kept in action by organs which manufacture its supporters, one of which is the blood. Consequently, when a body exists without life, it is the organic dispositions which have suffered derangement. All animal and vegetable structures, it is true, are formed out of fluids, but it does not follow from hence that these fluids are the life; for the most beautiful specimens of stone are sometimes formed in like manner.

If "the action of breathing depends