

as important as that of heredity. It is apparent in the fact that, although every individual of every species reproduces qualities of parents and ancestors, no two individuals do so in precisely the same manner; and no two are exactly alike. This difference, or individuality, becomes more marked as the organism is higher; and while the differences between dogs and horses are only observed by ordinary people with difficulty, the distinctions between human beings are so marked that the many millions existing in each generation no two exactly resemble one another. The reason of this is apparent, if we consider that the higher the organism the more complex does it become, and the less the chance of the whole complicated relations of parent and ancestral organisms being transmitted by single cells so solidly and completely as to overpower and remain uninfluenced by external influences. Darwin's theory of Natural Selection, which is now fully recognized as true by almost the entire scientific world, is, in a few words, as follows:

"No two forms of life are identical at birth, congenital variation being the rule. The individuals, possessing variations which are in conformity with the environment, persist, while those having disadvantageous variations, disappear. Such variations as are present at birth have a marked tendency to be transmitted to offspring."

It is certain that the process of Natural Selection—the struggle for existence—gives victory and survival to those forms—and eventually to those forms only—whose variations, slight as they may be, bring individuals into better adaption to their environment.

Evolution of Species.

To Charles Darwin and Alfred Russell Wallace the credit is due of having firmly established by an immense amount of evidence, the scientific explanation of the most important factor in evolution. Every day fresh discoveries and experiments confirm the great principle of the adaption of the individual to its external surroundings, and it has almost passed into the same phase as Newton's law of gravity, as the fundamental law accepted as axiomatic by all men of science, and as the basis of modern thought, to which all philosophies necessarily conform. And while Darwinism was most virulently attacked by all the various ministers of religion from 1860 to 1874, these attacks have now ceased, and many of the churches have accepted the greater part of the teaching of Modern Science.

It will be well to give a few examples of the operation of variation in working out the evolution of species.

There is an amphibious animal

called the triton, akin to the frog, whose normal course is to begin life in the water, breathing by gills, and end it with gills altered into lungs. But if these creatures are kept in a tank full of water they never lose their gills, but continue through life in the lower stage of development, and breed in the larva stage, producing, of course, gilled tritons. In this connection it may be well to mention, as a proof of the result of external surroundings, that the metamorphosis of the tadpole into the frog may be prolonged—probably indefinitely—"merely by feeding the animals very scantily."

The Axolotl, a curious gilled Mexican salamandra, has its normal course to live, die and propagate its species in water, breathing by gills; but when an axolotl strays from the water and takes to living on dry land, the gills become modified into lungs and the animal gains a higher position in vertebrate world.

When we remember that the embryo of all vertebrate mammals, including man, passes through the gilled stage before arriving at the development of lungs, the above facts assist us in understanding something of the history of Evolution. They teach us how terrestrial life may have arisen from aquatic life by adaption to altered conditions; and how the evolution of the embryo sums up in the individual, in a period of a few days or months, the various stages of evolutions which it has taken millions of years to accomplish in the species.

As a parallel to the transformation of gills into lungs, and of an aquatic into a land animal, if we turn to the geological records of the Secondary period, we may trace the transformation of a water into an air population, of sea-lizards into flying-lizards, and of flying-lizards into birds. The "Hesperonirs" is an actual specimen of the transition, being a feathered lizard or rather winged and feathered creature, which is half lizard and half bird.

We will now leave the general aspect of biology, in the hope that the reader may realize how the infinite diversities of living species have been developed in the course of evolution from simply origins, just as the inorganic world has developed from atoms, by the action and reaction of primitive polar forces between the organism and its environment, by means of incessant variation and adaption to external surroundings.

I AM THE * * LIFE.

This is taken from St. John.

Nothing is primordial. Life has always been connected with material, and material has always been connect-

ed with Life. They had no beginning. Throughout eternity the seeds of material forms which energy discloses, have existed. Not only human existence but all manifestation has eternal meaning.

A perfect activity is a perfect Life. This is our Father—the father of all. "Canst thou by searching find out God?"

This interrogation is the expression of a principle as well as a question. It is represented as the utterance of the best man in the world. All that we know or can know is from observation of forms which Life developed. The grand function is to disclose forms and to perpetuate them. Natural forms are beautiful and harmonious.

As we go downward the forms become small and, seemingly, less intelligent, until no optical instrument can reveal any life-forms. When natural senses fail we fall back on reason. In all places where our senses are able to serve us, we have found life-forms. Hence, we infer that the laws of nature are universal and that all nature abounds in life. God is omnipresent. "Not the God of the dead, but of the living."

We live in the earth. As we delve further into the earth, it is found more dense. Here worms and peculiar animals make their homes. Coming to the surface of what we usually call earth, we find a substance less dense. We call it water. This water is inhabited. Next, we find a substance less dense. This we call air. The air is inhabited. In the inhabitants of the air we find that our investigation results in a similar conclusion as the downward trend; we fall back on the one fundamental rule and reason forward interminably. The atmosphere is a part of the earth. We live in the earth. Like Dr. Dick, we might call to our aid imagination. We refrain. We have not room in the mind's store for all the solid truths. There are some things which life never does. It never makes sharp corners. The tendency is to become more round. The trees, the pebbles, the friction caused by the earth, the water, the air, tend to smooth off the rough corners and result in a frictionless, calm action—a perfect activity which is a perfect life. Let us reason no further in this direction. "Canst thou by searching find out God?" Our vision is only about so broad. Let us wait till our powers get used to the bright light.

Life never leaps. One step at a time, is the rule. If we ever succeed to a higher plane, it will be just above the one we now occupy. The Author of Our Beginning is too wise to make sudden changes. All His works reveal the same rhythmic progress.

A glorious lesson here we learn, and learn it well:
Infinitude, we know not how,
Commingles with our own life, now,
And we, the beauties of a higher life, may tell.

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